



## **Cisco® Solutions: Implementation and Administration**

### **Course Code: CCNA 200-301**

**Duration: 5 days**

#### **About this course**

The Cisco® Solutions: Implementation and Administration (CCNA 200-301) course builds on your existing user-level knowledge and experience with computing and networking to provide you with the knowledge and skills expected of an entry-level network administrator. It also addresses the content described in the exam objectives for the Certified Cisco Network Administrator (CCNA® 200-301). If you are pursuing a Cisco technical certification path, the CCNA 200.301 exam is your first step into the world of Cisco certification.

#### **Audience profile**

This course is designed for individuals who have end-user computer skills and some level of IT experience or technology aptitude, who are seeking an IT career in supporting Cisco® technologies, and who need training on networking fundamentals, IP connectivity and services, security fundamentals, and the basics of automation and programmability, all in the context of a Cisco environment.

This course is also designed for students who are seeking the Cisco® Certified Network Associate (CCNA®) certification and who want to prepare for CCNA Exam v1.0 (200-301).

#### **At course completion**

In this course, you will implement and administer networks by using Cisco solutions.

You will:

- Explain basic concepts related to networking.
- Configure switching.
- Configure IP addressing.
- Configure routing.
- Configure wireless connectivity.
- Configure IP network services.
- Explain basic network security concepts and practices.
- Explain the use of automation and programmability in network management tasks.
- Troubleshoot common network issues.

#### **Prerequisites**

To ensure your success in this course, you should have experience with computer user skills, including the ability to complete tasks in a Microsoft Windows environment and the ability to search for and access information on the Internet. You can obtain this level of skill and knowledge by taking one of the following Logical Operations courses:

- Introduction to Personal Computers Using Microsoft® Windows® 10
- Using Microsoft® Windows® 10
- Microsoft® Windows® 10: Transition from Windows® 7

You should also have intermediate knowledge of computing and networking concepts. Any type of technology or system administration training or certification, or experience working in an IT environment, is strongly recommended. For

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instance, other industry certifications such as CompTIA®'s ITF+®, A+®, or Network+® may be especially helpful for students who are preparing for the CCNA 200-301 exam.

#### Course Outline

<b>Lesson 1: Networking Fundamentals</b> <b>Topic A:</b> Network Types <b>Topic B:</b> Network Components <b>Topic C:</b> Network Topologies <b>Topic D:</b> Network Models <b>Topic E:</b> Basic Networking Protocols <b>Topic F:</b> Transmission Media and Connectors <b>Topic G:</b> Introduction to Cisco Networks and Cisco IOS Commands	<b>Lesson 2: Configuring Switching</b> <b>Topic A:</b> Switching Concepts <b>Topic B:</b> Configure Basic Switch Operation <b>Topic C:</b> Configure VLANs <b>Topic D:</b> Configure Interswitch Connectivity
<b>Lesson 3: Configuring IP Addressing</b> <b>Topic A:</b> Configure IPv4 Addresses <b>Topic B:</b> Configure IPv4 Subnets <b>Topic C:</b> Configure IPv6 Addresses <b>Topic D:</b> Manage Network Addressing	<b>Lesson 4: Configuring Routing</b> <b>Topic A:</b> Routing Basics <b>Topic B:</b> Interpret Routing Tables <b>Topic C:</b> Configure Static Routing <b>Topic D:</b> Configure Dynamic Routing
<b>Lesson 5: Configuring Wireless Connectivity</b> <b>Topic A:</b> Wireless LANs <b>Topic B:</b> Manage WLAN Connections <b>Topic C:</b> Configure Clients for WLAN Access	<b>Lesson 6: Configuring IP Network Services</b> <b>Topic A:</b> IP Network Services <b>Topic B:</b> Configure DHCP <b>Topic C:</b> Configure NAT <b>Topic D:</b> Configure NTP <b>Topic E:</b> Configure DNS <b>Topic F:</b> Perform Network Management
<b>Lesson 7: Security Fundamentals</b> <b>Topic A:</b> Security Concepts <b>Topic B:</b> Manage Passwords <b>Topic C:</b> Configure Layer 2 Security <b>Topic D:</b> Configure Wireless Security <b>Topic E:</b> Remote Access Security	<b>Lesson 8: Automation and Programmability</b> <b>Topic A:</b> Automation, Network Management, and Device Management <b>Topic B:</b> Controller-Based Networking and Software-Defined Networking <b>Topic C:</b> Programmability Concepts
<b>Lesson 9: Troubleshooting Network Issues</b> <b>Topic A:</b> Troubleshooting Methodologies <b>Topic B:</b> Troubleshoot Interface and Cable Issues <b>Topic C:</b> Troubleshoot Switching Issues <b>Topic D:</b> Troubleshoot IPv4 and IPv6 Addressing Issues <b>Topic E:</b> Troubleshoot Routing Issues <b>Topic F:</b> Troubleshoot WLAN Issues <b>Topic G:</b> Troubleshoot Network Services Issues	



<b>Topic H:</b> Troubleshoot Network Management Issues	
<b>Topic I:</b> Troubleshoot Security Issues	

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