

## SQL Server® 2008 Database Administration: Hands-On - 4 Days

*Course 138 Overview*

- You Will Learn How To**
- Administer SQL Server 2008 with SQL Server Management Studio and Transact-SQL
  - Build databases and upgrade from prior versions
  - Secure the server through logins and permissions management
  - Automate administrative activities with SQL Server Agent multistep jobs
  - Perform routine maintenance to correct fragmentation and database corruption
  - Identify problems and monitor server health
- Course Benefits** SQL Server 2008 provides a robust platform that enables organizations to run their most demanding, mission-critical applications. It is essential that database administrators know how to manage this complex platform correctly. This hands-on course provides you with the skills you need to install SQL Server, create and modify storage structures, manage security, and back up and recover databases.
- Who Should Attend** Those responsible for administering SQL Server 2008. A basic understanding of SQL Server 2008 or experience at the level of Course 137, "SQL Server 2008 Comprehensive Introduction," is assumed. Experienced SQL Server 2005 DBAs should take Course 136, "SQL Server 2008 Skills Upgrade."
- Hands-On Training** Throughout this course, a series of extensive hands-on exercises provides you with practical experience administering SQL Server 2008. Exercises include:
- Administering SQL Server 2008 with graphical tools and Transact-SQL
  - Creating databases
  - Implementing security for logins, databases and objects
  - Backing up and restoring databases
  - Managing transaction logs
  - Configuring Database Mail
  - Carrying out routine database maintenance
  - Monitoring server health

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## Course 138 Outline

### SQL Server 2008 Installation and Features

#### Installing SQL Server

- Choosing installation options
- Upgrading from previous versions
- Applying a service pack

#### Essential tools

- SQL Server Management Studio
- Transact-SQL
- SQL Server Configuration Manager
- Policy-based Management

### Creating and Managing Databases

#### Storage structures

- Examining disk structures
- Creating databases and transaction logs
- Defining file groups

#### Managing database space

- Permitting automatic database growth
- Adding database files to expand databases
- Specifying database options

#### Moving databases

- Scripting objects and moving data with Transact-SQL
- Detaching and attaching databases

### Implementing Server and Database Security

#### Creating logins

- Contrasting Windows and SQL Server authentication
- Authorizing logins
- Making logins members of server roles
- Enforcing password policy

#### Authorizing database access

- Adding users
- Defining new roles
- Delegating privileges with predefined roles
- Assigning users to roles
- Handling mismatched logins

### Managing Permissions

#### Granting database-scoped privileges

- Permitting object creation
- Granting blanket permissions

#### Schemas

- Designing schemas
- Assigning a default schema

### Handling object-level permissions

- Limiting object access
- Meeting complex permission requirements with roles
- Examining permission hierarchies

### Recovering from Disasters

#### Backing up databases

- Choosing a recovery model
- Transaction log architecture
- Performing full, log and differential backups
- Reclaiming transaction log space

#### Restoring databases

- Recovering user databases
- Testing recovery scenarios

### Automating Tasks with Jobs and Alerts

#### The SQL Server Agent

- Configuring the agent
- Setting up Database Mail

#### Multistep jobs

- Defining jobs to handle routine tasks
- Creating alerts and operators
- Associating alerts with jobs

### Performing Database Maintenance

#### Fragmentation and database corruption

- Identifying and curing fragmentation
- Finding and repairing database corruption

#### Database Maintenance Plan Wizard

- Choosing maintenance tasks
- Scheduling plan execution

### Monitoring SQL Server

#### Ad hoc monitoring

- Identifying problems with Activity Monitor
- Querying Dynamic Management Objects

#### The Management Data Warehouse

- Configuring data collection
- Reviewing the reports