Corso Cisco CCNA R&S 7.0 (New Version)

Modulo 1

CCNA1 Course

- Networking Today Explain the advances in modern network technologies.
- Basic Switch and Device
- Configuration
- Implement initial settings including passwords, IP addressing, and default gateway parameters on a
- network switch and end devices.
- Protocols and Models Explain how network protocols enable devices to access local and remote network resources.
- Physical Layer Explain how physical layer protocols, services, and network media support communications across
- data networks.
- Number Systems Calculate numbers between decimal and binary systems.
- Data Link Layer Explain how media access control in the data link layer supports communication across networks.
- Ethernet Switching Explain how Ethernet operates in a switched network.
- Network Layer Explain how routers use network layer protocols and services to enable end-to-end connectivity.
- Address Resolution Explain how ARP and ND enable communication on a local area network.
- Basic Router Configuration Implement initial settings on a router and end devices.
- IPv4 Addressing Calculate an IPv4 subnetting scheme to efficiently segment your network.
- IPv6 Addressing Implement an IPv6 addressing scheme.
- ICMP Use various tools to test network connectivity.
- Transport Layer Compare the operations of transport layer protocols in supporting end-to-end communication.
- Application Layer Explain the operation of application layer protocols in providing support to end-user applications.
- Network Security Fundamentals Configure switches and routers with device hardening features to enhance security.
- Build a Small Network Implement a network design for a small network to include a router, a switch, and end devices.

Modulo 2

CCNA2 Course

- Basic Device Configuration Configure devices by using security best practices.
- Switching Concepts Explain how Layer 2 switches forward data.
- VLANs Implement VLANs and trunking in a switched network.
- Inter-VLAN Routing Troubleshoot inter-VLAN routing on Layer 3 devices.
- STP Explain how STP enables redundancy in a Layer 2 network.
- EtherChannel Troubleshoot EtherChannel on switched links.
- DHCPv4 Implement DHCPv4 to operate across multiple LANs.
- SLAAC and DHCPv6 Concepts Explain the operation of dynamic address allocation in IPv6 networks.
- FHRP Concepts Explain how FHRPs provide default gateway services in a redundant network.
- LAN Security Concepts Explain how vulnerabilities compromise LAN security.
- Switch Security Configuration Configure switch security to mitigate LAN attacks.
- WLAN Concepts Explain how WLANs enable network connectivity.
- WLAN Configuration Implement a WLAN using a wireless router and WLC.
- Routing Concepts Explain how routers use information in packets to make forwarding decisions.
- IP Static Routing Configure IPv4 and IPv6 floating static routes.
- Troubleshoot Static and Default
- Routes Explain how to troubleshoot static and default route configurations.

Modulo 3

CCNA3 Course

- Single-Area OSPFv2 Concepts Explain how single-area OSPF operates in both point-to-point and broadcast multiaccess networks.
- Single-Area OSPFv2 Configuration Implement single-area OSPFv2 in both point-to-point and broadcast multiaccess networks.
- Network Security Concepts Explain how vulnerabilities, threats, and exploits can be mitigated to enhance network security.
- ACL Concepts Explain how ACLs are used as part of a network security policy.
- ACLs for IPv4 Configuration Implement IPv4 ACLs to filter traffic and secure administrative access.
- NAT for IPv4 Implement NAT services on the edge router to provide IPv4 address scalability.
- WAN Concepts Explain how WAN access technologies can be used to satisfy business requirements.
- VPN and IPsec Concepts Explain how VPNs and IPsec are used to secure site-to-site and remote access connectivity.
- QoS Concepts Explain how networking devices implement QoS.
- Network Management Implement network management protocols to monitor the network.
- Network Design Explain the characteristics of scalable network architectures.
- Network Troubleshooting Troubleshoot enterprise networks.
- Network Virtualization Explain the purpose and characteristics of network virtualization.
- Network Automation Explain how network automation is enabled through RESTful APIs and configuration management