Microsoft Azure Administration and Networking Masterclass

Course Overview

Participants will learn how to deploy, configure, secure, and manage Azure infrastructure, while gaining deep expertise in network connectivity, hybrid environments, and security solutions. Through hands-on labs and guided exercises, you will gain practical experience managing Azure identities, implementing governance, designing virtual networks, configuring hybrid connections, and optimizing performance across enterprise-grade environments.

By the end of this course, learners will be able to:
• Administer Azure identities, resources, and compliance policies.
• Configure and manage virtual networks, subnets, and security layers.
• Implement hybrid connectivity using VPN Gateway and ExpressRoute.
• Design and deploy load balancing, traffic routing, and private access solutions.
• Monitor, troubleshoot, and secure Azure infrastructure at scale.

This course is ideal for IT professionals, system administrators, and network engineers seeking to build or advance their cloud administration and networking skills in Azure.

Prerequisites

Before attending this course, participants should have:
• Basic understanding of core networking concepts, including IP addressing, DNS, and routing.
• Familiarity with virtualization technologies and Windows or Linux server administration.
• Prior experience with Azure Portal, PowerShell, or Azure CLI is recommended but not mandatory.
• Foundational knowledge of cloud computing concepts (e.g., IaaS, PaaS, SaaS) is beneficial.

Day 1

Module 1: Administer Identity

- Manage Azure Active Directory (Azure AD) objects
- Implement and manage hybrid identities
- Manage user and group properties
- Configure and manage role-based access control (RBAC)

Module 2: Administer Governance and Compliance

- Configure Azure policies
- Manage resource locks and tags
- Implement resource governance using Blueprints

Module 3: Administer Azure Resources

- Manage Azure subscriptions and resources
- Configure ARM templates
- Automate resource deployment using PowerShell and CLI

Day 2

Module 4: Administer Virtual Networking

- Configure virtual networks, subnets, and peering
- Manage network security groups (NSGs)
- Implement name resolution and DNS zones

Module 5: Administer Azure Storage

- Configure storage accounts and access tiers
- Implement blob storage and lifecycle management
- Secure and monitor Azure storage

Module 6: Administer Virtual Machines

- Deploy and configure VMs using Azure Portal, CLI, and ARM templates
- Manage VM availability and extensions
- Implement Azure Disk Encryption

Day 3

Module 7: Administer PaaS Compute Solutions

- Configure App Service Plans and Web Apps

- Implement container-based solutions
- Configure Azure Functions and Logic Apps

Module 8: Administer Data Protection

- Configure backups and restore data
- Implement Azure Recovery Services Vault
- Manage replication and disaster recovery

Module 9: Design and Implement Hybrid Networking

- Configure VPN Gateway and Site-to-Site VPN
- Implement Point-to-Site connections
- Integrate on-premises networks with Azure

Day 4

Module 10: Design and Implement Azure ExpressRoute

- Plan and configure ExpressRoute circuits
- Implement routing and connectivity
- Monitor ExpressRoute performance

Module 11: Load Balance Non-HTTP(S) Traffic in Azure

- Configure Azure Load Balancer
- Implement traffic distribution and failover
- Monitor and troubleshoot load balancing

Module 12: Load Balance HTTP(S) Traffic in Azure

- Configure Application Gateway
- Implement Web Application Firewall (WAF)
- Optimize routing and SSL offloading

Day 5

Module 13: Design and Implement Network Security

- Configure Azure Firewall and Network Security Groups
- Implement DDoS protection
- Secure network traffic and monitor threats

Module 14: Design and Implement Private Access to Azure Services

- Configure Private Link and Service Endpoints
- Manage private DNS integration
- Secure connectivity to Azure PaaS services

Module 15: Design and Implement Monitoring Solutions

- Implement Azure Monitor and Network Watcher
- Configure diagnostic settings and alerts
- Analyze logs using Log Analytics