AZ - 700 : Designing and Implementing Microsoft Azure Networking Solutions

Course Outline

Module 1: Introduction to Azure Virtual Networks

In this module, you will learn how to design and implement fundamental Azure Networking resources such as virtual networks, IPs, DNS, and network routing.

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

Lab:
- Design and implement a Virtual Network
- Configure DNS settings
- Connect two Azure Virtual Networks using peering

Skills Acquired:
- Implement virtual networks, public/private DNS zones, routing, and NAT

Module 2: Design and Implement Hybrid Networking

This module covers hybrid networking solutions like VPN connections and Virtual WAN.

Lessons:
- Design and implement Azure VPN Gateway
- Site-to-site and Point-to-site VPN connections
- Use Azure Virtual WANs
- Create a network virtual appliance (NVA)

Lab:
- Create a Virtual WAN
- Configure a virtual network gateway

Skills Acquired:
- Design and implement VPN connections and Azure Virtual WANs

Module 3: Design and Implement Azure ExpressRoute

Learn to design Azure ExpressRoute, Global Reach, FastPath, and Peering.

Lessons:
- Explore Azure ExpressRoute
- Configure ExpressRoute peering and global reach
- Improve performance with ExpressRoute FastPath

Lab:
- Configure an ExpressRoute gateway
- Provision an ExpressRoute circuit

Skills Acquired:
- Design and implement ExpressRoute, FastPath, and Peering

Module 4: Load Balancing Non-HTTP(S) Traffic

This module focuses on load balancing non-HTTP(S) traffic using Azure Load Balancer and Traffic Manager.

Lessons:
- Explore load balancing
- Design and implement Azure Load Balancer
- Configure Azure Traffic Manager

Lab:
- Create Traffic Manager profiles
- Configure Azure Load Balancer

Skills Acquired:
- Design and implement Azure Load Balancers and Traffic Manager

Module 5: Load Balancing HTTP(S) Traffic

Learn to design load balancing for HTTP(S) traffic using Azure Application Gateway and Front Door.

Lessons:
- Design and configure Azure Application Gateway
- Design and configure Azure Front Door

Lab:
- Deploy Azure Application Gateway
- Create a highly available Front Door setup

Skills Acquired:
- Design and implement Azure Application Gateway and Front Door

Module 6: Design and Implement Network Security

This module covers security solutions like Azure DDoS, Firewalls, and WAF.

Lessons:
- Secure networks with Azure DDoS, NSGs, and Firewalls
- Implement Web Application Firewall (WAF)

Lab:
- Deploy and configure Azure Firewall and DDoS Protection

Skills Acquired:
- Configure Azure DDoS, Firewalls, NSGs, and WAF

Module 7: Private Access to Azure Services

Learn to design private access to Azure services using Private Link and service endpoints.

Lessons:
- Define Private Link and endpoints
- Configure virtual network service endpoints
- Integrate Private Link with DNS and App Service

Lab:
- Create an Azure private endpoint
- Restrict network access to PaaS resources

Skills Acquired:
- Configure Private Link, service endpoints, and DNS integration

Module 8: Network Monitoring in Azure

This module focuses on network monitoring solutions like Azure Monitor and Network Watcher.

Lessons:

- Monitor networks with Azure Monitor and Network Watcher

Lab:

- Monitor a load balancer using Azure Monitor

Skills Acquired:

- Configure alerts, traffic analytics, and NSG flow logs using Azure Monitor