

# Networking with Windows Server («55349A»)

Ce cours de 5 jours sur Windows Server permet de maîtriser la gestion et la configuration des composants réseau de Windows Server. Vous apprendrez à déployer, configurer et supporter la mise en réseau de Windows Server.

**Durée:** 5 jours

**Prix :** 3'950.– excl. 8.1% TVA

**Documents :** Support de cours numérique

## Contenu

### INFORMATION IMPORTANTE

Cette formation n'est pas une formation Microsoft officielle. Le contenu de cette formation est basé sur le MOC 20741B aujourd'hui abandonné par Microsoft, et développé par la communauté Microsoft.

#### Module 1: Plan and implement IPv4

This module details how to plan and implement an IPv4 addressing scheme to support your organization's needs. The module also explains how to use fundamental networking tools and techniques to configure and troubleshoot IPv4-based networks.

##### Lessons

- Plan IPv4 addressing
- Configure IPv4
- Manage and troubleshoot IPv4

##### Lab: Plan an IPv4 addressing scheme

- Plan the IPv4 address assignments
- Verify IPv4 communication
- Troubleshoot IPv4

#### Module 2: Implement DHCP

Automatic IP configuration makes it easier to manage IP hosts. In this module, students learn how to deploy and manage the DHCP server role, select a high-availability option for DHCP, and configure DHCP failover.

##### Lessons

- What is DHCP?
- Deploy DHCP
- Manage DHCP high availability
- Manage and troubleshoot DHCP

##### Lab: Implement DHCP

- Plan a DHCP server implementation
- Implement the DHCP configuration
- Implement DHCP failover
- Validate the DHCP implementation

### Module 3: Plan and implement IPv6

This module details how to plan and implement an IPv6 addressing scheme to support your organization's needs. It also includes specifics about configuring coexistence between IPv4 and IPv6 and explains options for transitioning to IPv6.

#### Lessons

- Implement IPv6
- Manage IPv4 and IPv6 Coexistence
- Migrate to IPv6

#### Lab: Configure and evaluate IPv6 transition technologies

- Review the default IPv6 configuration
- Implement DHCPv6
- Configure network integration by using ISATAP
- Configure native IPv6 connectivity
- Configure 6to4 connectivity

### Module 4: Implement name resolution with DNS

This module explains the fundamentals of using Domain Name System (DNS) for simple name resolution, and then details more advanced topics, such as the GlobalNames zone, Domain Name System Security Extensions (DNSSEC), and split-brain syndrome. These modules detail how you can install, configure, and troubleshoot DNS within an organization's network.

#### Lessons

- Deploy DNS servers
- Configure zones in DNS server
- Configure nameresolution between DNS zones
- Configure DNS integration with AD DS
- Configure advanced DNS settings

#### Lab 1: Plan and implement DNS name resolution

- Plan DNS name resolution
- Implement DNS servers and zones

#### Lab 2: Integrate DNS with AD DS

- Integrate DNS with AD DS

#### Lab 3: Configure advanced DNS settings

- Configure DNS policies
- Validate a DNS implementation
- Troubleshoot DNS

### Module 5: Implement and manage IPAM

This module introduces IPAM functionality, explains how to deploy IPAM, and shows student how to manage DNS and DHCP functionality by using IPAM.

#### Lessons

- What is IPAM?
- Deploy IPAM
- Manage IP address spaces with IPAM

- Install the IPAM Server feature
- Provision the IPAM Server
- Manage IP address spaces by using IPAM

### Module 6: Implement remote access

In this module, students learn how to implement remote access technologies in Windows Server. You will also learn about different implementation scenarios for small or medium-sized organizations and enterprise organizations. In Windows Server, four component technologies—virtual private network (VPN), DirectAccess, Routing, and Web Application Proxy—integrate into a single, unified server role called Remote Access.

#### Lessons

- Overview of remote access options
- Implement WAP
- Plan VPNs

#### Lab 1: Implement a Web Application Proxy

- Implement Web Application Proxy
- Validate a Web Application Proxy deployment

#### Lab 2: Implement a VPN

- Implement VPN
- Validate the VPN deployment
- Troubleshoot VPN access

### Module 7: Implement branch office networking

In this module, students learn several ways in which to use Windows Server to overcome the limitations of branch-office scenarios. They'll learn about using Distributed File System (DFS) and Windows BranchCache.

#### Lessons

- Networking features and considerations for branch offices
- Implement DFSR
- Implement BranchCache for branch offices

#### Lab 1: Implement DFS for branch offices

- Implement DFS
- Validate the deployment

#### Lab 2: Implement BranchCache

- Implement BranchCache
- Validate the deployment

### Module 8: Implement advanced networking

Windows Server includes advanced high-performance networking features, such as server message block (SMB) 3.1.1, Quality of Service (QoS) options, and several enhancements on the receiving end of network packet processing. Additionally, high-performance networking features are available to the Microsoft Hyper-V role and the virtual machines (VMs) that are running under Hyper V, such as expanded virtual-switch functionality and extensibility, single-root I/O virtualization (SR-IOV), dynamic

virtual-machine queuing, and NIC Teaming for VMs. In this module, you will learn how to deploy and configure advanced networking in Windows Server and the new Hyper-V networking features.

## Lessons

- Overview of high-performance networking features
- Configure advanced Hyper-V networking features

## Lab: Configure advanced Hyper-V networking features

- Create and use Hyper-V virtual switches
- Configure and use the advanced features of a virtual switch

## Objectifs

- Planifier et implémenter un réseau IPv4
- Implémenter le Dynamic Host Configuration Protocol (DHCP)
- Planifier et implémenter un réseau IPv6
- Implémenter une résolution de noms avec Domain Name System (DNS)
- Implémenter et gérer la gestion des adresses IP (IP Address Management (IPAM))
- Planifier et implémenter un accès à distance
- Implémenter une mise en réseau pour des filiales
- Configurer des fonctionnalités avancées de mise en réseau

## Public cible

Ce cours est destiné aux professionnels de l'informatique (administrateurs réseau) qui ont déjà une certaine expérience pratique de la gestion de réseaux avec Windows Server et qui désirent connaître les technologies avancées de mise en réseau de Windows Server. Il s'adresse avant tout aux administrateurs réseau, de système et d'infrastructure.

## Avez-vous une question ou souhaitez-vous organiser un cours en entreprise ?

Nous vous conseillons volontiers au +41 22 738 80 80 ou [romandie@digicomp.ch](mailto:romandie@digicomp.ch). Retrouvez toutes les informations détaillées concernant les dates sur [www.digicomp.ch/formations-microsoft-technology/microsoft-server/cours-networking-with-windows-server](http://www.digicomp.ch/formations-microsoft-technology/microsoft-server/cours-networking-with-windows-server)