

Designing and Implementing Microsoft Azure Networking Solutions

This course teaches Network Engineers how to design, implement, and maintain Azure networking solutions.

This course covers the process of designing, implementing, and managing core Azure networking infrastructure, Hybrid Networking connections, load balancing traffic, network routing, private access to Azure services, network security and monitoring. Learn how to design and implement a secure, reliable, network infrastructure in Azure and how to establish hybrid connectivity, routing, private access to Azure services, and monitoring in Azure.

Détails

- Code : AZ-700
- Durée : 3 jours (21 heures)

Public

- Administrateurs
- Administrateurs systèmes

Pré-requis

- ?Have experience in enterprise networking, on-premises or cloud infrastructure and network security.
- ?Understanding of on-premises virtualization technologies.
- ?Understanding of network configurations.
- ?Understanding of software defined networking.
- Recommended prerequisites : Microsoft Azure Administrator

Objectifs

- This course helps to prepare for exam AZ-700

Programme

Module 1: Azure Virtual Networks

- Description
 - In this module, you will learn how to design and implement fundamental Azure Networking resources such as virtual networks, public and private IPs, DNS, virtual network peering, routing, and Azure Virtual NAT
- Lessons
 - Azure Virtual Networks
 - Public IP services
 - public and private DNS
 - cross-VNet connectivity
 - Virtual Network Routing
 - Azure virtual Network NAT
- Labs
 - Design and implement a Virtual Network in Azure
 - Configure DNS settings in Azure
 - Connect Virtual Networks with Peering
- After completing this module, students will be able to:
 - Implement virtual networks
 - Configure public IP services
 - Configure private and public DNS zones
 - Design and implement cross-VNET connectivity
 - Implement virtual network routing
 - Design and implement an Azure Virtual Network NAT

Module 2: Design and Implement Hybrid Networking

- Description
 - In this module you will learn how to design and implement hybrid networking solutions such as Site-to-Site VPN connections, Point-to-Site VPN connections, Azure Virtual WAN and Virtual WAN hubs
- Lessons
 - Site-to-site VPN connection
 - Point-to-Site VP connections
 - Azure Virtual WAN
- Labs
 - Create and configure a local gateway
 - Create and configure a virtual network gateway
 - Create a Virtual WAN by using Azure Portal
- After completing this module, students will be able to:
 - Design and implement a site-to-site VPN connection
 - Design and implement a point-to-site VPN connection
 - Design and implement authentication
 - Design and implement Azure Virtual WAN Resources

Module 3: Design and implement Azure ExpressRoute

- Description
 - In this module you will learn how to design and implement Azure ExpressRoute, ExpressRoute Global Reach, ExpressRoute FastPath and

ExpressRoute Peering options

- Lessons
 - ExpressRoute
 - ExpressRoute Direct
 - ExpressRoute FastPath
 - ExpressRoute Peering
- Labs
 - Create and configure ExpressRoute
- After completing this module, students will be able to:
 - Design and implement Expressroute
 - Design and implement Expressroute Direct
 - Design and implement Expressroute FastPath

Module 4: load balancing non-HTTP(S) traffic in Azure

- Description
 - In this module you will learn how to design and implement load balancing solutions for non-HTTP(S) traffic in Azure with Azure Load balancer and Traffic Manager
- Lessons
 - Content Delivery and Load Blancing
 - Azure Load balancer
 - Azure Traffic Manager
 - Azure Monitor
 - Network Watcher
- Labs
 - Create and configure a public load balancer to load balance VMs using the Azure portal
 - Create a Traffic Manager Profile using the Azure portal
 - Create, view, and manage metric alerts in Azure Monitor
- After completing this module, students will be able to:
 - Design and implement Azure Laod Balancers
 - Design and implement Azure Traffic Manager
 - Monitor Networks with Azure Monitor
 - Use Network Watcher

Module 5: Load balancing HTTP(S) traffic in Azure

- Description
 - In this module you will learn how to design and implement load balancing solutions for HTTP(S) traffic in Azure with Azure Application gateway and Azure Front Door
- Lessons
 - Azure Application Gateway
 - Azure Front Door
- Labs
 - Create a Front Door for a highly available web application using the Azure portal
 - Create and Configure an Application Gateway
- After completing this module, students will be able to:
 - Design and implement Azure Application Gateway
 - Implement Azure Front Door

Module 6: Design and implement network security

- Description
 - In this module you will learn to design and imponent network security solutions such as Azure DDoS, Azure Firewalls, Network Security Groups, and Web Application Firewall
- Lessons
 - Azure DDoS Protection
 - Azure Firewall
 - Network Security Groups
 - Web Application Firewall on Azure Front Door
- Labs
 - Create a Virtual Network with DDoS protection plan
 - Deploy and Configure Azure Firewall
 - Create a Web Application Firewall policy on Azure Front Door
- After completing this module, students will be able to:
 - Configure and monitor an Azure DDoS protection plan
 - Implement and manage Azure Firewall
 - Implement network security groups
 - Implement a web application firewall (WAF) on Azure Front Door

Module 7: Design and implement private access to Azure Services

- Description
 - In this module you will learn to design and implement private access to Azure Services with Azure Private Link, and virtual network service endpoints
- Lessons
 - Define Azure Private Link and private endpoints
 - Design and Configure Private Endpoints
 - Integrate a Private Link with DNS and on-premises clients
 - Create, configure, and provide access to Service Endpoints
 - Configure VNET integration for App Service
- Labs
 - Restrict network access to PaaS resources with virtual network service endpoints
 - Create an Azure private endpoint
- After completing this module, students will be able to:
 - Define the difference between Private Link Service and private endpoints
 - Design and configure private endpoints
 - Explain virtual network service endpoints
 - Design and configure access to service endpoints
 - Integrate Private Link with DNS
 - Integrate your App Service with Azure virtual networks

Modalités

- **Type d'action** :Acquisition des connaissances

- **Moyens de la formation** : Formation présentielle – 1 poste par stagiaire – 1 vidéo projecteur – Support de cours fourni à chaque stagiaire
- **Modalités pédagogiques** : Exposés – Cas pratiques – Synthèse
- **Validation** : Exercices de validation – Attestation de stages