Designing for Cisco Internetwork Solutions

Duration: 5 Days   Course Code: DESGN   Version: 3.0   Delivery Method: Virtual Learning

Overview:

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.

Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

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.

Objectives:

- **After you complete this course you will be able to:**

- 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

Prerequisites:

Delegates should meet the following prerequisites:

- ICND1 is now required to achieve the CCDA certification.
- It is recommended that delegates have attended their CCNP in Routing and Switching before starting the design curriculum.

Testing and Certification

Recommended as preparation for exam(s):

- 200-310 **DESGN -** Designing for Cisco Internetwork Solutions
This exam along with the ICND1 exam (100-101) is required for the Cisco Certified Design Associate Certification

Follow-on-Courses:

The following courses are recommended for further study:

- **ARCH** - Designing Cisco Network Architectures

This course is required for those students looking to achieve the Cisco Certified Design Professional (CCDP) Certification.

Content:

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

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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