NETWORKING · 2027

Network Engineer Cert Roadmap

The three certs I'd focus on if I wanted to be a network engineer in 2027, in the order I'd take them. One page per cert: what it proves, the exam, what to study, and the free resources to study with.

1 NETWORK+

START HERE

CompTIA · N10-009

The fundamentals. Firewalls, IPs, switches and the terms you'll use for the rest of your career.

2 CCNA

GETS YOU HIRED

Cisco · 200-301

Proves you can apply it: configure, connect and troubleshoot. This is what gets you hired.

3 CCNP ENTERPRISE

LEVEL UP

Cisco · 350-401 ENCOR + 1

Professional level. Not needed to be a network engineer, but it's the track toward architect roles.

WHERE IT CAN LEAD

$134,050 median · top 10% above $202,680

Computer network architects, US. Source: BLS Occupational Outlook Handbook and May 2025 wage data.

CCNP has no formal prerequisite, and experienced engineers sometimes start at CCNA. Starting from zero, this order builds each step on the last.

1 NETWORK+

CompTIA · exam N10-009 · vendor-neutral

The beginner-friendly cert that teaches you the basics of networking, and the terms you'll need as you progress in network engineering.

QUESTIONS	TIME	PASS	LEVEL
Up to 90	90 min	720 / 900	Entry

WHAT THE EXAM COVERS (COMPTIA)

- Networking concepts (23%): OSI and TCP/IP models, ports, protocols, addressing.
- Network implementation (20%): switching, routing, wireless.
- Network operations (19%): monitoring, documentation, network services.
- Network security (14%) and network troubleshooting (24%).

HOW TO STUDY IT, IN ORDER

1 Watch the free course — professormesser.com >

Professor Messer's full N10-009 video course. Every video is free.

2 Drill subnetting until it's fast — subnettingpractice.com >

Short daily reps. Subnetting shows up on Network+ and again on CCNA.

3 Build it in Packet Tracer — netacad.com >

Cisco's free network simulator. Wire up a firewall, a switch and three PCs, then give them IPs.

4 Study from the official objectives — comptia.org >

CompTIA's Network+ page: the five domains, the exam format and the passing score. Tick each objective off as you learn it.

START TODAY

Open Professor Messer's course and watch the first video tonight.

2 CCNA

Cisco · exam 200-301

The most important cert for a network engineer. It shows employers you don't just know the terms and the basics, you can apply them: TCP, DNS, gateways, and how to configure them.

TIME	COST	VERSION	NEW
120 min	US$300	v1.1 to Feb 2, 2027	v2.0 from Feb 3, 2027

WHAT TO MASTER

- Switching and VLANs, IP routing, and IP services like DHCP, DNS and NAT.
- Security fundamentals and the basics of automation.
- Configuring Cisco devices from the command line, not just reading about them.
- Testing on or after Feb 3, 2027? Study the v2.0 exam topics on Cisco's page.

HOW TO STUDY IT, IN ORDER

1 Watch a free CCNA course — jeremysitlab.com >

Jeremy's IT Lab: a complete free CCNA course on YouTube.

2 Do the labs — flackbox.com >

Free Packet Tracer lab guide for the CCNA. Type every command yourself.

3 Read the official exam topics — cisco.com >

Cisco's CCNA page lists the topics for v1.1 and v2.0, the price and the dates.

START TODAY

Open the first lesson of Jeremy's free course, then build the same thing in Packet Tracer.

3 CCNP ENTERPRISE

Cisco · core 350-401 ENCOR + 1 concentration exam

You don't need it to be a network engineer. If you want to grow into the $200K+ range and become a network architect or designer, this is the cert to go for.

CORE EXAM	CORE COST	CONCENTRATION	LEVEL
ENCOR, 120 min	US$400	US$300, 90 min	Professional

HOW IT WORKS

- Two exams: the 350-401 ENCOR core exam, then one concentration exam of your choice.
- Concentrations include advanced routing (ENARSI), SD-WAN, network design and automation.
- No formal prerequisites. Cisco suggests three to five years of hands-on experience first.
- Each exam you pass also earns a Cisco Specialist certification.

HOW TO STUDY IT, IN ORDER

1 Read the exam requirements — cisco.com >

Cisco's CCNP Enterprise page: the core exam, the concentration options and current prices.

2 Lab with real router images — gns3.com >

GNS3 is a free network emulator for bigger, multi-site labs: OSPF, BGP, redundancy.

3 Practice all three exams in one path — getuprep.com >

My networking path on getuprep: Network+, then CCNA, then ENCOR. Each step has 15 free practice questions, no sign-up.

START TODAY

Read the ENCOR exam topics on Cisco's page and mark what you already know from CCNA.