

DESIGNING FOR CISCO INTERNETWORK SOLUTION (CI-DESGN 3.0)

Temario

This is an instructor-led course designed to provide students with the knowledge and skills required to achieve associate level competency in network design. This is a structured and modular approach to designing networks that are scalable and resilient with well-defined failure domains. The course discusses routing and switching, the design of Campus and Enterprise networks in detail. Data center, wireless networking, and real-time traffic infrastructure are introduced and their effects on the core network are discussed from the design perspective

Pre-requisitos

It is strongly recommended, but not required, that students have the following knowledge and skills:

- A Cisco CCNA Routing and Switching certification and practical experience with deploying and operating networks based on Cisco network devices and Cisco IOS software
- Implementing Cisco Wireless Network Fundamentals (WIFUND) level knowledge of wireless topics
- Complete the Implementing Cisco IP Switched Networks (SWITCH) course

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This course is intended for pre-sales and post-sales network engineers involved in network design, planning and implementation. As well as individuals looking to attain the Cisco Certified Design Associate (CCDA) certification or the Cisco Certified Design Professional (CCDP) certification.

Objetivos del curso

Upon completing this course, you will be able to meet these objectives:

- Describe and apply network design methodologies
- Describe and apply network design concepts of modularity and hierarchy
- Design a resilient and scalable Campus network
- Design a resilient and scalable connectivity between parts of your Enterprise network
- Design connectivity to the Internet and internal routing for your network
- Integrate collaboration and wireless infrastructure into your core network
- Create scalable IPv4 and IPv6 addressing
- Describe what are software defined networks and describe example solutions

Contenido

Design Methodologies

- Design Life Cycle
- Characterizing the Existing Network
- Top-Down Approach

Network Design Objectives

- Building a Modular Network
- Applying Modularity: Hierarchy in a Network
- Applying Modularity: Virtualization Overview
- Challenge 1: Ask the Right Questions

Campus Network Design

- Layer 2/Layer 3 Demarcation
- Layer 2 Design Considerations
- High Availability Considerations
- Layer 3 Design Considerations
- Traffic and Interconnections
- Challenge 2: Design Branch's LAN

Enterprise Network Design

- Designing a Secure Network
- Edge Connectivity Design
- Wan Design
- Branch Design
- Connecting to the Data Center
- Challenge 3: Design Branch's Connections to the HQ

Design of Internal Routing and Connecting to the Internet

- Routing Protocol Considerations
- Expanding EIGRP Design
- Expanding OSPF Design
- Introducing IS-IS
- Expanding IS-IS Design
- Using BGP to Connect to the Internet
- Challenge 4: Design Branch's Routing

Expanding the Existing Network

- Understanding Quality of Service
- Supporting Wireless Access
- Integrating Collaboration
- Challenge 5: Design Support for Wireless and Collaboration

IP Addressing Design

- Concepts of Good IP Addressing
- Creating an Addressing Plan for IPv4
- IPv6 Addressing

- Supporting IP Addressing
- Challenge 6: Design IPv4 Addressing Plan
- Challenge 7: Design IPv6 Addressing Plan

Introduction to Software Defined Networks

- SDN Overview