

CCNP



The Internet is changing life as we know it—bringing new economic and social opportunities to communities throughout the world, and increasing the global demand for information and communication technology (ICT) skills. Innovations such as social networking, cloud computing, e-commerce, web conferencing, and desktop virtualization are changing the way we live, work, play, and learn. These capabilities are all powered by networks, and organizations around the world are experiencing a shortage of qualified ICT candidates to design, install, and manage these networks.

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The Cisco Networking Academy® CCNP curriculum provides a career oriented, comprehensive coverage of enterprise-level networking skills, including advanced routing, switching and troubleshooting, while providing opportunities for hands-on practical experience and soft-skills development.

The curriculum offers the following features and benefits:

- Provides an in-depth, theoretical overview of advanced routing and switching and troubleshooting complex enterprise networks.
- Builds on the Cisco CCNA® Discovery and CCNA Exploration courses with more complex network configurations, diagnosis, and troubleshooting.
- Helps students prepare for the globally-recognized Cisco CCNP® certification and professional career opportunities.
- Hands-on labs and case studies help students apply what they learn and develop critical thinking and complex problem solving skills

Who Should Enrol	Prerequisites
<ul style="list-style-type: none"> • College and university level students seeking career oriented, enterprise-level networking skills • IT professionals wishing to expand their core routing, switching, and network 	<ul style="list-style-type: none"> • CCNA-level networking concepts and skills • CCNP ROUTE and CCNP SWITCH have no course prerequisites and can be taken in any order • CCNP ROUTE and CCNP SWITCH are both prerequisites for CCNP



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<p>troubleshooting skills to advance their careers</p> <ul style="list-style-type: none"> • Current CCNA certification holders who wish to build on their CCNA knowledge base • Individuals seeking Cisco CCNP certification 	<p>TSHOOT</p> <p>NB: Students can acquire the CCNA level routing and switching skills needed for success in this course by completing CCNA Discovery or CCNA Exploration</p>
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Course Description

CCNP equips students with the knowledge and skills needed to plan, implement, secure, maintain, and troubleshoot converged enterprise networks. The curriculum consists of three experience-oriented courses that employ industry-relevant instructional approaches to prepare students for professional-level jobs:

CCNP ROUTE: Implementing IP Routing,

CCNP SWITCH: Implementing IP Switching,

CCNP TSHOOT: Maintaining and Troubleshooting IP Networks

CCNP SWITCH

This course teaches students how to implement, monitor, and maintain switching in converged enterprise campus networks. Students will learn how to plan, configure, and verify the implementation of complex enterprise switching solutions. The course also covers the secure integration of VLANs, WLANs,



voice, and video into campus networks. Comprehensive labs emphasize hands-on learning and practice to reinforce configuration skills.

Chapter	Goals
Analyzing the Cisco Enterprise Campus Architecture	Assess the structure and components used to build or expand an enterprise campus network
Implementing VLANs in Campus Networks	Implement VLANs in campus networks
Implementing Spanning Tree Protocol	Implement, monitor, and maintain spanning tree protocol in an enterprise campus network
Implementing Inter VLAN Routing	Implement, monitor, and maintain Inter VLAN routing in an enterprise campus network
Implementing High Availability and Redundancy in a Campus Network	Configure and optimize high availability on switches to provide Layer 3 redundancy
Securing the Campus Infrastructure	Describe and implement LAN security Features
Preparing the Campus Infrastructure for Advanced Services	Plan and prepare for advanced services in a campus infrastructure

CCNP ROUTE

This course teaches students how to implement, monitor, and maintain routing services in an enterprise network. Students will learn how to plan, configure, and verify the implementation of complex enterprise LAN and WAN routing



solutions, using a range of routing protocols in IPv4 and IPv6 environments. The course also covers the configuration of secure routing solutions to support branch offices and mobile workers. Comprehensive labs emphasize hands-on learning and practice to reinforce configuration skills.

Chapter	Goals
Routing Services	Explain complex network requirements and design models for implementing advanced routing services in an enterprise network.
Configuring the Enhanced Interior Gateway Routing Protocol	Implement EIGRP in an enterprise network
Configuring the Open Shortest Path First Protocol	Implement OSPF in an enterprise network
Manipulating Routing Update	Implement various mechanisms for controlling routing updates and traffic
Implementing Path Control	Implement path control using IP SLA and PBR



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Implementing a Border Gateway Protocol Solution for ISP connectivity	Implement BGP to allow an enterprise network to connect to an ISP
Implementing Routing Facilities for Branch Offices and Mobile Workers	Describe a basic implementation for Branch office and mobile worker connectivity
Implementing IPv6 in an Enterprise Network	Describe and configure IPv6 in an enterprise network

CCNP: TSHOOT

This course teaches students how to monitor and maintain complex, enterprise routed and switched IP networks. Skills learned include the planning and execution of regular network maintenance, as well as support and troubleshooting using technology based processes and best practices, based on systematic and industry recognized approaches. Extensive labs emphasize hands-on learning and practice to reinforce troubleshooting techniques. CCNP ROUTE and CCNP SWITCH are both prerequisites for this course.

Chapter	Goals
Planning Maintenance for Complex Networks	Plan and document the most common maintenance functions in complex enterprise networks



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Troubleshooting Processes for Complex Enterprise Networks	Develop a troubleshooting process to identify and solve problems in complex enterprise networks
Using Maintenance and Troubleshooting Tools and Applications	Select tools that best support specific troubleshooting and maintenance processes in large, complex enterprise networks
Maintaining and Troubleshooting Campus Switched Solutions	Practice maintenance procedures and fault resolution in switched environments
Maintaining and Troubleshooting Routing Solutions	Practice maintenance procedures and fault resolution in routing environments
Troubleshooting Addressing Services	Troubleshoot NAT/PAT, DHCP, and other services
Troubleshooting Network Performance Issues	Identify and troubleshoot network performance issues
Troubleshooting Converged Networks	Troubleshoot wireless connectivity, VoIP, and video
Maintaining and Troubleshooting Network Security Implementations	Practice maintenance procedures and fault resolution in a secure infrastructure
Review and Preparation for	Practice maintenance procedures and

Troubleshooting Complex Enterprise Networks	fault resolution in a complex environment
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For More Information

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