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CCNA 200-301 v2.0

Complete Course Syllabus and Training Guide

Implementing and Administering Cisco Solutions (200-301 CCNA) v2.0

Live Instructor-Led Training Programme | New Batch: October 2026

BUILD IT. BREAK IT. FIX IT.

The new CCNA moves from explaining and describing to configuring, diagnosing and troubleshooting.

TRAINER

SIKANDAR SHAIK

Triple CCIE #35012 — Enterprise | Security | Service Provider

20+ years of networking experience

+91 70368 26345 | www.noasolutions.com | info@noasolutions.com

Course page: <https://sikandar.teachable.com/p/ccna200-301>

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1. Course Overview

Cisco has published a new version of its associate-level certification exam: Implementing and Administering Cisco Solutions (200-301 CCNA) v2.0. The new version takes effect on 3 February 2027, and the current v1.1 exam remains available until 2 February 2027. The exam code, the 120-minute exam duration and the CCNA certification itself remain unchanged; what changes is the content and, more importantly, the depth at which that content is tested.

The v2.0 blueprint is organised into five domains instead of six, and it shifts the emphasis decisively from describing technologies towards configuring, diagnosing and troubleshooting them. Cisco has also introduced a completely new area covering AI and network operations, in which candidates may be required to evaluate output and recommendations produced by agentic AI systems and digital network assistants.

This training programme has been rebuilt around that blueprint. It is a live, instructor-led course delivered by Sikandar Shaik, Triple CCIE #35012, and it runs from network fundamentals through to a final integrated troubleshooting lab and mock examination. Students who complete the programme will have configured, verified and repaired every major technology in the CCNA v2.0 syllabus rather than only read about it.

What Students Will Learn

- Build and connect Cisco switched and routed networks from the command line, including switch-to-switch, switch-to-router and edge-host connectivity.
- Design and troubleshoot IPv4 and IPv6 addressing, including subnetting, VLSM, prefix sizing and address-assignment faults.
- Configure and troubleshoot VLANs, 802.1Q trunking, inter-VLAN routing, EtherChannel with LACP and Rapid PVST+ with its guard features.
- Configure and troubleshoot IPv4 and IPv6 static routing, single-area OSPFv2 and OSPFv3, and interpret HSRP and VRRP operational states.
- Deliver and diagnose the network services that users depend on: DHCP, DNS, NAT and PAT, SNMP and Syslog.
- Secure the network at the management plane and at Layer 2 using local users, AAA with TACACS+ and RADIUS, SSH, SFTP and SCP, ACLs, port security, DHCP snooping, dynamic ARP inspection, storm control and IPv6 RA guard.
- Work with modern network operations: device-based, cloud-based, controller-based and automation-based management, Infrastructure as Code, and Ansible for command execution.
- Use generative and agentic AI responsibly in network operations — writing effective prompts, classifying data safely, and validating AI-generated recommendations before applying them.

Certification and Exam Preparation Purpose

The programme is aligned to the published Cisco exam topics for 200-301 CCNA v2.0 and its five weighted domains. Every module maps to a specific blueprint area, and the final module is dedicated to integrated troubleshooting practice and a mock examination. The intent is that a student finishing the course is prepared both to sit the CCNA exam and to do associate-level network support work.

Practical Skills Focus

Course philosophy: Build it. Break it. Fix it. Every technology in this course is taught as a cycle — understand the concept, configure it on real Cisco IOS syntax, verify it with show and debug output, then diagnose it when it is broken. This mirrors the way the v2.0 exam itself is written.

2. Course at a Glance

Course	CCNA 200-301 v2.0 — Complete Networking Training Programme
Exam	Implementing and Administering Cisco Solutions (200-301 CCNA) v2.0. Exam duration 120 minutes. New exam version effective 3 February 2027; the v1.1 exam remains available until 2 February 2027.
Certification	Cisco Certified Network Associate (CCNA)
Level	Associate / entry level. Suitable for beginners as well as working professionals who want to update from CCNA v1.1 to v2.0.
Structure	6 sections delivered across 50 training days, covering all five CCNA v2.0 exam domains plus a final integrated preparation module.
Duration	Total programme hours and number of weeks: [To be confirmed]
Batch	New batch starts October 2026 — approximately four months ahead of the 3 February 2027 exam launch. Limited seats.
Class schedule	Days and timings for the October 2026 batch: [To be confirmed]
Delivery mode	Live instructor-led online training delivered by Network Online Academy.
Labs	Hands-on practical labs throughout, including configuration, verification and troubleshooting exercises. Cisco Packet Tracer is used in the academy's CCNA material; the exact lab platform mix for this batch is [To be confirmed].
Target audience	Networking students, IT and support engineers, system and network administrators, career changers, and CCNA certification candidates.
Prerequisites	No formal prerequisites. Basic computer literacy and familiarity with using a PC and the Internet are sufficient to start.
Trainer	Sikandar Shaik — Triple CCIE #35012 (Enterprise, Security, Service Provider), 20+ years of networking experience.
Included with the course	Complete CCNA video course, workbook explanation videos, hands-on configuration labs with downloadable lab material, real-time mock labs, troubleshooting scenarios, exam preparation sessions, interview practice questions and career guidance. Delivered through the academy's online course portal at sikandar.teachable.com . See Section 3 for the full package.
Admissions	Admissions open for the October 2026 batch. Limited seats.
Contact	+91 70368 26345 info@noasolutions.com www.noasolutions.com

Exam Blueprint Weighting

Cisco has restructured the blueprint from six domains to five. The table below shows the published v2.0 weighting alongside the equivalent v1.1 domain, and where each area is taught in this course.

CCNA v2.0 Domain	Weight	Equivalent v1.1 Domain	Taught in
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CCNA v2.0 Domain	Weight	Equivalent v1.1 Domain	Taught in
1.0 Network Infrastructure and Connectivity	25%	Network Fundamentals (20%)	Module 1
2.0 Switching and Network Access	25%	Network Access (20%)	Module 2
3.0 IP Routing	20%	IP Connectivity (25%)	Module 3
4.0 Network Services and Security	20%	IP Services (10%) + Security Fundamentals (15%), now merged	Module 4
5.0 AI, and Network Operations and Management	10%	Automation and Programmability (10%)	Module 5

3. What the Training Package Includes

The CCNA 200-301 v2.0 programme is a complete training package rather than a series of lectures. The components below are all included in the October 2026 batch.

Component	What it covers
Complete CCNA video course	Full video coverage of the CCNA 200-301 v2.0 syllabus, rebuilt against the new blueprint.
Workbook explanation videos	Step-by-step workbook videos for every major topic: topology explanation, configuration demonstration, verification commands, expected output, practice activities and complete lab solutions.
Hands-on configuration labs	Practical labs in every module, with downloadable lab material so students can rebuild each topology themselves.
Real-time mock labs	Full working topologies presented under exam-like conditions, with injected faults to isolate and objectives to complete.
Troubleshooting scenarios	Fault-injected scenarios across VLANs and trunks, IPv4 and IPv6, OSPFv2 and OSPFv3, and network services and security, ending in a final integrated troubleshooting lab.
Exam preparation sessions	Complete blueprint coverage, topic-wise practice questions, module-wise assessments, configuration exercises, troubleshooting questions, revision sessions, mock exams and a final exam-readiness review.
Interview practice questions	Technical, scenario-based, routing and switching, troubleshooting and configuration questions, plus HR and communication guidance, resume and experience guidance, and L1 network engineer preparation.
Career guidance	Guidance on entering and progressing in a networking career, delivered alongside the technical training.

In short: Learn it, practise it, verify it, break it, fix it — and then be ready to explain it in an interview. The package is built to produce a candidate who can pass the exam and hold an L1 network engineer conversation with equal confidence.

4. Who Should Attend

The programme is written for anyone who needs practical, working Cisco networking skills and an associate-level certification to prove them.

Audience	Why this course suits them
Networking students and fresh graduates	Starts from network fundamentals and builds to full configuration and troubleshooting, so no prior networking background is assumed.
IT support and helpdesk engineers	Heavy emphasis on diagnosing client connectivity on Windows, macOS and Linux, cabling and interface faults, DHCP and DNS problems — the issues support teams meet daily.
System and network administrators	Covers switching, routing, network services and Layer 2 security to the depth needed to run and defend a production access network.
Working professionals updating from CCNA v1.1	The course is built on the v2.0 blueprint and covers every newly added area, including OSPFv3, packet-capture interpretation, storm control, IPv6 RA guard, SFTP/SCP, DNS record diagnosis, Ansible and AI-assisted operations.
Career changers entering IT	Live instructor-led delivery, hands-on labs and career guidance are part of the programme, which suits students moving into networking from another field.
CCNA certification candidates	Aligned to the published Cisco exam topics, with practice questions, troubleshooting tickets and a final mock examination.

5. Prerequisites

There are no formal prerequisites for the CCNA certification or for this course. The programme begins with what a network is and how Cisco IOS is accessed from the command line.

Recommended before you start

- Comfortable general use of a computer, an operating system and a web browser.
- Willingness to work with a command-line interface — the course is CLI-driven throughout.
- Basic arithmetic confidence, which helps considerably with binary conversion and subnetting.
- A computer capable of running a network simulator, plus a stable Internet connection for live sessions.

Helpful but not required

- Any prior exposure to IP addressing, home or office networking, or Windows/Linux administration.
- Previous study of CCNA v1.1 material — this course covers what has changed as well as the foundations.

Note: Cisco recommends practical experience before attempting the exam, but does not require a prior certification. The blueprint is publicly available and is reproduced in summary form in this document.

6. Learning Outcomes

On successful completion of this programme, a student will be able to:

- 01** Explain how data moves through a network using the OSI and TCP/IP models, encapsulation and protocol data units, and relate each layer to the devices and protocols that operate there.
- 02** Diagnose physical-layer faults on copper and fibre links, including collisions, interface errors, duplex and speed mismatches, distance limits, signal levels, pinouts and cable types.
- 03** Configure and troubleshoot IPv4 addressing and subnetting, including fixed-length subnetting, VLSM, public and private addressing, and address-assignment faults.
- 04** Configure and troubleshoot IPv6 addressing, including prefix sizing, unicast and link-local addresses and modified EUI-64.
- 05** Troubleshoot wired and wireless client connectivity on Windows, macOS and Linux, covering IP configuration, reachability and wireless security parameters.
- 06** Explain wireless RF principles, band and channel selection, wireless security protocols and the common causes of interference.
- 07** Configure switch infrastructure connectivity — Layer 2 and Layer 3 physical interfaces, 802.1Q trunks, LACP EtherChannel and switch virtual interfaces.
- 08** Configure Layer 2 switch port attributes for edge hosts including desktops, printers, IoT appliances, access points, IP phones, virtualised hosts and network appliances.
- 09** Implement Rapid PVST+ with root bridge selection, PortFast, BPDU guard, root guard and loop guard, and troubleshoot the resulting port roles and states.
- 10** Interpret a routing table to determine the next hop for a packet using protocol, prefix length, administrative distance, metric and the default route.
- 11** Configure and troubleshoot IPv4 and IPv6 static routing including default, network, host and floating static routes.
- 12** Configure single-area OSPFv2 for IPv4 and OSPFv3 for IPv6, covering neighbour adjacencies, router ID, point-to-point and broadcast networks and DR/BDR selection, and troubleshoot adjacency and missing-route problems.
- 13** Interpret the operational status of first-hop redundancy protocols HSRP and VRRP.
- 14** Configure and diagnose core network services: DHCPv4 client, server and relay on IOS devices, DNS record types, and NAT and PAT on IOS XE routers.
- 15** Secure device management using local usernames, AAA client configuration with TACACS+ and RADIUS, SSH, and secure file transfer with SFTP and SCP.
- 16** Implement IPv4 access control lists — standard, extended, numbered and named — and place them correctly to enforce a security policy.
- 17** Secure the access layer using DHCP snooping, dynamic ARP inspection, storm control, IPv6 RA guard and port security.
- 18** Analyse show command output, logs, ping, extended ping, traceroute and packet captures to isolate Layer 2 and Layer 3 faults methodically.
- 19** Describe device-based, cloud-based, controller-based and automation-based network management and Infrastructure as Code, and use Ansible to execute commands against network devices.
- 20** Select and construct effective prompts for generative AI in network operations — persona, instructions, output format and data classification — and critically evaluate AI-generated recommendations before acting on them.

7. Complete Course Syllabus

The syllabus is organised into six modules delivered across 50 training days. Modules 1 to 5 map directly to the five CCNA 200-301 v2.0 exam domains; Module 6 is a final integrated preparation module. Each training day combines theory, live configuration, verification and troubleshooting.

How to read this section: Each module lists its numbered training days, the topics covered on each day, and the practical and lab work carried out during that module. Day numbers indicate teaching sequence, not calendar dates.

Module 1 — Network Infrastructure and Connectivity

Exam domain 1.0 — 25% of the CCNA v2.0 blueprint | Training days 1–10

Day 1 — Networking Introduction

- Network types and components
- LAN, WAN and the Internet
- Routers, switches, firewalls and access points
- Introduction to Cisco IOS
- CLI access and basic commands

Day 2 — Network Models

- The OSI model
- The TCP/IP model
- Encapsulation and de-encapsulation
- Protocol data units
- Application-to-network traffic flow

Day 3 — Ethernet Fundamentals

- Ethernet frames
- MAC addresses
- Unicast, broadcast and multicast traffic
- MAC address-table operation
- ARP and IPv6 Neighbor Discovery

Day 4 — Physical Interfaces and Cabling

- Copper and fibre connections
- Interface speed and duplex
- Pinout and distance limitations
- Interface errors and collisions
- Diagnosing cable, signal-level and cable-type problems

Day 5 — IPv4 Addressing

- IPv4 address structure
- Network and host portions
- Public and private IPv4 addressing
- Binary-to-decimal conversion
- Address assignment

Day 6 — IPv4 Subnetting

- Subnet masks and prefix lengths
- Network, broadcast and usable host addresses
- Fixed-length subnet masking
- Structured subnetting practice

Day 7 — Advanced Subnetting

- Variable Length Subnet Masking (VLSM)
- Address-planning scenarios
- Summarisation basics
- Subnetting troubleshooting

Day 8 — IPv6 Fundamentals

- IPv6 address format and notation
- Prefix length and prefix sizing
- Global unicast and link-local addressing
- Modified EUI-64 and address configuration
- IPv6 verification commands

Day 9 — Wireless Fundamentals

- Wireless bands and channels
- RF characteristics
- Channel selection
- Causes of wireless interference
- Wireless security protocols, SSIDs and basic client connectivity

Day 10 — Virtualisation and Client Troubleshooting

- Hypervisors
- Virtual machines
- Containers
- IP verification on Windows, macOS and Linux
- Wired and wireless client troubleshooting

Practical and lab activities for this module

- Access a Cisco device by console and navigate the IOS command modes.
- Read and interpret interface counters to identify duplex, speed and error conditions.
- Subnetting workshops: fixed-length subnetting, VLSM and full address-plan design.
- Configure and verify IPv4 and IPv6 addressing on hosts and Cisco interfaces.
- Client-side diagnosis exercises using the native IP tools of Windows, macOS and Linux.
- Guided troubleshooting tickets covering IPv4/IPv6 address assignment and prefix sizing faults.

Module 2 — Switching and Network Access

Exam domain 2.0 — 25% of the CCNA v2.0 blueprint | Training days 11–22

Day 11 — Basic Switch Configuration

- Hostname and interface configuration
- Switch management IP address
- Default gateway
- Console, Telnet and SSH access
- Saving, backing up and recovering configuration

Day 12 — Switch Operation

- MAC address learning
- Frame forwarding and flooding
- MAC address-table verification
- Unknown unicast and broadcast traffic
- Switching troubleshooting

Day 13 — VLAN Fundamentals

- VLAN concepts and broadcast domains
- Creating VLANs
- Access-port configuration
- Data and voice VLANs
- VLAN verification

Day 14 — VLAN Troubleshooting

- Incorrect VLAN assignment
- Inactive and missing VLANs
- Access-port problems
- End-to-end VLAN connectivity testing
- Relevant show commands

Day 15 — Trunking

- IEEE 802.1Q tagging
- Trunk-port configuration
- Native VLAN
- Allowed VLAN list
- Trunk verification

Day 16 — Trunk Troubleshooting

- Trunk-mode mismatch
- Native VLAN mismatch
- Missing allowed VLANs
- VLAN database consistency
- Packet-flow analysis across trunks

Day 17 — Inter-VLAN Routing

- Router-on-a-stick
- Subinterfaces and encapsulation
- Layer 3 switching
- Switch virtual interfaces (SVIs)
- End-to-end inter-VLAN connectivity

Day 18 — CDP and LLDP

- Cisco Discovery Protocol
- Link Layer Discovery Protocol
- Neighbour discovery and topology verification
- Validating the accuracy of network documentation
- CDP and LLDP troubleshooting

Day 19 — EtherChannel

- EtherChannel concepts

- Layer 2 and Layer 3 EtherChannel
- LACP configuration
- Port-channel verification
- EtherChannel mismatch troubleshooting

Day 20 — Spanning Tree Protocol

- Layer 2 loops and their symptoms
- Root bridge election
- Root ports and designated ports
- Rapid PVST+
- Port roles and port states

Day 21 — STP Configuration and Security

- Primary and secondary root bridge configuration
- PortFast
- BPDU guard
- Root guard
- Loop guard
- Spanning-tree troubleshooting

Day 22 — Modern Edge-Port Configuration

- Desktop, printer and IoT appliance ports
- Voice over IP phone connectivity
- Standalone and controller-based access point ports
- Virtualised-host ports
- Network-appliance connectivity
- Consolidated switching troubleshooting lab

Practical and lab activities for this module

- Build a two-switch topology and configure management access, VLANs and access ports.
- Configure and verify 802.1Q trunks, native VLAN and allowed-VLAN lists between switches.
- Implement inter-VLAN routing twice — once with router-on-a-stick, once with SVIs on a Layer 3 switch.
- Configure Layer 2 and Layer 3 LACP EtherChannel and deliberately break it to observe mismatch behaviour.
- Manipulate the Rapid PVST+ root bridge and observe the resulting port roles and states.
- Apply PortFast, BPDU guard, root guard and loop guard and verify the protective actions.
- Verify a documented topology against live CDP and LLDP output.
- Interpret packet captures taken from access and trunk links.
- Section troubleshooting ticket combining VLAN, trunk, EtherChannel and STP faults.

Module 3 — IP Routing

Exam domain 3.0 — 20% of the CCNA v2.0 blueprint | Training days 23–31

Day 23 — Routing Fundamentals

- The routing process
- Connected and local routes
- Routing-table components: protocol, prefix, next hop, administrative distance and metric
- Next-hop and exit-interface selection
- Longest-prefix matching

Day 24 — Static Routing

- IPv4 static routes

- Network routes
- Host routes
- Exit-interface and next-hop routes
- Static-route verification

Day 25 — Default and Floating Static Routes

- IPv4 default route
- IPv6 default route
- Floating static routes
- Administrative distance in path selection
- Backup-path testing

Day 26 — Static Routing Troubleshooting

- Missing and incorrect routes
- Next-hop reachability
- Recursive lookup failures
- IPv4 and IPv6 routing problems
- End-to-end verification methodology

Day 27 — OSPF Fundamentals

- Link-state routing operation
- OSPF neighbour formation
- Router ID selection
- OSPF cost and metrics
- OSPF packet types and neighbour states

Day 28 — Single-Area OSPFv2

- OSPFv2 configuration for IPv4
- Point-to-point networks
- Broadcast networks
- DR and BDR election
- OSPF route verification

Day 29 — OSPFv2 Troubleshooting

- Area mismatch
- Hello and dead timer mismatch
- Network-type mismatch
- Router ID problems
- Missing OSPF routes

Day 30 — OSPFv3 for IPv6

- OSPFv3 operation and differences from OSPFv2
- IPv6 router ID
- Interface-based configuration
- OSPFv3 neighbours and routes
- OSPFv3 troubleshooting

Day 31 — First-Hop Redundancy

- Default-gateway failure and its impact
- First-hop redundancy concepts
- HSRP operation

- VRRP operation
- Active/standby and master/backup states
- Interpreting FHRP output

Practical and lab activities for this module

- Read live routing tables and predict the forwarding decision for given destinations.
- Configure IPv4 and IPv6 static, default, host and floating static routes and prove failover.
- Configure single-area OSPFv2 across point-to-point and broadcast segments and verify DR/BDR election.
- Configure OSPFv3 for IPv6 and verify neighbours, interfaces and routes.
- Break and repair OSPF adjacencies — timers, area, network type and router ID faults.
- Interpret HSRP and VRRP show output and identify the active/master router.
- Combined routing troubleshooting lab spanning static routing, OSPFv2 and OSPFv3.

Module 4 — Network Services and Security

Exam domain 4.0 — 20% of the CCNA v2.0 blueprint | Training days 32–44

Day 32 — DHCPv4

- DHCP operation and the DORA process
- Cisco IOS DHCP server
- DHCP client on IOS devices
- DHCP relay
- DHCP troubleshooting

Day 33 — DNS

- DNS operation
- Forward and reverse lookup
- A, AAAA and CNAME records
- MX, NS and PTR records
- Diagnosing DNS problems affecting host, web application and mail access

Day 34 — NAT and PAT

- NAT terminology
- Static NAT
- Dynamic NAT
- PAT (overload)
- Configuration and verification on IOS XE routers
- NAT troubleshooting

Day 35 — Device Management Security

- Local usernames
- Privilege levels
- SSH configuration
- Secure administrative access
- Management-plane protection

Day 36 — AAA

- Authentication, authorisation and accounting
- TACACS+ and RADIUS
- Configuring a Cisco device as an AAA client
- Local fallback
- AAA configuration and troubleshooting

Day 37 — Secure File Transfer

- SFTP
- SCP
- Secure configuration backup
- IOS image and file transfer
- File-transfer troubleshooting

Day 38 — IPv4 Access Control Lists

- ACL processing logic
- Standard IPv4 ACLs
- Numbered and named ACLs
- Wildcard masks
- ACL placement

Day 39 — Extended ACLs

- Extended IPv4 ACLs
- Protocol and port matching
- Named extended ACLs
- ACL verification
- ACL troubleshooting

Day 40 — VPN Fundamentals

- IPsec concepts
- Site-to-site VPN
- Remote-access VPN
- Encryption, integrity and authentication
- Protocols, transport modes and basic VPN traffic flow

Day 41 — Layer 2 Port Security

- Port-security modes
- Static and sticky MAC addresses
- Violation actions
- Port-security configuration
- Troubleshooting violations

Day 42 — DHCP Snooping and Dynamic ARP Inspection

- Rogue DHCP server attacks
- Trusted and untrusted ports
- DHCP snooping
- Dynamic ARP inspection
- Binding-table verification and troubleshooting

Day 43 — Storm Control and IPv6 RA Guard

- Broadcast, multicast and unknown-unicast storms
- Storm control
- Rogue IPv6 router advertisements
- IPv6 RA guard
- Layer 2 security verification

Day 44 — Services and Security Integration Lab

- DHCP and DNS troubleshooting

- NAT and PAT configuration
- AAA and SSH
- ACL implementation
- Complete Layer 2 security scenario

Practical and lab activities for this module

- Configure a router as a DHCPv4 server, a DHCP client and a DHCP relay agent, then repair a broken lease process.
- Diagnose DNS record faults across A, AAAA, CNAME, MX, NS and PTR records.
- Configure static NAT, dynamic NAT and PAT on IOS XE and verify translations.
- Harden device management with local users, privilege levels and SSH; disable insecure access.
- Configure a device as an AAA client for TACACS+ and for RADIUS, with local fallback.
- Back up and restore configuration files securely using SFTP and SCP.
- Write, apply and reposition standard, extended, numbered and named IPv4 ACLs to enforce a policy.
- Implement port security, DHCP snooping, dynamic ARP inspection, storm control and IPv6 RA guard on an access switch.
- Full services-and-security troubleshooting ticket combining all of the above.

Module 5 — AI, Network Operations and Management

Exam domain 5.0 — 10% of the CCNA v2.0 blueprint | Training days 45–49

Day 45 — Network Management Approaches

- Device-based management
- Controller-based management
- Cloud-based management
- Automation-based management
- Infrastructure as Code

Day 46 — SNMP and Syslog

- SNMP components and operation
- SNMP polling and traps
- Syslog message structure
- Facilities and severity levels
- Interpreting real syslog message content

Day 47 — Ansible Fundamentals

- Ansible architecture
- Inventory files
- Playbooks
- Modules
- Using Ansible to execute commands on network devices

Day 48 — Generative and Agentic AI in Networking

- Generative AI in network operations
- Agentic AI in network operations
- AI-assisted monitoring
- AI-assisted configuration
- AI-assisted troubleshooting
- Limitations of AI output and the need for human validation

Day 49 — AI Prompting for Network Engineers

- Defining the AI persona
- Writing clear technical instructions
- Selecting the required output format
- Data classification and privacy
- Protecting customer configurations and credentials
- Building troubleshooting prompts
- Evaluating and validating AI recommendations

Practical and lab activities for this module

- Compare the same management task performed device-by-device, through a controller and through automation.
- Read and interpret live syslog output, identifying facility and severity for each message.
- Build a simple Ansible inventory and playbook and execute commands against network devices.
- Write and refine prompts for a network troubleshooting scenario, then critique the AI output against the actual device configuration.
- Identify an incorrect AI-generated configuration and explain why it would fail.

Module 6 — Final Preparation and Integrated Troubleshooting

Training day 50 — integrated review across all five exam domains

Day 50 — Final Integrated Lab and Exam Preparation

- VLAN and trunk troubleshooting
- EtherChannel and spanning-tree troubleshooting
- IPv4 and IPv6 routing
- OSPFv2 and OSPFv3
- DHCP, DNS, NAT and ACLs
- Layer 2 security
- Packet-capture interpretation
- AI-assisted troubleshooting exercise
- Mock examination and final review

Practical and lab activities for this module

- One multi-fault integrated topology combining switching, routing, services and security faults.
- Timed mock examination followed by a full review of every answer.
- Personal weak-area review plan built from the mock results.

Advanced and Legacy Bonus Topics

Several topics that appeared in CCNA v1.1 are no longer listed in the v2.0 exam blueprint. They remain valuable for real networking work and for later certifications, so they are retained as optional bonus material rather than removed. They are clearly identified as non-exam content.

Bonus area	Topics retained outside the main exam path
Advanced routing	EIGRP and EIGRP simulations, multi-area OSPF, BGP autonomous-system introduction, GLBP, classful versus classless protocol theory
WAN and additional skills	GRE, DMVPN, MPLS introduction, Metro Ethernet, leased lines, QoS, NTP configuration, TFTP and FTP

Bonus area	Topics retained outside the main exam path
Automation and SDN	Detailed SDN architecture, control-plane and data-plane separation, northbound and southbound APIs, overlay/underlay/fabric, REST APIs, CRUD and HTTP verbs, JSON encoding, Puppet and Chef
Wireless	Cisco wireless architectures, AP operating modes, AP-to-WLC connectivity, WLAN GUI configuration, WPA/WPA2/WPA3 comparison
Legacy switching	ISL trunking (historical context only), legacy STP timer theory, physical-interface inter-VLAN routing
Foundational theory	Device roles, SOHO networks, firewall and IPS introductions, TCP versus UDP, detailed IPv6 address types, MAC learning and frame flooding, class A/B/C addressing background retained for subnetting practice

Important: These bonus topics are not part of the CCNA 200-301 v2.0 exam and are not advertised as exam content. They are offered as additional professional background.

8. Workbook Videos, Labs and Practical Training

The CCNA v2.0 blueprint is written in the language of doing: configure, troubleshoot, diagnose, interpret. This programme is structured the same way. Practical work is not an add-on at the end of a topic — it is how each topic is taught.

The Build–Break–Fix Cycle

Stage	What happens in the lab
Build	The technology is configured live on Cisco IOS syntax, command by command, with the reason for each command explained as it is entered.
Verify	Students confirm the result using show commands, logs, ping, extended ping and traceroute before moving on.
Break	A specific, realistic fault is introduced — a mismatched native VLAN, a wrong wildcard mask, a missing allowed VLAN, an OSPF timer mismatch.
Fix	Students isolate the fault using output alone, correct it, and prove the repair end to end.

Workbook Videos

Every major topic is supported by a workbook explanation video that walks through the topic the same way a student should work it. Each workbook video covers:

- The network topology and what it is meant to achieve
- Step-by-step configuration demonstrated on the command line
- The verification commands to run at each stage
- The expected output, so students can tell right from wrong
- Practice activities to repeat the work independently
- Complete lab solutions for checking their own work

Downloadable lab material accompanies the workbook videos so that each topology can be rebuilt and repeated as often as needed.

Lab Environment

Cisco Packet Tracer is used in the academy's existing CCNA lab material and is the reference platform for the lab exercises in this programme. The precise platform mix for the October 2026 batch — including any use of physical Cisco equipment, other simulators or remote rack access — is [To be confirmed].

Real-Time Mock Labs

In addition to the module labs, the programme includes real-time mock labs — full working topologies presented under exam-like conditions, with faults to isolate and objectives to complete against the clock. These sit alongside the troubleshooting practice that runs through every module and the final integrated lab on Day 50.

Representative Lab Work

- Initial device setup, IOS navigation and secure management access.
- IPv4 and IPv6 addressing plans built from a requirements brief, then implemented and verified.
- Client-side diagnosis on Windows, macOS and Linux, and cabling and interface fault diagnosis.

- Multi-switch VLAN, trunk and inter-VLAN routing topologies.
- LACP EtherChannel with deliberate mismatch scenarios, and Rapid PVST+ root bridge manipulation with PortFast, BPDU guard, root guard and loop guard.
- Static, default, host and floating static routing for IPv4 and IPv6.
- Single-area OSPFv2 and OSPFv3 with adjacency and missing-route fault injection, and HSRP and VRRP output interpretation.
- DHCP server, client and relay; DNS record diagnosis; NAT and PAT on IOS XE.
- AAA client configuration with TACACS+ and RADIUS; SSH; SFTP and SCP file transfer.
- Standard, extended, numbered and named IPv4 ACLs.
- Layer 2 security stack: port security, DHCP snooping, dynamic ARP inspection, storm control, IPv6 RA guard.
- Packet-capture interpretation on access and trunk links.
- Ansible inventory and playbook execution against network devices.
- AI prompt construction and evaluation of AI-generated troubleshooting recommendations.
- A final integrated multi-fault troubleshooting lab across all domains.

9. Real-Time Mock Labs and Troubleshooting Practice

The CCNA v2.0 blueprint is dominated by diagnose and troubleshoot objectives, so troubleshooting is treated as a subject in its own right rather than as a closing remark on each topic.

Real-Time Mock Labs

Mock labs are complete working topologies presented under exam-like conditions. Faults are injected in advance; the student is given the symptom and the objective, and must reach the fix using device output alone.

- Fault-injected network scenarios built on realistic topologies
- VLAN and trunk troubleshooting
- IPv4 and IPv6 addressing and routing troubleshooting
- OSPFv2 and OSPFv3 troubleshooting
- Network services and security problems — DHCP, DNS, NAT, ACLs and Layer 2 security
- Show-command interpretation as the primary diagnostic tool
- Root-cause identification, not just symptom removal
- A final integrated troubleshooting lab combining every domain

The Diagnostic Method Taught

Step	What the student does
Configure	Build the topology and confirm the intended behaviour first, so the working state is known.
Verify	Establish what is actually happening using show commands, logs, ping, extended ping, traceroute and packet captures.
Diagnose	Narrow the fault by layer and by scope — is it physical, Layer 2, Layer 3, a service or a policy?
Troubleshoot	Correct the root cause, then re-verify end to end and confirm nothing else was broken by the fix.

Why this matters: In CCNA v2.0 the exam asks candidates to troubleshoot, diagnose and interpret far more often than it asks them to describe. Students who have worked injected faults under time pressure recognise the patterns; students who have only watched configuration demos usually do not.

10. Training Methodology

The programme is delivered live and online by the trainer, with configuration performed in front of the class and repeated by students in their own lab.

Element	How it is used in this programme
Instructor-led explanation	Every topic opens with a plain-language explanation of what the technology does and why it exists, before any command is typed.
Live configuration	The trainer configures each technology live on Cisco IOS, explaining the purpose of each command as it is entered.
Demonstration and verification	Show command output, logs and packet captures are read on screen so students learn to recognise correct and incorrect output.
Hands-on practice	Students repeat each configuration themselves in the lab environment for the module.
Troubleshooting exercises	Faults are injected deliberately and students isolate them from output — this is the single largest change in CCNA v2.0 and receives the most lab time.
Progressive build-up	Topics are sequenced so each module depends on the one before: addressing before switching, switching before routing, routing before services and security.
Practice questions and review	Topic-level questions and revision reinforce material as the course progresses.
Final integrated preparation	Day 50 combines every domain into one troubleshooting scenario plus a mock examination.

Note: Assessment activities are listed in Section 12. Class days, timings and total programme hours for the October 2026 batch are still to be confirmed.

11. Suggested Training Sequence

The course material defines a 50-day teaching sequence. Calendar dates, session lengths and class timings for the October 2026 batch are not documented in the source material, so the roadmap below is expressed in training days rather than dates.

Stage	Days	Focus	What a student can do by the end of the stage
Stage 1	1–10	Network Infrastructure and Connectivity	Address a network in IPv4 and IPv6, subnet confidently, and diagnose cabling, interface and client connectivity problems.
Stage 2	11–22	Switching and Network Access	Build a switched access network with VLANs, trunks, inter-VLAN routing, EtherChannel and a protected spanning-tree topology.
Stage 3	23–31	IP Routing	Route IPv4 and IPv6 with static routes and single-area OSPFv2/OSPFv3, and interpret first-hop redundancy state.
Stage 4	32–44	Network Services and Security	Deliver DHCP, DNS and NAT services and secure both the management plane and the access layer.
Stage 5	45–49	AI, Network Operations and Management	Describe modern management models, use Ansible for command execution, and apply and validate AI assistance safely.
Stage 6	50	Final Preparation	Work an integrated multi-fault ticket and sit a full mock examination.

Batch timing: Training for this batch begins in October 2026, approximately four months before the CCNA 200-301 v2.0 exam becomes available on 3 February 2027. This gives students time to complete the syllabus and revise before the new exam launches.

12. Assessments and Student Progress

The following assessment activities are documented in the course material:

- Practice questions covering IPv4 and IPv6, subnetting, VLANs, STP/RSTP, routing tables, static routing and OSPF.
- Simulation-based exercises covering NAT, ACLs and basic switch configuration.
- New v2.0 assessment areas: physical-interface diagnosis, wired and wireless client troubleshooting, packet-capture interpretation, VLAN and trunk troubleshooting, LACP troubleshooting, Rapid PVST+ and guard features, IPv4/IPv6 static-route troubleshooting, OSPFv3, HSRP and VRRP interpretation, DNS record diagnosis, SFTP and SCP, AAA client configuration, storm control, IPv6 RA guard, syslog interpretation, Ansible command execution, agentic AI, prompt selection and AI-output evaluation.
- Topic-wise practice questions across the whole blueprint.
- Module-wise assessments at the end of each module.
- Configuration exercises and troubleshooting questions.
- Section-level troubleshooting labs at the end of Modules 2, 4 and 5.
- Real-time mock labs run under exam-like conditions during the programme.
- Revision sessions during the programme.
- Mock examinations, including a final integrated troubleshooting lab and mock exam on Day 50.
- A final exam-readiness review before students sit the exam.
- Interview practice question sets, used to test whether a student can explain as well as configure.

Not currently documented

Whether assessment scores are formally recorded and reported back to students, and whether one-to-one progress reviews are scheduled, is not stated in the source material. [To be confirmed]

13. Certification and Exam Preparation

Certification	Cisco Certified Network Associate (CCNA)
Exam	Implementing and Administering Cisco Solutions (200-301 CCNA) v2.0
Exam code	200-301 — unchanged between v1.1 and v2.0
Exam duration	120 minutes
v2.0 available from	3 February 2027
v1.1 available until	2 February 2027
Domains	Five weighted domains — see the blueprint table in Section 2

How the Course Supports Exam Preparation

- Every module maps to a numbered v2.0 exam domain, and the module weighting follows the published blueprint percentages.
- The verbs used in the syllabus mirror the verbs used in the blueprint: configure, troubleshoot, diagnose, interpret, describe.
- Topics removed from v2.0 are moved into clearly labelled bonus material so that study time is not spent on content the exam no longer tests.
- New v2.0 areas — OSPFv3, packet-capture interpretation, storm control, IPv6 RA guard, SFTP and SCP, DNS record diagnosis, AAA client configuration, Ansible, agentic AI and prompting — are taught as first-class topics, not as afterthoughts.
- Practice questions and simulations run alongside the syllabus, and Day 50 provides a full mock examination and review.

What Exam Preparation Includes

- Complete blueprint coverage across all five v2.0 domains
- Topic-wise practice questions
- Module-wise assessments
- Configuration exercises
- Troubleshooting questions
- Revision sessions
- Mock exams
- A final exam-readiness review

Please note: This programme prepares students for the CCNA examination. It does not include an exam voucher, an exam booking service or any guarantee of a pass unless the academy states otherwise in writing. Exam registration is arranged directly by the candidate with Cisco's testing provider.

A note for students currently studying CCNA v1.1

Because the exam code and certification are unchanged, most of the foundational material carries over. What changes is depth and emphasis. Students already partway through v1.1 study should focus on the troubleshooting-oriented topics and on the newly added areas listed above, and should be aware that EIGRP, QoS, NTP, detailed SDN/REST/JSON content and detailed wireless architecture are no longer part of the exam blueprint.

14. Interview and Career Preparation

Passing the exam and getting hired are two different skills. Interview preparation is included with the CCNA 200-301 v2.0 training so that students can explain, configure and troubleshoot networks confidently in front of an interviewer.

Area	What is covered
CCNA technical questions	Core question sets across the whole syllabus, at the depth an interviewer will actually probe.
Routing and switching questions	Focused question sets on VLANs, trunking, spanning tree, EtherChannel, static routing and OSPF.
Scenario-based questions	Open-ended situations of the kind used to test whether a candidate can reason rather than recite.
Troubleshooting questions	How to describe a fault-isolation approach out loud, and how to talk through show output.
Configuration-based questions	Questions that expect the candidate to produce or read actual configuration.
HR and communication guidance	How to handle the non-technical portion of an interview and communicate clearly under pressure.
Resume and experience guidance	How to present skills, labs and projects honestly and effectively on a resume.
L1 network engineer preparation	Targeted preparation for entry-level network engineer and NOC roles.

15. Training Resources

The following resources are referenced in the course material. Where an item's availability for a specific batch has not been documented, that is stated plainly rather than assumed.

Resource	Status
Live instructor-led sessions	Confirmed — advertised as live instructor-led training.
Hands-on practical labs	Confirmed — practical labs are advertised and are built into every module.
Structured 50-day course plan	Confirmed — documented in the course material and reproduced in Section 6.
Practice questions and simulations	Confirmed — a question and simulation library exists and is being updated for v2.0.
Final mock examination	Confirmed — scheduled for Day 50.
Online course platform	Confirmed — the academy hosts CCNA course content at sikandar.teachable.com .
Complete CCNA video course	Confirmed — full video coverage rebuilt for the v2.0 blueprint.
Workbook explanation videos	Confirmed — step-by-step videos for every major topic.
Downloadable lab material	Confirmed — lab files accompany the workbook videos.
Real-time mock labs	Confirmed — included with the CCNA v2.0 training programme.
Troubleshooting scenarios	Confirmed — a distinct component in addition to the troubleshooting built into each module.
Exam preparation sessions	Confirmed — including revision sessions, mock exams and a final exam-readiness review.
Interview practice questions	Confirmed — technical, scenario, troubleshooting and configuration questions plus HR, resume and L1 role guidance.
Course access period	Length of access to the video course and lab material for this batch: [To be confirmed].
Written notes or study guide	Not documented in the source material: [To be confirmed].
Student support group or community	Not documented in the source material: [To be confirmed].
Career guidance	Confirmed — advertised as part of the programme.

16. Trainer Profile

SIKANDAR SHAIK

Triple CCIE #35012 — Enterprise | Security | Service Provider

Lead Trainer, Network Online Academy • 20+ years of networking experience

Professional Summary

Sikandar Shaik is a Cisco networking trainer with more than twenty years of experience in the field. He holds three CCIE certifications under a single number, #35012, across the Enterprise, Security and Service Provider tracks — a combination that spans routing and switching, network security and carrier-grade networking.

He leads the CCNA programme at Network Online Academy, where he delivers live instructor-led training and maintains the academy's Cisco course library. His teaching approach is configuration-first: technologies are explained, then built on the command line, then verified, then deliberately broken so that students learn to read output and reason their way to a fix.

Areas of Technical Expertise

Track	Coverage
Enterprise	Routing and switching, VLANs and trunking, spanning tree, EtherChannel, OSPF, first-hop redundancy, IPv4 and IPv6 design and troubleshooting.
Security	Device hardening, AAA with TACACS+ and RADIUS, access control lists, Layer 2 security features, IPsec VPN concepts.
Service Provider	Carrier and provider-network technologies, which inform the WAN and advanced routing bonus material offered alongside this course.
Operations and automation	Network management models, SNMP and syslog, Ansible, Infrastructure as Code, and the responsible use of AI in network operations.

Teaching Background

- Lead trainer for the CCNA programme at Network Online Academy.
- Maintains and continually updates a full CCNA video curriculum, which has been audited topic-by-topic against the CCNA v2.0 blueprint ahead of this batch.
- Delivers live instructor-led online training with hands-on lab work and career guidance.

Certification detail: Trainer credentials are stated as they appear in the academy's own course material: Triple CCIE #35012 (Enterprise, Security, Service Provider), 20+ years of networking experience. Any additional qualifications the trainer wishes to list should be supplied for inclusion. [Trainer details to be added]

17. Why Choose This Training

Built on the new blueprint, not retro-fitted to it

The syllabus was rebuilt from the published CCNA 200-301 v2.0 exam topics. Module weighting follows the official domain percentages, and removed topics have been moved out of the exam path rather than left in place.

A four-month head start

Training begins in October 2026 and the v2.0 exam launches on 3 February 2027. Students finish the syllabus and revise before the new exam goes live rather than scrambling after it.

Troubleshooting is the course, not a chapter

The v2.0 blueprint is dominated by diagnose and troubleshoot objectives. Every module ends with fault isolation from live output, and three separate integration labs bring the faults together.

Complete coverage of the new topic areas

OSPFv3, packet-capture interpretation, storm control, IPv6 RA guard, SFTP and SCP, DNS record diagnosis, AAA client configuration, Ansible command execution, agentic AI and prompt design are all taught as full topics.

Taught live by a Triple CCIE

Sessions are delivered live by Sikandar Shaik, CCIE #35012 in Enterprise, Security and Service Provider, with more than twenty years in the field.

Beginners are genuinely catered for

The course starts at what a network is and includes an extensive subnetting workshop before moving to switching and routing. No prior networking knowledge is assumed.

Removed topics are kept, not deleted

EIGRP, QoS, NTP, GRE, DMVPN, MPLS, SDN, REST and JSON material is retained as clearly labelled bonus content for professional development, without cluttering the exam path.

A complete package, not just lectures

The programme includes the complete CCNA video course, workbook explanation videos with downloadable lab material, hands-on configuration labs, real-time mock labs, troubleshooting scenarios, exam preparation sessions, interview practice questions and career guidance.

Interview preparation is built in

Technical, scenario-based, routing and switching, troubleshooting and configuration question sets, plus HR and communication guidance, resume guidance and targeted L1 network engineer preparation — so exam readiness and job readiness are built together.

Practical skills that survive the exam

The stated aim is job-ready capability: configure real networks, diagnose connectivity problems, secure Layer 2, read packet captures and use AI assistance responsibly.

18. Student Support

Support arrangements documented in the course material:

- Live instructor-led sessions, which allow questions to be raised and answered during class.
- Revision sessions scheduled as part of exam preparation.
- Career guidance, resume guidance and interview preparation, included in the programme.
- Direct contact with the academy by phone, email or the website for enrolment and course queries: +91 70368 26345, info@noasolutions.com, www.noasolutions.com.
- An online course platform hosting the academy's CCNA content at sikandar.teachable.com.

The following are not documented in the supplied material and should be confirmed before being advertised: scheduled doubt-clearing sessions outside class hours, a student community or discussion group, one-to-one mentoring, and the length of the post-course access and support period. [To be confirmed]

19. Frequently Asked Questions

Q1. Who can join this course?

Anyone who wants to build practical Cisco networking skills — networking students, IT support and helpdesk engineers, system and network administrators, career changers moving into IT, and professionals updating from CCNA v1.1 to v2.0.

Q2. Do I need previous networking experience?

No. There are no formal prerequisites. The course starts from what a network is and how to access Cisco IOS, and it includes a full subnetting workshop before moving on to switching and routing. Basic computer literacy and a willingness to work at the command line are enough.

Q3. How practical is the course?

Very. The CCNA v2.0 exam itself has shifted from describing technologies to configuring, diagnosing and troubleshooting them, and the course follows that shift. Every topic is built, verified, deliberately broken and then repaired in the lab.

Q4. What lab environment is used?

Cisco Packet Tracer is the reference lab platform used in the academy's CCNA material and in the exercises in this syllabus. The exact platform mix for the October 2026 batch, including any physical equipment, is to be confirmed with the academy.

Q5. Does this course prepare me for the CCNA exam?

Yes. The syllabus is aligned to the published Cisco exam topics for 200-301 CCNA v2.0, module weighting follows the official domain percentages, and the final day is a full integrated troubleshooting lab plus a mock examination. The course does not include an exam voucher or a guarantee of a pass.

Q6. When does the new exam start, and should I wait?

CCNA 200-301 v2.0 becomes available on 3 February 2027, and v1.1 remains available until 2 February 2027. Training starts in October 2026 so that students complete the new syllabus and revise before the new exam launches.

Q7. I already started studying CCNA v1.1. Is my work wasted?

No. The exam code, the 120-minute duration and the certification are unchanged, and most foundational material carries over. What changes is depth and emphasis. This course covers the new and expanded areas explicitly, and identifies which v1.1 topics are no longer examined.

Q8. What is new in CCNA v2.0?

The blueprint moves from six domains to five, places far more weight on troubleshooting, and introduces a new domain covering AI and network operations — including agentic AI, prompt selection and evaluating AI-generated recommendations. OSPFv3, packet-capture interpretation, storm control, IPv6 RA guard, SFTP and SCP, DNS record diagnosis and Ansible command execution are also new or significantly expanded.

Q9. Is EIGRP still covered?

EIGRP is no longer part of the CCNA exam blueprint, so it is not taught as exam content. It is retained as optional advanced-routing bonus material for students who want it.

Q10. How are sessions delivered?

As live instructor-led online sessions delivered by the trainer, with hands-on lab work alongside. Class days and timings for the October 2026 batch are to be confirmed.

Q11. What resources do I get with the course?

The complete CCNA v2.0 video course, workbook explanation videos with downloadable lab material, hands-on configuration labs, real-time mock labs, troubleshooting scenarios, exam preparation sessions, interview practice questions and career guidance. Material is delivered through the academy's online course portal. Written notes and the length of the access period should be confirmed at enrolment.

Q12. Does the course help with job interviews?

Yes. Interview preparation is included: CCNA technical questions, scenario-based questions, routing and switching questions, troubleshooting and configuration questions, HR and communication guidance, resume and experience guidance, and preparation aimed at L1 network engineer roles.

Q13. What are the real-time mock labs?

Complete working topologies with faults injected in advance, presented under exam-like conditions. You are given the symptom and the objective and must find the root cause from device output — covering VLANs and trunks, IPv4 and IPv6, OSPFv2 and OSPFv3, network services and Layer 2 security.

Q14. How do I contact the trainer or enrol?

Call +91 70368 26345, email info@noasolutions.com, or visit www.noasolutions.com. The CCNA course page is at sikandar.teachable.com/p/ccna200-301. Seats for the October 2026 batch are limited.

20. Enrolment and Contact

Seats for the October 2026 CCNA 200-301 v2.0 batch are limited. To enrol or to ask about the course, contact Network Online Academy using the details below.

Institute	Network Online Academy
Programme	CCNA 200-301 v2.0 — Complete Networking Training Programme
Batch	October 2026
Trainer	Sikandar Shaik — Triple CCIE #35012 (Enterprise, Security, Service Provider)
Phone	+91 70368 26345
Email	info@noasolutions.com
Website	www.noasolutions.com
Course page	https://sikandar.teachable.com/p/ccna200-301
Fees and payment	[To be confirmed]
Class days and timings	[To be confirmed]
Enrolment deadline	[To be confirmed]

Be ready before the exam changes — not after.

21. Website-Ready Course Content

For internal use: This section is written as ready-to-publish website copy. It can be lifted directly onto the course page with minimal editing. It is deliberately shorter and more promotional in tone than the syllabus above, but every claim in it is consistent with the detailed sections of this document.

A. Course Page Title

CCNA 200-301 v2.0 Training — Live Instructor-Led Cisco Networking Course

B. Short Hero Description

Master the new Cisco CCNA. Configure, secure and troubleshoot real networks — live, hands-on, and taught by a Triple CCIE. New batch starts October 2026.

C. Course Introduction (100–150 words)

The CCNA is changing. Cisco's new 200-301 v2.0 exam launches on 3 February 2027, and it moves decisively away from memorising definitions towards configuring, diagnosing and troubleshooting live networks. It also introduces a brand-new domain covering AI in network operations.

This live instructor-led programme is built directly on that new blueprint. Across six modules and fifty training days you will build switched and routed networks from the command line, break them deliberately, and learn to repair them from output alone. You will cover IPv4 and IPv6, VLANs and trunking, EtherChannel and Rapid PVST+, OSPFv2 and OSPFv3, DHCP, DNS, NAT, ACLs, Layer 2 security, Ansible and AI-assisted operations. Training starts in October 2026, giving you a four-month head start before the new exam goes live.

D. Key Course Highlights

- Aligned to the official CCNA 200-301 v2.0 exam blueprint and its five weighted domains
- Live instructor-led online training by Sikandar Shaik, Triple CCIE #35012
- 50 structured training days across six modules
- Build it. Break it. Fix it. — troubleshooting built into every topic
- Full coverage of the new v2.0 areas: OSPFv3, packet captures, storm control, IPv6 RA guard, SFTP/SCP, DNS diagnosis, Ansible, agentic AI and prompting
- Complete CCNA video course plus workbook explanation videos for every major topic
- Hands-on configuration labs with downloadable lab material
- Real-time mock labs and fault-injected troubleshooting scenarios
- Exam preparation sessions: topic-wise questions, module assessments, revision and mock exams
- Interview practice questions, resume guidance and L1 network engineer preparation
- Final integrated troubleshooting lab and mock examination
- Career guidance included
- Bonus advanced and legacy modules for professional development
- New batch starts October 2026 — limited seats

E. Who This Course Is For

- Networking students and fresh graduates starting from zero
- IT support and helpdesk engineers who want to diagnose faster
- System and network administrators running production access networks

- Professionals updating from CCNA v1.1 to v2.0
- Career changers moving into networking
- Anyone preparing for the CCNA certification

F. Prerequisites

No formal prerequisites. Basic computer literacy and a willingness to work at the command line are enough to start. Any prior exposure to IP addressing or IT support is helpful but not required.

G. Learning Outcomes

- Configure Cisco switches and routers from the command line
- Design and troubleshoot IPv4 and IPv6 addressing and subnetting
- Implement VLANs, 802.1Q trunking and inter-VLAN routing
- Configure LACP EtherChannel and Rapid PVST+ with PortFast, BPDU guard, root guard and loop guard
- Route with static routes, single-area OSPFv2 and OSPFv3, and interpret HSRP and VRRP state
- Deliver and diagnose DHCP, DNS, NAT and PAT
- Secure device management with local users, AAA (TACACS+ and RADIUS), SSH, SFTP and SCP
- Implement standard, extended, numbered and named IPv4 ACLs
- Harden the access layer with port security, DHCP snooping, DAI, storm control and IPv6 RA guard
- Analyse show output, logs and packet captures to isolate faults
- Use Ansible to execute commands across network devices
- Write effective AI prompts and validate AI-generated network recommendations

H. Condensed Syllabus

Module	Coverage	Weight
1. Network Infrastructure and Connectivity	Network models, Ethernet and ARP, cabling and interface diagnosis, IPv4 addressing and subnetting, VLSM, IPv6, wireless principles, virtualisation, client troubleshooting	25%
2. Switching and Network Access	Switch configuration and operation, VLANs, 802.1Q trunking, inter-VLAN routing, CDP and LLDP, EtherChannel with LACP, Rapid PVST+ and guard features, modern edge ports	25%
3. IP Routing	Routing tables and longest-prefix match, IPv4/IPv6 static, default, host and floating routes, single-area OSPFv2, OSPFv3 for IPv6, HSRP and VRRP interpretation	20%
4. Network Services and Security	DHCPv4 server/client/relay, DNS records and diagnosis, NAT and PAT on IOS XE, device management security, AAA with TACACS+ and RADIUS, SFTP and SCP, IPv4 ACLs, IPsec VPN concepts, port security, DHCP snooping, DAI, storm control, IPv6 RA guard	20%
5. AI, Network Operations and Management	Device, cloud, controller and automation-based management, Infrastructure as Code, SNMP and syslog interpretation, Ansible, generative and agentic AI, prompt design and AI-output evaluation	10%
6. Final Preparation	Integrated multi-domain troubleshooting lab, packet-capture interpretation, mock examination and final review	—

I. Practical Training and Labs

Every topic in this course is taught as a cycle: configure it, verify it, break it, fix it. Students build multi-switch and multi-router topologies, configure them live on Cisco IOS syntax, verify the result with show commands, logs, ping and traceroute, then work deliberately injected faults until they can isolate a problem from output alone. Cisco Packet Tracer is the reference lab platform. Real-time mock labs run alongside the module exercises, and the programme ends with a single integrated topology containing faults across switching, routing, services and security, followed by a mock exam.

I2. What's Included in the Package

- Complete CCNA 200-301 v2.0 video course
- Workbook explanation videos — topology, configuration, verification, expected output, practice activities and full lab solutions
- Hands-on configuration labs with downloadable lab material
- Real-time mock labs with injected faults
- Troubleshooting scenarios and a final integrated troubleshooting lab
- Exam preparation: complete blueprint coverage, topic-wise practice questions, module-wise assessments, configuration exercises, revision sessions, mock exams and a final exam-readiness review
- Interview preparation: technical, scenario, routing and switching, troubleshooting and configuration questions, plus HR and communication guidance, resume guidance and L1 network engineer preparation
- Career guidance

J. Trainer Summary

Sikandar Shaik — Triple CCIE #35012 (Enterprise, Security, Service Provider), with more than twenty years of networking experience. Lead trainer at Network Online Academy, where he delivers live instructor-led Cisco training and maintains the academy's CCNA curriculum. His teaching is configuration-first: explain it, build it, verify it, break it, fix it.

K. Why Choose This Course

- Rebuilt on the official v2.0 blueprint, not a relabelled v1.1 course
- Four-month head start before the new exam launches on 3 February 2027
- Troubleshooting-led delivery that matches how the new exam is written
- Complete coverage of every newly added v2.0 topic
- Taught live by a Triple CCIE with 20+ years in the field
- Genuinely beginner-friendly, with a full subnetting workshop
- Removed v1.1 topics retained as bonus professional content
- A complete package: video course, workbook videos, labs, mock labs, exam prep and interview prep

L. FAQ (short web version)

Do I need experience? No. The course starts from the fundamentals and assumes no networking background.

Is it practical? Yes — configuration, verification and troubleshooting labs run through every module, plus real-time mock labs.

What's included? Complete video course, workbook explanation videos, hands-on labs with downloadable material, real-time mock labs, troubleshooting scenarios, exam preparation and interview practice questions.

Does it help with interviews? Yes — technical and scenario question sets, HR and communication guidance, resume guidance and L1 network engineer preparation are included.

Which exam does it prepare me for? Cisco 200-301 CCNA v2.0, a 120-minute exam available from 3 February 2027.

When does the batch start? October 2026. Seats are limited.

How is it delivered? Live instructor-led online sessions with hands-on labs.

What lab platform is used? Cisco Packet Tracer is the reference platform for the lab exercises.

Is EIGRP covered? Not as exam content — it is no longer in the CCNA blueprint. It is offered as bonus advanced-routing material.

I'm studying v1.1 — is my work wasted? No. The exam code and certification are unchanged and most fundamentals carry over; this course covers what has changed.

Do I get an exam voucher? The exam is booked directly with Cisco's testing provider. Please confirm inclusions with the academy.

How do I enrol? Call +91 70368 26345, email info@noasolutions.com, or visit www.noasolutions.com.

M. Enrolment Call to Action

Don't prepare for yesterday's networks. The new CCNA 200-301 v2.0 exam launches on 3 February 2027 — start preparing in October 2026 and walk in ready.

Enrol now • +91 70368 26345 • info@noasolutions.com • www.noasolutions.com

Limited seats available for the October 2026 batch.

22. Items to Verify

The following could not be determined reliably from the supplied course materials. Each should be confirmed before this document is distributed to students or published to the website.

#	Item	What is needed
1	Total course duration	The source material defines 50 training days but does not state session length, total hours, or the number of weeks or months the batch runs.
2	Class schedule	Days of the week, timings and time zone for the October 2026 batch are not documented.
3	Exact batch start date	Posters state October 2026. The specific start date is not given.
4	Course fees and payment terms	No pricing information appears in any source file.
5	Lab platform for this batch	Cisco Packet Tracer is used in the academy's existing CCNA material. Whether physical equipment, other simulators or remote lab access are also provided is not stated.
6	Course access period	The package contents are confirmed. The length of access to the video course, workbook videos and lab material after the batch ends is not documented.
7	Assessment reporting	Module-wise assessments, mock exams and a final readiness review are confirmed. Whether scores are formally recorded and reported to students, and whether one-to-one progress reviews are scheduled, is not documented.
8	Written notes or study guide	Not documented — confirm whether a written study guide accompanies the workbook videos and lab material.
9	Exam voucher and certification support	Whether an exam voucher, booking assistance or a certificate of completion is provided is not documented.
10	Trainer credential wording	Confirmed as “Sikandar Shaik — Triple CCIE #35012, Enterprise Security Service Provider”. Note that the earlier website wording used “RS” and should be updated to “Enterprise”. Any further qualifications to be listed should be supplied.
11	Institute legal name and address	Marketing materials use “Network Online Academy” and the domain noasolutions.com. A registered business name and address, if required on student-facing documents, are not available in the sources.
12	Post-course support period	Not documented.
13	Student community or discussion group	Not documented — confirm whether a support group exists for the batch.

Website corrections already identified in the source material: Update the course page from v1.1 to v2.0; state the 3 February 2027 exam date; remove EIGRP, QoS and NTP from advertised exam topics; remove detailed SDN, REST API and JSON from the main exam list; replace “Wireless LAN Technologies and Architectures” with wireless principles and troubleshooting; add agentic AI and generative AI prompting, OSPFv3, packet-capture interpretation, storm control and IPv6 RA guard, SFTP/SCP and DNS diagnosis, and Ansible command execution; change the instructor track wording from “RS” to “Enterprise”.

23. Source Materials Reviewed

This section is for internal traceability and may be removed before public distribution.

Folder	File	Used for
CCNA 2.0 Syllabus Topics Docs	200-301_CCNA_v2.0_Exam_Topics_PDF.pdf	Official Cisco exam description, 120-minute duration, five domains and their weightings, and every numbered exam objective.
CCNA 2.0 Syllabus Topics Docs	CCNA 2.0 - Syllabus Notes Sikandar.docx	v1.1 to v2.0 blueprint comparison; topics retained, removed, new and expanded; the 50-day course plan across six sections; the course recording audit; bonus/legacy topic placement; assessment changes; website update list; trainer credential wording.
CCNA 2.0 MK-Posters	12c3a34e-58b0-47eb-b9b1-13d2f1a5b8d8.jpg	“Build it. Break it. Fix it.” positioning, practical skill list, October 2026 batch, trainer credentials, contact details, academy logo.
CCNA 2.0 MK-Posters	2ece0a0e-4c63-4644-a167-2e60c4c765fc.jpg	New v2.0 skill areas, October 2026 training start, 3 February 2027 exam launch, trainer credentials, contact details.
CCNA 2.0 MK-Posters	8f99fc0e-215f-4cdb-a668-e8c418913c8b.jpg	Four-month head-start positioning, course inclusions list, “Admissions Now Open” wording, 20+ years of experience.
CCNA 2.0 MK-Posters	e48ed549-8653-488b-91c4-19bb263d4922.jpg	Career positioning, job-ready skill areas, live instructor-led delivery, practical labs, exam preparation and career guidance.
CCNA 2.0 MK-Posters	e9896628-5e2a-4bfb-9f07-c247665dbc37.jpg	Updated v2.0 skills list including agentic AI, HSRP/VRRP, packet-capture analysis, Ansible and IaC, SFTP/SCP and DNS troubleshooting. Source of the academy logo used on the cover of this document.
Supplied by the trainer	CCNA 2.0 training package poster outlines (5 poster briefs supplied directly in the working session, August 2026)	Confirmed package contents: complete video course, workbook explanation videos, hands-on configuration labs, downloadable lab material, interview practice questions, exam preparation sessions, real-time mock labs, troubleshooting scenarios, career guidance, and confirmation that admissions are open for the October 2026 batch.

All source files listed above were read successfully. No additional CCNA syllabus or course information files were present in the course root folder at the time of writing.