

Cisco 350-501 Exam Preparation 2026

Cisco 350-501 SPCOR 2026. Service provider architecture, routing, and security exam prep.

[IT Certifications](#) Instructor: Brian Mitchell • 5 sections • 48 lessons • 18.00h total

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About this course

Many network professionals struggle to find reliable, up-to-date study materials for the Cisco 350-501 exam. This course cuts through the noise and gives you a structured, practical path to exam readiness, focusing on the core concepts you need to pass in 2026.

You will learn key topics like service provider architecture, routing, and security through video lessons, downloadable study guides, and real case study analysis. We include practical problem-solving sessions and a final review with practice questions.

Course curriculum

Foundations and Exam Overview

- **Understanding the 350-501 SPCOR Exam Structure (12m)**
We break down the exam domains and weighting for 2026, so you know exactly where to focus your study time.
- **Setting Up Your Study Environment (8m)**
A step-by-step guide to creating a study plan and setting up lab tools like Cisco Packet Tracer for hands-on practice.
- **Key Service Provider Terminology Explained (15m)**
Learn essential terms and concepts in a conversational way, with examples from real network setups.
- **Core Networking Fundamentals Review (18m)**
A quick review of OSI model, TCP/IP, and subnetting to ensure your basics are solid before diving deeper.
- **Introduction to Service Provider Architecture (20m)**
Explore the high-level design of service provider networks and how components interact in a real-world case.
- **Downloading and Using Study Resources (10m)**
How to access and use downloadable templates and checklists to organize your 350-501 preparation.
- **Common Exam Pitfalls to Avoid (14m)**
A problem-solving session on typical mistakes and how to sidestep them for a smoother exam experience.
- **Creating Your Personalized Study Timeline (11m)**
A practical workshop to build a 6-week study schedule that fits your daily routine and learning style.

Core Concepts: Routing and Switching

- **How BGP Works in Service Provider Networks (25m)**
Learn the fundamentals of BGP configuration and troubleshooting with a step-by-step lab guide.
- **Configuring OSPF for Large-Scale Networks (22m)**
A detailed walkthrough of OSPF design and optimization, including downloadable configuration templates.
- **MPLS Basics and Label Distribution (28m)**
Understand MPLS operation and label assignment through a real case study of a service provider backbone.
- **IPv6 Implementation Strategies (19m)**
Practical steps for deploying IPv6 in a service provider environment, with examples from current networks.
- **Route Redistribution and Filtering (23m)**
A hands-on problem-solving session on controlling route flow between different routing domains.
- **Switching Fundamentals for Providers (16m)**
Review VLANs, trunking, and spanning tree in the context of service provider switching requirements.

- **QoS Principles for Service Delivery (24m)**
Learn how to implement Quality of Service to prioritize traffic, with a real-world VoIP case study.
- **Troubleshooting Routing Issues (30m)**
A step-by-step guide to diagnosing and fixing common routing problems in a lab environment.
- **BGP Security Best Practices (21m)**
Protect your BGP sessions with practical configurations and real-world threat scenarios.

Deep Dive: Security and Services

- **Implementing Service Provider Security (26m)**
Explore security frameworks and tools specific to service providers, with downloadable policy templates.
- **Cisco ASA and Firepower for Providers (32m)**
A practical look at firewall configuration in service provider networks, including a case study analysis.
- **VPN Technologies: IPsec and DMVPN (27m)**
Step-by-step configuration of secure VPNs for customer connections, with real deployment examples.
- **Wireless Security in Service Context (18m)**
Learn about securing wireless services for enterprise clients, with a focus on 350-501 exam topics.
- **Identity Services and Access Control (22m)**
How to use ISE and AAA for managing access, including a problem-solving session on common issues.
- **Network Monitoring and Logging (20m)**
Set up monitoring tools like NetFlow and syslog for proactive security and performance tracking.
- **Service Provider Edge Security (29m)**
A deep dive into securing the network edge, with a downloadable checklist for configuration review.
- **Advanced Threat Protection (35m)**
Real-world cases on mitigating DDoS and other threats in service provider environments.

Advanced Application: Automation and Cloud

- **Introduction to Network Automation (15m)**
Why automation matters for service providers and how to get started with basic scripts.
- **Using Python for Network Tasks (33m)**
A step-by-step guide to writing Python scripts for configuration and monitoring, with code templates.
- **Cisco DNA Center and SD-WAN (28m)**
Learn how to manage networks with DNA Center and implement SD-WAN solutions for clients.
- **APIs and RESTful Services (24m)**
How to interact with network devices using APIs, including a real case study on automation.
- **Cloud Integration for Service Providers (30m)**
Explore hybrid cloud setups and how to connect service provider networks to cloud platforms.
- **Ansible for Network Configuration (31m)**
A practical workshop on using Ansible to automate repetitive tasks, with downloadable playbooks.
- **Monitoring Automation with Telemetry (26m)**
Set up telemetry for real-time monitoring and alerting, using real provider examples.
- **Securing Automated Workflows (23m)**
Best practices for securing automation scripts and tools, with a problem-solving session.

- **Integrating Cloud Services (27m)**
Step-by-step guide to integrating AWS or Azure with service provider networks for hybrid solutions.
- **Future-Proofing with Automation (19m)**
A forward-looking session on trends in network automation and how to stay current for the exam.

Implementation & Exam Success

- **Full 350-501 Practice Exam Walkthrough (40m)**
A comprehensive review of a practice exam, explaining answers and strategies for each question type.
- **Time Management for the Exam (12m)**
Learn how to pace yourself during the 350-501 exam with practical tips and a timed quiz.
- **Reviewing Key Exam Domains (25m)**
A focused review session covering the most heavily weighted topics, with downloadable summary sheets.
- **Hands-On Lab: Complete Service Provider Setup (38m)**
Build a small service provider network from scratch in a lab, applying all core concepts.
- **Troubleshooting Complex Scenarios (35m)**
A problem-solving session on multi-layer issues, simulating real exam challenges.
- **Final Exam Tips and Tricks (16m)**
Insider advice on what to expect and how to handle the exam environment for 2026.
- **Creating a Post-Exam Study Plan (14m)**
How to continue learning after the exam, with resources for recertification and advanced topics.
- **Real-World Case Study: Network Migration (32m)**
Analyze a case study of a service provider migration, applying security and automation concepts.
- **Building Your Professional Portfolio (18m)**
How to showcase your skills with lab projects and certifications for career advancement.
- **Q&A Session: Common Exam Questions (22m)**
A live-style session addressing top questions from students, with detailed explanations.
- **Final Review and Confidence Boost (20m)**
A motivational wrap-up with a checklist to ensure you're ready for the Cisco 350-501 exam.
- **Accessing Updated Resources for 2026 (10m)**
A guide to finding the latest study materials and communities to stay updated post-course.
- **Next Steps: From Certification to Career (15m)**
Practical advice on leveraging your SPCOR certification for job opportunities and growth.

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