

Designing Cisco Network Service Architectures - On Demand (ARCH 3.0)

Modality: On Demand

Duration: 40 Hours

CLC: 8 Units

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About this course:

With the help of this course, you will learn the intermediate, conceptual, and detailed design of the infrastructure of the network that supports the solutions for the desired network over intelligent network services in order to get the effective scalability, performance, and availability.

Course objectives:

- Service Provider Managed VPNs
- WAN Resiliency Design
- Enterprise Managed VPNs
- SDN and APIC-EM
- Campus Edge and Connectivity to Partners
- Modular and Scalable Data Center Network
- Data Center Interconnections
- Multi-Tenant Data Center
- Data Center Traffic Flows
- Design QoS in the Enterprise Network
- Design Resilient Enterprise WAN
- Design an Enterprise IPv6 Solution
- Design Enterprise BGP Network with Internet Connectivity
- Design Enterprise Data Center Connectivity

Course Outline:

Enterprise Connectivity and High-Availability

- EIGRP OSPF
- IS-IS

BGP Design

- IBGP
- BGP Communities
- Load Sharing

Wide Area Network Design

- Service Provider Managed VPNs
- Enterprise Managed VPNs
- WAN Resiliency Design
- Campus Edge and Connectivity to Partners
- SDN and APIC-EM

Enterprise Data Center Integration

- Modular and Scalable Data Center Network
- Multi-Tenant Data Center
- Data Center Interconnections
- Data Center Traffic Flows
- SDN and APIC-DC

Designing Security Services

- Overview
- Designing Infrastructure Protection
- Firewall and IPS Solutions
- Network Access Control Solutions

Design QoS for Optimized User Experience

- Overview
- Recommended QoS Design Principles
- Campus QoS
- Data Center QoS
- WAN QoS
- MPLS VPN QoS
- IPSec VPN QoS

Transition to IPv6

- Deploying IPv6 Challenges

IP Multicast Design

- Defining MCAST Trees and Forwarding
- PIM Sparse Mode
- Rendezvous Point Distribution Solutions

- IP Multicast Security

Case Studies

- Case Study 1: Design Enterprise Connectivity
- Case Study 2: Design Enterprise BGP Network with Internet Connectivity
- Case Study 3 Design Resilient Enterprise WAN
- Case Study 4: Design Enterprise Data Center Connectivity
- Case Study 5: Design a Secure Network
- Case Study 6: Design QoS in the Enterprise Network
- Case Study 7: Design an Enterprise IPv6 Solution