

## SQL Server® 2005 Database Administration: Hands-On - 5 Days

### Course 132 Overview

- You Will Learn How To**
- Administer SQL Server 2005 with SQL Server Management Studio and Transact-SQL
  - Create and manage databases, transaction logs and database snapshots
  - Implement login and database security and manage permissions
  - Develop a backup and recovery strategy
  - Manage complex multistep jobs with SQL Server Agent
  - Deploy and manage transactional replication
- Course Benefits** SQL Server 2005 offers a robust architecture for enterprise data management. Administration of your organization's SQL Server databases requires taking advantage of the scalability, availability and security features in SQL Server 2005. This course offers extensive experience using SQL Server 2005 tools to install SQL Server, create and modify storage structures, back up and recover databases, and manage security.
- Who Should Attend** Those interested in SQL Server administration. Experience with relational databases is assumed, along with a working knowledge of computers and a familiarity with Windows systems.
- Hands-On Training** Throughout this course, a series of extensive hands-on exercises provides you with practical experience administering SQL Server 2005. Exercises include:
- Administering SQL Server 2005 with graphical tools and Transact-SQL
  - Creating databases
  - Implementing security for logins, databases and objects
  - Backing up and restoring databases
  - Recovering the master database
  - Maintaining a hot standby server with mirroring
  - Configuring Database Mail
  - Managing transactional replication

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## Course 132 Outline

### Getting Started with SQL Server 2005

#### Components

- Services
- Editions
- System and user databases

#### Essential tools

- SQL Server Management Studio
- Transact-SQL
- Surface Area Configuration
- SQL Server Configuration Manager

### Installing SQL Server

#### SQL Server 2005 installation

- Choosing installation options
- Employing multiple instances
- Upgrading from previous versions
- Applying a Service Pack

### Managing Databases

#### Disk structures

- Examining storage structures
- Creating databases and transaction logs

#### Space management strategies

- Handling dynamic database growth
- Reclaiming unused space

#### Moving databases

- Detaching and attaching databases
- Copying databases with the Copy Database Wizard

### Controlling Server and Database

#### Security

##### Login security

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

##### Database security

- Designing schemas
- Adding users
- Defining NEW roles
- Delegating privileges with predefined roles
- Assigning users to roles

##### Permissions

- Granting server, database, schema-scoped and object permissions
- Interaction of roles and permissions

### Migrating Data

#### SQL Server Integration Services

- Packages
- Control flows
- Data flows
- Connections
- Business Intelligence Development Studio

#### Building simple packages

- Importing data from Access
- Exporting a table to Excel

### Backup and Recovery

#### Planning for and recovering from disasters

- Transaction log architecture
- Choosing a recovery model
- Performing full, log and differential backups
- Recovering system and user databases

#### Implementing database mirroring

- Selecting a mirroring architecture
- Configuring the mirror and witness servers
- Monitoring database mirroring
- Taking a snapshot of the mirror

### 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

### Deploying Replication

#### Replication concepts

- Publish/subscribe metaphor
- Replication types
- Replication agents

#### Managing transactional replication

- Configuring the Publisher and Distributor
- Creating publications
- Subscribing to publications

### Monitoring SQL Server

- Identifying problems with Activity Monitor
- Querying Dynamic Management Objects
- Deploying the Performance Dashboard
- Analyzing trends with the SQL Server Health and History tool (SQLH2)

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