



## MODULE 1

### Local Area and Wireless Networking

- o Understanding networks using the OSI reference model
- o Physical and logical connectivity, networking topologies
- o Fundamentals of Ethernet and switching in a local area network
- o Fundamentals of Internet Protocol, addressing and higher-level protocols – TCP, UDP, DNS, DHCP
- o Fundamentals of Wireless LANs – radio waves, antennas, media access control in wireless networks
- o Routing LANs to the Internet, Network Address Translation

### Enterprise Networking Technologies

- o Media access control in LANs
- o Understanding link aggregation and LACP
- o Virtual LANs and trunking
- o Network redundancy and high availability
- o Wide Area Network technologies – AON, GPON, DWDM
- o Understanding and configuring proxy and reverse proxy servers
- o Securing Internet access using Next Generation Firewalls
- o Enterprise wireless networks – architecture and design concepts
- o Understanding authentication and authorization
- o Multi-Factor Authentication
- o Identity management and directory services using Active Directory Domain Services and Azure AD
- o Cryptography basics, certificate authentication and enterprise certificate services

### Extending Enterprise Networks to Remote Workers and to the Cloud

- o Understanding the cloud – principles and delivery mechanisms
- o Public, Private and Hybrid cloud; comparing IaaS, PaaS and SaaS
- o Overview of the Microsoft 365 SaaS platform
- o Overview of Microsoft Azure and Azure IaaS services
- o Securely connecting branch offices using VPN technologies – IPsec, DMVPN
- o Securely connecting remote workers using Remote Access VPN solutions

### Managing, Securing, Monitoring and Troubleshooting Networks

- o Management and monitoring protocols and monitoring objectives
- o Understanding SNMP and NMS systems
- o Mastering systematic troubleshooting

### Datacenter Networking , Servers, Storages and Virtualization Technologies

- o Overview of DC networking – concepts, specifics, layers
- o DC Technologies – VMware HCI and NSX
- o Software-defined DC
- o Servers and server components – hardware and software overview



- o Storage technologies – storage types, interfaces
- o Understanding RAID and levels
- o SAN technologies
- o Storage scalability and storage tiering
- o Virtualization – the “engine” of the cloud; understanding (the need for) virtualization, hypervisors
- o Technologies for backup, recovery and business continuity – recovery objectives, backup types, failover clusters

## **Cybersecurity in the Modern Enterprise Environment**

- o Processes, threats and tools
- o Security Event Management
- o Privileged Access Management
- o Endpoint Detection and Response
- o Cloud security – Azure AD Identity Protection and Information Protection; Microsoft Defender for Office 365, for Identity and for Endpoint

## **Software-Defined Networking, Automation and Orchestration**

- o Understanding software-defined technologies
- o Software-defined Access and WAN
- o Automation of compute, storage, networking and backup
- o Infrastructure as Code (IaC), cloud native platforms

## **MODULE 2**

### **Business Etiquette**

### **Company culture and values**

### **Personal development**

### **Office Productivity tools**

- o MS Word, MS Excel, MS Outlook
- o MS SharePoint, MS OneDrive
- o Office productivity tools
- o Service Now
- o SolarWinds

### **Involvement in real projects**