

# Course : Windows Server 2019, maintenance and troubleshooting

*Practical course - 4d - 28h00 - Ref. WXH*

*Price : 2650 CHF E.T.*



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This training course provides a method for assessing the behavior of a Windows 2019 server, detecting bottlenecks, performing centralized incident and alert escalation, and implementing fast and effective troubleshooting techniques.



## Teaching objectives

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

- ✓ Acquire the knowledge and skills required for server maintenance
- ✓ Monitor performance
- ✓ Set up an efficient backup and restore system
- ✓ Managing ACLs on objects
- ✓ Setting up audits on a server

## Intended audience

System administrators and engineers.

## Prerequisites

Good knowledge of Windows server 2019 or 2016 administration.

## Course schedule

### 1 Windows 2019 internal architecture

- Windows 2019 components.
- WAC (Windows Admin Center).
- Reliability history and Server manager 2019.
- WSUS (update management server).

### Hands-on work

System analysis with WAC. Server management via Server Manager and Reliability History Install a WSUS server.

## PARTICIPANTS

System administrators and engineers.

## PREREQUISITES

Good knowledge of Windows server 2019 or 2016 administration.

## 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.

## 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.

## 2 Activity monitoring and supervision tools

- The reliability and performance monitor.
- Task manager, new features.
- Resource monitor. Monitoring tools.
- The event observer.
- Diagnosing memory.

### Hands-on work

Analyze process activity with the system monitor. Analyze log files. Add monitoring indicators.

## 3 Troubleshooting Windows 2019

- Incidents: startup, drivers, registry.
- Create a Windows PE to troubleshoot a server.
- MDOP (Microsoft Diagnostics Recovery Toolset) and DART.
- System protection.
- Recovery mode (WIMRE).

### Hands-on work

Use troubleshooting tools to repair boot sectors, registry and system. Recover files. Reset administrator password. Troubleshooting tools.

## 4 Hyper-V maintenance and troubleshooting

- Overview of Hyper-V and its benefits.
- Implementation of a disaster recovery plan, replication management.
- Hyper-V snapshots.
- Export / import VMs.
- Setting up a Hyper-V cluster.
- Hot VM migration (Live Migration).

### Hands-on work

Adding a VM, replication with a physical server, hot-swapping a VM.

## 5 Troubleshooting AD-related network problems

- DNS records linked to AD.
- DNS zone management and delegation.
- Securing areas.
- Cleaning DNS zones integrated into AD.
- DNS troubleshooting utilities.

### Hands-on work

Test DNS operation with specific tools. Configure zones. Solve DC deletion problems.

## 6 Troubleshooting AD objects

- Manage ACLs on objects.
- AD Recycle Bin, restore items without the Recycle Bin.
- Diagnose service account problems.
- DFS replications and DC replications.
- DFS root problems Sysvol and DFS limitations.

### 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.

## 7 Remote management

- Server management via Server Manager.
- Add and remove roles and functions.
- Remote PowerShell for server management.

### Hands-on work

Add roles on remote servers, use PowerShell remotely, install PowerShell Web Access.

## 8 Audit and BPA (Best Practices Analyzer)

- Use of GAP and analysis of best practices.
- Setting up an audit on a 2019 server.
- Create an analysis with the Best Practice Analyser.

### Hands-on work

Audit and analysis with the Best Practice Analyser.

## Dates and locations

### REMOTE CLASS

2026 : 17 Mar., 19 May, 21 July, 20 Oct., 8 Dec.