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ACADEMY**

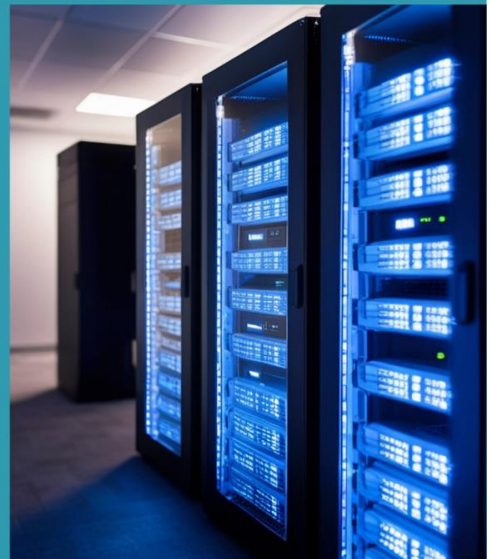
NETWORKING & INFRASTRUCTURE

PATHWAY GUIDE

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2026 EDITION

A practical pathway for beginners, career changers, working professionals and experienced technicians.



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ABOUT THIS GUIDE

Welcome to the Networking & Infrastructure Pathway

This standalone guide explains the curriculum, practical laboratories, assessments, awards and career preparation for all three levels of the TeckyGuys Academy Networking & Infrastructure Pathway.

What this guide covers

- Level 1 — Networking Foundations
- Level 2 — CCNA Network Administration
- Level 3 — CCNP Enterprise Preparation (planned advanced delivery)
- Required Cisco Networking Academy courses at each level
- TeckyGuys practical training, evidence and assessments
- Program formats, credentials and career directions

What this guide does not replace

- The TeckyGuys Academy Catalog and Student Handbook
- The student's written enrollment agreement and program offer
- Current Cisco course, examination or certification requirements
- Employer-specific experience, screening or work-authorization requirements.

IMPORTANT: Course access, schedules, included services and Level 3 availability must be confirmed in writing for the applicable enrollment period.

NAVIGATION

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SECTION 1

Pathway Overview

The pathway combines official Cisco Networking Academy coursework with instructor-led practice, Cisco Packet Tracer laboratories, approved physical or virtual equipment, technical documentation and career preparation.

1.1 Who this pathway is for

- Beginners entering networking or IT infrastructure
- IT support, help-desk and field-service technicians
- Data center, cabling and connectivity technicians
- Junior network technicians and career changers
- Working professionals preparing for Cisco certification
- Experienced technicians developing enterprise-network skills

1.2 Training approach

Cisco courses provide the structured academic curriculum. TeckyGuys adds guided laboratories, practical scenarios, professional documentation, assessment and feedback so students apply that curriculum in realistic working environments.

NO OUTSIDE PLATFORM REQUIRED: The published pathway uses Cisco Networking Academy and TeckyGuys learning activities. Any future optional resource will be identified separately.

SECTION 2

Pathway Learning Outcomes

Domain	Student capability
Connectivity	Interpret network diagrams and identify appropriate devices, media and interfaces.
Addressing	Configure and verify IPv4 and IPv6 settings and develop addressing plans appropriate to the level.
Switching	Configure secure switching, VLANs, trunks, redundancy and related services.
Routing	Implement and troubleshoot static and dynamic routing appropriate to the pathway level.
Wireless	Support and configure wireless connectivity using approved requirements.
Security	Apply device-access, segmentation and traffic-control practices within authorized scope.
Operations	Monitor, back up, restore, document and support network infrastructure.
Troubleshooting	Collect evidence, isolate faults, validate corrections and escalate clearly.
Professional practice	Prepare diagrams, change records, ticket notes, handovers and technical presentations.
PROGRESSIVE DEPTH: The expected complexity increases at each level. Completing foundational work does not substitute for advanced course, laboratory or assessment requirements.	

SECTION 3

Three-Level Architecture and Entry Requirements

Level	Entry position	Primary outcome
Level 1	Open to beginners; previous networking experience is not required.	Small-network support and CCST Networking preparation.
Level 2	Level 1, CCST Networking, or approved equivalent knowledge.	Network administration and CCNA preparation.
Level 3	Level 2, CCNA, or approved equivalent CCNA-level knowledge.	Advanced enterprise-network and CCNP Enterprise preparation.

3.1 Direct entry

TeckyGuys reviews direct-entry requests using previous education, certification, professional experience and, where required, a readiness assessment. Direct entry does not waive the completion requirements of the level entered.

3.2 Normal progression

- Build support fundamentals and pass the Level 1 practical assessment.
- Complete the official CCNA sequence and pass the Level 2 capstone.
- After activation, complete advanced enterprise courses and the Level 3 capstone.

LEVEL 3 STATUS: Level 3 opens only after TeckyGuys confirms applicable Cisco academy and instructor delivery requirements.

LEVEL 1

3.3.1. Networking Foundations

Level 1 develops the knowledge and practical ability needed to understand, install, support and troubleshoot small networks.

Component	Requirement
Cisco curriculum	Four required Networking Academy courses
Practical work	Packet Tracer plus approved physical or virtual laboratories
Evidence	Configurations, test results, ticket notes and troubleshooting records
Final assessment	Small-network configuration and fault-resolution task
Award	TeckyGuys Academy Networking Foundations Award
Certification direction	Preparation for the separate CCST Networking examination
ENTRY: Previous networking experience is not required. Basic computer literacy and consistent practice are expected.	

3.3.2. Networking Basics

Introduces the purpose, components and communication principles of connected networks.

Core knowledge and skills

- How networks support individuals and organizations
- Network types and connections
- Switches, routers, access points, clients and servers
- Ethernet and network protocols
- Wired and wireless connectivity
- Basic security awareness and common connectivity problems

Applied learning

- Build and label a small Packet Tracer topology
- Identify device roles and connection types
- Test basic connectivity and record observations

LEARNING FOCUS: Students learn to explain what each device and connection contributes to a working network.

3.3.3. Networking Devices and Initial Configuration

Develops initial Cisco device-access, configuration and verification skills.

Core knowledge and skills

- Network interfaces and cabling
- Cisco IOS and command-line navigation
- Device names and secure passwords
- Interface configuration
- Saving and verifying configurations
- Basic device troubleshooting

Applied learning

- Access an approved switch or router
- Apply an initial configuration
- Verify interfaces and save the configuration
- Prepare a concise configuration record

LEARNING FOCUS: Students must distinguish configuration evidence from assumptions and unsupported conclusions.

3.3.4. Network Addressing and Basic Troubleshooting

Builds the addressing and diagnostic skills used to support endpoints and small networks.

Core knowledge and skills

- IPv4 and IPv6 addressing
- Subnet masks and prefix lengths
- Default gateways
- Basic subnetting and address assignment
- Workstation configuration
- Connectivity testing, common addressing faults and structured escalation

Applied learning

- Configure approved workstation network settings
- Use diagnostic commands to test reachability
- Correct a staged addressing problem
- Capture evidence for escalation

LEARNING FOCUS: Correct addressing is validated through observable results, not configuration entry alone.

3.3.5. Network Support and Security

Connects troubleshooting, user support, network awareness and secure operating practice.

Core knowledge and skills

- Network-support procedures
- Endpoint and network-security principles
- Common threats and vulnerabilities
- Secure device access
- Wireless support and monitoring fundamentals
- Customer communication and documentation

Applied learning

- Work from a support ticket
- Apply approved secure-access settings
- Investigate a staged wireless or connectivity issue
- Write user-facing and technical closure notes

LEARNING FOCUS: Support quality includes technical correctness, clear communication and responsible handling of access.

3.3.6. TeckyGuys Practical Laboratory Program

Laboratory domain	Required activities
Devices and media	Identify devices, copper and fiber connections, connectors, racks and patching.
Endpoint setup	Configure IPv4 settings, gateways and approved wireless connectivity.
Device access	Use Cisco IOS, secure access, configure interfaces and verify status.
Small-network build	Assemble and test a topology from an approved diagram.
Troubleshooting	Identify staged connectivity faults and gather evidence.
Documentation	Prepare diagrams, ticket notes, results and escalation records.

3.3.7. Evidence portfolio

- Annotated network diagram
- Saved or exported Packet Tracer activity
- Configuration and command-verification record
- Connectivity test results
- Troubleshooting worksheet
- Professional ticket closure or escalation note

LAB ACCESS: Activities use Cisco Packet Tracer and approved physical or virtual equipment. Students may not make unauthorized changes to live systems.

3.3.8. Practical Assessment, Completion and Award

The student must

- Interpret a basic network diagram and identify required devices.
- Configure workstation network settings and a network device.
- Apply basic device-security settings.
- Verify interfaces and end-to-end connectivity.
- Identify and correct an introduced network problem.
- Record results and explain the completed work.

Completion requirements

- Complete all four required Cisco courses
- Complete required TeckyGuys laboratories
- Pass the practical assessment
- Meet attendance, participation, conduct and integrity standards
- Resolve applicable academic and administrative requirements

AWARD AND CERTIFICATION: Eligible students receive applicable Cisco course credentials and the TeckyGuys Networking Foundations Award. CCST Networking is a separate Cisco-controlled certification.

LEVEL 2

3.4. CCNA Network Administration

Level 2 develops routing, switching, wireless, security, automation and troubleshooting skills for modern business networks through Cisco's official three-course CCNA sequence.

Component	Requirement
Cisco curriculum	Introduction to Networks; SRWE; ENSA
Practical work	Network-administration labs and realistic scenarios
Evidence	Configurations, diagrams, addressing plans, change and handover records
Final assessment	CCNA-aligned business-network capstone
Award	TeckyGuys Academy CCNA Network Administration Award
Certification direction	Preparation for the separate CCNA examination
ENTRY : Students normally complete Level 1 first or demonstrate equivalent knowledge through approved certification, education, experience or assessment.	

3.4.1. CCNA: Introduction to Networks

Establishes the architecture, protocol, addressing and configuration foundation of the CCNA sequence.

Core knowledge and skills

- Network architectures, models and protocols
- Physical and data-link connectivity
- Ethernet switching
- IPv4, IPv6 and subnetting
- Initial router and switch configuration
- Security fundamentals
- Small-network implementation and troubleshooting

Applied learning

- Design an addressing plan
- Configure routers, switches and endpoints
- Verify protocol and interface operation
- Diagnose introduced small-network faults

LEARNING FOCUS : Students move from individual commands to repeatable configuration and verification practice.

3.4.2. CCNA: Switching, Routing, and Wireless Essentials

Develops campus switching, interconnection, wireless and first-stage routing capability.

Core knowledge and skills

- VLANs and trunking
- Inter-VLAN routing
- Spanning Tree Protocol
- EtherChannel
- DHCP and first-hop redundancy concepts
- Wireless LANs
- Switch security
- Static routing and troubleshooting

Applied learning

- Create and assign VLANs
- Configure trunks and inter-VLAN routing
- Implement EtherChannel and switching protections
- Configure approved wireless and DHCP services
- Diagnose routing and switching faults

LEARNING FOCUS: Students must verify both the intended forwarding behavior and the applied security settings.

3.4.3. CCNA: Enterprise Networking, Security, and Automation

Extends CCNA learning into enterprise routing, services, security, virtualization and automation.

Core knowledge and skills

- Enterprise architecture and OSPF
- WAN technologies
- Access control lists
- Network address translation and VPN concepts
- Quality of service
- Network management and virtualization
- Software-defined networking
- APIs, automation fundamentals and enterprise troubleshooting

Applied learning

- Implement and verify OSPF
- Apply ACL and NAT requirements
- Review management and assurance information
- Complete introductory automation exercises
- Troubleshoot an enterprise-style topology

LEARNING FOCUS: Automation is introduced as controlled, testable infrastructure practice—not blind execution.

3.4.4. TeckyGuys Practical Training — Switching and Services

- Configure managed switches and secure device management
- Create, assign and document VLANs
- Configure trunks and inter-VLAN routing
- Implement EtherChannel and Spanning Tree concepts
- Configure IPv4 and IPv6 addressing
- Configure DHCP services
- Configure approved wireless networks

- Backup and restore configurations

3.4.4.1 Required evidence

Artifact	Minimum content
Logical diagram	Devices, interfaces, VLANs, trunks and routed boundaries.
Addressing plan	Networks, masks/prefixes, gateways and assignment purpose.
Configuration record	Relevant commands, device identity and verification output.
Change note	Scope, expected impact, validation and rollback consideration.
CHANGE DISCIPLINE : Students practice planning, verification and rollback awareness alongside configuration.	

3.4.5 TeckyGuys Practical Training — Routing, Security and Troubleshooting

- Implement static and dynamic routing
- Apply access control lists
- Configure network address translation
- Use diagnostic and verification commands
- Diagnose routing, switching and service faults
- Review network-management information
- Prepare escalation and shift-handover reports
- Present technical findings clearly

Troubleshooting workflow

- Confirm the reported symptom, scope and recent changes.
- Review the topology, addressing plan and expected behavior.
- Collect interface, protocol, route and service evidence.

- Isolate the likely fault domain and test one hypothesis at a time.
- Apply an authorized correction and verify end-to-end operation.
- Document the result, remaining risk and next action.

EVIDENCE FIRST : A strong escalation explains what was observed, tested and ruled out—not merely that the network is down.

3.4.6. CCNA-Aligned Capstone Assessment

The capstone requires the student to design, implement, secure, troubleshoot and explain a business-network solution.

- Review the business and technical requirements.
- Develop the logical design and IP-addressing plan.
- Configure routers, switches, VLANs, trunks and routing.
- Implement required services and approved security controls.
- Verify end-to-end connectivity and expected traffic behavior.
- Diagnose and resolve introduced faults.
- Prepare diagrams, configuration records and validation evidence.
- Present and explain the completed solution.

Evaluation domains

Design	Implementation	Professional practice
Architecture and addressing	Routing, switching and services	Documentation and communication
Security intent	Verification and troubleshooting	Conduct, judgment and ownership

3.4.7. Completion, Award and Certification Direction

Completion requirements

- Complete all three required Cisco CCNA courses
- Complete the required TeckyGuys practical laboratories
- Pass the CCNA-aligned capstone assessment
- Submit required technical evidence
- Meet attendance, participation, conduct and academic-integrity standards
- Resolve applicable academic and administrative requirements

Eligible recognition

- Applicable Cisco Networking Academy course-completion certificates
- Applicable Cisco digital badges
- TeckyGuys Academy CCNA Network Administration Award

CERTIFICATION NOTICE : The TeckyGuys award is an academy pathway award. CCNA is a separate Cisco professional certification requiring Cisco-controlled examination and certification requirements.

LEVEL 3

3.5. CCNP Enterprise Preparation — Status and Scope

Level 3 is the planned advanced stage of the pathway. It will open only after TeckyGuys confirms that its academy and instructors satisfy the applicable Cisco delivery requirements.

Advanced purpose

- Support complex enterprise-network environments
- Strengthen advanced switching and routing capability
- Develop high-availability and enterprise wireless awareness
- Apply deeper network assurance, security and troubleshooting
- Introduce controlled network automation and operational continuity

Entry position

Students normally enter after Level 2, CCNA certification or approved evidence of equivalent CCNA-level knowledge.

ENROLLMENT CONTROL : Until activation is confirmed, TeckyGuys will not advertise Level 3 as open or promise immediate access to the planned CCNP Enterprise courses.

3.5.1. CCNP Enterprise: Core Networking

Develops advanced enterprise knowledge across architecture, infrastructure, assurance, security and automation.

Core knowledge and skills

- Enterprise-network architecture
- Advanced switching and routing
- Enterprise wireless networks
- Network security and assurance
- Virtualization
- Automation
- Infrastructure troubleshooting

Applied learning

- Design an enterprise topology
- Implement advanced infrastructure in an approved lab
- Review assurance and monitoring evidence
- Troubleshoot multi-domain faults
- Prepare operational and technical documentation

LEARNING FOCUS : Exact course title, scope and access remain subject to current Cisco Networking Academy requirements.

3.5.2. CCNP Enterprise: Advanced Routing

Develops deeper enterprise-routing design, implementation and troubleshooting capability.

Core knowledge and skills

- Enterprise-routing technologies
- Advanced IP addressing
- Route selection and control
- OSPF and route redistribution
- VPN technologies
- Infrastructure security
- Routing troubleshooting and enterprise operations

Applied learning

- Develop routing and control plans
- Implement advanced routing in an approved lab
- Validate route selection and reachability
- Diagnose introduced routing faults
- Document risks, corrections and validation

LEARNING FOCUS : The planned two-course structure will not be presented as ten additional TeckyGuys courses.

3.5.3. Advanced Practical Training

Practice domain	Representative activities
Architecture	Enterprise design, scalability, segmentation and resiliency.
Infrastructure	Advanced switching, routing, wireless and secure management.
Availability	Redundancy, failure scenarios and operational continuity.
Assurance	Monitoring, logs, validation and fault isolation.
Automation	Controlled configuration or verification exercises using approved methods.

Practice domain	Representative activities
Operations	Backups, recovery, change control, method of procedure and handover.

Professional evidence

- Enterprise logical and physical diagrams
- Addressing, VLAN and routing plans
- Method of procedure and rollback plan
- Monitoring and validation record
- Incident or escalation report
- Technical presentation

PRACTICAL CLASSIFICATION : These are TeckyGuys practical components supporting the Cisco curriculum; they are not separate professional certifications.

3.5.4. Enterprise-Networking Capstone

- Review an enterprise scenario and identify technical and operational requirements.
- Design a scalable network solution.
- Prepare addressing, VLAN, routing and availability plans.
- Configure the required infrastructure in an approved environment.
- Implement security, monitoring and network services.
- Diagnose and resolve introduced faults.
- Validate connectivity, behavior and recovery expectations.
- Prepare complete technical and operational documentation.
- Present and defend the proposed solution.

Evaluation

- Enterprise architecture
- Advanced configuration
- Routing and switching

- Security and availability
- Automation and assurance
- Troubleshooting
- Operational judgment
- Documentation, communication and professional conduct

3.5.5. Completion, Award and Certification Direction

- Complete both required Cisco CCNP Enterprise courses after activation
- Complete TeckyGuys advanced practical laboratories
- Pass the enterprise-networking capstone
- Submit required technical and operational evidence
- Meet attendance, participation, conduct and integrity standards
- Resolve applicable academic and administrative requirements

3.5.6. Eligible recognition after activation

- Applicable Cisco Networking Academy course certificates
- Applicable Cisco digital badges
- TeckyGuys Academy CCNP Enterprise Preparation Award

IMPORTANT DISTINCTION : The TeckyGuys award is not the official CCNP Enterprise certification and does not replace Cisco's current examination and certification requirements.

3.5.7. Program Formats and Student Journey

Format	Pathway use
Self-Paced Learning	Assigned Cisco courses and specifically included TeckyGuys activities within the access period.

Format	Pathway use
12-Week Cohort	One pathway level with instructor sessions, labs, reviews and final assessment.
24-Week Career Transition	Level 1 plus Level 2: foundations through CCNA-aligned administration.
Level 3 Advanced Program	Separate delivery after activation and verification of entry requirements.

Progression principle

Students may receive recognition for an individual level without completing all three levels. Progression requires completion of the current level or approved evidence of equivalent readiness.

WRITTEN OFFER CONTROLS : The enrollment offer identifies the applicable format, schedule, services, tuition, course access, laboratory access and assessment requirements.

3.5.8. Assessment, Evidence, Credentials and Awards

Evidence portfolio

- Cisco course-completion records
- Packet Tracer and laboratory evidence
- Device configurations and verification output
- Network and addressing diagrams
- Troubleshooting, ticket, change and handover records
- Capstone report and presentation

Assessment standard

Students are evaluated on technical knowledge, practical ability, troubleshooting, security awareness, verification, documentation, communication and professional conduct.

Credential distinction

- Cisco course certificates and badges are subject to Cisco requirements.
- TeckyGuys pathway awards recognize completion of academy requirements.

- CCST Networking, CCNA and CCNP Enterprise are separate Cisco professional certifications.
- Examination fees and vouchers are separate unless expressly included in writing.

COMPLETION : Participation alone is not completion. Required evidence and the applicable performance standard must be satisfied.

3.5.9. Career Preparation and Opportunities

After Level 1	After Level 2	After Level 3
Network Support Technician	Network Technician	Enterprise Network Technician
IT/Help-Desk Technician	Junior Network Administrator	Network Administrator
Field Service Technician	NOC Technician	Network Operations Specialist
Connectivity Technician	Network Deployment Technician	Network Implementation Engineer
Junior Network Technician	Wireless Support Technician	Infrastructure Operations Engineer
Infrastructure Support Technician	Data Center Network Technician	Network Deployment Lead

Career evidence to build

- Accurate résumé and LinkedIn profile
- Skills inventory tied to completed work
- Redacted diagrams and configuration evidence
- Troubleshooting and project stories
- Professional references where available

EMPLOYMENT NOTICE : Titles and requirements vary. Completion does not guarantee certification, internship, employment, promotion or salary.

SECTION 7

Student Readiness and Next Steps

Before enrolling, confirm

- Selected level and entry requirements
- Format, start date, duration and weekly commitment
- Computer, internet, Packet Tracer and laboratory requirements
- Tuition, payment schedule and additional expenses
- Included Cisco access, credentials, services and examination vouchers
- Assessment, attendance, withdrawal and refund requirements

Professional commitments

- Attend and participate consistently
- Practice configurations and troubleshooting
- Protect accounts, equipment and confidential information
- Document work accurately and communicate blockers early
- Accept feedback and continue building technical judgment

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TeckyGuys Academy

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