

200-301: CCNA – Cisco Certified Network Associate

Configure and troubleshoot Cisco networks with confidence, and prepare for the CCNA 200-301 exam.

DURATION

5 days · 40 hours

LEVEL

Intermediate

CURRICULUM

15 modules · 9 labs

DELIVERY

Live online, Classroom,
Onsite, Corporate

Course overview

CCNA remains one of the most requested certifications for network engineers in India and the Gulf, because it proves you can actually build and fix the networks businesses run on. This five-day course combines clear explanations with configuration practice every day, and it is aligned to the CCNA 200-301 exam.

Day one covers network fundamentals: the role of routers, switches, firewalls and access points, cabling, TCP and UDP, IPv4 subnetting and IPv6 addressing. Day two is about network access, including VLANs, trunks, EtherChannel, Spanning Tree and wireless architectures. Day three focuses on IP connectivity: routing tables, static routes, single-area OSPF and first-hop redundancy. Day four covers IP services such as NAT, DHCP, DNS, NTP, SNMP, syslog and QoS, along with security fundamentals including ACLs, port security, VPN concepts and wireless security. Day five introduces automation and programmability, controller-based networking, REST APIs and JSON, and finishes with exam preparation.

You will spend a large part of each day at the command line. Labs include building a multi-VLAN campus switch block, configuring OSPF between routers, setting up NAT and DHCP, writing ACLs and port security, and troubleshooting broken topologies. By the end, common IOS commands become second nature.

This course is aligned to the CCNA 200-301 exam. Cisco can revise exam topics, so confirm the current version and pricing on the Cisco Learning Network before booking.

Highlights

- 40 hours of live, trainer-led sessions
- Covers all six CCNA exam topic areas
- Daily configuration labs on Cisco IOS
- Subnetting and OSPF practice until they feel routine
- Mock exam with question-by-question review

What's included

- Trainer with hands-on Cisco enterprise networking experience
- Plan aligned to the six CCNA topic areas
- Daily Cisco IOS configuration labs
- Subnetting drills and OSPF practice
- Troubleshooting challenges with broken topologies
- Automation and API introduction
- Mock exam with review
- Course completion certificate from Ace Skills Consulting

Who this course is for

Who should attend

- Aspiring and junior network engineers
- IT support engineers moving into networking
- System administrators who manage network devices
- Network+ holders moving to Cisco platforms
- Engineering graduates targeting infrastructure roles

Prerequisites

- Basic computer and IP networking knowledge
- Network+ level understanding is helpful but not required

Detailed curriculum — 5 days, 40 hours, 15 modules, 9 hands-on labs

Day 1 Network Fundamentals

8 hours

1.1 Network components

- Routers, switches and firewalls
- Topologies and architectures
- Access points and wireless controllers
- Cabling and interfaces

1.2 Protocols and addressing

- TCP vs UDP
- Private addressing
- IPv4 addressing and subnetting
- IPv6 addressing and types

LAB Subnetting drills and an addressing plan · 50 min

1.3 Cisco IOS basics

- CLI modes and navigation
- Saving and verifying configuration
- Basic device configuration

LAB Initial switch and router configuration · 40 min

Day 2 Network Access

8 hours

2.1 VLANs and trunking

- VLAN configuration
- Inter-VLAN routing
- 802.1Q trunks

LAB Build a multi-VLAN switch block with inter-VLAN routing · 60 min

2.2 Layer 2 resilience

- Rapid PVST+ operation
- EtherChannel with LACP
- Root bridge and port roles

LAB Configure EtherChannel and tune Spanning Tree · 40 min

2.3 Wireless

- Wireless LAN architectures
- Configuring a WLAN
- WLC and AP modes
- Management access connections

Day 3 IP Connectivity

8 hours

3.1 Routing fundamentals

- Routing table components
- Administrative distance and metrics
- Forwarding decisions

3.2 Static routing

- IPv4 and IPv6 static routes
- Default and floating static routes

LAB Configure static and floating static routes · 35 min

3.3 OSPF

- Single-area OSPFv2
- Router ID and DR/BDR
- Neighbour adjacencies
- Verification

LAB Configure and troubleshoot single-area OSPF · 60 min

3.4 First-hop redundancy

- Purpose of FHRP
- HSRP concepts

Day 4 IP Services and Security Fundamentals

8 hours

4.1 IP services

- NAT and PAT
- NTP, SNMP and syslog
- SSH and TFTP/FTP
- DHCP and DNS
- QoS concepts

LAB Configure NAT, DHCP and NTP · 45 min

4.2 Security fundamentals

- Threats and mitigation
- Standard and extended ACLs
- VPN and wireless security concepts
- Device access control and passwords
- Port security and DHCP snooping

LAB Write ACLs and enable port security · 45 min

Day 5 Automation, Programmability and Exam Readiness

8 hours

5.1 Automation and programmability

- Traditional vs controller-based networking
- REST APIs and JSON
- Software-defined architectures
- Configuration management tools overview

5.2 Troubleshooting

- Structured troubleshooting
- Layer 2 and Layer 3 faults

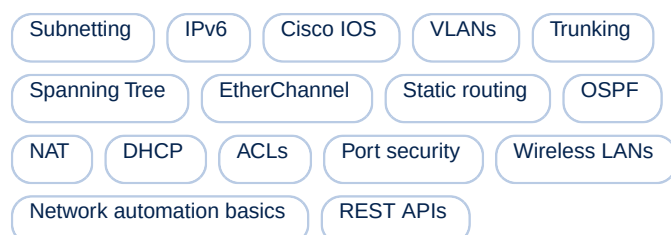
LAB Troubleshooting challenge: repair a broken campus network · 60 min

5.3 Exam readiness

- Exam strategy
- Mock exam and review

Skills and tools

Skills you will build



Tools used in class



Certification exam

This course is aligned to the exam below and prepares you for it. The exam itself is booked and taken with the vendor.

Exam	Cisco Certified Network Associate (CCNA)
Exam code	200-301
Duration	120 minutes
Delivery	Online proctored, Test centre
Validity	3 years
Official page	https://www.cisco.com/site/us/en/learn/training-certifications/certifications/enterprise/ccna/index.html

Exam skill areas covered

Network Fundamentals
IP Services Fundamentals
Security Fundamentals

Exam details are pending verification. Confirm the current exam code, format and fee on the official vendor page before booking.

Frequently asked questions

Do I need prior networking experience?

No formal experience is required, but basic IP networking knowledge helps. We start with fundamentals on day one.

Will I practise on real Cisco devices?

Labs run on Cisco simulation and emulation tools, which cover everything the exam requires and let you practise after class.

Is the exam fee included?

Only when the batch shows the "Exam voucher included" badge. Otherwise you book the exam directly with Cisco through Pearson VUE.

How long is CCNA valid?

Three years. You can renew by passing a qualifying exam or by earning Cisco continuing education credits.

Can you train our network team?

Yes. Request a corporate quote for a private online or onsite batch.

Book a batch or talk to an advisor

Course page: aceskillsconsulting.com/course/200-301-ccna · Email: info@aceskillsconsulting.com

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