

## **Microsoft Certified IT Professional (MCITP): Database Administrator**

### **Course Content**

Includes: Exams 70-431 (Prerequisite MCTS certification), 70-443 & 70-444  
(Two Professional Exams)

### **Exam 70-431: Microsoft Certified Technology Specialist (MCTS): SQL Server 2005 (Prerequisite MCTS certification)**

Microsoft Certified Technology Specialists in Microsoft SQL Server 2005 (MCTS: SQL Server 2005) implement and maintain SQL Server databases and typically pursue careers as database administrators, database developers, or business intelligence developers. This course teaches students how to use the tools and Transact-SQL language and know how to explore the user interface.

When you pass Exam 70-431: TS: Microsoft SQL Server 2005 – Implementation and Maintenance, you complete the requirements for the following certification:

- MCTS: Microsoft Certified Technology Specialist: SQL Server 2005

Exam 70-431 is also credit toward the following certifications:

- MCITP: Database Administrator
- MCITP: Database Developer
- MCSA on Microsoft Windows 2000
- MCSA on Microsoft Windows 2003
- MCSE on Microsoft Windows 2000
- MCSE on Microsoft Windows 2003

### **Learning segments:**

Implementing a Microsoft SQL Server 2005 Database (Course 2779)

Module-1 Creating Databases and Database Files

Creating Databases

Creating Filegroups

Creating Schemas

## Creating Database Snapshots

### Module-2 Creating Data Types and Tables

Creating Data Types

Creating Tables

Creating Partitioned Tables

### Module-3 Using XML

Retrieving XML by Using FOR XML

Shredding XML by Using OPENXML

Using the XML Data Type

### Module-4 Creating and Tuning Indexes

Planning Indexes

Creating Indexes

Optimizing Indexes

Creating XML Indexes

### Module-5 Implementing Data Integrity

Data Integrity Overview

Implementing Constraints

Implementing Triggers

Implementing XML Schemas

### Module-6 Implementing Views

Introduction to Views

Creating and Managing Views

Optimizing Performance by Using Views

### Module-7 Implementing Stored Procedures and Functions

Implementing Stored Procedures

Creating Parameterized Stored Procedures

Creating Functions

Handling Errors

## Controlling Execution Context

### Module-8 Implementing Managed Code in the Database

Introduction to the SQL Server Common Language Runtime

Importing and Configuring Assemblies

Creating Managed Database Objects

### Module-9 Using Service Broker

Service Broker Overview

Creating Service Broker Objects

Sending and Receiving Messages

## Maintaining a Microsoft SQL Server 2005 Database

(Course 2780)

### Module-1 Installing and Configuring SQL Server 2005

Preparing to install SQL Server

Installing SQL Server

Managing a SQL Server 2005 Installation

### Module-2 Managing Databases and Files

Planning databases

Creating databases

Managing databases

### Module-3 Disaster Recovery

Planning a Backup Strategy

Backing Up User Databases

Restoring User Databases

Recovering Data from Database Snapshots

System Database and Disaster Recovery

### Module-4 Managing Security

Overview of SQL Server Security

Securing the Server Scope

Securing the Database Scope

Managing Keys and Certificates in SQL Server

Module-5 Monitoring SQL Server

Viewing Current Activity

Using System Monitor

Using SQL Server Profiler

Using DDL Triggers

Using Event Notifications

Module-6 Transferring Data

Overview of Data Transfer

Introduction to SQL Server Integration Services

Using SQL Server Integration Services

Module-7 Automating Administrative Tasks

Automating Administrative Tasks in SQL Server 2005

Configuring the SQL Server Agent

Creating Jobs and Operators

Creating Alerts

Managing Multiple Servers

Managing SQL Server Agent Security

Module-8 Maintaining High Availability

Introduction to High Availability

Implementing Server Clustering

Implementing Database Mirroring

Implementing Log Shipping

Module-9 Introduction to Replication

Overview of Replication

Replication Scenarios

## **Exam 70-443: PRO: Designing a Database Server Infrastructure by Using Microsoft SQL Server 2005 (Professional Exam)**

ReTrain for IT's Microsoft Exam 70-443 training course PRO- Designing a Database Server Infrastructure by Using Microsoft SQL Server 2005 teaches database administrators to design a Microsoft SQL Server 2005 database infrastructure, to design security for database systems using Microsoft SQL Server 2005, how to monitor security and respond to threats and to design database solutions that meet the availability needs of their organization, emphasizing high availability, which includes thinking about the database itself and about their entire environment, including business needs; regulatory requirements; and network, systems, and database considerations during design. Students will also learn how to document and test the high availability database solution.

When you pass this exam, you earn credit towards the following certifications:  
MCITP Database Administrator.

### **Learning segments:**

Microsoft Exam 70-443: PRO-Designing a Database Server Infrastructure by Using Microsoft SQL Server 2005

Designing High Availability Database Solutions Using Microsoft SQL Server 2005

Determining Appropriate High-Availability Solutions

Identifying High-Availability Requirements and Constraints

Analyzing High-Availability Requirements and Constraints

High-Availability Solution

Determining Storage Requirements for SQL Server Databases

Determining Storage Requirements for SQL Server Components and Files

Designing Storage Solutions for SQL Server Databases

Designing a Backup and Restore Strategy

Designing the Platform for Failover Clustering

Designing the SQL Server Cluster Implementation

Designing Recovery Strategies and a Test Plan for Failover Clustering

Migrating and Upgrading SQL Server Clusters

Designing an Operations Plan for Clustering

Introduction to Designing a Log Shipping Solution  
Designing Log Shipping Server Roles and Topology  
Designing a Log Shipping Upgrade Strategy  
Designing an Operations Plan for Log Shipping  
Introduction to Designing a Database Mirroring Solution  
Designing Database Roles and Topology for Database Mirroring  
Converting High-Availability Solutions to Database Mirroring  
Designing an Operations Plan for Database Mirroring  
Introduction to Designing a Replication Solution  
Designing a Replication Solution  
Designing a Replication Upgrade Strategy  
Designing an Operations Plan for Replication  
Evaluating Weaknesses in Each High-Availability Technology  
Maximizing Availability by Combining High-Availability Technologies  
Documenting High-Availability Solutions  
Creating a Test Plan for High-Availability Solutions

Designing Security for Microsoft SQL Server 2005

Principles of Database Security  
Security Standards  
Methodology for Designing a SQL Server Security Policy  
Monitoring SQL Server Security  
Developing an Authentication Policy  
Developing Server-Level Security Policies  
Developing a Secure Communication Policy  
Defining SQL Server Security-Monitoring Standards  
Designing an Instance-Level Security Policy  
Designing a Database-Level Security Policy  
Designing an Object-Level Security Policy  
Defining Security Monitoring Standards for Instances and Databases  
Securing Data by Using Encryption and Certificates  
Designing Data Encryption Policies  
Determining a Key Storage Method  
Analyzing Business and Regulatory Requirements

Determining the Exceptions and Their Impact  
Constraints of Government Regulations  
Designing a Response Policy for Virus and Worm Attacks  
Designing a Response Policy for Denial of Service Attacks  
Designing a Response Policy for Internal and SQL Injection Attacks

Designing a Microsoft SQL Server 2005 Infrastructure

Estimating Storage Requirements  
Estimating CPU Requirements  
Estimating Memory Requirements  
Estimating Network Requirements  
Analyzing Capacity Needs  
Identifying Requirements That Affect Data Archiving  
Determining the Structure of Archival Data  
Creating a Data Archival Plan  
Overview of Database Server Consolidation  
Designing a Database Server Consolidation Strategy  
Selecting a Data Distribution Tool  
Creating a Data Distribution Plan Using Replication  
Evaluating the Current Database Server Infrastructure  
Gathering Requirements for Changing a Database Server Infrastructure  
Designing Modifications to a Database Server Infrastructure  
Designing a Backup and Restore Strategy  
Creating a Database Disaster Recovery Plan  
Establishing Database Naming Conventions  
Defining Database Standards

**Exam 70-444: PRO: Optimizing and Maintaining a Database Administration Solution by Using Microsoft SQL Server 2005 (Professional Exam)**

ReTrain for IT's Microsoft Exam 70-444 training course PRO- Optimizing and Maintaining a Database Administration Solution by Using Microsoft SQL Server 2005 teaches database administrators to design security for database systems using Microsoft SQL ServerT 2005, to administer and automate Microsoft SQL Server 2005 databases and servers and to determine and troubleshoot

performance issues using Microsoft SQL Server 2005, including establishing monitoring standards and baselines, determining performance thresholds, and focusing the investigation on specific issues.

When you pass this exam, you earn credit towards the following certifications:  
MCITP Database Administrator.

**Learning segments:**

Microsoft Exam 70-444: PRO- Optimizing and Maintaining a Database Administration Solution by Using Microsoft SQL Server 2005

Designing Security for Microsoft SQL Server 2005

Principles of Database Security

Security Standards

Methodology for Designing a SQL Server Security Policy

Monitoring SQL Server Security

Developing an Authentication Policy

Developing Server-Level Security Policies

Developing a Secure Communication Policy

Defining SQL Server Security-Monitoring Standards

Designing an Instance-Level Security Policy

Designing a Database-Level Security Policy

Designing an Object-Level Security Policy

Defining Security Monitoring Standards for Instances and Databases

Securing Data by Using Encryption and Certificates

Designing Data Encryption Policies

Determining a Key Storage Method

Analyzing Business and Regulatory Requirements

Determining the Exceptions and Their Impact

Constraints of Government Regulations

Designing a Response Policy for Virus and Worm Attacks

Designing a Response Policy for Denial of Service Attacks

Designing a Response Policy for Internal and SQL Injection Attacks

Administering and Automating Microsoft SQL Server 2005 Databases and Servers

Planning an Automated System for Database Maintenance

Planning an Automated System for Server Maintenance

Documenting Administration and Automation Information

Managing SSIS Packages

Managing Replication

Managing Reporting Services

Troubleshooting and Optimizing Database Servers Using Microsoft SQL Server 2005

Using SQL Server Profiler and System Monitor

Troubleshoot Performance Issues

Narrowing Down a Performance Issue to a Database Object

Troubleshooting Database Server Performance Issues

Query Performance Troubleshooting Process

Optimizing the Query Performance Environment

Troubleshooting SQL Server Connectivity Issues

Areas to Troubleshoot for Connectivity Issues

Troubleshooting SQL Server Data Issues

Troubleshooting Data Integrity Issues

Troubleshooting Concurrency Issues

SQL Server Data Concurrency Issues

## **COURSE DESIGN & FEATURES**

Self Paced CBT

Instructional Design Principles

Instructor-Led Training

Full motion video

Navigation and Controls

Practice Tests and Exam Simulators

Hands-on Lab Simulation

Digital Video/Audio Presentations

Multimedia Presentations

Realistic Simulations

Vendor Approved Curriculum

### **Self Paced CBT**

Our Computer Based Training is divided into courses, which are divided into units. Each unit consists of a well-defined set of learning objectives, a series of interactions that teach the stated objectives, and a means for evaluating whether the learning objectives have been met.

### **Instructional Design Principles**

Our courses are based on sound principles from research in instructional design, adult learning, and information processing. We believe that for training to be effective, the learner must view the training as meaningful and relevant. The learner must be engaged as an active participant.

### **Instructor-Led Training**

This combines both the convenience and affordability of computer-based training with the effectiveness of a traditional classroom setting. The instructors featured in our multi-media CD's are not only certified in their area of expertise, but also have years of real world experience and are subject matter experts in their fields. Our courses feature video modules of our instructors teaching the information directly to you. This creates a personal learning experience and simulates the benefits of classroom learning- without leaving the comfort of your home.

### **Full motion video**

Each class is presented in full motion video allowing you to see the steps, hear the explanations, and perform the tasks which includes our interactive hands-on training simulations, students will learn from real-world scenarios taught by our expert instructor.

## **Navigation and Controls**

Our self-paced elearning courseware is designed to give you the freedom to proceed through each training class at your own pace. Courses are arranged in sections, with navigation and controls that allow you to fast forward, skip, go back, stop, restart, and control the pace of your training. You can stop at any time and easily find where you left off in your training.

## **Practice Tests and Exam Simulators**

We incorporate practice tests and certification exam simulators into all of our courseware. The flexibility of our practice tests and exam simulators allow you to apply your knowledge and test what you have learned, ensuring you have the skills and confidence needed to pass your exams - the first time.

## **Hands-on Lab Simulation**

Our courseware includes instructor-led demonstrations and hands-on lab exercises that allow you to practice what you learn in a fully functional, simulated environment. You will learn how to implement what you have learned to build skills for your chosen area of study and to pass your exams.

Our training system employs the next generation learning curriculum. Our courses include hands-on lab exercises that allow you to practice what you learn in a fully functional, simulated environment. You'll learn how to implement and utilize your knowledge to build the skills you need for your chosen area of study and to pass your exams. Hands-on Lab Simulation is a crucial component of your IT training. Practice make perfect. Step-by-step hands-on labs with detail instructions are included to reinforce all key concepts. When you complete a topic, choose the Lab Simulation button to select the associated hands-on lab exercises. Labs allow you to reinforce concepts by performing the tasks you've just learned.

## **Digital Video/Audio Presentations**

Our courses are developed using the latest in digital video/audio technology. Setting the standard for IT training, our courses provide you something no one else can - next generation, interactive, and effective training solutions. Do not

accept any training unless it meets the high standards we offer - you deserve the best training there is!

### **Multimedia Presentations**

Incorporating PowerPoint, Flash animations, charts, graphs, graphics and other relevant course material enhances the user experience of our computer based training modules. The use of multimedia reinforces key learning material and creates a more stimulating user experience.

### **Realistic Simulations**

So you can see how the application really works. All Courses also include pre and post-test which identifies individual strengths and weaknesses, allowing you to take only the units you haven't mastered and test how well you've mastered the completed Module.

### **Vendor Approved Curriculum**

ReTrain for IT's Computer-Based-Training modules have been designed in partnership with Microsoft, CompTIA and the EC Council and incorporate the official approved curriculum, guaranteeing you receive the appropriate information and training needed to get you certified.

### **Testing Centres**

Prometric Test Centres

Prometric offers the most extensive, professional and secure testing network in the world where tests are delivered in over 160 countries in over 7,500 locations.

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### Pearson VUE® Authorized Test Centers

The largest global test center network available with over 4,400 test centers in more than 160 countries. Prior to testing, Pearson VUE Authorized Test Centers must sign a pre-arranged agreement, meet hardware requirements and provide a certified test administrator. In addition to this, Pearson VUE performs on-going quality control measures to ensure program integrity.

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