

Exam 98-366: Networking Fundamentals

Skills measured

This exam measures your ability to accomplish the technical tasks listed below. The percentages indicate the relative weight of each major topic area on the exam. The higher the percentage, the more questions you are likely to see on that content area on the exam.

Please note that the questions may test on, but will not be limited to, the topics described in the bulleted text.

Understanding network infrastructures (30–35%)

- Understand the concepts of Internet, intranet, and extranet
 - Virtual Private Network (VPN), security zones, firewalls
- Understand local area networks (LANs)
 - Perimeter networks; addressing; reserved address ranges for local use (including local loopback IP), VLANs; wired LAN and wireless LAN
- Understand wide area networks (WANs)
 - Leased lines, dial-up, ISDN, VPN, T1, T3, E1, E3, DSL, cable, and more, and their characteristics (speed, availability)
- Understand wireless networking
 - Types of wireless networking standards and their characteristics (802.11a,b,g,n, including different GHz ranges), types of network security (WPA, WEP, 802.1X, and others), point-to-point (P2P) wireless, wireless bridging
- Understand network topologies and access methods
 - Star, mesh, ring

Understanding network hardware (20–25%)

- Understand switches
 - Transmission speed, number and type of ports, number of uplinks, speed of uplinks, managed or unmanaged switches, VLAN capabilities, Layer 2 and Layer 3 switches and security options, hardware redundancy, support, backplane speed, switching types and MAC table, understand capabilities of hubs versus switches
- Understand routers

- Transmission speed considerations, directly connected routes, static routing, dynamic routing (routing protocols), default routes; routing table and how it selects best route(s); routing table memory, network address translation (NAT), software routing in Windows Server; Quality of Service (QoS)
- Understand media types
 - Cable types and their characteristics, including media segment length and speed; fiber optic; twisted pair shielded or nonshielded; catxx cabling, wireless; susceptibility to external interference (machinery and power cables); susceptibility to electricity (lightning), susceptibility to interception

Understanding protocols and services (45-50%)

- Understand the Open Systems Interconnection (OSI) model
 - OSI model; Transmission Control Protocol (TCP) model; examples of devices, protocols, applications, and which OSI/TCP layer they belong to; TCP and User Datagram Protocol (UDP); well-known ports for most used purposes (not necessarily Internet); packets and frames
- Understand IPv4
 - Subnetting, IPconfig, why use Internet Protocol version 4 (IPv4), addressing, ipv4toipv6 tunneling protocols to ensure backward compatibility, dual IP stack, subnetmask, gateway, ports, packets, reserved address ranges for local use (including local loopback IP)
- Understand IPv6
 - Subnetting, IPconfig, why use IPv6, addressing, ipv4toipv6 tunneling protocols to ensure backward compatibility, dual IP stack, subnetmask, gateway, ports, packets, reserved address ranges for local use (including local loopback IP)
- Understand names resolution
 - DNS, Windows Internet Name Service (WINS), steps in the name resolution process
- Understand networking services
 - Dynamic Host Configuration Protocol (DHCP), remote access
- Understand TCP/IP
 - Tools (such as ping), tracert, pathping, Telnet, IPconfig, netstat, reserved address ranges for local use (including local loopback IP), protocols