



CCNA Certification Training

About DevOpsSchool

DevOpsSchool is a unit of "Cotocus PVT Ltd" and a leading platform which helps IT organizations and professionals to learn all the emerging technologies and trend which helps them to learn and embrace all the skills, intelligence, innovation and transformation which requires to achieve the end result, quickly and efficiently. We provide over 40 specialized programs on DevOps, Cloud, Containers, Security, AI, ML and on Big data that are focused on industry requirement and each curriculum is developed and delivered by leading experts in each domain and aligned with the industry standards.

About Course

If you want to jumpstart your career in IT and networking by acing the Cisco Certified Network Associate CCNA exam, then this course is for you! It gives you a full understanding of all the concepts and topics you need to earn the most in-demand networking certification today by passing the CCNA Certification Training.

This is the one course you need to get your CCNA.

Full lab exercises are included so you'll get the hands-on practical skills you need to work on real world networks, and it's the only CCNA course online where all questions posted in the Q&A section are answered. It offers an easy to understand, structured approach to shortcut your path to mastering Cisco networking to the CCNA level and beyond.

In this course, you will:

- Develop a deep understanding of Cisco's features and functions
- Walkthrough complete and easy to understand explanations of each technology area covered in the exam
- Follow simple step by step instructions to build your own fully-featured lab on your laptop for free
- Gain hands-on configuration and troubleshooting experience through comprehensive lab exercises
- Learn how networking really works through real-world examples throughout the course
- Build the skills and confidence to crush the CCNA 200-301 exam
- Gain demonstrable knowledge and practical experience to supercharge your networking career



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Duration	15 Hours
Mode	Online (Instructor-led, live & Interactive)
Projects (Real time scenario based)	1

FEATURES	DEVOPSSCHOOL	OTHERS
Faculty Profile Check	✓	✗
Lifetime Technical Support	✓	✗
Lifetime LMS access	✓	✗
Top 25 Tools	✓	✗
Interviews Kit	✓	✗
Training Notes	✓	✗
Step by Step Web Based Tutorials	✓	✗
Training Slides	✓	✗
Training + Additional Videos	✓	✗



Training

DevOps As part of this course, you would be strong in DevOps technology. You would learn Linux, Python, DevOps, Docker, Jira, Git, SonarQube, Maven, Ansible, Jenkins, Kubernetes, Datadog, Splunk, NewRelic, Terraform and various other stacks related to this methodology.

Projects

As part of this project, we would help our participant to have first-hand experience of real time software project development planning, coding, deployment, setup and monitoring in production from scratch to end. We would also help participants to visualize a real development environment, testing environment and production environments. Project technology would be based on Java, Python and DOTNET and based on Microservices concept.

Interview

As part of this, you would be given complete interview preparation support until you clear a interview and get on boarded with organization including demo interview and guidance. More than 50 sets of Interview KIT would be given including various project scenario of the projects.



AGENDA OF THE CCNA CERTIFICATION TRAINING

Welcome

- Introduction
- How to Make the Most of This Course
- The Study Plan
- The Udemy Interface
- Why Passing the CCNA is Going to Turbo Charge Your Career

How to Set Up the Lab

- How to Set Up the Lab Introduction
- Cisco Packet Tracer Installation
- How to Use the Course Lab Exercises
- Packet Tracer Installation Notes and FAQ

Host to Host Communications

- Introduction
- A (Very) Basic Introduction to Networking
- The OSI Reference Model Overview
- The TCP/IP Stack
- The Upper OSI Layers
- The Lower OSI Layers

The Cisco IOS Operating System

- Introduction
- Cisco Operating Systems
- Connecting to a Cisco Device over the network
- Making the Initial Connection to a Cisco Device
- Navigating the Cisco IOS Operating System Part 1
- Navigating the Cisco IOS Operating System Part 2
- Cisco IOS Configuration Management
- The IOS Operating System - Lab Exercises

OSI Layer 1 - The Physical Layer

- Introduction
- Ethernet Connection Media



OSI Layer 2 - The Data-Link Layer

- Introduction
- Local Area Network Layer 2 - Ethernet

OSI Layer 3 - The Network Layer

- Introduction
- The IP Header
- Unicast, Broadcast, and Multicast Traffic
- How to Count in Binary
- IPv4 Addresses
- Calculating an IPv4 Address in Binary
- The Subnet Mask
- Slash Notation

OSI Layer 4 - The Transport Layer

- Introduction
- The Transport Layer Header, TCP and UDP

IP Address Classes

- Introduction
- Class A IP Addresses
- IP Address Classes B and C
- IP Address Classes D and E

Subnetting

- Introduction
- CIDR Classless Inter-Domain Routing
- Subnetting Overview
- Subnetting Class C Networks and VLSM
- Subnetting Practice Questions
- Variable Length Subnet Masking Example Part 1
- Variable Length Subnet Masking Example Part 2
- Subnetting Large Networks Part 1
- Subnetting Large Networks Part 2
- Subnetting on the 4th Octet - Written Example
- Subnetting on the 3rd Octet - Written Example
- Private IP Addresses Part 1
- Private IP Addresses Part 2
- Subnetting Table and Subnet Calculator
- Where to Get More Subnetting Practice
- Additional Subnetting Practice Sites



Cisco Device Functions

- Introduction
- Switches vs Hubs
- Switch Operation
- Routers
- Other Cisco Devices
- Cisco Device Functions - Lab Exercises

The Life of a Packet

- Introduction
- DNS The Domain Name System
- DNS on Cisco Routers
- ARP Address Resolution Protocol
- ARP for Routed Traffic
- Life of a Packet Example Part 1 - DNS
- Life of a Packet Example Part 2 - HTTP
- The Life of a Packet - Lab Exercises

The Cisco Troubleshooting Methodology

- Introduction
- The Cisco Troubleshooting Methodology
- Cisco Troubleshooting Methodology - Lab Example
- The Cisco Troubleshooting Methodology - Lab Exercises

Cisco Router and Switch Basics

- Introduction
- Basic Router and Switch Configuration
- The Setup Wizard
- Speed and Duplex Settings
- CDP and LLDP
- Basic Layer 1 and 2 Troubleshooting
- Basic Layer 1 and 2 Troubleshooting - Lab Demo
- Cisco Router and Switch Basics - Lab Exercises



Cisco Device Management

- Introduction
- The Boot Up Process
- The Boot Up Process Lab Demo
- Factory Reset and Password Recovery
- Password Recovery Lab Demo
- Backing up the System Image and Configuration
- Upgrading IOS
- Cisco Device Management - Lab Exercises

Routing Fundamentals

- Introduction
- Connected and Local Routes
- Connected and Local Routes Lab Demo
- Static Routes
- Static Routes Lab Demo
- Summarisation and Default Routes
- Summary Routes and Longest Prefix Match Lab Demo
- Default Routes and Load Balancing Lab Demo
- Routing Fundamentals - Lab Exercises

Dynamic Routing Protocols

- Introduction
- Dynamic Routing Protocols vs Static Routes
- Dynamic Routing Protocols Lab Demo
- Routing Protocol Types
- Routing Protocol Types Lab Demo
- Routing Protocol Metrics
- Routing Protocol Metrics Lab Demo
- Equal Cost Multi-Path
- Equal Cost Multi-Path Lab Demo
- Administrative Distance
- Administrative Distance Lab Demo
- Loopback Interfaces
- Adjacencies and Passive Interfaces
- Adjacencies and Passive Interfaces Lab Demo
- Dynamic Routing Protocols - Lab Exercises

Connectivity Troubleshooting

- Introduction
- Basic Connectivity Troubleshooting
- Connectivity Troubleshooting - Lab Exercises

IGP Interior Gateway Protocol Fundamentals

- Introduction
- RIP the Routing Information Protocol
- RIP Lab Demo
- EIGRP - the Enhanced Interior Gateway Routing Protocol
- EIGRP Lab Demo
- IGP Fundamentals Configuration - Lab Exercises

OSPF - Open Shortest Path First

- Introduction
- OSPF Characteristics
- OSPF Basic Configuration
- OSPF Basic Configuration Lab Demo
- OSPF Advanced Topics
- OSPF Advanced Topics Lab Demo
- Bandwidth vs Clock Rate and Speed
- OSPF Cost Metric
- OSPF Cost Metric Lab Demo
- OSPF Adjacencies
- OSPF DR and BDR Designated Routers
- OSPF DR and BDR Lab Demo
- OSPF Areas
- OSPF Areas Lab Demo
- OSPF Configuration - Lab Exercises

VLANs Virtual Local Area Networks

- Introduction
- Campus LAN Design - Core, Distribution, and Access Layers
- Spine-Leaf Network Design
- Why we have VLANs
- VLAN Access Ports
- VLAN Access Ports Lab Demo
- VLAN Trunk Ports
- VLAN Trunk Ports Lab Demo
- DTP Dynamic Trunking Protocol
- VTP VLAN Trunking Protocol
- VTP Lab Demo
- VLAN Configuration Lab Exercises



Inter-VLAN Routing

- Introduction
- Router with Separate Interfaces
- Router on a Stick
- Layer 3 Switch
- Layer 3 Switch Lab Demo
- VLAN and Inter-VLAN Routing Configuration - Lab Exercises

DHCP - Dynamic Host Configuration Protocol

- Introduction
- DHCP Dynamic Host Configuration Protocol
- Cisco DHCP Server
- External DHCP Server
- Windows, Mac, and Linux client IP settings
- Cisco DHCP Client
- DHCP Configuration - Lab Exercises

HSRP - Hot Standby Router Protocol

- Introduction
- Network Redundancy
- FHRP First Hop Redundancy Protocols
- HSRP Hot Standby Router Protocol
- HSRP Advanced Topics
- HSRP Configuration - Lab Exercises

STP - Spanning Tree Protocol

- Introduction
- Layer 3 Path Selection and Loop Prevention Review
- Why we have the Spanning Tree Protocol
- Spanning Tree Terminology - The Bridge
- How Spanning Tree Works
- Spanning Tree Versions
- Verification - show spanning-tree
- Verification - show mac-address-table
- Manipulating the Root Bridge Election
- Spanning Tree and HSRP Alignment
- Portfast, BPDU Guard, and Root Guard
- STP Troubleshooting - Lab Exercises
- STP Configuration - Lab Exercises

Switch Security

- Introduction
- DHCP Snooping
- DAI Dynamic ARP Inspection
- 802.1X Identity Based Networking
- Preventing Unauthorised Devices with Port Security
- Preventing Unauthorised Devices with Port Security Lab Demo
- Locking Ports to Hosts with Port Security
- Locking Ports to Hosts with Port Security Lab Demo
- Port Security Configuration - Lab Exercises

ACLs - Access Control Lists

- Introduction
- Access Control Lists Overview
- Standard, Extended and Named ACLs
- ACL Syntax
- ACL Operations
- Numbered ACLs Lab Demo
- Named ACLs Lab Demo
- Access Control Lists Configuration - Lab Exercise

NAT - Network Address Translation

- Introduction
- IPv4 Address Exhaustion and NAT
- Static NAT
- NAT Translations - Inside Local, Inside Global, Outside Local, Outside Global
- Static NAT Lab Demo
- Dynamic NAT
- Dynamic NAT Lab Demo
- PAT Port Address Translation
- PAT Port Address Translation Lab Demo
- Network Address Translation Configuration - Lab Exercise

IPv6 Addressing and Routing

- Introduction
- Why We Need IPv6
- The IPv6 Address Format
- IPv6 Global Unicast Addresses
- IPv6 Global Unicast Addresses Lab Demo
- EUI-64 Addresses
- Unique Local and Link-Local Addresses
- Link-Local Addresses Lab Demo
- SLAAC Stateless Address AutoConfiguration
- IPv6 Static Routes
- IPv6 Static Routes Lab Demo
- IPv6 Addressing and Routing - Lab Exercise

WAN - Wide Area Networks

- Introduction
- WAN Overview
- VPN - Virtual Private Networks
- WAN Connectivity Options
- Leased Lines
- MPLS Multi-Protocol Label Switching
- PPPoE Point to Point Protocol over Ethernet
- WAN Topology Options

The Security Threat Landscape

- Introduction
- The Security Threat Landscape
- Common Attacks
- Firewalls and IDS/IPS
- Firewalls vs Packet Filters
- Cryptography
- TLS Transport Layer Security
- Site-to-Site VPN Virtual Private Networks
- Remote Access VPN Virtual Private Networks
- Threat Defense Solutions

Cisco Device Security

- Introduction
- Line Level Security
- Privileged Exec and Password Encryption
- Line Level Security Lab Demo
- Usernames and Privilege Levels
- SSH Secure Shell
- SSH Secure Shell Lab Demo
- AAA Authentication, Authorization and Accounting
- AAA Configuration
- Global Security Best Practices
- Global Security Best Practices Lab Demo
- Cisco Device Security Configuration - Lab Exercises

Network Device Management

- Introduction
- Syslog
- Terminal Monitor and Logging Synchronous
- Syslog Lab Demo
- SNMP Simple Network Management Protocol
- SNMP Lab Demo
- SNMPv3 Configuration
- SNMPv3 Lab Demo
- Syslog vs SNMP
- Network Device Management - Lab Exercises

QoS Quality of Service

- Introduction
- Traditional IT Deployment Models
- Defining Cloud Computing
- Cloud Computing Case Study
- Server Virtualization
- Virtualizing Network Devices
- Cloud Service Models
- Cloud Deployment Models
- Cloud Computing Advantages

Cloud Computing

- Introduction
- Wireless Network Types
- Infrastructure Mode and Wireless Access Points
- Wireless LAN Controllers and CAPWAP
- Switch Configuration for Wireless Networks
- Wireless Channels and Radio Frequencies
- Wireless Security
- Switch Configuration for Wireless - Lab Demo
- Wireless Network Configuration - Lab Demo
- Wireless Fundamentals: Lab Exercises

Wireless Networking Fundamentals

- introduction
- The Benefits of Network Automation and Programmability
- Python, Git, GitHub, and CI-CD
- Data Serialization Formats: XML, JSON, and YAML
- APIs - CRUD, REST, and SOAP
- Model-Driven Programmability - YANG, NETCONF, RESTCONF, and gRPC
- Lab Demo - Testing APIs with Postman
- Configuration Management Tools - Ansible, Puppet, and Chef
- Ansible Lab Demo
- SDN Software Defined Networking
- Software-Defined Architecture - DNA Center
- Software-Defined Architecture - SD-Access
- Software-Defined Architecture - SD-WAN
- Further Learning Resources



Thank you!

Connect with us for more info

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