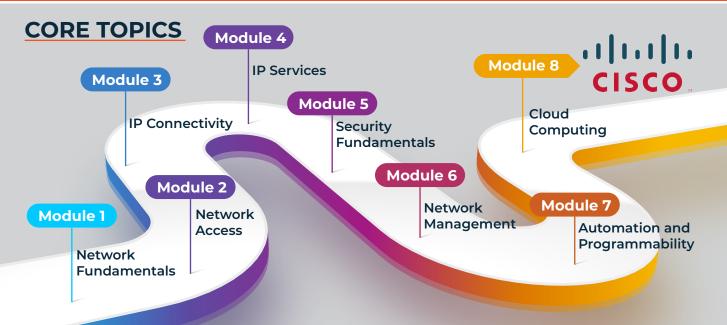


New CCNA Exam - 200-301

Cisco certification program will be drastically changed from Feb. 24, 2020. There will no longer be multiple different CCNA exams and certifications – only a single, comprehensive exam will be available. The new exam's code is 200-301 CCNA and its full name is Implementing and Administering Cisco Networking Technologies. According to Cisco, the new exam "covers a broad range of fundamentals based on the latest technologies, software development skills, and job roles".

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CCNA 200 - 301 NEW SYLLABUS



Module 1: Network Fundamentals

- 1. Introduction to the OSI Model
- 2. Introduction to IPv4 (Internet Protocol)
- 3. IPv4 Packet Header
- 4. Address Resolution Protocol (ARP)
- 5. Introduction to TCP and UDP
- 6. TCP Header

- 7. TCP Window Size Scaling
- 8. Introduction to ICMP
- 9. Introduction to DNS
- 10. Introduction to Cisco Command Line

Interface (CLI)

11. User mode and Privileged mode

Module 2: Network Access

2.2 VLANs and Trunks

- 1. Introduction to VLANs
- 2. How to configure VLANs
- 3. VLAN Trunking Protocol (VTP)
- 4. Introduction to 802.1Q
- 5. How to configure a Trunk
- 6. Dynamic Trunking Protocol (DTP)
- 7. 802.1Q Native VLAN
- 8. Introduction to Voice VLAN
- 9. Etherchannels
- 10. L3 Etherchannel

2.3 Spanning-Tree

- 1. Introduction to Spanning-Tree
- 2. Per VLAN Spanning-Tree
- 3. Spanning-Tree Port States
- 4. Spanning-Tree Cost Calculation
- 5. Spanning-Tree Portfast
- 6. Rapid PVST
- 7. Rapid PVST Configuration

2.4 Wireless

- 1. Introduction to Wireless Networks
- 2. Introduction to Wireless LANs
- 3. Wireless LAN 802.11 Service Sets
- 4. Introduction to Wireless Security
- 5. Wireless Authentication Methods
- 6. Wireless Encryption and Integrity
- 7. Wi-Fi Protected Access (WPA)
- 8. Cisco Wireless Network Architectures
- 9. Cisco WLC Deployment Models
- 10. Cisco Wireless AP Modes
- 11. Cisco Wireless LAN Controller (WLC)
 Basic Configuration
- 12. Cisco WLC WPA2 PSK Authentication

Module 3: IP Connectivity

3.1 Introduction

- 1. Introduction to Routers and Routing
- 2. Cisco IOS Router Basic Configuration 3.

Introduction to Wide Area Networks (WAN)

3.2 IPv4 Subnetting

- 1. Introduction to Subnetting
- 2. Basics of Binary Numbers
- 3. Subnetting in Binary
- 4. Subnetting in Decimal (Fast Method)
- 5. Classless Inter-Domain Routing (CIDR)
- 6. Variable Length Subnet Mask (VLSM)
- 7. Route Summarization
- 8. Hexadecimal to Binary and Decimal

Conversion

9. Create a Subnetting Cheat Sheet

3.3 IPv6

- 1. Introduction to IPv6
- 2. Shortening IPv6 Addresses
- 3. How to find IPv6 Prefix
- 4. IPv6 Address Types
- 5. IPv6 Address Assignment Example
- 6. IPv6 EUI-64
- 7. IPv6 Summarization
- 8. IPv6 Solicited Node Multicast Address
- 9. IPv6 Neighbor Discovery Protocol (NDP)
- 10. IPv6 Stateless Auto configuration

3.4 Routing

- 1. Default Gateway
- 2. Static Routing
- 3. IPv6 Static Route
- 4. IP Routing Explained
- 5. Router on a Stick
- 6. Inter VLAN Routing
- 7. Administrative Distance
- 8. Floating Static Route
- 9. Introduction to Route Summarization

3.5 OSPF (OPEN SHORTEST PATH FIRST)

- 1. Introduction to OSPF
- 2. OSPF Configuration
- 3. OSPF Packets and Neighbor Discovery
- 4. OSPF Reference Bandwidth
- 5. OSPF Router ID
- 6. OSPF DR/BDR Election
- 7. OSPF Passive Interface
- 8. OSPF Hello and Dead Interval

3.6 Gateway Redundancy

1. Introduction to Gateway Redundancy

Module 4: IP Services

4.1 DHCP (Dynamic Host Configuration Protocol)

- 1. Introduction to DHCP
- 2. DHCP Server Configuration
- 3. DHCP Relay Agent
- 4. DHCP Client
- 5. DHCP Server IPv6 Configuration

4.2 SNMP (Simple Network Management Protocol)

- 1. Introduction to SNMP
- 2. SNMPv2
- 3. SNMPv3

4.3 NAT (Network Address Translation)

- 1. Introduction to NAT and PAT
- 2. NAT Static
- 3. NAT Dynamic
- 4. Port Address Translation (PAT)

4.4 (QoS) Quality of Servicet

- 1. Introduction to Quality of Service (QoS)
- 2. IP Precedence and DSCP Values
- 3. Classification
- 4. Marking
- 5. Shaping
- 6. Policina

Module 5: Security Fundamentals

5.1 Access-Lists

- 1. Introduction to Access-Lists
- 2. Wildcard Bits
- 3. Standard Access-List
- 4. Extended Access-List
- 5. Time-based Access-List

5.2 Security Analysis

- 1. Port-Security
- 2. AAA and 802.1X
- 3. AAA User Authentication
- 4. AAA Admin Authentication
- 5. DHCP Snooping
- 6. Introduction to Firewalls
- 7. Introduction to VPNs

