INFOSEC Skills

LIVE BOOT CAMPS ▶

Get live, expert instruction from anywhere.

CCNA Boot Camp

Infosec's authorized CCNA Boot Camp helps you build your knowledge of networking and provides hands-on experience installing, configuring and operating network devices.

Course description

This innovative five-day boot camp is designed specifically for network engineers and administrators requiring full knowledge of Cisco router and switch configuration. You'll gain hands-on experience by completing a series of labs in our Networking Cyber Range. The labs provide practical experience in a networking and switching environment and prepare you for the simulation-based questions you'll find on the CCNA exam.

You will gain in-depth knowledge about network access, IP connectivity, IP services, and automation and programmability for Cisco networks. In addition, our expert instructors prepare you to pass the popular CCNA exam.

Who should attend

- » Network engineers
- » Network administrators
- » Systems administrators
- » System engineers
- » IT managers/directors
- » Anyone looking to improve their network skills

Boot camp at a glance

Certifications

✓ Cisco Certified Network Associate (CCNA)

Delivery methods

✓ Online
✓ In person
✓ Team onsite

Training duration

✓ Pre-study course
✓ 5-day boot camp
✓ 90-day extended access to all boot camp materials

The hands-on cybersecurity training platform that moves as fast as you do

Infosec Skills boot camps are engineered to match the way today's cybersecurity professionals prefer to learn. In addition to days of live training from an experienced pro, you'll get unlimited access to 100s of additional hands-on cybersecurity courses and cyber ranges to help you advance your skills before, during and after your boot camp. Your Infosec Skills access extends 90 days past your boot camp, so you can take additional time to prepare for your exam, or get a head start on your next certification goal.

Start training immediately

Prepare for your boot camp with immediate access to the Infosec Skills on-demand training library.

Learn by doing in the cyber range

Put what you've learned into practice with 100s of browser-based labs and hands-on projects.

Get unlimited custom practice exams

Uncover knowledge gaps with unlimited practice exams attempts and skill assessments.

700+ IT and security courses

Earn CPEs and build new skills with 100s of additional training courses.

What's included

- » Five days of expert, live CCNA training
- » Exam Pass Guarantee
- » Exam voucher
- » Unlimited practice exam attempts
- » 100% Satisfaction Guarantee
- » Free 90-day Infosec Skills subscription (access to 1,400+ additional courses and labs)
- » 90-day extended access to all boot camp video replays and materials
- » Onsite proctoring of exam
- » Pre-study learning path
- » Knowledge Transfer Guarantee

Prerequisites

Prior to attending the CCNA Boot Camp, you should be familiar with networking topics such as TCP/IP, IP configuration, peer-to-peer networking, subnetting, building a routing table and other network protocols, standards and architecture.

CCNA certification objectives

Upon the completion of this boot camp, you will know how to:

» Make appropriate decisions concerning implementation of hardware and configuration, based on ISR routers and switches running the Cisco iOS

» Proficiently administer Cisco routers

» Install, configure and maintain dependable, functional networks

» Properly identify protocols involving

» Cisco networking devices

» Troubleshoot general network and security issues

» Successfully operate routers and switched LAN networks

» Follow enterprise network design principles

» Understand routing protocols design considerations (OSPF and EIGRP)

Hands-on labs

Hundreds of exercises in over 30 hands-on labs prepare you for the most difficult part of the CCNA exam, the simulation questions. You'll build your networking skills and gain real-world experience you can carry over to your next job or project.

Learn from experts

We don't just have great instructors, our instructors have years of industry experience and are recognized as experts. We've helped tens of thousands of students like you get certified and advance their careers.

Skill up and get certified, guaranteed

Exam Pass Guarantee

If you don't pass your exam on the first attempt, get a second attempt for free. Includes the ability to re-sit the course for free for up to one year.

100% Satisfaction Guarantee

If you're not 100% satisfied with your training at the end of the first day, you may withdraw and enroll in a different online or in-person course.

Knowledge Transfer Guarantee

If an employee leaves within three months of obtaining certification, Infosec will train a different employee for free for up to one year.

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What our students are saying

We had exactly what was needed to prepare us for our exams. The instructor was great. You could tell he loves teaching and was able to keep your attention and get the class to understand the material. I would recommend him as a teacher for CCNA to anyone.

Daniel Knight
Hillphoenix

An excellent instructor that obviously knows the material by heart. He was always clear and concise in his explanations and would break it down if anyone in the class didn't quite get how something worked. He is by far one of my favorite instructors ever, even though I only spent seven days with him.

Chris Soule
Rocky Gap Resort

My instructor was excellent. He made sure that I not only knew the information in order to pass my exams. He took it upon himself to teach us real-world knowledge that is necessary to do my job today.

Jeffrey McGill
TIC Gums, Inc.

My CCNA instructor has thus far been the best I've had throughout my career (being in the military, that is a LOT of training). He was extremely knowledgeable on the material and was extremely skilled at teaching it.

Shawn Tierney
United States Air Force

CCNA Boot Camp details

Our instructors give you 100% of their time and dedication to ensure that your time is well spent. You receive an immersive experience with no distractions! The typical daily schedule is:

	Day 1	Day 2	Day 3	Day 4	Day 5
Morning session	Network fundamentals	Network access	IP connectivity	IP services	Automation and programmability
Afternoon session	Network fundamentals	Network access	IP connectivity	Security fundamentals	Exam prep Take CCNA 200-301 exam
Evening session	Optional group & individual study	Optional group & individual study	Optional group & individual study	Optional group & individual study	

Schedule may vary from class to class

Course Outline

Before your boot camp

Start learning now. You'll get immediate access to all the content in Infosec Skills, including an in-depth CCNA prep course, the moment you enroll. Prepare for your live boot camp, uncover your knowledge gaps and maximize your training experience.

CCNA (200-301)

Network fundamentals

» Role and function of network components
  » Routers
  » L2 and L3 switches
  » Next-generation firewalls and IPS
  » Access points
  » Controllers (Cisco DNA Center and WLC)
  » Endpoints
  » Servers

» Characteristics of network topology architectures
  » 2 tier
  » 3 tier
  » Spine-leaf
  » WAN
  » Small office/home office (SOHO)
  » On-premises and cloud
» Compare and contrast network topologies
» Physical interface and cabling types
  » Single-mode fiber, multimode fiber, copper
  » Connections (Ethernet shared media and point-to-point)
  » Concepts of PoE
» Interface and cable issues (collisions, errors, mismatch duplex, and/or speed)
» TCP and UDP
» Configuring and verifying IPv4 addressing and subnetting
» The need for private IPv4 addressing
» Configuring and verifying IPv6 addressing and prefix

- » IPv6 address types
  - » Global unicast
  - » Unique local
  - » Link local
  - » Anycast
  - » Multicast
  - » Modified EUI 64
- » Verifying IP parameters for client OS (Windows, Mac OS, Linux)
- » Wireless principles
  - » Nonoverlapping Wi-Fi channels
  - » SSID
  - » RF
  - » Encryption
- » Virtualization fundamentals (virtual machines)
- » Switching concepts
  - » MAC learning and aging
  - » Frame switching
  - » Frame flooding
  - » MAC address table

Network access

- » Configuring and verifying VLANs (normal range) spanning multiple switches
  - » Access ports (data and voice)
  - » Default VLAN
  - » Connectivity
- » Configuring and verifying interswitch connectivity
  - » Trunk ports
  - » 802.1Q
  - » Native VLAN
- » Configuring and verifying Layer 2 discovery protocols (Cisco Discovery Protocol and LLDP)
- » Configuring and verifying (Layer 2/ Layer 3) EtherChannel (LACP)
- » The need for and basic operations of
- » Rapid PVST+ Spanning Tree Protocol
  - » Root port, root bridge (primary/ secondary), and other port names
  - » Port states (forwarding/blocking)
  - » PortFast benefits

- » Cisco Wireless Architectures and AP modes
- » Physical infrastructure connections of WLAN
- » components (AP, WLC, access/ trunk ports, and LAG)
- » AP and WLC management access connections (Telnet,
- » SSH, HTTP, HTTPS, console and TACACS+/RADIUS)
- » Configuring the components of a wireless LAN access for client connectivity using GUI only such as WLAN creation, security settings, QoS profiles and advanced WLAN settings

IP connectivity

- » Components of routing table
  - » Routing protocol code
  - » Prefix
  - » Network mask
  - » Next hop
  - » Administrative distance
  - » Metric
  - » Gateway of last resort
- » Determining how a router makes a forwarding decision by default
  - » Longest match
  - » Administrative distance
  - » Routing protocol metric
- » Configuring and verifying IPv4 and IPv6 static routing
  - » Default route
  - » Network route
  - » Host route
  - » Floating static
- » Configuring and verifying single area OSPFv2
  - » Neighbor adjacencies
  - » Point-to-point
  - » Broadcast (DR/BDR selection)
  - » Router ID
- » The purpose of first hop redundancy pro**tocol**

IP services

» Configuring and verifying inside source
» NAT using static and pools
» Configuring and verifying NTP operating
    in a client and server mode
» Role of DHCP and DNS within the network
» Function of SNMP in network operations
» Use of syslog features including
    facilities and levels
» Configuring and verifying DHCP client and relay
» Understanding the forwarding per-hop behavior
    (PHB) for QoS such as classification, marking,
    queuing, congestion, policing, shaping
» Configuring network devices for
    remote access using SSH
» Capabilities and function of TFTP/
    FTP in the network

Security fundamentals

» Key security concepts (threats, vulnerabilities,
    exploits and mitigation techniques)
» Security program elements (user awareness,
    training and physical access control)
» Configuring device access control
    using local passwords
» Security password policies elements:
    management, complexity and password
    alternatives (multifactor authentication,
    certificates and biometrics)
» Remote access and site-to-site VPNs
» Configuring and verifying access control lists

» Configuring Layer 2 security features
    (DHCP snooping, dynamic ARP
    inspection and port security)
» Authentication, authorization and accounting
» Wireless security protocols
    (WPA, WPA2 and WPA3)
» Configuring WLAN using WPA2 PSK using the GUI

Automation and programmability

» How automation impacts network management
» Traditional networks vs. controller-
    based networking
» Controller-based and software defined
    architectures (overlay, underlay and fabric)
    » Separation of control plane and data plane
    » North-bound and south-bound APIs
» Traditional campus device management vs.
    Cisco DNA Center enabled device management
» Characteristics of REST-based APIs (CRUD,
    HTTP verbs and data encoding)
» Capabilities of configuration management
    mechanisms Puppet, Chef and Ansible
» Interpreting JSON encoded data

After your boot camp

Your Infosec Skills access extends 90 days past
your boot camp, so you can take additional time to
prepare for your exam, get a head start on your next
certification goal or start earning CPEs.

About Infosec

Infosec's mission is to put people at the center of cybersecurity. We help IT and security professionals advance their
careers with skills development and certifications while empowering all employees with security awareness and
phishing training to stay cyber-safe at work and home. Learn more at infosecinstitute.com.

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