



# CCIE Enterprise Infrastructure (EI)

# 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.

**15+** Years of Expertise

**5K+** Successful Graduates

## Key Features

Hands on training for real world application

Highly experienced and skilled faculties

State-of-the-Art Infrastructure

Course completion certificate

Job Assistance

Duration  
**6**  
Months

# CCIE Enterprise Infrastructure (EI)



Infocampus presents a structured and comprehensive CCIE Enterprise training program, designed to equip networking professionals with the advanced skills required to achieve the Cisco Certified Internetwork Expert (CCIE) Enterprise Infrastructure certification.

Spanning 6 months, this program provides in-depth coverage of enterprise networking concepts, including advanced routing and switching, network automation, security, and infrastructure services. Delivered by certified industry experts, the course combines theoretical instruction with extensive hands-on lab practice, ensuring participants are well-prepared for both the written and lab components of the CCIE certification exam.

Ideal for network engineers, architects, and IT professionals aiming to validate their expertise at an expert level, this program is aligned with current industry standards and Cisco's certification framework.

Advance your career with Infocampus – your trusted partner in professional IT training.

## Module -1

## Foundation & Core Concepts

### Review of CCNP EI Concepts

- OSPF (v2 & v3)
- EIGRP
- BGP
- Redistribution & Route Filtering
- Policy-Based Routing (PBR)

### Enterprise Infrastructure Architecture

- Understanding Enterprise Networks
- Hierarchical Network Design
- Modular Design (Campus, WAN, Branch, Data Center)

### Introduction to SD-WAN Architecture

- Overview of SD-WAN Architecture
- Controllers, Edge Devices, Policies
- WAN Connectivity (MPLS, Internet, etc.)

## Module -2

## Advanced Routing & Core Services

### Advanced BGP

- BGP Attributes and Path Selection
- Route Reflectors, Confederations
- BGP Multipath, BGP PIC (Prefix Independent Convergence)
- BGP Route Aggregation and Filtering

### Advanced OSPF & EIGRP

- OSPF Advanced Features (NSSA, Stub Areas, LSA Types)
- EIGRP Advanced Techniques (Stub Routing, Named Mode)
- Redistribution between Routing Protocols

### Infrastructure Services

- DHCP, DNS, NAT, HSRP, VRRP, GLBP

## Module -3

## Layer 2 Technologies & MPLS

### Switching Concepts

- Spanning Tree Protocol (STP, RSTP, MST)
- EtherChannel, VLANs, Trunking, Private VLANs
- VXLAN, FabricPath

### MPLS

- MPLS Architecture & Concepts
- MPLS VPNs, VRF Lite
- Label Distribution Protocol (LDP)
- MPLS Traffic Engineering (TE)

**Module -4****SDN, SD-WAN, Automation & Programmability****Software-Defined Networking (SDN)**

- SD-Access, SDN Controllers
- Cisco DNA Center Overview
- Network Virtualization & Overlays (VXLAN, LISP)

**SD-WAN Deep Dive**

- SD-WAN Orchestration, Policy Management, Tunneling
- Zero-Touch Provisioning (ZTP), Security, Application-Aware Routing

**Network Automation & Programmability**

- Network Automation Tools (Python, NETCONF, RESTCONF)
- Network Management with Ansible, Puppet, Chef
- Model-Driven Telemetry & Automation
- Cisco DevNet Labs (optional for programming concepts)

**Module -5****Security, QoS, Multicast & Final Lab Preparation****Security Concepts**

- IPsec VPNs, DMVPN, GETVPN
- Cisco TrustSec, MACsec, 802.1X
- Control Plane Policing (CoPP), Infrastructure Protection
- AAA, TACACS+, RADIUS

**Multicast**

- Multicast Routing, PIM-SM, PIM-SSM
- Multicast VLAN Registration (MVR)

**QoS**

- QoS Models (DiffServ, IntServ)
- Queuing Mechanisms (CBWFQ, LLQ)
- QoS Design for Voice & Video

**Final CCIE Lab Exam Preparation**

- Full-Length Mock Labs
- Time Management Strategies
- Troubleshooting Scenarios & Best Practices
- Review & Revision of Key Topics

**Module -6**

- Complete a few full mock labs
- Work on the troubleshooting section of the lab exam
- Build confidence through scenario-based lab exercises

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