

# Cisco Routing and Switching Certifications

Learning@Cisco  
Overview



## Overview

### Increasing Demand for Practical Network Skills

As the network grows in complexity, so does the need for training for those who implement and manage network infrastructure and solutions. A skills gap emerges when technology outpaces professional skills development.

To fill this talent gap, Cisco continues to develop training and certification products that help our customers be more successful using the network and the solutions that ride on top of the network—solutions like voice communications, video services and collaboration environments. To align with changing industry job roles, CCNA® is being renamed CCNA Routing and Switching.

### Job-Ready Practical Skills

The Cisco CCNA Routing and Switching, CCNP®, and CCIE® Routing and switching certification programs are practical, relevant, and job-ready certification curricula aligned closely with the specific tasks expected of these in-demand professionals. Cisco realizes that the network professional increasingly must focus on design, configuration, and support responsibilities as the technical consultant, specialist or expert on a networking team. Therefore, the Cisco curriculum is specific to the best practices of network administrators, engineers, and experts using the latest Cisco network solutions.

To fill this talent gap, Cisco continues to develop training and certification products that help our customers be more successful using the network and the solutions that ride on top of the network—solutions like voice communications, video services and collaboration environments.

### Best Practices in Networking

Achieving CCNA (Cisco Certified Network Associate) Routing and Switching certification (formerly known as CCNA) is the first step in helping you prepare for a career in networking. Pursuing this certification will help improve your skill sets, and provide you with ability to manage and optimize network systems. CCNA Routing and Switching focuses on network infrastructure, mainly routing and switching, but it also includes wireless access, security, and connectivity to branch offices using WAN.

### Achieving CCNA Routing and Switching Certification

CCNA Routing and Switching certification offers professionals job-ready training and skills. The certification lays the foundation for job roles such as network administrator, network engineer or network specialist. Candidates gain knowhow installing, monitoring and troubleshooting network

infrastructure. The curriculum includes Cisco switches, routers, basic mitigation of security threats, introduction to wireless networking concepts and terminology, and performancebased skills. The curriculum also covers the use of the following protocols: IP, Enhanced Interior Gateway Routing Protocol (EIGRP), Serial Line Interface Protocol, Frame Relay, VLANs, OSPF, Ethernet and Access Control Lists (ACLs). The curriculum also includes managing Cisco devices with IOS v15, Cisco licensing and extensive troubleshooting.

## Requirements for CCNA Routing and Switching Certification

The CCNA Routing and Switching program is a three-year certification program intended to provide fundamental education and testing for network professionals interested in network infrastructure.

You can recertify by taking any associate level exam or professional level exam or higher. Or you can also pass the CCIE certification exam before your certification expires.

## Prerequisites for CCNA Routing and Switching Certification

There is no pre-requisite for attempting CCNA Routing and Switching Certification. This is a three-year certification program.

## Required Exams and Recommended Training for CCNA Routing and Switching

Completion of the CCNA curriculum requires the candidates to pass Required Exams. CCNA required exams and recommended training are shown in Table 1.

**Table 1: CCNA Routing and Switching Required Exams and Recommended Training**

Required Exams	Recommended Training
200-120 CCNA	CCNA Composite v2.0
Or	
100-101 ICND1 AND 200-101 ICND2	Interconnecting Cisco Network Devices 1 (ICND1) v2.0 AND Interconnecting Cisco Network Devices 2 (ICND2) v2.0

## Achieving CCNP Certification

Those who achieve CCNP (Cisco Certified Network Professional) certification have demonstrated the skills required in enterprise roles such as network technician, support engineer, systems engineer or network engineer. CCNP certification offers employers proof of job-ready training and skills from experienced, professional-level network engineers.

## Requirements for CCNP Certification

The CCNP program is a three-year certification program intended to distinguish the network engineers who have the ability to plan, implement, verify and troubleshoot local and wide-area enterprise networks and work collaboratively with specialists on advanced security, voice, wireless and video solutions.

Before attempting the CCNP certification, individuals must meet the requirements for the Cisco CCNA certification and have at least one to three years of networking experience.

## Prerequisites for CCNP Certification

A valid CCNA certification or any CCIE Certification can act as a prerequisite.

## Required Exams and Recommended Training for CCNP

Completion of the CCNP curriculum requires the candidates to pass required exams. CCNP required exams and recommended training are shown in Table 2.

**Table 2: CCNP Exams and Recommended Training**

Required Exams	Recommended Training
642-902 ROUTE	Implementing Cisco IP Routing (ROUTE)
642-813 SWITCH	Implementing Cisco IP Switched Networks (SWITCH)
642-832 TSHOOT	Troubleshooting and Maintaining Cisco IP Networks (TSHOOT)

## Achieving CCIE Routing and Switching Certification

CCIE (Cisco Certified Internetwork Expert) Routing and Switching certifies the expert-level skills required to plan, prepare, operate, monitor and troubleshoot complex converged networks. Professionals who achieve CCIE have demonstrated their technical skills at the highest level.

Candidates are expected to have an in-depth understanding of the topics on the blueprint and strongly encouraged to have at least three to five years of job experience before attempting certification.

### Requirements for CCIE Routing and Switching Certification

The CCIE Routing and Switching program is intended to recognize the Cisco network experts who have the necessary skills to plan, test, deploy, configure, maintain, and troubleshoot Cisco network solutions. CCIE Routing and Switching certification is valid for two years and must be recertified every two years thereafter.

To gain CCIE certification, candidates must not only prove their theoretical knowledge of best practices but also must demonstrate them in a lab environment using real-world scenarios.

### Prerequisites for CCIE Routing and Switching Certification

There are no formal prerequisites for CCIE Routing and Switching certification.

## Required Exams and Recommended Training for CCIE Routing and Switching

Candidates must first pass a written qualification exam and then pass the corresponding hands-on lab exam. Candidates are expected to have an in-depth understanding of the topics in the exam blueprints and are strongly encouraged to have three to five years of job experience before attempting certification.

Completion of the CCIE Routing and Switching curriculum requires the candidates to pass required exams. CCIE required exams and recommended training are shown in Table 3.

Table 3: CCIE Routing and Switching Exams

Required Exams	Recommended Training
350-001	CCIE Routing & Switching v4.0 Written Exam
CCIE R&S Lab Exam v4.0	CCIE Routing & Switching v4.0 Lab Exam

## Learn More

For more information on these certifications, visit <http://www.ciscolearningnetwork.com>.

