IPRULERS

CISCO CERTIFIED NETWORK ASSOCIATE (CCNA)

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CCNA Certification is an associate level certification provided by Cisco, the latest certificate which consolidates all the former CCNA certificates (such as Routing and Switching, Security, Datacenter, Service Provider and Wireless) under one single roof. It covers a broad range of entry-level networking and security skills with one comprehensive exam. The course involves learning how to install, configure and manage basic IPv4 and IPv6 networks. It also covers configuration and management of network devices such as switches, routers and wireless LAN controllers, and provides a base in network programmability, automation, and software-defined networking.

IPrulers is the new face of **CCNA Certification and Training in Dubai, UAE**, which provides both online and classroom-based training in the latest cutting-edge fundamental technologies in the IT sector. 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, IPRulers is fast becoming a leading name in Dubai in providing a highly valued Cisco Certificate, with a 100% pass rate on the first attempt. The CCNA course lays the foundation in IT infrastructure and networking and keeps the candidate in touch with the dynamic technologies in the field, all with the help of IPRulers.

COURSE DETAILS

CCNA certification proves you have what it takes to navigate the ever-changing landscape of IT. CCNA exam covers networking fundamentals, IP services, security fundamentals, automation and programmability. Designed for agility and versatility, CCNA validates that you have the skills required to manage and optimize today's most advanced networks.


Network Fundamentals


Network Access


IP Connectivity


IP Services


Security Fundamentals


Automation and Programmability

1.0 Network Fundamentals	***(20%)***
2.0 Network Access	***(20%)***
3.0 IP Connectivity	***(25%)***
4.0 IP Services	***(10%)***
5.0 Security Fundamentals	***(15%)***
6.0 Automation and Programmability	***(10%)***

CERTIFICATION DETAILS

Course Code	-	***200-301: Cisco Certified Network Associate***
Duration	-	***40 Hrs***
Mode	-	***Online/Classroom based Instructor led***
Trainer	-	***CCIE Certified Instructors***

PREREQUISITES

There are no formal prerequisites required.

RECOMMENDED TRAINING COURSES

Implementing and Administering Cisco Solutions (CCNA) v2.0

CCNA 200 - 301

1.0 NETWORK FUNDAMENTALS (20%)

1.1 EXPLAIN THE ROLE AND FUNCTION OF NETWORK COMPONENTS

- Routers
- Layer 2 & Layer 3 switches
- Next-generation firewalls & IPS
- Access points
- Endpoints
- Servers
- PoE

1.2 DESCRIBE CHARACTERISTICS OF NETWORK TOPOLOGY ARCHITECTURES

- Two-tier
- Three-tier
- Spine-leaf
- WAN
- Small office/home office (SOHO)
- On-premises and cloud

1.3 COMPARE PHYSICAL INTERFACE AND CABLING TYPES

- Single-mode fiber, multimode fiber, copper
- Connections (Ethernet shared media and point-to-point)

1.4 IDENTIFY INTERFACE AND CABLE ISSUES (COLLISIONS, ERRORS, MISMATCH DUPLEX, AND/OR SPEED)

1.5 COMPARE TCP TO UDP

1.6 CONFIGURE AND VERIFY IPV4 ADDRESSING AND SUBNETTING

1.7 DESCRIBE THE NEED FOR PRIVATE IPV4 ADDRESSING

1.8 CONFIGURE AND VERIFY IPV6 ADDRESSING AND PREFIX

1.9 DESCRIBE IPV6 ADDRESS TYPES

- Unicast (global, unique local, & link local)
- Anycast
- Multicast
- Modified EUI 64

1.10 VERIFY IP PARAMETERS FOR CLIENT OS (WINDOWS, MAC OS, LINUX)

1.11 DESCRIBE WIRELESS PRINCIPLES

- Nonoverlapping Wi-Fi channels
- SSID
- RF
- Encryption

1.12 EXPLAIN VIRTUALIZATION FUNDAMENTALS (SERVER VIRTUALIZATION, CONTAINERS, AND VRFS)

1.13 DESCRIBE SWITCHING CONCEPTS

- MAC learning and aging
- Frame switching
- Frame flooding
- MAC address table

2.0 NETWORK ACCESS (20%)

2.1 CONFIGURE & VERIFY VLANS (NORMAL RANGE) SPANNING MULTIPLE SWITCHES

- Access ports (data and voice)
- Default VLAN
- InterVLAN connectivity

2.2 CONFIGURE & VERIFY INTERSWITCH CONNECTIVITY

- Trunk ports
- 802.1Q
- Native VLAN

2.3 CONFIGURE AND VERIFY LAYER 2 DISCOVERY PROTOCOLS (CDP & LLDP)

2.4 CONFIGURE AND VERIFY (LAYER 2/LAYER 3) ETHERCHANNEL (LACP)

2.5 INTERPRET BASIC OPERATIONS OF RAPID PVST+ SPANNING TREE PROTOCOL

- Root port, root bridge (primary/secondary), and other port names
- Port states (forwarding/blocking)
- PortFast

2.6 DESCRIBE CISCO WIRELESS ARCHITECTURES AND AP MODES

3.0 IP CONNECTIVITY (25%)

3.1 INTERPRET THE COMPONENTS OF ROUTING TABLE

- Routing protocol code
- Prefix
- Network mask
- Next hop
- Administrative distance
- Metric
- Gateway of last resort

3.2 DETERMINE HOW A ROUTER MAKES A FORWARDING DECISION BY DEFAULT

- Longest prefix match
- Administrative distance
- Routing protocol metric

3.3 CONFIGURE AND VERIFY IPV4 AND IPV6 STATIC ROUTING

- Default route
- Network route
- Host route
- Floating static

3.4 CONFIGURE AND VERIFY SINGLE AREA OSPFV2

- Neighbor adjacencies
- Point-to-point
- Broadcast (DR/BDR selection)
- Router ID

3.5 DESCRIBE THE PURPOSE, FUNCTIONS, AND CONCEPTS OF FIRST HOP REDUNDANCY PROTOCOLS

4.0 IP SERVICES (10%)

4.1 Configure and verify inside source NAT using static and pools.

4.2 Configure and verify NTP operating in a client and server mode.

4.3 Explain the role of DHCP and DNS within the network.

4.4 Explain the function of SNMP in network operations.

4.5 Describe the use of syslog features including facilities and levels.

4.6 Configure and verify DHCP client and relay.

4.7 Explain the forwarding per-hop behavior (PHB) for QoS, such as classification, marking, queuing, congestion, policing, and shaping

4.8 Configure network devices for remote access using SSH.

4.9 Describe the capabilities and functions of TFTP/FTP in the network.

5.0 SECURITY FUNDAMENTALS (15%)

5.1 Define key security concepts (threats, vulnerabilities, exploits, and mitigation techniques)

5.2 Describe security program elements (user awareness, training, and physical access control)

5.3 Configure and verify device access control using local passwords.

5.4 Describe security password policies elements, such as management, complexity, and password alternatives (multifactor authentication, certificates, and biometrics)

5.5 Describe IPsec remote access and site-to-site VPNs.

5.6 Configure and verify access control lists.

5.7 Configure and verify Layer 2 security features (DHCP snooping, dynamic ARP inspection, and port security)

5.8 Compare authentication, authorization, and accounting concepts.

5.9 Describe wireless security protocols (WPA, WPA2, and WPA3)

5.10 Configure and verify WLAN within the GUI using WPA2 PSK

6.0 AUTOMATION AND PROGRAMMABILITY (10%)

6.1 Explain how automation impacts network management.

6.2 Compare traditional networks with controller-based networking.

6.3 Describe controller-based, software defined architecture (overlay, underlay, and fabric)

- Separation of control plane and data plane
- Northbound and Southbound APIs

6.4 Compare traditional campus device management with Cisco DNA Center enabled device management.

6.5 Describe characteristics of REST-based APIs (CRUD, HTTP verbs, and data encoding)

6.6 Recognize the capabilities of configuration management mechanisms Puppet, Chef, and Ansible

6.7 Recognize components of JSON-encoded data.

TRAINER'S PROFILE

- IP Rulers is managed by an expert team of trainers with over 15 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

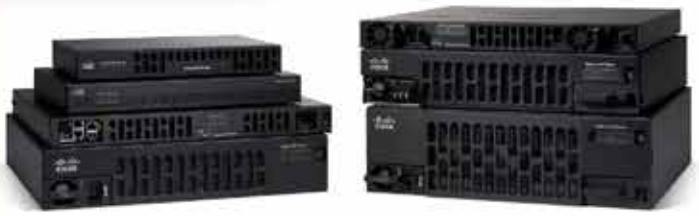
IPRulers has a fully equipped lab, specially designed for the CCNA training, with an enhanced lab topology that represent real world network. Students will have the following. Equipment and software configured for their training; they may also get the chance to see newer hardware and software during this period. The lab training intends to boost the student's confidence in handling these tools efficiently.

CCNA EQUIPMENT AND SOFTWARE LIST

Physical Equipment

CISCO CATALYST SERIES SWITCHES

- Cisco Catalyst 9300 Series Switches
- Cisco Catalyst 9200 Series Switches
- Cisco Catalyst 3650 Series Switches
- Cisco Catalyst 3850 Series Switches
- Cisco Catalyst 2960 Series Switches



CISCO ISR SERIES ROUTERS

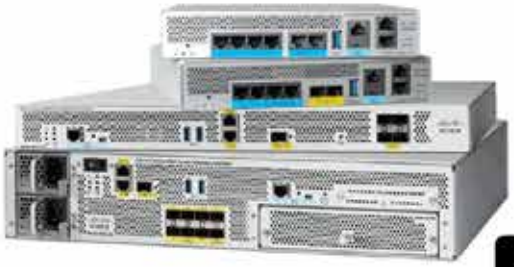
- Cisco ISR 4000 Series Routers
- Cisco ISR 3900 Series Routers
- Cisco ISR 2900 Series Routers
- Cisco ISR 1900 Series Routers

CISCO WIRELESS ACCESS POINTS

- Cisco Catalyst 9115 Series Access Point
- Cisco Aironet 3800 Series Access Points
- Cisco Aironet 3700 Series Access Points
- Cisco Aironet 1850 Series Access Points

CISCO WIRELESS LAN CONTROLLER SERIES

- Cisco Embedded - Catalyst 9800 on a Catalyst 9300 switch
- Physical - 5500 Wireless Controller
- Physical - 2500 Wireless Controller
- Mobility Express - on 1850



Virtual Machines

- Cisco Catalyst 8000V Routers with Cisco IOS XE Software Release 17.9
- Cisco IOSv with Cisco IOS Software Release 15.8
- Cisco IOSv-L2 with Cisco IOS Software Release 15.2
- Cisco SD-WAN (vManage, vBond, vSmart, cEdge) Software Release 20.9
- Cisco DNA Center, Release 2.3
- Virtual - Cisco Virtual Wireless Controller

Supporting Machines

- Test PC: Windows 10 Enterprise
- Linux Kali
- AD/DNS: Window Server 2016
- Ubuntu

TARGET AUDIENCE

The CCNA certification provides basic knowledge involved in the installation, operation, and verification of Cisco networks. Therefore, this course serves best the aspirants in the following job roles:

Network administrator

Professionals in the IT and related technologies sector

Network support technician

Help desk Engineers.

IT students and graduates

IT/Desktop Support Engineers

MODE OF TRAINING

Classroom-based Training	Online Training	Corporate Training
Go old-school. Make friends and have fun, just like elementary grades. Follow lectures, turn in assignments and appear for exams in campus-style!	Sit in the comfort of your home as you move through the course. Instructors will guide you in predetermined sessions. Hundreds of supporting videos available, in case you want to outshine yourself.	Lectures and hands-on training for office employees, in the comfort of their own office. Sponsored by employers to push up their employees above the market competence.

One-on-One Training	Fast Track Training	Private Group Training
An instructor will train you in private – without any external intrusion. Ideal if you want to progress on your own. Schedule your classes according to your own timeline as you advance, without disruption to your daily routine.	No time to follow regular class timeline? Go fast track – speed through the course, whether it be alone, or online, in groups, on an accelerated timescale, to give the icing on the cake.	You and your friends like to be together in a class, but without any outsiders? You've got it! Feel as if you have hired your own instructor. A way to combat shyness, with the comfort your friend-circle.

Lab workshop training
This would be helpful for those who are already familiar with the technologies in depth.

BENEFITS

PROFESSIONAL BENEFITS FOR NETWORKING PROFESSIONALS

The procedure of CCNA certification helps to enhance your knowledge about Cisco Networking and understanding the core concepts. It leads to up-to-date information and knowledge in field of IT. Certifications along with your years of experience enhance your knowledge and introduce you with latest developments and technical improvements in IT industry.

GREAT ACCEPTABILITY

Cisco is a popular name in the IT industry. It's renowned around the world not only for the complete platform it offers but the amazing features that have made IT easier for businesses.

A DOOR TO OTHER CERTIFICATIONS

Most professional and expert level Cisco certifications require CCNA as a prerequisite.

BETTER SALARY AND PERKS

If you have been eyeing a higher position company and expecting an appraisal soon, this could be your chance to hit it right. The right timing is also very important with CCNA certification. If you opt for it now, you can definitely achieve a better position, bigger salary package, and additional perks.

CAREER BOOST

In simple words, it is easier for an employee to climb the success ladder quicker as compared to other IT employees if you have additional certification. By becoming a CCNA certified professional, you can give your career the instant boost you are looking for.

GLOBAL RECOGNITION

Various countries around the globe accept Cisco certification. CCNA certified networking experts are in a better position for demanding high pay outs for their services as compared to those do not having CCNA certificate. At present, a large number of jobs for CCNA certified people are available in the IT industry. And CCNA certificate is a criterion for acquiring job.

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