CCNA Boot Camp

Introduzione

Is an instructor-led boot camp that provides students with the knowledge and skills necessary to install, operate, and troubleshoot a small to medium-sized network, including connecting to a WAN and implementing network security. The course will provide students with the skills necessary to pass the CCNA certification exam.

Agenda

- Course Introduction
- Building a Simple Network
    - Exploring the Functions of Networking
    - Securing the Network
    - Understanding the Host-to-Host Communications Model
    - Understanding the TCP/IP Internet Layer
    - Understanding the TCP/IP Transport Layer
    - Exploring the Packet Delivery Process
    - Understanding Ethernet
    - Connecting to an Ethernet LAN
- Switching
    - Understanding the Challenges of Shared LANs
    - Solving Network Challenges with Switched LAN Technology
    - Exploring the Packet Delivery Process
    - Operating Cisco IOS Software
    - Starting a Switch
    - Securing the Switch
    - Maximizing the Benefits of Switching
    - Implementing VLANs and Trunks
    - Improving Performance with Spanning Tree
    - Routing Between VLANs
    - Troubleshooting Switched Networks
- Wireless LANs
    - Exploring Wireless Networking
    - Understanding WLAN Security
    - Implementing a WLAN
- LAN Connections
    - Understanding Binary Basics
    - Constructing a Network Addressing Scheme
    - Exploring the Packet Delivery Process
    - Starting a Cisco Router
    - Configuring a Cisco Router
    - Understanding Cisco Router Security
    - Using Cisco SDM
    - Using a Cisco Router as a DHCP Server
- WAN Connections
    - Understanding WAN Technologies
    - Enabling the Internet Connection
    - Introducing VPN Solutions
    - Configuring Serial Encapsulation
    - Enabling Static Routing
- Network Environment Management
    - Accessing Remote Devices
    - Discovering Neighbors on the Network
    - Managing Cisco Router Startup and Configuration
    - Managing Cisco Devices
- Medium-Sized Routed Network Construction
    - Exploring the Functions of Routing
    - Enabling RIP
    - Implementing VLSM

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- Single-Area OSPF Implementation
  - Implementing OSPF
  - Troubleshooting OSPF
- EIGRP Implementation
  - Implementing EIGRP
  - Troubleshooting EIGRP
- Access Control Lists
  - Introducing ACL Operation
  - Configuring and Troubleshooting ACLs
- Address Space Management
  - Scaling the Network with NAT and PAT
  - Transitioning to IPv6
- LAN Extension into a WAN with Frame Relay
  - Establishing a WAN Connection with Frame Relay
  - Troubleshooting Frame Relay WANs

Metodologie didattiche

Nel Boot camp si alternano lezioni teoriche a laboratori pratici. Sono affrontate e spiegate con chiarezza i principi del networking, routing, switching, security e IPv6, con laboratori su CLI di Router e Switch Cisco, connessi in reti LAN e WAN.
L'obiettivo è fornire una adeguata preparazione teorico/pratica per affrontare la certificazione CCNA (*Cisco Certified Network Associate*) esame 640-802. Il Boot camp è un periodo di formazione intensivo di 5 giorni che condensa i corsi ICND1 e ICND2 definiti nel percorso di certificazione ufficiale di Cisco Systems.

Obiettivi

Upon completing this course, the learner will be able to meet these overall objectives:
- Describe how networks function, identifying major components, function of network components, and the OSI reference model
- Describe issues related to increasing traffic on an Ethernet LAN and expand the switched network from a small LAN to a medium-sized LAN with multiple switches supporting VLANs, trunking, and spanning tree
- Describe the reasons for extending the reach of a LAN and the methods that can be used, with a focus on RF wireless access
- Describe the reasons for connecting networks and connecting multiple IP subnets with routers
- Configure and verify a Cisco router for WAN connections with HDLC and PPP encapsulation, PAT, static routing, and describe the components that make up a VPN solution
- Use the command-line interface to discover neighbors on the network and manage the router startup and configuration
- Describe routing concepts as they apply to a medium-sized network, discuss dynamic routing with distance vector and link-state routing protocols, and configure RIP
- Configure, verify, and troubleshoot single-area OSPF
- Configure, verify, and troubleshoot EIGRP
- Determine how to apply ACLs based on network requirements, and to configure, verify, and troubleshoot ACLs
- Describe when to use NAT and PAT on a medium-sized network, how to configure NAT and PAT, and explain IPv6 addressing and configuration on a Cisco router
- Configure, verify, and troubleshoot Frame Relay

Destinatari

The primary audience for this course is as follows: Network administrators, Network engineers, Network managers, Systems engineers.

Prerequisiti

To attend the Boot Camp, you need to have at least 1 year in the field as a Network Administrator and a good basic understanding of TCP/IP Fundamentals. You must have some hands-on experience with setting up TCP/IP Networks prior to attending this accelerated learning experience.

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