Designing and Implementing Microsoft Azure Networking Solutions

Description

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.

Course Content
Module 1: Introduction to Azure Virtual Networks

- Explore Azure Virtual Networks
- Configure public IP services
- Design name resolution for your Virtual Network
- Enable Cross-VNet connectivity with peering
- Implement virtual network traffic routing
- Configure internet access with Azure Virtual NAT

Module 2: Design and Implement Hybrid Networking

- Design and implement Azure VPN Gateway
- Connect networks with Site-to-site VPN connections
- Connect devices to networks with Point-to-site VPN connections
- Connect remote resources by using Azure Virtual WANs
- Create a network virtual appliance (NVA) in a virtual hub

Module 3: Design and implement Azure ExpressRoute

- Explore Azure ExpressRoute
- Design an ExpressRoute deployment
- Configure peering for an ExpressRoute deployment
- Connect an ExpressRoute circuit to a VNet
- Connect geographically dispersed networks with ExpressRoute global reach
- Improve data path performance between networks with ExpressRoute FastPath

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

- Explore load balancing
- Design and implement Azure load balancer using the Azure portal
- Explore Azure Traffic Manager

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

- Design Azure application gateway
- Configure Azure application gateway

- Design and configure Azure front door

Module 6: Design and implement network security

- Secure your virtual networks in the Azure portal
- Deploy Azure DDoS Protection by using the Azure portal
- Deploy Network Security Groups by using the Azure portal
- Design and implement Azure Firewall
- Working with Azure Firewall Manager

Module 7: Design and implement private access to Azure Services

- Define Private Link Service and private endpoint
- Explain virtual network service endpoints
- Integrate Private Link with DNS
- Integrate your App Service with Azure virtual networks

Module 8: Design and implement network monitoring

- Monitor your networks with Azure Monitor
- Monitor your networks with Azure Network Watcher

Lab / Exercises
Microsoft Official Labs

- Design and implement a Virtual Network in Azure
- Configure DNS settings in Azure
- Connect two Azure Virtual Networks using global virtual network peering
- Create a Virtual WAN by using Azure Portal
- Create and configure a virtual network gateway
- Configure an ExpressRoute gateway
- Provision an ExpressRoute circuit
- Create a Traffic Manager profile using the Azure portal
- Create and configure an Azure load balancer
- Deploy Azure application gateway
- Create a front door for a highly available web application
- Deploy and configure Azure Firewall using the Azure portal
- Secure your virtual hub using Azure Firewall Manager
- Configure DDoS Protection on a virtual network using the Azure portal
- Create an Azure private endpoint using Azure PowerShell
- Restrict network access to PaaS resources with virtual network service endpoints
- Monitor a load balancer resource by using Azure Monitor

Documentation

- Access to Microsoft Learn (online learning content)

Exam

- This course prepares to the exam AZ-700: Designing and Implementing Microsoft Azure Networking Solutions. If you wish to take this exam, please contact our secretariat who will let you know the cost of the exam and will take care of all the necessary administrative procedures for you.

Participant profiles

- Network Engineers looking to specialize in Azure networking solutions

Prerequisites

- Understanding of on-premises virtualization technologies, including: VMs, virtual networking, and virtual hard disks
- Understanding of network configurations, including TCP/IP, Domain Name System (DNS), virtual private networks (VPNs), firewalls, and encryption technologies
- Understandingof software defined networking
- Understanding hybrid network connectivity methods, such as VPN
- Understanding resilience and disaster recovery, including high availability and restore operations
- Completion of the following course or equivalent knowledge is required

Objectives

- Design, implement and manage hybrid network connections
- Design and implement core Azure networking infrastructure
- Design and implement routing and load balancing in Azure
- Secure and monitor networks
- Design and implement private access to Azure Services

Niveau
Intermédiaire
Classroom Registration Price (CHF)
2500
Virtual Classroom Registration Price (CHF)
2350
Duration (in Days)
3
Reference
AZ-700T00