



To register or for more information call our office (208) 898-9036 or email register@leapfoxlearning.com



20465 Designing Database Solutions for MS SQL Server 2012

Duration: Five Days

Overview: Students will have the opportunity to practice hands-on skills and design tasks in a virtual lab environment and will learn about topics such as data compression, high availability, data migration, security, and scalability.

Who Should Attend: This course is intended for individuals who design database solutions for organizations and have experience with database development and administering SQL Server databases.

Prerequisite(s) or equivalent knowledge

10774 Querying Microsoft SQL Server 2012
10775 Administering Microsoft SQL Server 2012 Databases
10776 Developing Microsoft SQL Server 2012 Databases

Outline

Lesson 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
- Lab : Designing a Database Server Infrastructure

Lesson 2: Designing a Logical Database Schema

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

Lesson 3: Designing a Physical Database Implementation

- Files and Filegroups
- Partitioning Data
- Compressing Data
- Lab : Designing a Physical Database Implementation

Lesson 4: Designing a Database Solution for BLOB Data

- Considerations for BLOB Data
- Working with FileStream
- Using Full-text Search
- Lab : Creating a Database Solution for BLOB Data

Lesson 5: Tuning Database Performance

Optimizing Query Performance with Indexes
Managing Query Plans
Performance Monitoring and Tuning
Lab : Planning for Database Performance

Lesson 6: Designing Database Security

Designing Server-Level Security
Designing Database-Level Security
Transparent Database Encryption
Auditing Database Activity
Lab : Planning Database Security

Lesson 7: Using Policy-Based Management

Introduction to Policy-Based Management
Implementing Policy-Based Management
Planning For Policy-Based Management
Lab : Using Policy-Based Management

Lesson 8: Monitoring Server Health

Introduction to Health Monitoring
Options for Monitoring Health
Using the SQL Server Utility
Lab : Monitoring Server Health

Lesson 9: Designing a Database Backup Solution

SQL Server Backup and Restore
Planning a Recovery Strategy
Lab : Designing a Database Backup Solution

Lesson 10: Automating Multi-Server Maintenance

Overview of Maintenance Automation
Managing Multiple Servers
Lab : Automating Multi-Server Maintenance

Lesson 11: Managing SQL Server with PowerShell

Introduction to PowerShell
Lab : Managing SQL Server with PowerShell

Lesson 12: Replicating Data

SQL Server Replication
Planning Replication
Lab : Planning and Implementing SQL Server Replication

Lesson 13: Designing for High Availability

High Availability in SQL Server 2012
AlwaysOn Availability Groups
Lab : Implementing High Availability



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