



CCNA + Linux

7411464640

Eduinx.com

admissions@eduinx.com

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What is CCNA?

Cisco Certified Network Associate (CCNA) is Cisco's entry-level certification. It is for the candidates who want to enter the Information Technology (IT) and networking. CCNA certification forms the basis of your whole IT career.

If you want to excel in your career, start off right with CCNA. You can get beginner's jobs in networking through CCNA such as Network Associate, Help Desk Technician, etc.



What is Linux?

Linux is an open-source operating system kernel known for its stability, security, and efficiency. It serves as the basis for various free and open-source operating systems, providing a customizable platform for a wide range of devices.



Who we are?

Greetings from EDUINX, your entry point to an amazing education in the ever-changing field of information technology! At EDUINX, we are committed to equipping people with the knowledge and abilities necessary to succeed in the rapidly changing IT sector and to become industry-ready. Our extensive courses give a smooth transition into the domains of CCNA, Python, Cisco DevNet Associate, and TCP Deep Dive, all while equipping students with the knowledge and skills that the industry demands. At EDUINX, we take great satisfaction in providing all of our students with the greatest knowledge possible, enabling them to have the appropriate information at the appropriate moment. Our trainers have years of expertise in various disciplines, which gives them a leg up when it comes to providing individualised teaching.



What are our special features?

Our training sessions are unique in their own way.
You can enjoy the following benefits:

- Live interactive classes with frequent doubt sessions
- Lifetime LMS access
- Access to pre-recorded videos as well
- Students from all over the globe
- Hands on Practical Learning
- Dedicated Placement Support
- Learn from Top 1% Industry Leaders
- Industry Led Training Program
- Personalized Mentorship
- 100+ Hiring Partners
- **Placement** assistance

Our Mentors



Sabyasachi

Sr.Network Engineer at Google, Ireland



[Sabyasachi K.](#)

As the Lead Trainer at EDUINX, Sabyasachi K., a renowned Network Engineer at Google, Ireland, contributes an unmatched depth of knowledge. Having held a senior-level position at Nokia as a Subject Matter Expert with a focus on EVPN and SRv6, Sabyasachi possesses a wealth of experience in the planning, execution, transfer, and maintenance of intricate multi-vendor enterprise data centres. In addition to being an accomplished practitioner, Sabyasachi is also a well-known speaker in industry forums, thanks to his dynamic approach to knowledge sharing. With his expertise in Python, Bash, and Ansible, Sabyasachi is a notable figure in the field of Network Automation. His proficiency with these tools demonstrates his dedication to remaining on the cutting edge of technological development, guaranteeing that EDUINX students receive instruction that is not just theoretical but also applicable to the real world and pertinent to the industry. With a unique combination of industry experience, state-of-the-art expertise, and a passion for enabling students to succeed in the quickly changing field of network engineering, Sabyasachi K., as Lead Trainer at EDUINX, is leading the charge in moulding the future generation of network professionals.

What's inside the course?

Module 1

Network Fundamentals

- Explain the role and function of network components
 - Routers
 - Layer 2 and Layer 3 switches
 - Next-generation firewalls and IPS
 - Access points
 - Controllers (Cisco DNA Center and WLC)
 - Endpoints
 - Servers
 - PoE
- Describe the characteristics of network topology architectures
 - Two-tier
 - Three-tier
 - Spine-leaf
 - WAN
 - Small office/home office (SOHO)
 - On-premise and cloud
- Compare physical interface and cabling types
 - Single-mode fiber, multimode fiber, copper
 - Connections (Ethernet shared media and point-to-point)
- Identify interface and cable issues (collisions, errors, mismatch duplex, and/or speed)
- Compare TCP to UDP
- Configure and verify IPv4 addressing and subnetting



- Describe the need for private IPv4 addressing
- Configure and verify IPv6 addressing and prefix
- Describe IPv6 address types
 - Unicast (global, unique local, and link-local)
 - Anycast
 - Multicast
 - Modified EUI 64
- Verify IP parameters for Client OS (Windows, Mac OS, Linux)
- Describe wireless principles
 - Nonoverlapping Wi-Fi channels
 - SSID
 - RF
 - Encryption
- Explain virtualization fundamentals (server virtualization, containers, and VRFs)
- Describe switching concepts
- MAC learning and aging
- Frame switching
- Frame flooding
- MAC address table



Module 2

Network Access

- **Configure and verify VLANs (normal range) spanning multiple switches**
 - Access ports (data and voice)
 - Default VLAN
 - Connectivity
- **Configure and verify interswitch connectivity**
 - Trunk ports
 - 802.1Q
 - Native VLAN
- **Configure and verify Layer 2 discovery protocols (Cisco Discovery Protocol and LLDP)**
- **Configure and verify (Layer 2/Layer 3) EtherChannel (LACP)**
- **Describe the need for and basic operations of Rapid PVST+ Spanning Tree Protocol and identify basic operations**
 - Root port, root bridge (primary/secondary), and other port names
 - Port states (forwarding/blocking)
 - PortFast benefits
- **Compare Cisco Wireless Architectures and AP modes**
- **Describe physical infrastructure connections of WLAN components (AP, WLC, access/trunk ports, and LAG)**
- **Describe AP and WLC management access connections (Telnet, SSH, HTTP, HTTPS, console, and TACACS+/RADIUS)**
- **Configure 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**



Module 3

IP connectivity

- Interpret the components of the routing table
 - Routing protocol code
 - Prefix
 - Network mask
 - Next hop
 - Administrative distance
 - Metric
 - Gateway of last resort
- Determine how a router makes a forwarding decision by default
 - Longest match
 - Administrative distance
 - Routing protocol metric
- Configure and verify IPv4 and IPv6 static routing
 - Default route
 - Network route
 - Host route
 - Floating static
- Configure and verify single area OSPFv2o Network route
 - Neighbor adjacencies
 - Point-to-point
 - Broadcast (DR/BDR selection)
 - Router ID
- Describe the purpose of first hop redundancy protocol



Module 4

IP Services

- Configure and verify inside source NAT using static and pools
- Configure and verify NTP operating in a client and server mode
- Explain the role of DHCP and DNS within the network
- Explain the function of SNMP in network operations
- Describe the use of syslog features including facilities and levels
- Configure and verify DHCP client and relay
- Explain the forwarding per-hop behavior (PHB) for QoS such as classification, marking, queuing, congestion, policing, shaping
- Configure network devices for remote access using SSH
- Describe the capabilities and function of TFTP/FTP in the network



Module 5

Security Fundamental

- Define key security concepts (threats, vulnerabilities, exploits, and mitigation techniques)
- Describe security program elements (user awareness, training, and physical access control)
- Configure device access control using local passwords
- Describe security password policies elements, such as management, complexity, and password alternatives (multifactor authentication, certificates, and biometrics)
- Describe remote access and site-to-site VPNs
- Configure and verify access control lists
- Configure Layer 2 security features (DHCP snooping, dynamic ARP inspection, and port security)
- Differentiate authentication, authorization, and accounting concepts
- Describe wireless security protocols (WPA, WPA2, and WPA3)
- Configure WLAN using WPA2 PSK using the GUI



Module 6

Automation & Programmability

- Explain how automation impacts network management
- Compare traditional networks with controller-based networking
- Describe controller-based and software defined architectures (overlay, underlay, and fabric)
 - Separation of control plane and data plane
 - North-bound and south-bound APIs
- Compare traditional campus device management with Cisco DNA Center enabled device management
- Describe characteristics of REST-based APIs (CRUD, HTTP verbs, and data encoding)
- Recognize the capabilities of configuration management mechanisms Puppet, Chef, and Ansible
- Interpret JSON encoded data

Module 7

System Architecture

- Determine and configure hardware settings
- Boot the system
- Change run levels/boot targets and shutdown or reboot system

Module 1

Linux Installation and Package Management

- Design hard disk layout
- Install a boot manager
- Manage shared libraries
- Use Debian package management
- Use RPM and YUM package management
- Linux as a virtualisation guest

Module 2

GNU and Unix Commands

- Work on the command line
- Process text streams using filters
- Perform basic file management
- Use streams, pipes and redirects
- Create, monitor and kill processes
- Modify process execution priorities
- Search text files using regular expressions
- Basic file editing



Module 3

Devices, Linux Filesystems, Filesystem Hierarchy Standard

- Create partitions and filesystems
- Maintain the integrity of filesystems
- Control mounting and unmounting of filesystems
- Manage file permissions and ownership
- Create and change hard and symbolic links
- Find system files and place files in the correct location
- LPIC-1 Exam 102

Module 4

Shells and Shell Scripting

- Customise and use the shell environment
- Customise or write simple scripts



Module 5

User Interfaces and Desktops

- Install and configure X11
- Graphical Desktops
- Accessibility

Module 6

Administrative Tasks

- Manage user and group accounts and related system files
- Automate system administration tasks by scheduling jobs
- Localisation and internationalisation

Module 7

Essential System Services

- Maintain system time
- System logging
- Mail Transfer Agent (MTA) basics
- Manage printers and printing



Module 8

Networking Fundamentals

- Fundamentals of internet protocols
- Persistent network configuration
- Basic network troubleshooting
- Configure client side DNS

Module 9

Security

- Perform security administration tasks
- Setup host security
- Securing data with encryption

Who is this course for?

CCNA is a beginner-friendly course. Yet there are some requirements before learning CCNA. This course is for you if:

- You know the basics of computer and networking.
- You want to land an entry-level job in IT environment.
- Any Graduate.
- Students in the final year of their graduation, post graduation or fresh graduates.
- Candidates from a non-tech background can also apply.*





Job Opportunities

You can land the following jobs through CCNA:

- Technical Support Engineer
- Systems Engineer
- Network Administrator
- Information Technology (IT) Manager
- Senior Network Engineer
- Network Security Specialist



CCNA + Linux

Training

- Personal Mentor
- Doubt Solving Sessions
- Recorded Sessions
- Live Sessions
- Master Classes

Placement

- Guaranteed Interview Opportunity
- Resume Building
- Placement Assistance
- Soft Skills Training
- Aptitude Grooming
- Personality Development
- Centre Group Activities
- Group Discussions

Course Duration

- 12 Months

Hiring partners

Google

Microsoft

slack

tcs TATA
CONSULTANCY
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Our Office





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Speak to our Program Manager at

 **7411464640**

Email us at

 **admissions@eduinx.com**



B-Block, BHIVE Workspace – No.112, AKR Tech Park, "A"
and, 7th Mile Hosur Rd, Krishna Reddy Industrial Area,
Bengaluru, Karnataka 560068



Plot no.281, 2nd Floor, Sahid Nagar,
Bhubaneswar-751007

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 [Eduinx.com](https://www.eduinx.com)

 [TenDotOne](https://www.tendotone.com)

7411464640

[Eduinx.com](https://www.eduinx.com)

admissions@eduinx.com

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