

Course : SQL Server, implementing high availability

Versions 2022 to 2012

Practical course - 3d - 21h00 - Ref. SDS

Price : 2040 CHF E.T.



High availability refers to an architecture with maximum availability for its users. It anticipates difficulties and proposes actions to ensure H24 service. This course will teach you how to choose and implement the best high-availability and disaster recovery strategy for SQL Server. You'll learn about the different types of replicas and the latest improvements made by the different versions.

Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Understand the principles of high availability solutions in SQL Server
- ✓ Know the prerequisites and essential conditions for setting up an Always On failover cluster
- ✓ Implement a log shipping solution
- ✓ Setting up an emergency recovery solution with Always On availability groups
- ✓ Identify the advantages and limitations of other availability solutions offered in SQL Server

Intended audience

SQL Server administrators.

Prerequisites

Good knowledge of SQL Server administration or knowledge equivalent to that provided by the SQL Server administration training course (ref. QSA).

Practical details

Hands-on work

Training alternates theory and practice. Everything we learn is put into practice.

Course schedule

PARTICIPANTS

SQL Server administrators.

PREREQUISITES

Good knowledge of SQL Server administration or knowledge equivalent to that provided by the SQL Server administration training course (ref. QSA).

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more. Participants also complete a placement test before and after the course to measure the skills they've developed.

1 Comparing high-availability solutions

- Definition of HADR, High Availability and Disaster Recovery.
- Comparison of SQL Server solutions.
- Implementation of a log shipping solution.

2 Always On failover cluster instances (Clustering Services)

- Windows cluster services: from MSCS (Microsoft Cluster Service) to WSFC (Windows Server Failover Cluster).
- Hardware and software recommendations/conditions for deploying Always On availability groups.
- Configuring a Windows cluster with WSFC. Understanding quorum modes.
- Installing SQL Server as a cluster node.
- Configuration of cluster group properties.
- Cluster management with Failover Cluster Manager.
- Supervision with dynamic management views and performance counters.

Hands-on work

Setting up a failover cluster in a virtual machine environment.

3 Always On availability groups

- How it works, how it differs from the mirror in earlier versions.
- Basic availability groups (BAGs) for the standard edition.
- Different types of replicas. Synchronous and asynchronous validation modes.
- Using the listener to redirect clients.
- Replicas open for reading, read routing. Remote backups on the secondary.

Hands-on work

Setting up an Always On availability group.

4 Always On availability groups, monitor and manage problems

- Supervision with dynamic management views and performance counters.
- Evolution of high availability across versions.
- Manage manual changeover, force quorum in case of loss of quorum.
- Ensure performance in operational conditions.
- Monitor the reading performance of secondaries.

Hands-on work

Recovery of Always On in the event of problems, correction of performance problems.

TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

Dates and locations

REMOTE CLASS

2026 : 22 June, 7 Oct., 25 Nov.