Cisco - DESGN - Designing for Cisco Internetwork Solutions
v3.0

This course includes Cisco Training Exclusives
Accelerate your Cisco learning experience with complimentary access to the IT Skills Video On-Demand Library, Boson practice exams, Introduction to Cybersecurity digital learning course, course recordings, IT Resource Library, and digital courseware.

In this course, you will learn how to design a strong and effective network as you prepare for the Cisco Certified Design Associate (CCDA) certification. Our enhancements to Cisco's authorized content, combined with case-study practice and our exclusive exam practice homework, will prepare you for the exam in only five days.

Skills Gained

- How to identify designed requirements and characterize (baseline) the existing network
- Principles of network design and the guidelines for building a network design solution
- How the Enterprise Composite Network model simplifies the complexity of today's networks
- Design an Enterprise Campus in a hierarchical modular fashion using Cisco Borderless Networks and modular design
- Design Enterprise Campus and Enterprise Edge networks
- Select the appropriate Network Management Solution
- Design the WAN and branch office
- Design a network addressing plan for IPv4 and IPv6
- Select optimal routing protocols for the network
- Design a modern data center using Cisco and industry best practices
- Evaluate security solutions for the network
- Design Voice, Video, and Collaboration solutions
- Design a wireless solution using lightweight access points and the Cisco Wireless LAN Controller
- Understand the role of software defined networks in a design
- All topics on the CCDA certification exam
- Test-taking tips and techniques

Who Can Benefit
Prerequisites

- CCNA certification is highly recommended
- Familiarity with basic internetworking technologies such as LAN, WAN, bridging, switching, protocols, and network management

Course Details

1. Applying a Methodology to Network Design

- PPDIOO
- Identifying Design Requirements
- Characterizing the Existing Network
- Using the Top-Down Approach
- Implementing the Design Methodology

2. Network Design Objectives

- Designing the Network Hierarchy
- Modular Approach to Network Design
- Infrastructure Services
- Network Management Protocols and Features

3. Campus and Data Center Design Considerations

- Campus Design Methodology
- Layer 2
- Layer 3
- High Availability

4. Enterprise Network Design

- Traffic and Interconnection
- Security
- Edge Connectivity
- WAN Design
- Branch Design
- Data Center Design
5. Internal Routing and Connecting to the Internet

- Routing Protocol Considerations
- Expanding EIGRP
- Expanding OSPF
- Introducing IS-IS
- Expanding IS-IS
- Using BGP

6. Expanding the Existing Network

- QoS
- Wireless
- Integrating Collaboration

7. IP Addressing Design

- Concepts
- Addressing Plan for IPv4
- IPv6 Addressing
- Supporting IP Addressing

8. Introduction to Software-Defined Networking

- Need
- Definition
- Flavors

Case Studies:

Case Study 1: Ask the Right Questions

Case Study 2: Design a Branch LAN

Case Study 3: Branch Connections to Headquarters

Case Study 4: Branch Routing

Case Study 5: Design Support for Wireless and Collaboration

Case Study 6: Designing the IPv4 Addressing Plan

Case Study 7: Designing the IPv6 Addressing Plan