Interconnecting Cisco Networking Devices Part 1

Duration: 5 Days **Course Code: ICND1**

Overview:

This course focuses on providing the skills and knowledge required to install, operate, configure, and verify a basic IPv4 and IPv6 network,including configuring a LAN switch, configuring an IP router, connecting to a WAN, and identifying basic security threats. At the end of this course students should be able to complete the configuration, implementation and troubleshooting of a small branch network under supervision. test

Target Audience:

This course is designed for:Network engineers and administrators who will install, operate and troubleshoot a small branch office Enterprise network. This is an entry level course and is ideal for those individuals new to networking andlooking to start their Cisco Career Certification accreditation.

Objectives:

- Upon completing this course, the learner will be able to meet these overall objectives:
- Describe network fundamentals and build simple LANs
- Establish Internet connectivity
- Manage network device security
- Expand small- to medium-sized networks with WAN connectivity
- Describe IPv6 basics

Prerequisites:

The knowledge and skills that a learner must have before attending this course are as follows:

- Basic Windows navigation and keyboard literacy skills
- Basic Internet usage skills
- Basic IP addressing knowledge

Testing and Certification

Recommended as preparation for:

- **100-101 - ICND1** Introduction to Cisco Network Devices Part 1

OR

- **200-120** - **CCNA** - This is a composite exam consisting of both ICND1 & ICND2

Note: Passing the ICND1 exam (100-101) results in the award of the Cisco Certified Entry Network Technician (CCENT) certification. Students taking the composite exam will only be awarded the CCNA Routing and Switching Certification , they will not be awarded the CCENT certification.

Follow-on-Courses:

The following courses are recommended for further study:

- ICND2 - Interconnecting Cisco Network Devices Part 2- Required to gain CCNA Routing and Switching Certification
- DESGN - Designing for Cisco Internetwork Solutions
- IINS - Implementing Cisco IOS Network Security- Required to gain CCNA Security Certification.
- IUWNE - Implementing Unified Wireless Networking Essentials- Required to gain CCNA Wireless Certification.
- ICOMM - Introducing Cisco Voice and Unified Communications Administration- Required to gain CCNA Voice Certification.
- SSPO - Supporting Cisco Service Provider IP NGN Operations - Required to gain CCNA SP Ops Certification.

Content:

Building a Simple Network

- Exploring the Functions of Networking
- Understanding the Host-to-Host Communications Model
- Introducing LANs
- Operating Cisco IOS Software
- Starting a Switch
- Understanding Ethernet and Switch Operation
- Troublshooting Common Swith Media Issues

Establishing Internet Connectivity

- Understanding the TCP/IP Internet Layer
- Understanding IP Addressing and Subnets
- Understanding the TCP/IP Transport Layer
- Exploring the Functions of Routing
- Configuring a Cisco Router
- Exploring the Packet Delivery Process
- Enabling Static Routing
- Managing Traffic Using ACLs
- Enabling Internet Connectivity

Managing Network Device Security

- Securing Administrative Access
- Implementing Device Hardening
- Implementing Traffic Filtering with ACLs

Building a Medium-Sized Network

- Implementing VLANs and Trunks
- Routing between VLANs
- Using a Cisco Network Device as a DHCP Server
- Introducing WAN Technologies
- Introducing Dynamic Routing Protocols
- Implementing OSPF

Introducing IPv6

- Introducing Basic IPv6
- Understanding IPv6
- Configuring IPv6 Routing

Additional Information:

Recertification
CCENT certifications are valid for three years. To recertify, pass either the ICND1 or ICND2 exam, or pass the current CCNA Routing and Switching exam, or pass a CCNA Concentration exam (wireless, security, voice), or pass any 642-XXX professional level or Cisco Specialist exam (excluding Sales Specialist exams), or pass a current CCIE or CCDE written exam.

Further Information:

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

training@clclearningafrica.com

www.clclearningafrica

Computer Learning Centre 2nd Floor Museum Hill Centre, Muthithi Road, Westlands, Nairobi, Kenya

Designing for Cisco Internetwork Solutions

Duration: 5 Days Course Code: DESGN

Overview:

The Designing for Cisco Internetwork Solutions (DESGN) course will enable learners to gather customer internetworking requirements, identify solutions, and design the network infrastructure and elements to ensure the basic functionality of the proposed solutions. The purpose of this course is to provide learners with the knowledge and skills to achieve associate-level competency in network design. The DESGN course is the first course in a design curriculum that supports the design certification track. The course focuses on the technology and methods currently available.

Target Audience:

This course is designed for:Individuals seeking the Cisco CCDA certification Individuals seeking the Cisco CCDP certification Presales and postsales network engineers who are involved in enterprise network design, planning, and implementation

Objectives:

- Upon completing this course, the learner will be able to meet these overall objectives:
- Discuss methodology in network design
- Describe how to structure and modularize the network design using the Cisco Network Architectures for the Enterprise
- Design the enterprise campus, and describe the architectural approach to the data center and virtualization market
- Design the enterprise edge and remote modules as needed
- Design a network addressing plan and select suitable routing protocols for a given network design
- Evaluate security solutions for the network
- Discuss voice and video networking considerations in the enterprise network design
- Recommend a design for a basic wireless solution

Prerequisites:

-
- CCENT, CCNA Routing and Switching or any Cisco CCIE certification

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

- Interconnecting Cisco Network Devices Part 1 (ICND1)

Testing and Certification

Recommended as preparation for exam:

- 640-864 - Designing for Cisco Internetwork Solutions

The DESGN course is part of the **Cisco Certified Design Associate (CCDA)** certification.

To achieve CCDA certification, you have to pass the CCENT exam (100-101 ICND1)as a pre-requisite.

Follow-on-Courses:

- ROUTE - Implementing Cisco IP Routing
- ARCH- Designing Cisco Network Service Architectures

These courses are all part of the **Cisco Certified Design Professional (CCDP)** Certification

Content:

Network Design Methodology Overview

- Understanding the Network Architectures for the Enterprise
- Identifying Design Requirements
- Characterizing the Existing Network and Sites
- Using a Top-Down Approach to Network Design

Structuring and Modularizing the Network

- Designing the Network Hierarchy
- Using a Modular Approach in Network Design
- Supporting Services on Borderless Networks
- Identifying Network Management Protocols and Features

Designing Basic Campus and Data Center Networks

- Describing Campus Design Considerations
- Designing the Campus Infrastructure Module
- Describing Enterprise Data Center Considerations
- Describing Enterprise Network Virtualization Tools

Designing Remote Connectivity

- Identifying WAN Technology Considerations
- Designing the Enterprise WAN
- Designing the Enterprise Branch

Designing IP Addressing and Selecting Routing Protocols

- Designing IPv4 Addressing
- Designing IPv6 Addressing
- Reviewing Enterprise Routing Protocols
- Designing a Routing Protocol Deployment

Evaluating Security Solutions for the Network

- Defining Network Security
- Understanding the Cisco SAFE Approach
- Selecting Network Security Solutions

Identifying Voice and Video Networking Considerations

- Integrating Voice and Video Architectures
- Identifying the Requirements of Voice and Video Technologies

Identifying Design Considerations for Basic Wireless Networking

- Cisco Unified Wireless Network Review
- Wireless Network Controller Technology
- Designing Wireless Networks Using Controllers

Further Information:

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

training@clclearningafrica.com

www.clclearningafrica.com

Computer Learning Centre 2nd Floor Museum Hill Centre, Muthithi Road, Westlands, Nairobi, Kenya