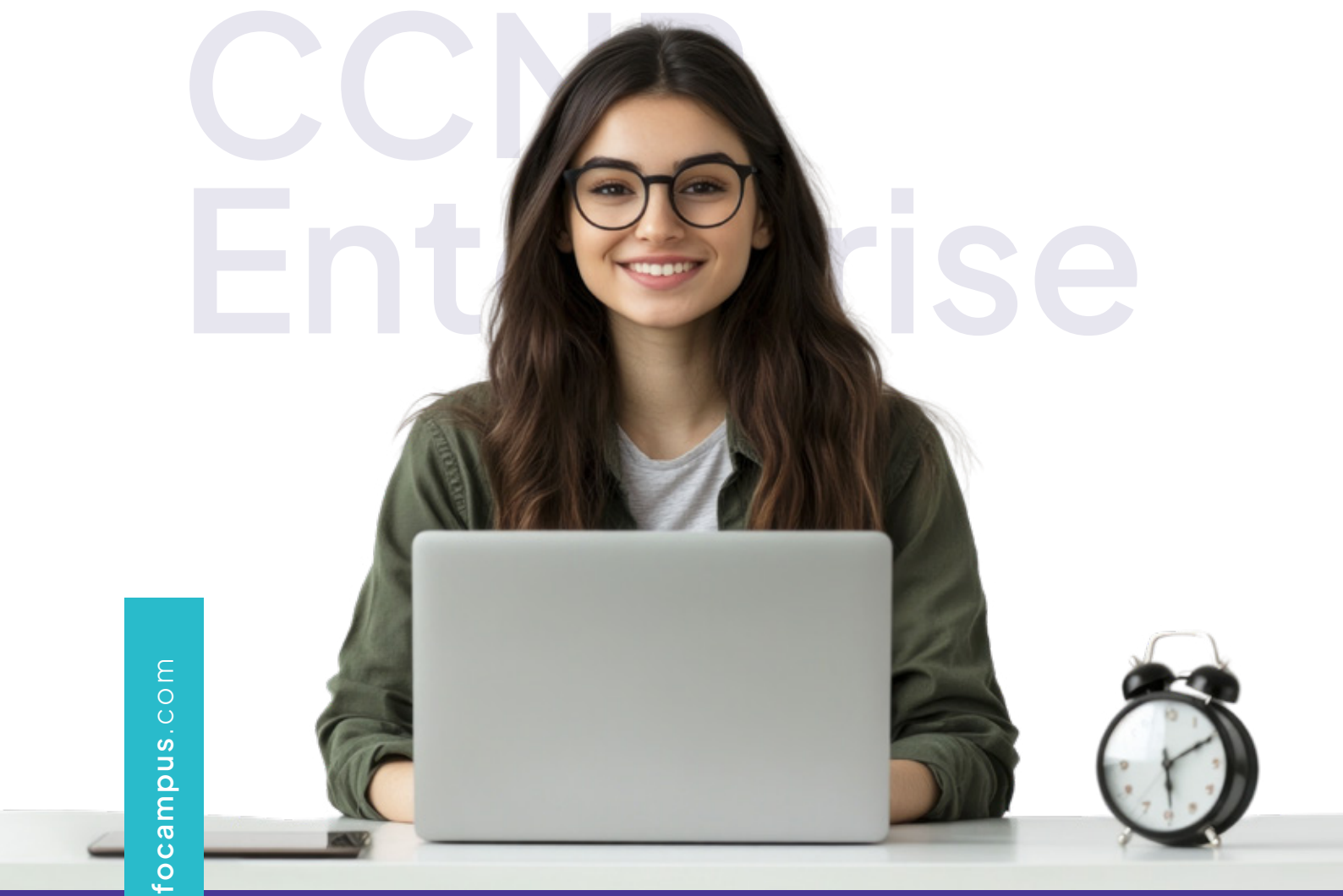
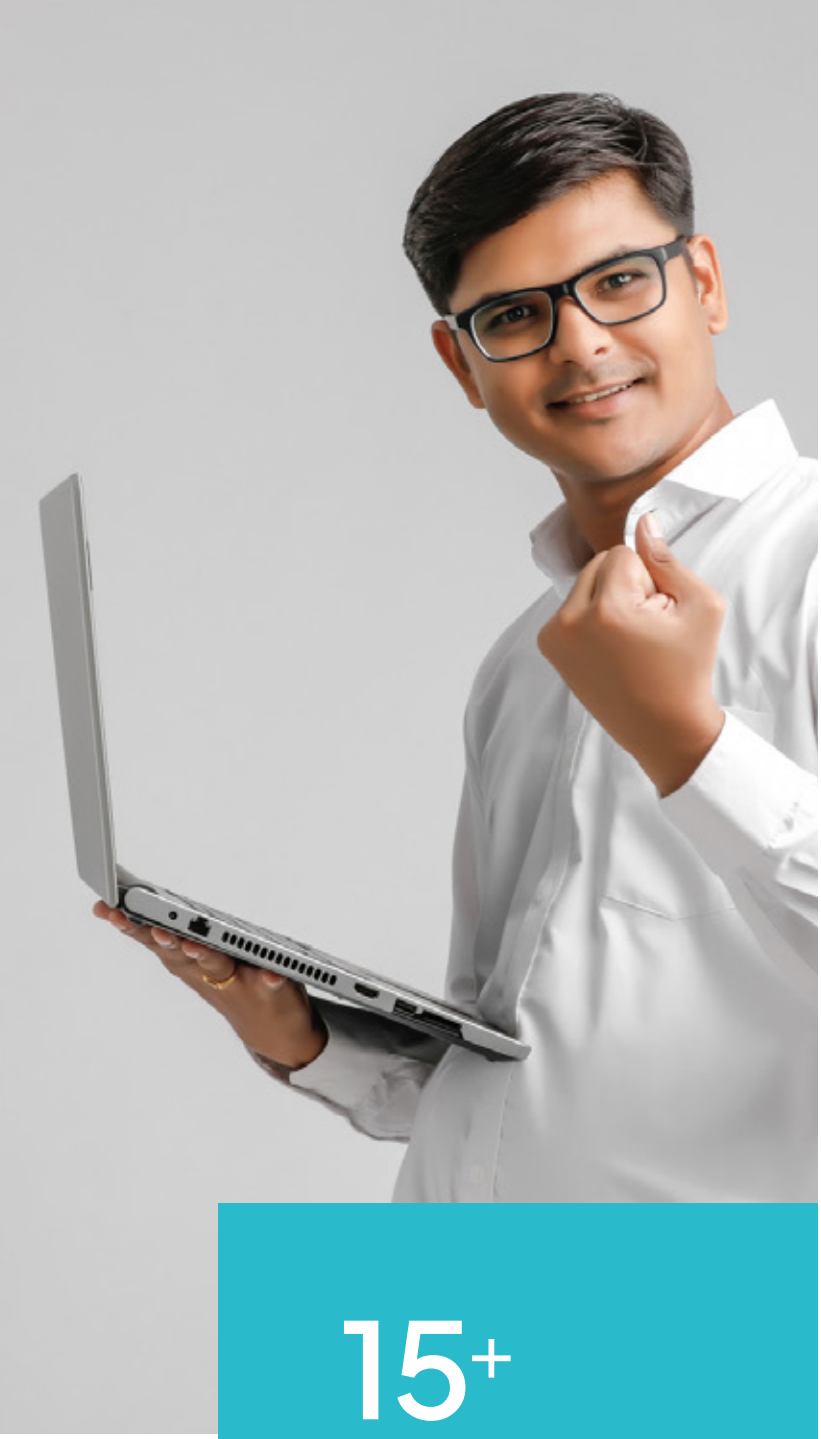
FUTURE PATH INFOCAMPUS



www.teaminfocampus.com

CCNP Enterprise

Cisco Certified Network Professional



About Infocampus

Infocampus is a community of learners, educators, and industry professionals dedicated to creating a supportive and dynamic learning environment. Since 2009, we have specialized in IT and networking courses for both beginners and professionals, bridging the gap between theory and practice. Our mission is to prepare students for the evolving tech industry, making us a trusted choice for career advancement in technology.

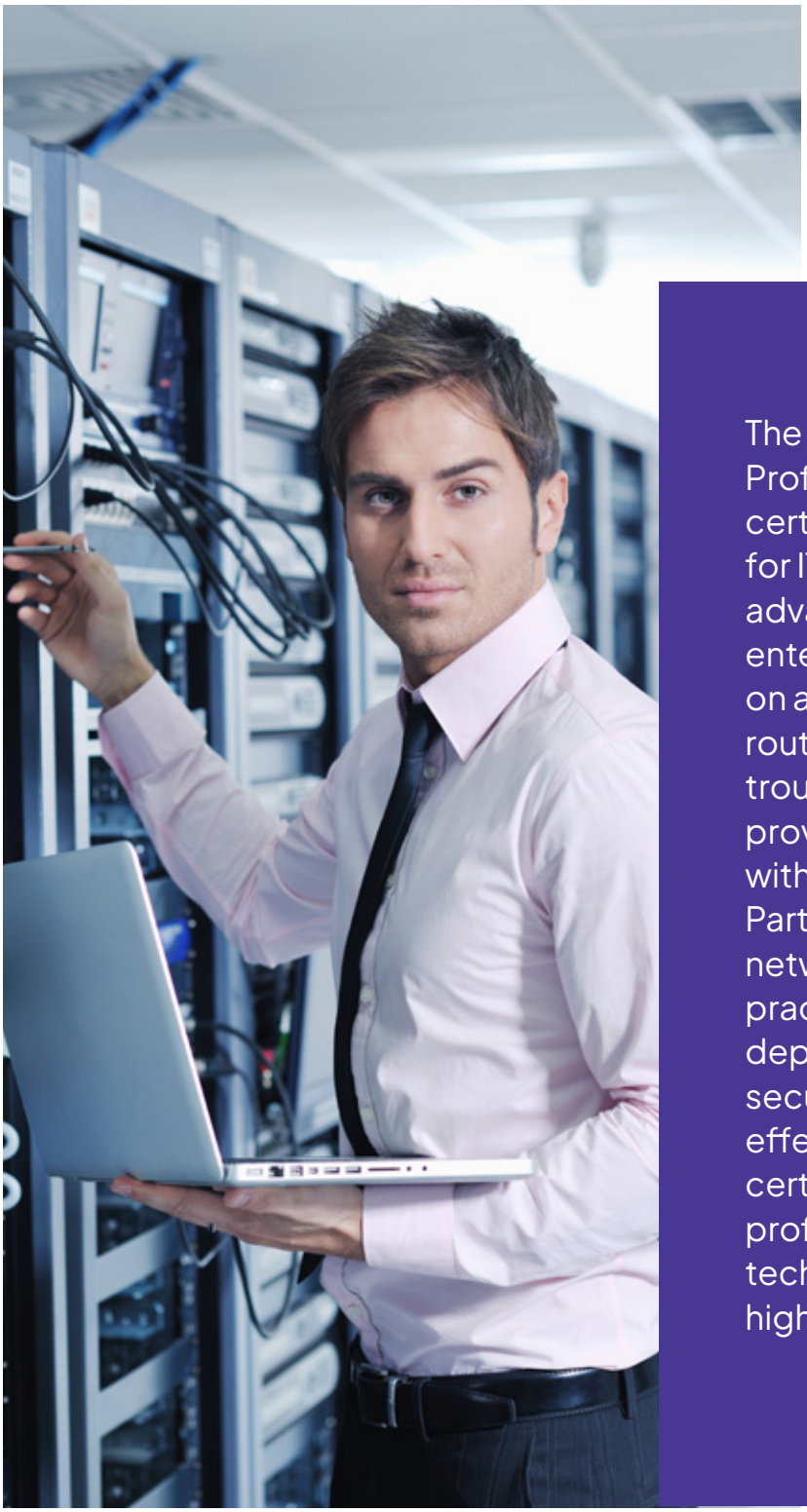
Key Features

- Hands on training for real world application
- Highly experienced and skilled faculties
- State-of-the-Art Infrastructure
- Course completion certificate
- Job Assistance

15+
Years of Expertise

5K+
Successful Graduates

CCNP ENTERPRISE
Cisco Certified Network Professional



Duration

2

Months

The Cisco Certified Network Professional (CCNP) Enterprise certification course is designed for IT professionals looking to advance their expertise in enterprise networking. It focuses on advanced technologies like routing, switching, troubleshooting, and security, providing hands-on experience with Cisco enterprise solutions. Participants cover topics such as network optimization, gaining practical skills for designing, deploying, managing, and securing enterprise networks effectively. CCNP Enterprise certification validates advanced proficiency in these technologies, making graduates highly sought after in the industry

CCNP Enterprise Infrastructure

Architecture

- Enterprise network design
- Two tier network design
- Three tier network design
- Analyze design principles of WLAN deployment
- Differentiate between on-premises and cloud infrastructure deployments

Switching

- Basic switching
- Verify MAC table
- Configure VLANs
- Configure static and dynamic Trunks
- Configure and verify Rapid spanning tree protocol
- Configure and verify multiple spanning tree protocol
- Describe EtherChannel
- Ether channel protocols
- PAGP and LACP
- Configure dynamic EtherChannel
- Configure static EtherChannel
- Configure L2 EtherChannel and L3 EtherChannel
- Configure Inter-VLAN routing

IPv6 Addressing

- Binary and hexadecimal
- IPv6 address format
- IPv6 address classifications
- Configure IPv6 on a device

Routing

- EIGRP
- EIGRP Basics
- EIGRP AS number
- EIGRP path selection
- Configure EIGRP Using Classic Mode for IPv4 and IPv6
- Configure EIGRP Named Mode for IPv4 and IPv6
- Verify the EIGRP Topology Table
- Configure EIGRP Stub Routing, Summarization, and Default RoutingConfigure EIGRP Load Balancing and Authentication

OSPF

- OSPF Basics
- OSPF network design
- OSPF path selection
- Configure OSPFv2 and v3 for IPv4 and IPv6
- Verify the Link-State Database
- Describe OSPF LSAs
- Configure OSPF Stub Areas and Summarization
- Configure OSPF Authentication

Redistribution

- Implement Routing Protocol Redistribution
- Manipulate Redistribution
- Manipulate Redistribution
- Using Route Maps

BGP

- BGP Basics
- BGP tables
- Next hop process

- Route reflector
- Changing update source
- EBGP multi-hop
- BGP path selection criteria
- Weight attribute
- Local preference attribute
- AS-path attribute Changing path attributes using route-map

Multi-protocol label switching (MPLS)

- Explain and Configure VRF-lite
- Explain and Configure VRF aware protocols
- Explain and Configure MP-BGP
- Explain and Configure CEF
- Explain and Configure MPLS
- Configure and test MPLS VPN

High availability

- HSRP
- VRRP
- Policy based routing (PBR)
- IP SLA
- Configure primary and secondary WAN links using PBR and IP SLA

Describe and configure Virtual Private Networks

- VPN basics
- Types of VPNs
- Configure GRE Tunnel
- Configure IPSec VPN
- Encryption types
- Hashing
- Describe DM VPN concepts
- Configure DM VPN phase 3

Describe and configure Network Monitoring Options

- Syslog
- SNMP
- SPAN
- RSPAN
- NetFlow
- IP SLA

Describe and configure QOS

- QOS basics
- Describe QOS tools
- Classification
- Marking
- Queueing
- Congestion avoidance
- Policing and shaping
- Configure QOS marking

Describe and configure multicast communication

- Introduction to multicast
- Multicast address
- Multicast routing
- Multicast architecture
- IGMP
- PIM dense mode
- PIM sparse mode
- Static rendezvous point

Describe wireless Network

- RF signal
- Wireless LAN
- Wireless MAN
- Wireless WAN
- IEEE standards for WLAN
- Wireless network design
- Wireless access points
- Wireless Lan controllers
- Wireless security

Describe and configure QOS

- Explain the working principles of the Cisco SD-WAN solution
- SD-WAN control and data planes elements
- Traditional WAN and SD-WAN solutions
- Explain the working principles of the Cisco SD-Access solution
- SD-Access control and data planes elements
- Traditional campus interoperating with SD-Access
- Describe cisco DNA Centre

Describe and configure network virtualization concepts

- LISP
- VXLAN

Features and services

- Introduction to Programmability and Automation tools
- Python
- Ansible
- puppet
- Explain why we need a programmable network
- Introduce application programming interface
- (API) Brief introduction of Data Formats
- XML
- JSON
- YAML

Introduction to Python

- Advantages of Python
- The Python Environment
- Installing Python Interpreter in windows
- Explain Python
- IDEs Install PyCharm on windows

- Converting among types
- Sequences
- Lists
- Indexing
- Operators
- Relational operators
- While loops, For Loop
- Modules and Packages
- The import statement
- Module search path
- Function and Module aliases
- Working with files
- Reading and writing raw (binary) data
- Converting binary data with struct
- The standard library
- Math functions
- String and Byte

Managing Network devices

- Docker container
- Creating python Script for managing Network devices
- Configuring single network device
- (Router or Switch) using Python Script
- Configuring multiple network devices using Python Script

FUTURE PATH INFOCAMPUS

KERALA

6th Floor, Markaz Complex,
Mavoor Road,
Opp.Private Bus Stand,
Kozhikode, Kerala – 673004

BENGALURU

No.50, 1st Floor, JKN Arcade,
1st Cross Road, 27th Main,
Old Madiwala, BTM 1st stage,
Bengaluru-560068

Call

+91 9037555777
+91 62821 25456

Email: hello@teaminfocampus.com

www.teaminfocampus.com