

# Cisco 500-452 Exam Preparation 2026

Cisco 500-452 2026 exam prep. Hands-on labs, practice exams, and enterprise case studies.

[IT Certifications](#) Instructor: Jason Miller • 5 sections • 46 lessons • 15.25h total

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## About this course

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This course is for network engineers and IT professionals who need to pass the Cisco 500-452 exam. We will break down the key concepts, exam objectives, and practical skills required for 2026. You will get a structured approach to the material without unnecessary fluff.

You will learn to configure and troubleshoot Cisco environments, with downloadable templates, hands-on labs, and practice exams that mirror the actual test. We include real case studies from enterprise networks.

# Course curriculum

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## Foundations and Exam Overview

- **Understanding the 500-452 Exam Structure (12m)**  
Learn the exam format, scoring, and key domains for 2026. Get a clear roadmap to avoid common pitfalls.
- **Setting Up Your Cisco Lab Environment (18m)**  
Step-by-step guide to building a virtual lab using Packet Tracer or GNS3 for hands-on practice.
- **Key Terminology and Concepts (15m)**  
Define essential terms like VLANs, routing protocols, and security basics with real-world examples.
- **Time Management Strategies for the Exam (8m)**  
Practical tips on pacing yourself during the test to maximize your score.
- **Downloadable Study Checklist (5m)**  
A downloadable template to track your progress and organize your study materials.
- **Common Exam Myths Debunked (10m)**  
Separate fact from fiction about the 500-452 exam to focus your efforts effectively.
- **Introduction to Cisco's 2026 Updates (14m)**  
Overview of recent changes in Cisco technologies that will appear on the 2026 exam.
- **Your First Practice Quiz: Baseline Assessment (12m)**  
Take a short quiz to gauge your current knowledge and identify weak areas.

## Core Networking Concepts

- **Configuring VLANs and Trunks Step-by-Step (22m)**  
Hands-on lab to set up VLANs and trunks, with troubleshooting tips for common issues.
- **Implementing OSPF and EIGRP Routing (25m)**  
Real case study analysis of routing protocols in an enterprise network.
- **Switch Security: Port Security and DHCP Snooping (18m)**  
Learn how to secure switches with practical configurations and downloadable templates.
- **IPv4 and IPv6 Addressing Fundamentals (20m)**  
Compare IPv4 and IPv6, with step-by-step subnetting exercises for the exam.
- **Wireless Basics: WLAN Configuration (16m)**  
Configure a basic wireless network in Packet Tracer, including security settings.
- **Access Control Lists (ACLs) in Practice (19m)**  
Problem-solving session on creating and applying ACLs to filter traffic.
- **Spanning Tree Protocol (STP) Deep Dive (24m)**  
Understand STP variants and how to prevent loops with real-world examples.
- **Link Aggregation and EtherChannel (17m)**  
Step-by-step guide to configuring EtherChannel for better bandwidth.
- **Network Address Translation (NAT) Types (14m)**  
Learn NAT concepts with lab exercises on static and dynamic NAT.

## Advanced Routing and Switching

- **BGP Fundamentals for the 500-452 Exam (28m)**  
Break down BGP concepts with a focus on exam-relevant scenarios.
- **Route Redistribution and Filtering (23m)**  
Hands-on lab on redistributing routes between OSPF and EIGRP.
- **HSRP and VRRP for Gateway Redundancy (20m)**  
Configure first-hop redundancy protocols with a real case study.
- **Quality of Service (QoS) Implementation (26m)**  
Step-by-step guide to applying QoS policies in a network.
- **Multicast Concepts and IGMP (19m)**  
Learn multicast basics with downloadable configuration templates.
- **Troubleshooting Routing Issues (32m)**  
Problem-solving session using show commands and debug tools.
- **Advanced Switch Security Features (21m)**  
Explore features like DAI and IP Source Guard with lab exercises.
- **Practice Exam: Routing and Switching (30m)**  
Simulated exam section with explanations for each answer.

## Security and Wireless

- **Implementing AAA with RADIUS and TACACS+ (24m)**  
Step-by-step configuration for authentication, authorization, and accounting.
- **VPN Setup: Site-to-Site and Remote Access (27m)**  
Real-world lab on configuring IPsec VPNs for secure connections.
- **Firewall Basics: ASA Configuration (22m)**  
Learn ASA firewall rules with a downloadable template for common setups.
- **Wireless Security: WPA3 and Enterprise Authentication (19m)**  
Hands-on guide to securing WLANs with practical examples.
- **Intrusion Prevention Systems (IPS) (21m)**  
Understand IPS deployment and tuning for exam scenarios.
- **Endpoint Security and NAC (18m)**  
Network Access Control concepts with a case study from a corporate network.
- **Security Monitoring and Logging (15m)**  
Learn to use syslog and SNMP for monitoring with real data examples.
- **Troubleshooting Security Issues (25m)**  
Problem-solving session on common security misconfigurations.
- **Practice Exam: Security and Wireless (28m)**  
Full-length practice test with detailed feedback on weak areas.

## Implementation and Exam Mastery

- **Final Review: Key Topics for 500-452 (20m)**  
Condensed review of all exam domains with mnemonics and tips.

- **Hands-On Lab: Complete Network Build (35m)**  
Step-by-step guide to building a full network from scratch in your lab.
- **Exam Day Strategies and Mindset (12m)**  
Practical advice on staying calm and focused during the test.
- **Using Cisco Learning Resources Effectively (10m)**  
How to leverage Cisco's official docs and tools for your study.
- **Creating Your Personal Study Plan (14m)**  
Downloadable template to customize your study schedule.
- **Mock Exam: Full 500-452 Simulation (40m)**  
Simulate the entire exam with timed questions and scoring.
- **Analyzing Your Mock Exam Results (18m)**  
Problem-solving session to review mistakes and improve.
- **Advanced Troubleshooting Scenarios (29m)**  
Real case studies with complex issues and step-by-step solutions.
- **Staying Current: 2026 Exam Updates (16m)**  
What's new in the 2026 exam and how to prepare for it.
- **Final Practice: 100 Questions Drill (38m)**  
Intensive practice with explanations to solidify knowledge.
- **Post-Exam: Next Steps and Certifications (11m)**  
What to do after passing, including career tips and further learning.
- **Course Wrap-Up and Q&A (8m)**  
Summary of key takeaways and answers to common questions.

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