Learning Services

Cisco Training on Demand

Designing Cisco Network Service Architectures (ARCH)

Overview

Designing Cisco® Network Service Architectures (ARCH) Version 3.0 is a Cisco Training on Demand course. It enables you to perform the conceptual, intermediate, and detailed design of a network infrastructure that supports desired network solutions over intelligent network services to achieve effective performance, scalability, and availability. It also enables you to provide viable, stable enterprise internetworking solutions by applying solid Cisco network solution models and recommended design practices.

By building on the Designing for Cisco Internetwork Solutions (DESGN) Version 3.0 course, you learn additional aspects of modular campus design, advanced addressing and routing designs, WAN service designs, enterprise data center, and security designs.

Interested in purchasing this course in volume at discounts for your company? Contact ctod-sales@cisco.com.

Duration

The ARCH Training on Demand is a self-paced course based on the 5-day instructor-led training version. It consists of 40 sections of instructor video and text totaling more than 28 hours of instruction along with interactive activities, 7 hands-on lab exercises, content review questions, and challenge questions.

Target Audience

This course is designed for network engineers and those preparing for the 300-320 ARCH exam.
Objectives
After completing this course, you should be able to:

- Design enterprise connectivity and high availability
- Design enterprise Border Gateway Protocol (BGP) and WAN connectivity
- Design enterprise data center integration and security services in an enterprise network
- Design quality of service (QoS) for optimized user experience
- Design enterprise transition to IPv6 and multicast network

Course Prerequisites
The knowledge and skills recommended before attending this course are:

- Internetworking technologies, Cisco products, and Cisco IOS® features
- CCNA® level of knowledge
- Completed Designing for Cisco Internetwork Solutions (DESGN) course or have equivalent knowledge
- Completed Implementing Cisco IP Switched Networks (SWITCH) course or have equivalent knowledge
- Completed Implementing Cisco IP Routing (ROUTE) course or have equivalent knowledge

Course Outline
- Section 1: Designing EIGRP
- Section 2: Designing OSPF
- Section 3: Designing IS-IS
- Section 4: Design Enterprise Connectivity (Paper Lab 1)
- Section 5: Designing IBGP Sessions
- Section 6: Designing BGP Communities
- Section 7: Load Sharing
- Section 8: Design an Enterprise BGP Network with Internet Connectivity (Paper Lab 2)
- Section 9: Designing Service Provider-Managed VPNs
- Section 10: Designing Enterprise-Managed VPNs
- Section 11: Designing WAN Resiliency
- Section 12: Designing the Campus Edge and Connectivity to Partners
- Section 13: Designing SDN and APIC-EM
- Section 14: Design a Resilient Enterprise WAN (Paper Lab 3)
- Section 15: Designing a Modular and Scalable Data Center Network
- Section 16: Designing a Multitenant Data Center
- Section 17: Designing Data Center Interconnections
- Section 18: Designing Data Center Traffic Flows
- Section 19: Designing SDN and ACI Data Center
- Section 20: Designing Enterprise Data Center Connectivity (Paper Lab 4)
Labs Outline

This course contains seven paper lab exercises.

Figure 1. Topology for All Labs in Designing Cisco Network Service Architectures
The labs included in this course are:

- Paper Lab 1: Design Enterprise Connectivity
- Paper Lab 2: Design Enterprise BGP Network with Internet Connectivity
- Paper Lab 3: Design Resilient Enterprise WAN
- Paper Lab 4: Design Enterprise Data Center Connectivity
- Paper Lab 5: Design Secure Enterprise Network
- Paper Lab 6: Design QoS in Enterprise Network
- Paper Lab 7: Design Enterprise IPv6 Network

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