Technical Career Branding Coach

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Roadmap to Become Network Engineer

START

1 Networking Fundamentals

- OSI Model
- TCP/IP Model
- Networking Devices (Routers, Switches, Hubs, Bridges)

2 Network Protocols

- Core Protocols: TCP, UDP, IP
- Application Layer Protocols: HTTP, HTTPS, FTP, DNS, DHCP
- Additional Protocols: SNMP, ICMP, ARP

3 Routing and Switching

- Routing Protocols: OSPF, EIGRP, BGP
- Switching Concepts: VLANs, STP, Trunking
- Dynamic Routing vs Static Routing

4 Network Design and Architecture

- Network Topologies: Star, Mesh, Bus, Ring
- Design Principles: Redundancy, Scalability, Reliability
- Network Types: LAN, WAN, MAN, WLAN, VLAN

5 Network Security

- Firewalls
- VPNs
- ACLs
- Security Protocols: SSL/TLS, IPSec
- Network Security Best Practices

6 Wireless Networking

- Wireless Standards: IEEE 802.11 a/b/g/n/ac/ax
- Wireless Security: WPA2, WPA3
- Wireless Network Design: Coverage, Capacity Planning

7 Cloud Networking

- Cloud Networking Services (VPC, Direct Connect, VPN)
- Hybrid Cloud Networking (Connecting On-Premises to Cloud)
- Cloud Providers: AWS, Azure, Google Cloud

8 Network Automation and Scripting

- Network Programmability
- Automation Techniques
- Scripting for Network Management (Python, Bash, PowerShell)

9 Monitoring and Troubleshooting

- Network Monitoring
- Troubleshooting Techniques (Ping, Traceroute, Network Diagrams)
- Performance Monitoring (NetFlow, SNMP)

10 Virtualization & Container Networking

- Virtual Network Functions (NFV)
- Software-Defined Networking (SDN)
- Container Networking (Docker Networking, Kubernetes Networking)

11 Certifications

- Entry-Level: CompTIA Network+, Cisco CCNA
- Professional-Level: Cisco CCNP, Juniper JNCIP
- Advanced-Level: Cisco CCIE, VMware VCP-NV

FINISH