# COURSE: SQL Server High Availability and Disaster Recovery Solutions

The course goal is to dive into SQL Server Technologies and solutions that support and provide service and database availability, to understand, maintain and support them in real environments.

## Summary

| Duration: | 3 days |
|---|---|
| Level: | 300* |
| Delivery method: | Virtual Instructor-led class |
| Language: | English/Bulgarian |

*\* The difficulty level is consistent with the widely accepted scale of technical difficulty of training on Microsoft Corp*

It is very important to know the way availability solutions work to design, implement, and maintain critical production systems and align to SLAs. Developing an overall understanding and familiarity of the basic features and different implementations is relatively simple. What is trickier to develop however, is an understanding of the mechanics (or internals) of Clustering, Availability Groups and Log Shipping and gaining experience of how to manage large scale and critical systems.

This training gives you the important aspects to gain a good understanding of how the Clustering, Log Shipping and Availability group technology works so that you can design, build, and manage a reliable availability solution.

Technical Level: 300+

Versions covered:

The course covers all versions of SQL Server from 2016+ and later, including SQL Server 2022. The lab exercises will be on SQL Server 2019.

## AUDIENCE:

- DBAs and Architects, who need to design, implement and maintain SQL Server High Availability and Disaster Recovery solutions
- Prerequisites: Level 200 of Microsoft SQL Server Administration and Development. T-SQL and database programming knowledge is good to have.

## AFTER THE TRAINING ATTENDEES WILL BE ABLE TO:

- Decide which HA and DR technology to implement
- Understand how the specific availability solution work
- Implement a proper high availability solution or a combination of them
- Manage, maintain, operate and troubleshoot Availability Group configuration
- Monitor and take actions to optimize the solution performance

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## TOPICS:

**Module 1: HA and DR concepts**

Putting measures and definition as availability solution requirements

Defining SQL Server Availability terms

SQL Server HA and DR Solutions overview

**Module 2: Backups and Log Shipping**

Backup and restore process

Log Shipping Concepts

Configuring Log Shipping

**Module 3: Providing Service level protection with SQL Server Failover Clustering**

How the FC works

The Voting concept

Installing SQL Server FC – important steps

Maintaining SQL Server FC solution

**Module 4: SQL Server Availability Groups**

Solution, design decisions, and possible architectures

Configuration parameters and security

Readable secondaries and Read Only Routing

**Module 5: Operating an Availability Group Solution**

Solution Maintenance and support

Monitoring Availability Group Solution

Alerts and Notifications

**Module 6: Combining HA and DR Technologies**

Important factors in combining HA and DR solutions

HADR is the Cloud – options and possible configurations, SQL MI for a DR

**Course format:**

The course modules consist of presentation for describing the respective concept and a demonstration. Some of the modules consist of practical exercises in order for the attendees to understand the concept better.