CCIE Enterprise Infrastructure - Lab Exam Preparation Training

Category: Networking & Security | **Vendor:** Cisco

Duration: 40.00 hours (5 days) **32.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Certification: CCIE

Course Overview

The CCIE Enterprise Infrastructure - Lab Exam Preparation program is a derivative work that prepares you for today’s expert-level job roles in enterprise infrastructure technologies and the CCIE EI lab exam v.1.1. which now includes automation and programmability to help you scale your enterprise infrastructure. The CCIE Enterprise Infrastructure Lab Exam is an eight-hour, hands-on exam that requires a candidate to plan, design, deploy, operate, and optimize dual stack solutions (IPv4 and IPv6) for complex enterprise networks.

This boot camp is 9-days in duration, but divided into two parts:

Part 1 - Online class – 5-day
In this boot camp we will cover Routing and Switching. The students will complete 2 or more Configurations Mock Labs and we will do a deep dive into different protocols. This class is a combination of lectures and labs.

Part 2 - Online Class – 4-day
This boot camp covers SD-WAN and SD-Access which is 25% of the blueprint. This part of the boot camp is not set by schedule and will be provided to the students after they attend Part 1. You will have the option of choosing which date you would like to schedule your Part 2 class.

About This Course

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Who Should Attend

- Candidates that need to acquire their CCIE Enterprise Infrastructure
- Network engineers/designers that need to raise their knowledge to an expert-level

Prerequisites & Entry Requirements

General Prerequisites:

There are no formal prerequisites for CCIE Enterprise Infrastructure - Lab Exam Preparation program, but we recommend you have an understanding of designing, deploying, operating and optimizing enterprise networking technologies.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

This boot camp is approximately 60% lecture and 40% hands-on labs.

The instructor uses a combination of “Chalk talk” and “one on one mentoring”, the instructor will NOT use an overhead projector, We believe in traditional method of teaching where the subjects were taught and NOT lectured.

The classroom material and hardware are based on current CCIE Enterprise Infrastructure v1.0.

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Detailed Course Outline

VTP: Hands-on-lab

- VTP and different versions
- Pruning

EtherChannel: Hands-on-lab

- LACP

- Layer 2 and Layer 3

Spanning Protocol: Hands-on-lab

- 1d, 802.1w, and 802.1s

- SPAN, RSPAN, and ERSPAN

DMVPN: Hands-on-lab

- All Phases

- Redundancy:

- Two Clouds One Hub

- Two Hubs one Cloud

- Two hubs two Clouds

- Running Routing Protocols

- DMVPN over MPLS

EIGRP: Hands-on-lab

- RD, CD, S, FC, FS, and FD

- Configuration, and hidden debugging

- Authentications:

- MD5, and SHA

- Summarization

- Load Balancing:

- Equal Cost

- Unequal Cost

- Add-Path

- Filtering

- Default Route Injection
- Optimization:
- Query Propagation Boundary
- IP FRR
- STUB routing (All Options)
- Metric:
- Classic,
- Wide Metric
- Route Tags:
- Decimal and Dotted-Decimal Notations
- OTP

OSPFv2: Hands-on-lab

- Overview and special cases
- GRE or Virtual-Links
- LSAs, FA, and RFCs (1583, 1587, 2328, 3101, 5185 and many more)
- Best Path Selection
- Network Types
- Area Types
- Optimization:
- GTSM
- LFA
- Default Route Injection
- Authentication:
- RFC 2328
- RFC 5709
- Summarization
- Filtering

BGP: Hands-on-lab

- States
- Establishing a Peer Session:
- Regular method
- Peer-Groups
- Templates
- Best Path Selection
- Attributes:
- Weight, AS-Path, Origin, Next-Hop, Local-Preference, Atomic-Aggregate Communities, Aggregator, and MED
- Load Balancing:
- Equal Cost
- Unequal Cost
- Conditional Advertisement
- Out/In Bound Route Filtering and the order
- ORF
- Multihoming Scenarios
- AS-Path Manipulation:
- Regexp
- Local-as
- Allow-as
- Remove-Private-as
- Convergence and Scalability:
- Route Reflectors
- Confederation
- Aggregation (All Options)
- Other BGP Features:
- MultiPath
- Add-Path
- Route-Refresh
- Soft Reconfiguration

IPv6: Hands-on-lab

- Acquiring an IPv6 Address:
- IPv6 General Prefix
- SLAAC
- DHCPv6
- Rapid-Commit
- Relay
- Prefix Delegation
- IPv6 and DMVPN
- EIGRPv6
- OSPFv3: Both flavors, LSAs, RFCs
- BGP for IPv6: IPv6 transport, and IPv4 route exchange
- Transitional Solutions:
- NAT-PT
- 6VPE
- Multicast
- MLD
- Static RP
- BSR
- Embedded RP
- IPv6 Traffic Filters
- RA Guard
- ND Inspection

MPLS: Hands-on-lab

- LDP, VRFs, RD, and RT
- L3VPNs
- Route Leaking
- PE to CE Routing

Security: Hands-on-lab

- Control Plane Policing
- VACLs
- Storm Control
- DHCP Snooping
- IP Source Guard
- DAI
- Private VLANs
- Port Security
- Access-lists
- uRPF
- Device Tracking
- IPsec
- Identity Use Case For FlexVPN
- Site-to-Site
- IKEv1, and IKEv2 Using Preshared Keys
- 1x Port Base Authentication
- Device Roles
- Port States
- Authentication Process
- Host Modes

Network Services: Hands-on-lab

- FHRP
- HSRP, VRRP, and GLBP
- NAT
- Static NAT, and PAT
- Dynamic NAT
- Policy-Base NAT
- VRF-Aware NAT
- VASI NAT

Software Defined Infrastructure: Hands-on-lab

- Cisco SD Access
- Design a Cisco SD Access solution
- Underlay network (IS-IS, manual/PnP)
- Overlay fabric design (LISP, VXLAN, Cisco TrustSec)
- Fabric domains (single-site and multi-site using SD-WAN transit)
- Cisco SD Access deployment
- Cisco DNA Center device discovery and device management
- Add fabric node devices to an existing fabric
- Host onboarding (wired endpoints only)
- Fabric border handoff
- Segmentation
- Macro-level segmentation using VNs
- Micro-level segmentation using SGTs (using Cisco ISE)
- Assurance
- Network and client health (360)
- Monitoring and troubleshooting
- Cisco SD-WAN
- Design a Cisco SD-WAN solution
- Orchestration plane (vBond, NAT)
- Management Plane (vManage)
- Control Plane (vSmart, OMP)
- Data Plane (vEdge/cEdge)
- WAN edge deployment
- Onboarding new edge routers
- Orchestration with zero-touch provisioning/PnP
- OMP
- TLOC
- Configuration templates

- Localized policies (only QoS)

- Centralized policies

- Application aware Routing

- Topologies

Infrastructure Automation and Programmability: Hands-on-lab

Course outline is subject to change without notice.

Skills You Will Learn:

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Frequently Asked Questions

Q: What delivery options are available for CCIE Enterprise Infrastructure - Lab Exam Preparation Training?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: What certification does this course prepare me for?

The CCIE Enterprise Infrastructure - Lab Exam Preparation Training course helps prepare you for the CCIE certification path.

Q: How many CPD hours does this course provide?

The 5-day CCIE Enterprise Infrastructure - Lab Exam Preparation Training course provides up to 32.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the CCIE Enterprise Infrastructure - Lab Exam Preparation Training training?

The training takes place over 5 day(s), with each day lasting approximately 40.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for CCIE Enterprise Infrastructure - Lab Exam Preparation Training?

Yes, we provide corporate training, dedicated training, and closed classes for CCIE Enterprise Infrastructure - Lab Exam Preparation Training. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: CCIE Enterprise Infrastructure - Lab Exam Preparation Training, Cisco Networking, CCIE-EI-LEP

Q: Why choose Nexus Human for CCIE Enterprise Infrastructure - Lab Exam Preparation Training?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your CCIE Enterprise Infrastructure - Lab Exam Preparation Training training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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