

# Course WLC-SQL1402: Implementing High-Availability and Disaster Recovery (HA/DR) using Microsoft SQL Server 2012 and 2014

Three (3) days, Instructor-Led

This is a 3 day course meant for IT pros, database developers and administrators who would need knowledge to ensure that they have good disaster recovery solution in place in case data needs to be recovered. It also tackles the tools and features available in SQL 2012 and 2014 that are used to maintain high availability.

## Course Outline

### Module 1: Replicating Data

#### Lessons

- SQL Server Replication
  - Why Use Replication?
  - Replication Terminology
  - Types of Replication
  - Replication Agents
  - Securing Replication
  - Data Validation and Monitoring
  - Troubleshooting Replication
  
- Planning Replication
  - Scenarios for Snapshot Replication
  - Scenarios for Transactional Replication
  - Scenarios for Peer-to-Peer Transactional Replication
  - Scenarios for Merge Replication
  - Identifying Replication Topologies

#### Lab: Planning and Implementing Replication

- Planning Replication

- Implementing Replication

### Module 2: Planning High Availability

#### Lessons

- High Availability in SQL Server 2012
  - Introduction to High Availability
  - Options for High Availability in SQL Server 2012
  - Planning for High Availability with SQL Server 2012
  
- AlwaysOn Availability Groups
  - AlwaysOn Availability Groups
  - Active Secondary Replicas
  - Implementing AlwaysOn Availability Groups
  - Managing AlwaysOn Availability Groups

#### Lab: Working with AlwaysOn Availability Groups

- Creating an AlwaysOn Availability Group
- Using an AlwaysOn Availability Group

- Testing Failover for an AlwaysOn Availability Group

### **Module 3: Preparing the Server for Replication**

#### **Lessons:**

- Preparing the Server for Replication
  - Creating Windows Accounts for Replication
  - Preparing the Snapshot Folder
  - Configuring Distribution
- Replicating Data Between Fully Connected Servers
  - Publishing Data Using Transactional Replication
  - Creating a Subscription to the Transactional Publication
  - Validating the Subscription and Measuring Latency

#### **Lab: Using AlwaysOn Availability Groups**

- Preparing the Server for Replication
- Replicating Data Between Fully Connected Servers

### **Module 4: High Availability and Data Recovery Enhancements**

#### **Lessons:**

- AlwaysOn High Availability

- AlwaysOn Technologies in SQL Server 2014
- AlwaysOn Failover Cluster Instances
- AlwaysOn Availability Groups
- Active Secondary Replicas
- Creating an Availability Group
- Managing an AlwaysOn Availability Group

- Enhancements to Data Recovery
  - Enhancements to Point in Time Restore
  - Enhancements to Page Restore

#### **Lab: Using AlwaysOn Availability Groups**

- Creating an AlwaysOn Availability Group
- Using an AlwaysOn Availability Group
- Observing Availability Group Failover Behavior

#### **Course Inclusions:**

- Microsoft Official Curriculum (MOC) and/or Wizards Learning Courseware (WLC)
- Microsoft Certified Trainer (MCT)
- Lunch, AM and PM Snacks
- Certificate of Achievement
- Course Notes