Implementing and Oper. Enterprise Network Core Technologies

Course code: ENCOR

The goal of this course is to develop the core networking skills needed to configure, operate, troubleshoot and manage Enterprise wired and wireless networks. It also requires you to understand and implement security principles within the Enterprise network and introduces you to overlay network design by using solutions like SD-Access and SD-WAN. The course also lays focus on implementing automation and programmability in Enterprise networks.

Who is the course for

The goal of this course is to develop the core networking skills needed to configure, operate, troubleshoot and manage Enterprise wired and wireless networks.

What we teach you

It requires you to understand and implement security principles within the Enterprise network and introduces you to overlay network design by using solutions like SD-Access and SD-WAN. The course also lays focus on implementing automation and programmability in Enterprise networks.

Required skills

Implementation of Enterprise LAN networks. Basic understanding of Enterprise routing and wireless connectivity "

Basic understanding of Python scripting

Teaching materials

Course material is provided in electronic format.

Course outline

- Cisco Enterprise Architecture Model
- Campus LAN Design Fundamentals
- Understanding Cisco Switching Paths
- Implementing Campus LAN Connectivity o VLANs, 802.1Q o InterVLAN Routing
- Bulding Redundant Switched Topology o Spanning-Tree o RSTP, MSTP
- Implementing Layer 2 Port Aggregation
- Understanding EIGRP
- Implementing OSPF
- Optimizing OSPF
- Exploring BGP
- Implementing Network Redundancy o FHRP o HSRP, VRRP
- Implementing NAT
- Introducing Virtualization Protocols and Techniques o GRE, VRF
- Understanding VPN
- Understanding Wireless Principles o Explain RF Principles o IEEE Standards, Antenna Characteristics o Examining Wireless Deployment Options o Enderstanding Wireless Roaming and Location Services o Examining Wireless AP Operation o Troubleshooting Wireless C;lient Connectivity
- Implementing Network Services o NTP, SNMP, IP SLA, NetFlow, EEM
- Using Network Analysis Tools o Ping, Traceroute, Debug o IP SLA o SPAN, RSPAN, ERSPAN
- Implementing Infrastructure Security o ACL o Control Plane Policing

3-day selfstudy:

- Introducing Multicast Protocols
- Introducing QoS
- Understanding Enterprise Network Security Architecture
- Exploring Automation and Assurance Using Cisco DNA Center

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- Examining Cisco SD-Access Solution
- Understanding Working Principles of the Cisco SD-WAN Solution
- Understanding the Basics of Python Programming
- Introducing Network Programmability Protocols

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