

# Designing and Implementing Microsoft Azure Network Solutions (AZ-700T00)

## **COURSE OVERVIEW**

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.

## WHO WILL BENEFIT FROM THIS COURSE?

This course is for Network Engineers looking to specialize in Azure networking solutions. An Azure Network engineer designs and implements core Azure networking infrastructure, hybrid networking connections, load balance traffic, network routing, private access to Azure services, network security and monitoring. The azure network engineer will manage networking solutions for optimal performance, resiliency, scale, and security.

## PREREQUISITES

- Successful Azure Network Engineers start this role with experience in enterprise networking, on-premises or cloud infrastructure and network security.
- 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.
- Understanding of software-defined networking.
- Understanding hybrid network connectivity methods, such as VPN.
- Understanding resilience and disaster recovery, including high availability and restore operations.

## **COURSE OBJECTIVES**

Students will learn:

- Introduction to Azure Virtual Networks
- Design and implement hybrid networking
- Design and implement Azure ExpressRoute
- Load balance non-HTTP(S) traffic in Azure
- Load balance HTTP(S) traffic in Azure
- Design and implement network security
- Design and implement private access to Azure Services
- Design and implement network monitoring



#### **COURSE OUTLINE**

Module 1: Introduction to Azure Virtual Networks

- Implement virtual networks
- Configure public IP services
- Design and implement name resolution
- 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

- Design and implement a site-to-site VPN connection
- Design and implement a point-to-site VPN connection
- Design and implement authentication for point-to-site VPN connections
- Design and implement Azure Virtual WAN

Module 3: Design and implement Azure ExpressRoute

- Design and implement ExpressRoute
- Design and implement ExpressRoute Global Reach
- Design and implement ExpressRoute FastPath
- Troubleshoot ExpressRoute connection issues

Module 4: Load balance non-HTTP(S) traffic in Azure

- Identify the features and capabilities of Azure Load Balancer
- Design and implement an Azure Load Balancer
- Implement a Traffic Manager profile

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

- Design and implement Azure Application Gateway
- Implement Azure Front Door

Module 6: Design and implement network security

- Get network security recommendations with Microsoft Defender for Cloud
- Deploy Azure DDoS Protection by using the Azure portal
- Design and implement network security groups (NSGs)
- Design and implement Azure Firewall
- Design and implement a web application firewall (WAF) on Azure Front Door
- Module 7: Design and implement private access to Azure Services
  - Explain virtual network service endpoints
  - Define Private Link Service and private endpoints
  - Integrate private endpoints with DNS
  - Design and configure private endpoints
  - Design and configure access to service endpoints
  - Integrate your App Service with Azure virtual networks

Module 8: Design and implement network monitoring

- Configure network health alerts and logging by using Azure Monitor
- Create and configure a Connection Monitor instance
- Configure and use Traffic Analytics



- Configure NSG flow logs
- Enable and configure diagnostic logging
- Configure Azure Network Watcher

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