# After you complete this course, you will be able to describe and implement

- Discuss the CCIE R&S Lab Program and its content and elaborate on approach to expertise technologies needed to clear the CCIE Lab-test exam
- Do discussions on your "baseline" status for "Cisco CCIE Lab readiness"
- You will be an Expert in "L2 features and functions". You will also master the skills of doing analysis, monitoring & configuration and at the same time troubleshooting "L2 Technologies".
- You will have the expertise in resolving "expert level IPv4" and "Ipv6 connectivity" issues
- You will have the expertise in L3 Protocols, develop proficiency on L3 features and functions. You will also matter the skills of doing analysis, monitoring & configuration and troubleshooting L3 Protocols.
- Expertise BGP, develop proficiency on multi-homed environment, BGP attributes and master the skills of monitoring, analysis, configuration and troubleshooting BGP
- Will be able to resolve "expert level core task" in multiple protocol environment, configuration, analysis and also troubleshooting looping issue
- Will be able to resolve "expert level" MPLS L3 VPN, DMVPN configuration tasks
- You will have expertise in "Multicast" and its protocols. Also, you'll have proficiency on analysis, configuration and troubleshooting "Multicast"
- You will have the expertise in "MQC QoS features and functions". Along with it, you will also master the talent in analysis, configuration and troubleshooting QoS Techniques.
- Resolve and configure expert-level IP / Network Services task, Monitor, analyze, configure and troubleshoot issues related to IP / Network Services

# SIGNELLENT TECHNOLOGIES INDIA PVT. LTD.

#### **Batch Timings**

Daily Morning Batches	2 Hrs	7 am - 9 am
Daily Evening Batches	2 Hrs	7 pm - 9 pm
Fast Track Full Time (Monday - Friday)	8 Hrs	10 am - 6 pm
Weekend Batches		
Saturday	8 Hrs	10 am - 6 pm
Sunday	8 Hrs	10 am - 6 pm

For any other information and a FREE consultation session, call us NOW!

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# Signellent Technologies(I) Pvt Ltd.

# **CCIE** Enterprise Infrastructure

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# CCIE Enterprise Infrastructure (v1.0) - LAB

#### Network Infrastructure

#### Switched campus

- Switch administration
- Layer 2 protocols
- VLAN technologies
- i LACP, manual 1.1.d ii Layer 2, layer 3.
- Spanning-Tree

# **Routing Concepts**

#### EIGRP

- Adjacencies
- Best pathselection
- Operations
- EIGRP load-balancing
- EIGRP named mode
- Optimization, convergence & scalability

#### OSPF (v2 and v3)

- Adjacencies
- Network types, area types
- Path preference
- Operations
- Optimization, convergence & scalability

#### BGP

- IBGP and EBGP peer relationships
- Path selection
- Routing policies
- AS path manipulations
- Convergence and scalability
- Other BGP features

#### Multicast

- Layer 2 multicast
- Reverse path forwarding check
- PIM

#### Software Defined Infrastructure

#### **Cisco SD Access**

- Design a Cisco SD Access solution
- Cisco SD Access deployment
- Segmentation
- Assurance

# Cisco SD WAN

- Design a Cisco SD-WAN solution
- WAN edge deployment
- Configuration templates
- Localized policies (only QoS)
- Centralized policies

# Transport Technologies and Solutions

#### MPLS

- Operations
- L3VPN

# DMVPN

- Troubleshoot DMVPN phase 3 with dual-hub
- Identify use-cases for FlexVPN

# Infrastructure Security and Services Device Security on Cisco IOS XE

- Control plane policing and protection
- AAA

### **Network Security**

- Switch security features
- Router security features
- IPv6 First Hop Security features
- IEEE 802.1X Port-Based Authentication

### System Management

- Device management
- SNMP
- Logging

#### **Quality of Service**

• End to end L3 QoS using MQC

#### **Network Services**

- First-Hop Redundancy protocols
- Network Time Protocol
- DHCP on Cisco IOS
- IPv4 Network Address Translation

# **Network optimization**

- IP SLA
- Tracking object
- Flexible netflow

# **Network operations**

- Traffic capture
- Cisco IOS-XE Troubleshooting tools

# Infrastructure Automation and Programmability Data encoding formats

- JSON
- XML

### Automation and scripting

- EEM applets
- Guest shell

### Programmability

- Interaction with vManage API
- Interaction with Cisco DNA Center API
- Interaction with Cisco IOS XE API
- Deploy & verify model-driven telemetry