

Course : Windows 2025, Active Directory Administration

Practical course - 4d - 28h00 - Ref. WSY
Price : 2710 CHF E.T.

NEW

Master the Active Directory environment in Windows Server 2025 with this training course. You'll learn how to install and configure an Active Directory domain and perform all administrative tasks using the graphical interfaces and PowerShell.

Teaching objectives

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

- ✓ Deploying Active Directory Domain Services on Windows Server 2025
- ✓ Deploy Domain Controllers
- ✓ Perform routine administrative tasks using the interfaces and PowerShell
- ✓ Deploy Group Policy Objects (GPOs) to manage workstations and servers
- ✓ Backing Up and Restoring Active Directory

Intended audience

Technicians, administrators, and systems and network engineers

Prerequisites

Strong knowledge of managing Windows 10 and/or 11 workstations.

Course schedule

PARTICIPANTS

Technicians, administrators, and systems and network engineers

PREREQUISITES

Strong knowledge of managing Windows 10 and/or 11 workstations.

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.

1 Windows Server 2025 and Active Directory 2025

- Positioning within the Microsoft ecosystem: role, uses, Microsoft strategy
- Major Changes Compared to Windows Server 2019 / 2022
- Microsoft's Vision: Security, Cloud-First, Hybridization, Entra ID, Zero Trust
- Key New Features: Native TLS 1.3, Cryptographic Hardening
- Kerberos AES SHA-256/384, Accelerated Deprecation of NTLM
- Performance, Scalability: Full NUMA for Data Centers
- New AD database in 32K-page format: impacts, benefits, and implementation
- Server Core vs. Desktop: Choices, Implications, and Best Practices

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.

2 Preparing the Active Directory 2025 Environment

- Hardware, Software, Security, and Network Prerequisites
- Role Installation: AD DS, DNS, RSAT, Administrative Tools
- Planting a New Forest by 2025
- Adding a Windows Server 2025 domain controller to an existing forest
- Core vs. Desktop Comparison: Advantages, Limitations, Use Cases
- Secure DNS Configuration: DNSSEC, Client-Side NRPT
- List of dependencies: LDAP, LDAPS, Kerberos, NTLM, PKI, GPO

Hands-on work

Installation of a Windows Server 2025 domain controller, enabling the 32K-page AD database, implementing DNSSEC and GPO NRPT, creating a domain at functional level 2025, and analyzing application dependencies (LDAP simple bind, NTLM, Kerberos, PKI)

3 Management of Specific Objects and Configurations on a W2K25 Server

- Leveraging New Technical and Safety Features
- AD 32K-page base: activation, verification, and impacts on AD objects
- Full NUMA support: benefits for virtualized data centers, optimization
- LDAP and Kerberos Security: Enforce TLS 1.3, LDAP Signing, and Channel Binding
- Strengthened Kerberos Policies, NTLM Deprecation
- Administration Tools: Windows Admin Center 2025, RSAT, PowerShell AD
- Directory Organization: Designing a Sustainable OU (Organizational Unit) Hierarchy
- Separate administrator accounts, gMSA/dMSA accounts
- Governance, Delegation: RBAC AD, Authentication Silos

Hands-on work

Installation and configuration of Windows Admin Center 2025, enabling and validating the 32K-page AD database, creating and using gMSA/dMSA accounts, and setting up automated delegation (KCD/dMSA)

4 Hyper-V 2025

- New Hyper-V Features in Windows Server 2025
- Network Improvements: Virtual Switches, RSC, SDN, Azure Stack HCI
- Hyper-V and AI Workloads: GPU Partitioning, DirectML, Enhanced vTPM
- Storage for Hyper-V: ReFS, Storage Spaces, CSV, Performance
- Creating, Managing, and Optimizing Virtual Machines

Hands-on work

Hyper-V Deployment and Network Optimization. AD Replication and Trust Relationships in a Hyper-V Environment

5 Security Practices, Group Strategies

- DC Hardening GPO: Disable SMBv1 / NTLMv1 / Unencrypted LDAP
- How GPOs Work: Central Repository, WMI Filtering, Security
- MFA is required for administrator accounts
- Separate Administrator Accounts (T0/T1/T2)
- AppLocker for DCs and Sensitive Servers, Modern GPO Templates
- Advanced audit: logon, services, AD changes, LDAP access
- AD Monitoring: Replication, Domain Controller Health (Kerberos, DNS, Netlogon)
- SYSVOL (DFS) Consistency: Monitoring and Remediation

Hands-on work

LDAP/Kerberos hardening, AppLocker deployment, and replication verification, AD.

6 Hybridization with Microsoft Entra ID

- Fundamental Concepts: Hybrid Identity, Zero Trust, Cloud-First
- Technical Pillars: Hybrid Join, Entra Connect Sync, Cloud Sync
- Azure Arc + Entra ID (Recommended Model 2025)
- Synchronization Mechanisms: Choices, Limitations, Scenarios
- SSO, MFA, Conditional Access, Identity Protection
- Hybrid Join vs. Entra ID Join: Differences and Uses
- Monitoring & Auditing: Entra ID, Azure AD Connect Health
- Writeback: password, group, device

Hands-on work

Installing and Configuring Entra Connect Sync, Creating Accounts, and Verifying Synchronization

7 Migration to Windows Server 2025

- Migration Strategy from 2012 R2 / 2016 / 2019 / 2022
- Preparation: inventory, compatibility, prerequisites
- AD Schema Compatibility, Applications Using NTLM
- Managing Unencrypted LDAP Dependencies
- Migration: Adding the First DC 2025, FSMO Transfer
- Removal of the old DCs, upgrade to the 2025 operational level

Hands-on work

Replication Verification / AD, Migration of a DC from 2019/2022 to 2025

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Dates and locations

REMOTE CLASS

2027 : 9 Mar., 14 June, 6 Sep., 29 Nov.