

# Cisco Certified Support Technician – Networking



## Online Course



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# Cisco Certified Support Technician – Networking

## Course Modules

### 1. Identify the fundamental conceptual building blocks of networks.

- TCP/IP model
- OSI model
- Frames and Packets
- Addressing



### 2. Differentiate between bandwidth and throughput.

- Latency
- Delay
- Speed test vs. Iperf

### 3. Differentiate between Networks

- LAN
- WAN
- MAN
- CAN
- PAN
- WLAN.
- Illustrate common physical & logical network Topologies.

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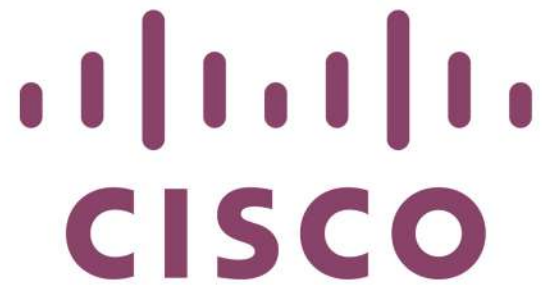


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## 4. Compare & Contrast cloud and on-premises Apps & Services.

- Public
- Private
- Hybrid
- SaaS
- PaaS
- IaaS
- Remote work/hybrid work



## 5. Describe common network applications and protocols.

- TCP vs. UDP (connection-oriented vs. connectionless)
- FTP
- SFTP
- TFTP
- HTTP
- HTTPS
- DHCP
- DNS
- ICMP
- NTP

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## 6. Compare & contrast private addresses and public addresses.

- Address classes
- NAT concepts



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## 7. Identify IPv4 addresses and subnet formats.

- Subnet concepts
- Subnet Calculator
- Slash notation, and subnet mask
- Broadcast Domain



## 8. Identify IPv6 Addresses and Prefix Formats.

- Types of Addresses
- Prefix Concepts

## 9. Cables & Connectors Commonly used in Local Area Ntwrks.

- Cable types: fiber, copper, twisted pair
- Connector types: coax, RJ-45, RJ-11, fiber connector types

## 10. Diff between Wi-Fi, cellular, and wired Network Technlgies.

- Copper, including sources of interference
- Fiber
- wireless, includg 802.11 , cellular, sources of interference

## 11. Demonstrate how to set up and check network connectivity

- Ntwrkg utilities on Wndws, Linux, Android, & Apple oprtn systm
- How to run troubleshooting commands
- Wireless client settings (SSID, authentication, WPA mode)



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## 12. Describe Endpoint Devices.

- Internet of Things (IoT) devices
- Computers
- Mobile devices
- IP Phone
- Printer
- Server



## 13. The status lights on a Cisco device when given instrctn

- Link light colour and status (blinking or solid)

## 14. Use a network diagram provided by an engineer

- Patch cables
- Switches and Routers
- Small Topologies
- Power
- Rack layout

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## 15. Identify the various ports on network devices.

- Console Port
- Serial Port
- Fiber Port
- Ethernet Ports
- SFPs
- USB port



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## 16. Explain basic Routing

- Default gateway
- layer 2 vs. layer 3 switches
- local network vs. remote network

## 17. Explain basic switching

- MAC address Tables
- MAC address Filtering
- VLAN

## 18. Effective troubleshooting methodologies & help desk best practices

- Policies and procedures
- Accurate and complete Documentation
- Prioritization

## 19. Perform a packet capture with Wireshark and save it to a file.

- Purpose of using a packet Analyzer
- saving and opening a .pcap file

## 20. Describe how firewalls operate to filter traffic.

- Firewalls (blocked ports and protocols)
- Rules deny or permit Access





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## 21. Run basic diagnostic commands and interpret the results.

- Ping
- Ipconfig/ifconfig/ip,
- Tracert/traceroute
- Nslookup
- Recognize how firewalls can influence the result

## 22. Differentiate bet diff ways to access and ccolct data

- Remote access (RDP, SSH, telnet)
- VPN
- Terminal emulators
- Console
- Network Management Systems
- Cloud-managed network (Meraki)
- Scripts

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## 23. Describe Foundational Security Concepts.

- Confidentiality, integrity, and availability (CIA)
- Authentication, authorization, and accounting (AAA)
- Multifactor Authentication (MFA)
- Encryption, certificates, and password complexity
- Identity stores/databases (Active Directory)
- Threats and vulnerabilities
- Spam, phishing, malware, and denial of service

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## 24. Run basic show commands on a Cisco network device.

- Show run
- Show cdp neighbors
- Show ip interface brief
- Show ip route
- Show version
- Show inventory
- Show switch
- Show mac address-table
- Show interface
- Show interface x
- Show interface status
- Privilege levels
- Command help and auto-complete

## 25. Configure basic wireless security on a home router (WPAx).

- WPA
- WPA2
- WPA3
- Choosing between Personal and Enterprise
- Wireless security concepts

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