



CCNP Service Provider

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IP Rulers is the new face of **CCNP Service Provider Certification and Training** in Dubai, UAE, which provides both online and classroom-based training in the latest cutting-edge technologies in the IT infrastructure and networking portfolio. With grouped as well as one-to-one classes and online tutorials that could be scheduled for weekdays or weekends in accordance to the students' choice, IP Rulers is fast becoming a leading name in Dubai in providing a highly valued Cisco Certificate, with a 100% pass rate on the first attempt. Students can choose between different concentration topics to go with the core topic to customize their certification, and keep in touch with the dynamic technologies in the field, all with the help of IP Rulers. It provides in-depth technology classes in service provider technologies such as automation and programmability, led by an expert team of trainers who have multiple CCIEs with experience in the industry and hands-on training. Clearing two assessments, one in the core subject, and one in the concentration subject, accrues the Certification, hence enabling focus and customization in any one technical area according to the candidate's selection

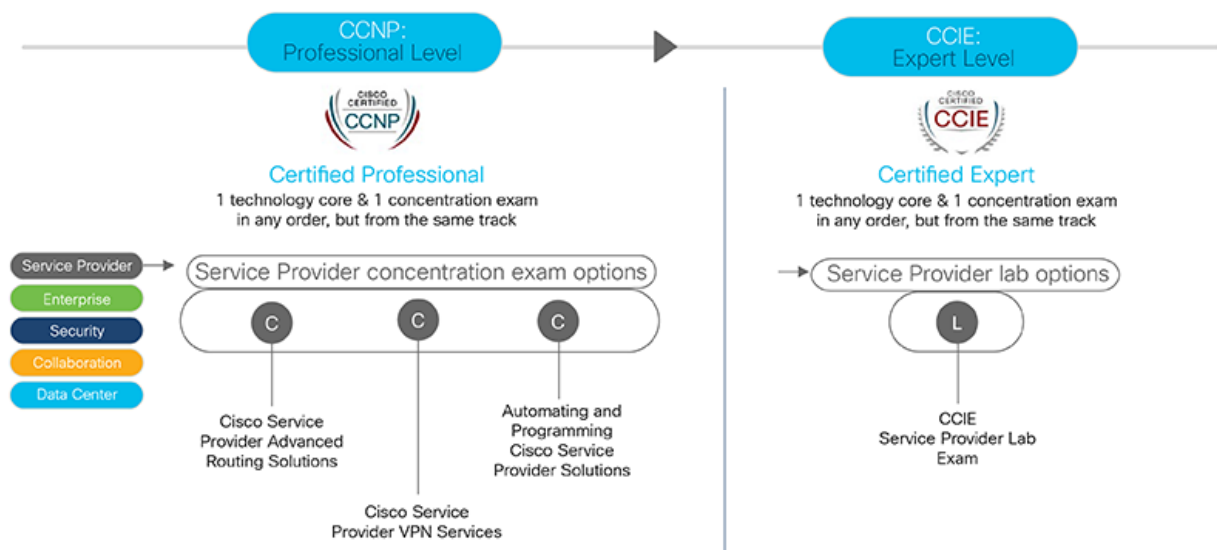


COURSE DETAILS

The **CCNP Service Provider Certification** comprises of clearing two exams – one in a core subject, and another in a concentration subject. This gives a CCNP Enterprise Badge

- ▶ Clearing only the core subject gives a Core Specialist Badge, which is also the qualification for CCIE Enterprise Service Provider Certification.
- ▶ Achieving only the concentration subject gives a Concentration Specialist Badge. This exam focuses on new, industry-specific topics such as advanced routing, VPN services and automation.

Cisco Service Provider certification track



350-501 SPCOR

Implementing and Operating Cisco Service Provider Core Technologies (SPCOR)

- ▶ Describing Service Provider Network Architectures
- ▶ Describing Cisco IOS Software Architectures
- ▶ Implementing OSPF
- ▶ Implementing IS-IS
- ▶ Implementing BGP
- ▶ Implementing Route Maps and Routing Protocol for LLN [Low-Power and Lossy Networks] (RPL)
- ▶ Transitioning to IPv6
- ▶ Implementing High Availability in Networking
- ▶ Implementing MPLS
- ▶ Implementing Cisco MPLS Traffic Engineering
- ▶ Describing Segment Routing
- ▶ Describing VPN Services
- ▶ Configuring L2VPN Services
- ▶ Configuring L3VPN Services
- ▶ Implementing Multicast
- ▶ Describing QoS Architecture
- ▶ Implementing QoS
- ▶ Implementing Control Plane Security
- ▶ Implementing Management Plane Security
- ▶ Implementing Data Plane Security
- ▶ Introducing Network Programmability
- ▶ Implementing Automation and Assurance
- ▶ Introducing Cisco NSO
- ▶ Implementing Virtualization in Service Provider Environments

Concentration exams (choose one):

300-510 SPRI

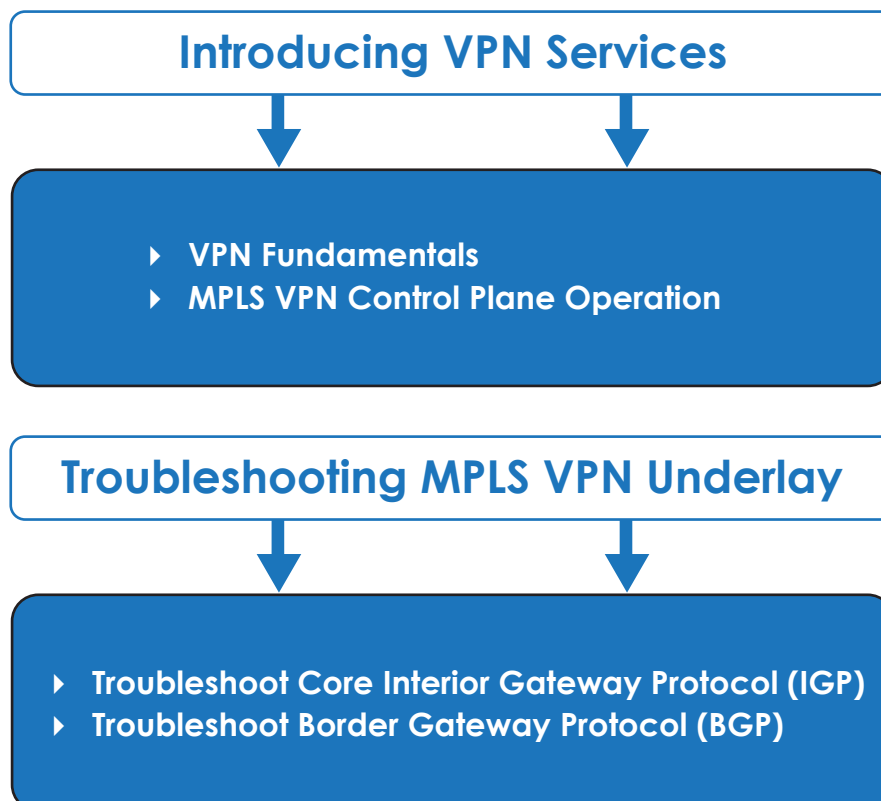
Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)

- ▶ Implementing and Verifying Open Shortest Path First Multiarea Networks
- ▶ Implementing and Verifying Intermediate System to Intermediate System Multilevel Networks
- ▶ Introducing Routing Protocol Tools, Route Maps, and Routing Policy Language

- ▶ Implementing Route Redistribution
- ▶ Influencing Border Gateway Protocol Route Selection
- ▶ Scaling BGP in Service Provider Networks
- ▶ Securing BGP in Service Provider Networks
- ▶ Improving BGP Convergence and Implementing Advanced Operations
- ▶ Troubleshooting Routing Protocols
- ▶ Implementing and Verifying MPLS
- ▶ Implementing Cisco MPLS Traffic Engineering
- ▶ Implementing Segment Routing
- ▶ Describing Segment Routing Traffic Engineering (SR TE)
- ▶ Deploying IPv6 Tunneling Mechanisms
- ▶ Implementing IP Multicast Concepts and Technologies
- ▶ Implementing PIM-SM Protocol
- ▶ Implementing PIM-SM Enhancements
- ▶ Implementing Interdomain IP Multicast
- ▶ Implementing Distributed Rendezvous Point Solution in Multicast Network

300-515 SPVI

Implementing Cisco Service Provider VPN Services (SPVI)



Implementing Layer 3 MPLS VPNs

- ▶ Multiprotocol BGP (MP-BGP) Routing Requirements in MPLS VPNs
- ▶ Provider Edge to Customer Edge (PE-to-CE) Routing Requirements in Layer 3 MPLS VPNs

Implementing Layer 3 Interdomain MPLS VPNs

- ▶ Inter-Autonomous System (AS) for Layer 3 MPLS VPNs
- ▶ Content Security and Control (CSC) for Layer 3 MPLS VPNs

Implementing Layer 3 Multicast MPLS VPNs

- ▶ Multicast VPN (MVPN) Fundamentals
- ▶ Implement Intranet MVPN

Troubleshooting Intra-AS Layer 3 VPNs

- ▶ Troubleshoot PE-CE Connectivity
- ▶ Troubleshoot PE-to-Route Reflector

Implementing Layer 2 VPNs

- ▶ Layer 2 Service Architecture and Carrier Ethernet Services
- ▶ Refresh on Traditional Ethernet LAN (E-LAN), E-Line, and E-Tree Solutions

Troubleshooting Layer 2 VPNs

- ▶ Troubleshoot Common Issues for Traditional E-Line, E-LAN, and E-Tree Ethernet Solutions
- ▶ Troubleshoot Common Issues for Ethernet VPN (EVPN) Native, EVPN Virtual Private Wire Service (VPWS), and EVPN Integrated Routing and Bridging (IRB) Solutions

Implementing Layer 3 IPv6 MPLS VPNs

- ▶ Classical Solutions for Deploying IPv6 over IPv4 Environments
- ▶ Using 6VPE to Deploy IPv6 Connectivity over MPLS Environment
- ▶ Troubleshooting Layer 3 IPv6 MPLS VPNs
- ▶ Troubleshooting PE-to-PE Connectivity

300-535 SPAUTO Implementing Automation for Cisco Service Provider Solutions (SPAUI)

Implementing Network Device Programmability Interfaces with NETCONF and RESTCONF

- ▶ Implement NETCONF Protocol
- ▶ Implement RESTCONF Protocol

Implementing Model-Driven Programmability with YANG

- ▶ YANG Data Models
- ▶ YANG Tools
- ▶ YANG Development Kit

Implementing Model-Driven Telemetry

- ▶ Implementing Model-Driven Telemetry with gRPC
- ▶ Implementing Model-Driven Telemetry with gNMI

Automating Service Provider Network Traffic with Cisco XTC

- ▶ Cisco XTC Fundamentals
- ▶ Configure Cisco XTC

Automating Networks with Tools That Utilize SSH

- ▶ Implement Device Configurations with Python Netmiko Library
- ▶ Implement Device Configurations with Ansible Playbooks

Orchestrating Network Services with Cisco NSO

- ▶ Cisco NSO Fundamentals
- ▶ Cisco NSO Device Manager
- ▶ Cisco NSO Services
- ▶ Implement Device Configurations with Python

Automating Virtualized Resources with Cisco Elastic Services Controller

- ▶ Cisco ESC Architecture
- ▶ Cisco ESC Resource Management

Automating the WAN with Cisco WAE

- ▶ Describe the Cisco WAE Components

TARGET AUDIENCE

- ▶ Technical Engineers in the service provider field of IP routing implementation.
- ▶ Network Engineers, Network Managers, Network Administrators and Systems Engineers.
- ▶ Cisco integrators or partners.
- ▶ Network specialists who deliver a carrier infrastructure.
- ▶ Network engineers in charge of supporting ISP managed services and other customer requirements.
- ▶ Network engineers seeking skill enrichment in specific technologies to nourish their passion and career. IT students and professionals seeking strong expertise in the subject and an internationally recognized qualification in the same for prospective jobs.
- ▶ Aspirants seeking knowledge in service provider automation and programmability.

PREREQUISITES

- ▶ The CCNP Service Provider does not require any particular qualification for attendance of the course. However, comprehensive knowledge of the subjects is necessary for attending the examinations.
- ▶ A CCNA certificate, or equivalent knowledge, is preferred, but not mandatory.
- ▶ Experience in networking field will be an advantage to attempt the CCNP examination.

IP Rulers has a fully equipped lab, specially designed for the CCNP Service Provider training, with an enhanced lab topology that represent real world network. Students will have the following equipment and software configured for their training; they may also get the chance to see newer hardware and software during this period.

Equipment and Software list

Virtual Equipment

- ▶ RR, P, and PE role: Cisco ASR 9000 Series running IOS-XR 6.5 Release
- ▶ RR and PE role: Cisco ASR 1000 series running IOS-XE 16.6.5 Release
- ▶ PE and CE role: Cisco Edge Routers running IOS-XE 16.6.5 Release
- ▶ Access and Aggregation: Cisco Access series running IOS 3.2.1S Release
- ▶ Cisco Network Service Orchestrator (NSO) running 5.2 Release


TRAINER'S PROFILE

- ▶ IP Rulers is managed by an expert team of trainers with over 10 years' experience in the industry and in hands-on training.
- ▶ All the trainers have multiple CCIEs in their respective areas of interest.
- ▶ Individual trainers' profiles can be provided upon request by email, along with demos and LinkedIn profiles.
- ▶ Online and classroom demos are also available upon request

BENEFITS

- ▶ Specialist Certification in any CCNP exam, whether it be core or concentration.
- ▶ Eligibility to attend the CCIE (Service Provider) Lab Exam directly by passing the CCNP Core Examination. Customized certification to suit particular areas of technical focus.
- ▶ Internationally valued certification from Cisco. Skills in Configuration, verification, troubleshooting, and optimization of Service Provider IP network infrastructures and core networks.
- ▶ Deep knowledge of Service Provider technologies such as core architecture, services, networking, automation, quality of services, security, and network assurance, through hands-on application and practical instruction. Indispensable skills in reinforcement of fundamental concepts in MPLS VPN, and its benefits and classifications.
- ▶ Hands-on experience in using modern data models to manage Service Provider network infrastructure.
- ▶ Constant acquaintance to the dynamic technologies in the IT field.
- ▶ Refreshment in regular concepts of Service Provider Technologies along with Automation.
- ▶ Authority to link the CCNP Certification Badge to all social media profiles.



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