Systems & Network Training

Implementing and Administering Cisco Solutions

A 5 day Hands on training course

Save on expenses. This course is also available on your premises.

Description

The Implementing and Administering Cisco Solutions (CCNA) course gives you a broad range of fundamental knowledge for all IT careers. Through a combination of lecture, hands-on labs, and self-study, you will learn how to install, operate, configure, and verify basic IPv4 and IPv6 networks. The course covers configuring network components such as switches, routers, and wireless LAN controllers; managing network devices; and identifying basic security threats. It also gives a foundation in network programmability, and software-defined networking.

Key outcomes

By the end of the course delegates will be able to:

- ✔ Install, configure, and operate a small to medium sized network
- ✔ Gain a foundation in the essentials of networking, security, and automation
- ✔ Prepare for the 200-301 CCNA exam, which earns CCNA certification

Training approach

This structured course uses Instructor Led Training to provide the best possible learning experience. Small class sizes ensure students benefit from our engaging and interactive style of teaching with delegates encouraged to ask questions throughout the course. Quizzes follow each major section allowing checking of learning. Hands on sessions are used throughout to allow delegates to consolidate their new skills.

Details

Who will benefit?
Network support help desk technicians involved in the basic installation, operation, and verification of Cisco networks. Anyone seeking CCNA certification.

Prerequisites
Introduction to datacoms & networking

Duration: 5 days

Overall rating: ★★★★★

Generic training	Small class sizes	Hands On training	Our courseware	Customise your course
Generic training complements product specific courses covering the complete picture of all relevant devices including the protocols "on the wire".	We limit our maximum class size to 8 delegates; often we have less than this. This ensures optimal interactivity between delegates and instructor.	The majority of our courses use hands on sessions to reinforce the theory.	We write our own courses; courseware does not just consist of slides and our slides are diagrams not bullet point text.	Please contact us if you would like a course to be customised to meet your specific requirements. Have the course your way.
"*Friendly environment with expert teaching that teaches the why before the how."* G.C. Fasthosts	*"Excellent course. The small class size was a great benefit..."* M.B. IBM	*"Not many courses have practice added to it. Normally just the theoretical stuff is covered."* J.W. Vodafone	*"Comprehensive materials that made the course easy to follow and will be used as a reference point."* V.B. Rockwell Collins	*"I was very impressed by the combination of practical and theory. Very informative. Friendly approachable environment, lots of hands on."* S.R. Qinetiq

Implementing and Administering Cisco Solutions

Course objectives

After taking this course, you should be able to:
Identify the components of a computer network and describe their basic characteristics,
Understand the model of host-to-host communication,
Describe the Cisco IOS® software,
Describe LANs and the role of switches within LANs,
Describe Ethernet and describe the operation of switches
Install a switch and perform the initial configuration,
Describe the TCP/IP Internet layer, IPv4, its addressing scheme, and subnetting,
Describe the TCP/IP Transport and Application layers
Explore functions of routing,
Implement basic configuration on a Cisco router,
Explain host-to-host comms across switches and routers,
Identify and resolve common switched network issues and common problems associated with IPv4 addressing,
Describe IPv6 main features and addresses, and configure and verify basic IPv6 connectivity.
Describe static routing,
Describe, implement, and verify VLANs and trunks,
Describe inter VLAN routing,
Explain the basics of dynamic routing protocols and describe components and terms of OSPF,
Explain how STP and RSTP work,
Configure link aggregation using EtherChannel,
Describe the purpose of Layer 3 redundancy protocols,
Describe basic WAN and VPN concepts,
Describe the operation of access control lists (ACLs) and their applications in the network,
Configure Internet access using DHCP clients and explain and configure NAT on Cisco routers, Describe basic QoS concepts,
Describe the concepts of wireless networks, which types of wireless networks can be built, and how to use Wireless LAN Controllers (WLCs),
Describe network and device architectures, introduce virtualization, network programmability and SDN and describe smart network management solutions such as Cisco DNA Center™, SD-Access, and SD-WAN,
Configure basic IOS system monitoring tools,
Describe the management of Cisco devices,
Describe the current security threat landscape,
Describe threat defence technologies, Implement a basic security configuration of the device management plane
Implement basic steps to harden network devices.

Detailed course outline

Exploring the Functions of Networking,
The Host-to-Host Communications Model,
Operating Cisco IOS Software,
Introducing LANs,
Exploring the TCP/IP Link Layer,
Starting a Switch,
The TCP/IP IP layer, IPv4 Addressing, and Subnets,
The TCP/IP Transport Layer and Application Layer,
Exploring the Functions of Routing,
Configuring a Cisco Router,
Exploring the Packet Delivery Process,
Troubleshooting a Simple Network,
Introducing Basic IPv6,
Configuring Static Routing,
Implementing VLANs and Trunks,
Routing Between VLANs,
Introducing OSPF,
Redundant Switched Topologies with EtherChannel,
Explaining Basics of ACL,
Enabling Internet Connectivity,
Explaining the Evolution of Intelligent Networks,
Introducing System Monitoring,
Managing Cisco Devices,
Securing Administrative Access,
Implementing Device Hardening.

Self-Study:
Building Redundant Switched Topologies
Exploring Layer 3 Redundancy,
Introducing WAN Technologies,
Introducing QoS,
Explaining Wireless Fundamentals,
Introducing Architectures and Virtualization,
Examining the Security Threat Landscape,
Threat Defense Technologies