



vILT

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training

# Cisco® Implementing and Administering Cisco® Solutions v1.0 (CCNA)

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## Introduction:

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This course gives you a broad range of fundamental knowledge for all IT careers. You will learn how to install, operate, configure, and verify a basic IPv4 and IPv6 network. The course covers configuring network components such as switches, routers, and Wireless LAN Controllers; managing network devices; and identifying basic security threats. The course also gives you a foundation in network programmability, automation, and software-defined networking. This course helps you prepare to take the 200-301 Cisco Certified Network Associate (CCNA) exam to earn CCNA certification.

This course consists of 5 days of instructor-led training with hands-on lab practice, plus the equivalent of 3 days of self-paced material.

This course includes additional lab access post class for up to 90 days or 60 hours, whichever is first.

## Objectives:

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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 features and functions of the Cisco IOS Software

Describe LANs and the role of switches within LANs

Describe Ethernet as the network access layer of TCP/IP 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 layer and Application layer

Explore functions of routing

Implement basic configuration on a Cisco router

Explain host-to-host communications across switches and routers

Identify and resolve common switched network issues and common problems associated with IPv4 addressing

Describe IPv6 main features, addresses and configure and verify basic IPv6 connectivity  
Describe the operation, benefits, and limitations of static routing  
Describe, implement and verify VLANs and trunks  
Describe the application and configuration of 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 ACLs and their applications in the network  
Configure internet access using DHCP clients and explain and configure NAT on Cisco routers  
Describe the basic QoS concepts  
Describe the concepts of wireless networks, which types of wireless networks can be built and how to use WLC  
Describe network and device architectures and introduce virtualization  
Introduce the concept of network programmability and SDN and describe the smart network management solutions like 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 defense technologies  
Implement a basic security configuration of the device management plane  
Implement basic steps to harden network devices

## **Course Outline:**

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### **1 – EXPLORING THE FUNCTIONS OF NETWORKING**

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### **2 – INTRODUCING THE HOST-TO-HOST COMMUNICATIONS MODEL**

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### **3 – OPERATING CISCO IOS SOFTWARE**

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### **4 – INTRODUCING LANS**

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### **5 – EXPLORING THE TCP/IP LINK LAYER**

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### **6 – STARTING A SWITCH**

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### **7 – INTRODUCING THE TCP/IP INTERNET LAYER, IPV4 ADDRESSING, AND SUBNETS**

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### **8 – EXPLAINING THE TCP/IP TRANSPORT LAYER AND APPLICATION LAYER**

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**9 – EXPLORING THE FUNCTIONS OF ROUTING**

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**10 – CONFIGURING A CISCO ROUTER**

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**11 – EXPLORING THE PACKET DELIVERY PROCESS**

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**12 – TROUBLESHOOTING A SIMPLE NETWORK**

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**13 – INTRODUCING BASIC IPV6**

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**14 – CONFIGURING STATIC ROUTING**

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**15 – IMPLEMENTING VLANS AND TRUNKS**

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**16 – ROUTING BETWEEN VLANS**

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**17 – INTRODUCING OSPF**

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**18 – BUILDING REDUNDANT SWITCHED TOPOLOGIES**

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**19 – IMPROVING REDUNDANT SWITCHED TOPOLOGIES WITH  
ETHERCHANNEL**

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**20 – EXPLORING LAYER 3 REDUNDANCY**

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**21 – INTRODUCING WAN TECHNOLOGIES**

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**22 – EXPLAINING BASICS OF ACL**

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**23 – ENABLING INTERNET CONNECTIVITY**

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**24 – INTRODUCING QOS**

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**25 – EXPLAINING WIRELESS FUNDAMENTALS**

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**26 – INTRODUCING ARCHITECTURES AND VIRTUALIZATION**

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**27 – EXPLAINING THE EVOLUTION OF INTELLIGENT NETWORKS**

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**28 – INTRODUCING SYSTEM MONITORING**

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**29 – MANAGING CISCO DEVICES**

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## **30 – EXAMINING THE SECURITY THREAT LANDSCAPE**

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## **31 – IMPLEMENTING THREAT DEFENSE TECHNOLOGIES**

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## **32 – IMPLEMENTING DEVICE HARDENING**

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### **Enroll in this course**

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£4,195.00

### **Select a start date for your 5 Days course**

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- 2023-01-09 09:00:00\_2023-01-13 17:00:00
- 2023-02-06 09:00:00\_2023-02-10 17:00:00
- 2023-03-13 09:00:00\_2023-03-17 17:00:00
- 2023-04-17 09:00:00\_2023-04-21 17:00:00
- 2023-05-22 09:00:00\_2023-05-26 17:00:00
- 2023-06-26 09:00:00\_2023-06-30 17:00:00