



Microsoft SQL Database Administrator Certification

Training for Exam 70-432

Course Modules and Objectives

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Course Modules and Objectives

Module 1:

Prerequisites for Installing Microsoft SQL Server 2008

- Outline the Business Scenario Case Study
- Identifying minimum hardware requirements
- Understanding the Processor and Memory Prerequisites
- Understanding the Disk Space Prerequisites
- Identifying Supported Operating Systems
- Identifying Software Requirements

Module 2:

Selecting Microsoft SQL Server 2008 Editions

- Explain SQL Server services
- Understand the types of SQL Server services
 - Service Broker Service
 - SQL Server Integration Service (SSIS)
 - SQL Server Reporting Service (SSRS)
 - SQL Server Analysis Service (SSAS)
- Identify the need for different SQL Server editions
- List the different editions of Microsoft SQL Server 2008
- Identify the differences between the various SQL Server editions

Module 3:

Installing Microsoft SQL Server 2008

- Create Service Accounts
- Understand the SQL Server Configuration Manager
- Understand SQL Server Instances
- Set Authentication Modes
- Install and Configure a SQL Server Instance
- Install a Sample Database
- Configure Database Mail

Module 4:

Understanding SQL Server Files

- Understand types of SQL Server files
- Understand Filegroups
- Work with Filegroups
- Understand Transaction logs
- Manage Transaction logs
- Understand the FILESTREAM feature
- Understand the tempdb database

Module 5:

Managing the Database

- Describe the available database options
- Discuss the various recovery models
- Set the recovery model
- Automate actions in a database
- Understand change tracking
- Control database access
- Understand query parameterization
- Understand collation sequences
- Ensure database integrity

Module 6:

Managing Tables

- Understanding Database Schemas
- Understand Data Types; Numeric, Character, Date and time, Binary, XML and Spatial data types
- Understand properties of table columns
- Understand computed columns
- Compress rows and pages to reduce disk storage space
- Create tables
- Understand table constraints

Module 7:

Working with SQL Server Indexes

- Understand the Index Structure
- Discuss different SQL Server Indexes; Clustered, Nonclustered, Unique, Index with included columns, Filtered, XML, Spatial and Full text Indexes
- Work with and Implement Indexes
- Understand what is Index fragmentation
- Manage Indexes
- Work with Full Text Indexes

Module 8:

Partitioning Data

- Understand Partitioning
- Implement Partition functions
- Implement Partition schemes
- Create Partitioned tables
- Create Partitioned indexes
- Manage Partitions

Module 9:

Transferring Data

- Identify data transfer tools for Importing and Exporting data
- Understand and use the Bulk Copy Program (BCP)
- Understand and use the BULK INSERT command
- Understand and use the SQL Server Import and Export Wizard

Module 10:

Managing Security in SQL Server 2008

- Understand Policy-Based Management
- Understand the terms associated with Policy-Based Management
- Describe the Policy-Based Management process
- Identify how Policies are evaluated
- Create your own Policy
- Manage policies across multiple instances of SQL Server
- Import and export policies across database instances

Module 11:

Implementing Layered Security

- Understand what are Endpoints
- Describe Endpoint Configuration for Database Mirroring and Service Broker
- Create an Endpoint for Database Mirroring and Service Broker
- Understand Surface area configuration
- Manage Protocols, Connections and Startup Options
- Work with Principals
- Describe Certificates and Asymmetric Keys
- Manage Permissions
- Audit SQL Server instances
- Encrypt data in SQL Server

Module 12:

Identifying Disaster Recovery Options

- Understand database backups
- Understand transaction log backups
- Manage corrupt pages
- Understand the maintenance plan
- Validate backups
- Restore database backups
- Restore corrupt pages
- Restore databases with media errors
- Restore transaction Log Backups
- Work with database snapshots

Module 13:

Automating Tasks with SQL Server Agent

- Understand the SQL Server agent
- Manage SQL Server Agent Jobs
- Understand operators
- Define SQL Server alerts
- Understand what are performance condition alerts
- Understand Windows Management Instrumentation (WMI) event alerts

Module 14:

Performance and Monitoring

- Understand the System Monitor
- Work with Counter Logs
- Work with Performance Counters
- Work with SQL Server Profiler
- Create a Trace
- Manage Traces
- Jointly Analyze SQL Server Profiler and System Monitor Data
- Work with Logs
- Manage Space for Logs and Databases
- Identify Reasons for Service Failure
- Work with Locks

Module 15:

Optimizing Performance

- Understand the Database Engine Tuning Advisor
- Work with Database Engine Tuning Advisor
- Understand the process of workload analysis
- Set the Database Engine Tuning Advisor options
- Work with Resource Governor
- Determine Resource Governor configuration
- Implement the Resource Governor
- Work with Dynamic Management Views and Functions
- Work with Performance Data Warehouse

Module 16:

Understanding Failover Clustering

- Understand Failover Clustering
- Design Failover Clustering
- Design Windows Clustering
- Configure Windows Clustering
- Configure Failover Cluster Instances
- Perform Cluster Health Checks

Module 17:

Implementing Database Mirroring

- Understand Database Mirroring
- Describe Database Mirroring Operating Modes
- Prepare Databases for Mirroring
- Copy System Objects from the Principal to the Mirror
- Understand Failover
- Design Database Mirroring Failback

Module 18:

Implementing Log Shipping

- Understand Log Shipping
- List the Participants in Log Shipping
- Configure Log Shipping
- Understand Failover Strategies
- Understand Failback Strategies

Module 19:

Implementing Replication

- Understand Replication
- Understand different Replication methods
- Describe what are Replication Agents
- Resolve Data Conflicts
- Implement Snapshot Replication
- Implement Transactional Replication
- Implement Merge Replication
- Microsoft Test Preparation