

Course Details

Course 20465A

Designing Database Solutions for Microsoft SQL Server 2012

Length: 5 Days

Published: January 14, 2013

Language(s): English

Audience(s): IT Professionals

Level: 300

Technology: Microsoft SQL Server 2012

Type: Course

Delivery Method: Instructor-led (classroom)

Prerequisites

In addition to their professional experience, students who attend this training should already have the following technical knowledge:

- Experience with Transact-SQL
- Familiarity with SQL Server 2012 components and tools
- Familiarity with objects in a SQL Server database
- Familiarity with enterprise Windows network and security architecture

Students who attend this training can meet the prerequisites by attending the following courses, or obtaining equivalent knowledge and skills:

- MCSA: SQL Server 2012

- Or attend

- Course 10774: Querying Microsoft SQL Server 2012
- Course 10775: Administering a Microsoft SQL Server 2012 Database
- Course 10776: Developing Microsoft SQL Server 2012 Databases with Microsoft SQL Server 2012

Course Outline

Module 1: Designing a Database Server Infrastructure

- Introduction to Database Server Infrastructure
- Planning a Database Server Infrastructure
- Analyzing Capacity Requirements
- Considerations for Database Server Consolidation
- Migrating Resources in a Database Infrastructure

Module 2: Designing a Logical Database Schema

- Relational Database Design Techniques
- Using Schemas
- Designing Tables
- Providing Users with a Denormalized View of a Database

Module 3: Designing a Physical Database Implementation

- Files and Filegroups
- Partitioning Data
- Compressing Data

Module 5: Tuning Database Performance

- Optimizing Query Performance with Indexes
- Managing Query Plans
- Performance Monitoring and Tuning

Module 7: Using Policy-Based Management

- Introduction to Policy-Based Management
- Implementing Policy-Based Management
- Planning For Policy-Based Management

Module 9: Designing a Database Backup Solution

- SQL Server Backup and Restore
- Planning a Recovery Strategy

Module 11: Managing SQL Server with PowerShell

- Introduction to PowerShell

Module 13: Designing for High Availability

- High Availability in SQL Server 2012
- AlwaysOn Availability GroupsII

Module 4: Designing a Database Solution for BLOB Data

- Considerations for BLOB Data
- Working with FileStream
- Using Full-text Search

Module 6: Designing Database Security

- Designing Server-Level Security
- Designing Database-Level Security
- Transparent Database Encryption
- Auditing Database Activity

Module 8: Monitoring Server Health

- Introduction to Health Monitoring
- Options for Monitoring Health
- Using the SQL Server Utility

Module 10: Automating Multi-Server Maintenance

- Overview of Maintenance Automation
- Managing Multiple Servers

Module 12: Replicating Data

- SQL Server Replication
- Planning Replication