Course : Windows 2025, securing your infrastructure

Practical course - 4d - 28h00 - Ref. WSX
Price : 2640 CHF E.T.

NEW

◎ Teaching objectives

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

- ✓ Master the new security features of Windows Server 2025 (VBS, Credential Guard, Device Guard, OSConfig)
- ✓ Secure Active Directory 2025 infrastructure and manage user identities
- ✓ Set up and administer a certificate management infrastructure (PKI) with AD CS
- ✓ Protect data with encryption (EFS, BitLocker, NTFS/ReFS)
- ✓ Configure access control and delegation mechanisms in Active Directory
- ✓ Securing network and remote access with SMB over QUIC, VPN and NPS/RADIUS
- ✓ Strengthen DNS and domain controller security (DNSSEC, RODC, privileged accounts)

Prerequisites

Basic knowledge of network operating systems.

Course schedule

1   Windows Server 2025 architecture

- Security features and best practices for Windows 2025.
- Key steps to securing Windows Server 2025.
- New level of functionality for Active Directory services.
- Virtualization-based security (VBS).
- Implementation of Credential Guard, Device Guard.
- OSConfig under Windows 2025 (next-generation DSC).
- Windows Admin Center 2025 (native server version).
- Dynamic access control for user accounts.
- Set up a security audit using specific tools.

Hands-on work
Basic configuration and auditing to secure a Windows 2025 server.

2   Certification authority and PKI architecture

- Presentation and roles of CAs (certification authorities).
- ADCS (Active Directory Certificate Services) news and enhancements.
- Installation and implementation of the certificate server role (PKI).
- Certificate creation and management via MMC and Windows Admin Center (WAC).
- Creation and administration of specific Windows 2025 certificate templates.
- The online answering role. OCSP enhancement (hybrid environments).
- Collection certificates and online answering role.

Hands-on work
Basic administration of a certificate server. Securing web access with HTTPS

3   AD federation services and Microsoft Entra ID

- Interest in and implementation of the ADFS role, when ADFS remains relevant in 2025.
- Certificate management and creation of trust relationships.
- Entra ID and modern functionalities (MFA, Conditional Access, Passwordless, Identity Protection).
- Install the WAP server and publish ADFS to the outside world.
- The role of Web Application Proxy (WAP) version 2025.

Hands-on work
Set up AD federation services, secure AD. WAP installation and configuration.

4   Manage identities

- Credential Guard management (protects Kerberos/NTLM secrets).
- Signed and encrypted LDAP mandatory.
- Assign rights to users.
- Set up user delegation via the active directory.
- Enhanced monitoring, enriched logs: Kerberos, LDAP, AD replication.
- New features in Windows LAPS and associated GPOs.

Hands-on work
Set up a user rights management policy. Use Windows LAPS. Set up user delegation.

5   Securing the DA

- New AD diagnostic tools and improvements , dcdiag, repadmin...
- Securing the AD: reinforced protection of privileged accounts, isolation of LSASS processes.
- What's new in AD-CS certificate services "Schema 93" .
- RODC (Read Only Domain Controller): implementation scenarios and benefits.
- DNS SEC implementation. DNS zone protection.
- Roles and interests of ADAC (active directory administration center).
- PSO for password granularity, benefits and implementation.

Hands-on work
Securing the AD. Password granularity. Installing and configuring a RODC.

(6) Data protection

- NTFS and ReFS file system security.
- Implementation of EFS and management of collection certificates.
- BitLocker: disk encryption and encryption key storage.
- Centralization of keys in AD via group policies.

Hands-on work
Set up encryption. Data recovery with agent and associated certificates.

(7) SMB over QUIC, NPS 2025 and VPN

- QUIC vs DirectAccess vs Always On VPN.
- New VPN features in Windows Server 2025 (RRAS).
- NPS servers. Hardening the NPS 2025 role.
- RADIUS infrastructure components (802.1x).
- Always On VPN versus DirectAccess.
- VPN versus SMB over QUIC: which one to choose?
- The firewall role in Windows Server 2025 (what's changing?).

Hands-on work
Implementation of SM over QUIC via Windows Admin Center, Always On VPN "Why it's the modern solution". Implementation of a RADIUS 2025 server. Advanced firewall configuration.

Dates and locations

REMOTE CLASS
2026 : 7 July, 1 Sep., 1 Dec.