

Designing Cisco Network Service Architectures

Duration: 5 Days Course Code: ARCH

Overview:

The Designing Cisco Network Service Architectures (ARCH) course enables learners to perform the conceptual, intermediate, and detailed design of a network infrastructure that supports desired network solutions over intelligent network services, in order to achieve effective performance, scalability, and availability. This course enables learners, by applying solid Cisco network solution models and recommended design practices, to provide viable, stable enterprise internetworking solutions.

The course presents concepts and examples that are necessary to design converged enterprise networks. Advanced network infrastructure technologies, such as virtual private networks (VPNs) and other security solutions, are also covered.

Target Audience:

This course is designed for: Individuals seeking the Cisco CCDP certification and those working toward the Cisco CCDE certification Presales and postsales network engineers that are involved in network design, planning, and implementation Network administrators and designers that are responsible for designing and implementing the enterprise network

Objectives:

- Upon completing this course, the learner will be able to meet these overall objectives:
- Introduce the Cisco Network Architectures for the Enterprise and explain how this concept addresses enterprise network needs for performance, scalability, and availability
- Describe how the Cisco Network Architectures for the Enterprise can be used as a framework for designing enterprise networks
- Create conceptual, intermediate, and detailed enterprise campus network designs
- Create conceptual, intermediate, and detailed enterprise data center design
- Create conceptual, intermediate, and detailed enterprise edge and remote infrastructure designs
- Create conceptual, intermediate, and detailed network service designs for security considerations
- Create conceptual, intermediate, and detailed VPN designs

Prerequisites:

To gain the prerequisite skills and knowledge, Cisco strongly recommends knowledge of the following courses:

- Interconnecting Cisco Network Devices Part 1 (ICND1)
- Interconnecting Cisco Network Devices Part 2 (ICND2)
- Designing for Cisco Internetwork Solutions (DESGN)
- Implementing Cisco IP Routing (ROUTE)
- Implementing Cisco IP Switched Networks (SWITCH)

Testing and Certification

Recommended as preparation for exam(s):

- 642-874 – Designing Cisco Network Service Architectures
- The ARCH course is part of the **Cisco Certified Design Professional CCDP** Certification

Content:

Cisco Network Architectures for the Enterprise

- Review of Cisco Network Architectures for the Enterprise
- Reviewing the Cisco PPDIOO Approach

Enterprise Campus Network Design

- Designing High Availability in the Enterprise Campus
- Layer 2 Design Recommendations
- Layer 3 Design Recommendations
- Designing the Layer 2-to-Layer 3 Boundary
- Describing Enterprise Network Virtualization Technologies
- Infrastructure Services Considerations

Advanced Addressing and Routing Design

- Advanced Addressing Design
- Advanced Routing Design
- Scalable EIGRP Design
- Scalable OSPF Design
- Scalable BGP Design

Advanced WAN Services Design Considerations

- Optical Technologies for WANs
- Using Metro Ethernet, VPLS, and MPLS VPN Technologies
- Advanced WAN Service Implementations

Enterprise Data Center Design

- Core and Aggregation Layer Design
- Access Layer Design
- Scaling the Data Center Architecture
- Spanning-Tree Sizing and High Availability

E-Commerce Module Design

- Common Component Designs for the E-Commerce Module
- Integrated E-Commerce Designs

SAN Design Considerations

- Identifying SAN Components and Technologies
- SAN and SAN Extension Design
- Integrated Fabric Designs Using Cisco Nexus Technology

Security Services Design

- Firewall Design Considerations
- Network Admission Control Design
- Intrusion Detection and Prevention Designs

IPsec and SSL VPN Design

- Remote Access VPN Design
- Site-to-Site VPN Design
- IPsec VPN Technologies
- VPN Management and Scaling

IP Multicast Design

- IP Multicast Overview
- PIM and RP Considerations
- IP Multicast Security

Network Management Capabilities with Cisco IOS Software

- Embedded Management Capabilities
- NetFlow Considerations
- NBAR Considerations
- IP SLA Considerations

Further Information:

For More information, or to book your course, please call us on +254 713 027 191

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