TOPIC-MPLS Interview Questions

MPLS INTERVIEW QUESTIONS

1. What Is MPLS? What Are the Advantages of MPLS?

Answer:

Multiprotocol label switching provides a way to process packets based on their labels. It's a data forwarding service that uses labels instead of routing table lookups to enable high-end network communications from one network node to the next. The need to look up the routing table for each packet slows communication, whereas MPLS utilizes the LFIB/forwarding table to transfer labels from one node to the other.

The following are the key advantages of using MPLS:

- Multiple degrees of QoS are supported to regulate latency, jitter, and packet loss for various types of traffic (voice, video, email, bulk file transfers, etc.)
- Convergence is quick thanks to label-based switching, which eliminates the need to seek for routing tables.
- IP VPNs are scalable.
- Using MPLS TE, network congestion is kept to a minimum.
- Reliable and safe

2. Which Protocol does MPLS Employ?

Answer:

TDP or LDP are used by MPLS.

3. Which Layer does MPLS Work on?

Answer:

It functions between layers 2 and 3.

4. Which Functions are done by MPLS?

Answer:
- PUSH (Adding the label)
- SWAP (Changing the label)
- POP (Removing the label)

5. How do you Tell the Difference between a P and a PE Router?

Answer:

Customer network routes are not available on the P router, but they are available on the PE router. Another reason is that whereas P routers do not require MP-iBGP, PE routers must.

6. How many IDP Sessions will be Established if Two Routers have Four Equal-Cost Links?

Answer:
One session

7. Is it Possible to Set the PE Router to P Mode?

Answer:
One must remove the BGP configurations from the PE router to make it a P, after which it will not participate in the customer network.

8. What Exactly is Penultimate Hop Popping, and Why Is It so Important? Which Router Is Responsible for The PHP Function?

Answer:
The Penultimate Hop Popping function is used by the second last router to remove the topmost label.

9. What is TTL Propagation?

Answer:
It is process of copying the TTL value from IP header to MPLS header.

10. What Are the Many Types of Labels?

Answer:
Explicit Null, Implicit Null, Aggregate Label.

11. What is the difference between Explicit Null and Implicit Null?

Answer:
Explicit Null i.e. Label 0 is used for QOS and disables PHP behaviour.
Implicit Null i.e. Label 3 is used to indicate other router to remove label before sending the packets.

12. How can I make a customer path that is unique?

Answer:
By addition a route distinguisher.

13. What exactly is the distinction between RD and RT?

Answer:
RD is not a part of a larger community, although RT is.

14. Is It Possible to Allocate the Same Rd to Two Customers?

Answer:
RD is unique and specific to the router.

15. What are BGP Path Attributes for Controlling Incoming And Outgoing Traffic?

Answer:
BGP provides a number of path attributes that can be used to influence traffic flow. We alter incoming traffic using AS-Path prepending and MED in the most frequent technique (multi-exit discriminator). Weight and local preference are the best ways to affect outbound traffic.

16. How Do You Tell the Difference Between Vpnv4 And Ipv4 Address Families?

Answer:

VRF communication, which is much bigger (96 bits) than typical IPv4 packets, is transported by address-family VPNv4, whereas ordinary 32-bit IPv4 packets are transported by address-family IPv4. When deploying L3VPN, VPNv4 peering between PEs is required to route VRF routes (tagged with RD, RT) to the appropriate destination PE router.

17. Is Summarization Recommended in MPLS?

Answer:
No

18. How can MPLS Labels be Filtered?

Answer:
By Using Access Control Lists (ACLs).

19. In Cisco Routers, What is the Default Range of MPLS Labels? What's the Best Way to Broaden That Range?

Answer:
The default range is 16–100,000.

20. Can I use MPLS Without a Route Reflector?

Answer:
Yes, full mesh BGP development is required.

21. What Exactly is MP-iBGP? is it Possible to Utilize Regular BGP Instead of MP-iBGP?

Answer:
No, MP-iBGP is utilized because it supports multiple protocols that standard BGP does not.

22. What is CEF, and Can MPLS be Made to Work Without it?

Answer:
In Cisco routers, CEF is required for MPLS.

23. Is LDP dependent on OSPF, IS-IS, or BGP?

Answer:
IP Reachability necessitates the use of IGP.

24. What Is the Transportation Address?

Answer:
The route id is the transportation address.

25. Could you Please Explain What SYSVOL is?

Answer:

The server's copy of the domain's public files is kept in the SysVOL folder. The contents of the sysvol directories, such as users, group policies, and so on, are duplicated to all domain controllers in the domain.

26.What Are Lib And Lfib? If We Disable Cef (on A Cisco Device) Will Mpls Work?

Answer:

The difference between two is almost like RIB and FIB, as RIB uses FIB to forward traffic. Label Information Base (LIB) is a table where prefix to label bindings are built and stored in the control plane and can be seen with "show mpls ldp bindings." Label Forwarding Information Base (LFIB) is another MPLS table used to forward label packets throughout the MPLS network and build in the data plane. To check LFIB, run "show mpls forwarding-table." The lookups are in fact done in the LFIB, not the LIB.

If CEF is disabled, MPLS will not work, as it uses LFIB to forward labeled packets and LFIB built from the FIB table.

27.If My Bgp Neighbor Is Stuck In Idle Or Active State, What Should I Do?

Answer:

If BGP peer is in idle state, then it could be due to physical connectivity failure or the neighbor is not defined properly with respective AS. In connect state, BGP tries to establish a TCP session over port number 179; if it fails to establish the connection, then it goes to active state, where it tries again to establish a TCP connection. By using "debug ip bgp" and "debug ip tcp transactions" commands, we can learn the exact cause of TCP connection failure. Lack of the "update-source" or "ebgp-multihop" command can also be a reason of neighbor active state.

28. Describe the Roles of Rd And Rt In Mpls L3vpn? Is It Possible To Assign A Same Rd To Multiple Customers?

Answer:

Route distinguisher (RD) is used to distinguish identical routes in different VRFs, whereas route target (RT) is used to share routes between them. Route target also specifies which prefixes get imported or exported on the PE router.

No, we can't assign same RD to multiple customers on a PE router because the main purpose of defining RD is limited to provide uniqueness in different VRFs.

29. What Is Any Transport Over Mpls (atom)? Do We Require Vrf Or Bgp-vpn To Form Atom Connectivity?

Answer:

Any Transport over MPLS (AToM) enables service providers to deliver Layer 2 connectivity over a MPLS backbone to connect different clients' sites with existing data link layer (Layer 2) networks. BGP-VPN or VRF is not required to configure AToM; to form AToM connectivity we do use xconnect (cross connect) peering with unique VC-ID to distinguish multiple clients.

What is CCIE?

Cisco Certified Internetwork Expert [CCIE] is the Most Respected, Reputed, Prestigious and Highest paid IT Certification. CCIE is offered by Cisco systems which is world's Largest Networking Equipment Manufacturer. It's the pinnacle of Certification offered by Cisco. CCIE is also known as Phd level of IT Certification. CCIE is accepted worldwide as the most prestigious networking certification in the industry. To be a CCIE one requires to Pass 3 hours written exam followed by a 8 hours Practical Lab, After completion of CCIE, an engineer will have ability to design, implement maintain and troubleshoot complex Enterprise network.

Reasons to Become a CCIE

Salary

One of the surprising fact about the CCIE Certified professionals is that the CCIE experts are the highest paid IT professionals. it has consistently been at or near the rop of the certifications with highest salaries. The demand for CCIE professional is high, but the supply has fallen about over the years. In fact, CCIE Salary for a fresher is also quite good. Due to low supply, they are paid an excellent salary. So, if you are willing to earn a good package from the start of your career, then CCIE certification can help you to live your dream.

International Job Oppurtunities

CCIE is accepted globally as the most prestigious networking certification in the industry. Having CCIE certification means that you have proven track record, mastered your skills in networking technology and have in-depth knowledge of your domain of networking. CCIE certified professionals are an inevitable requirement of every IT company and thus they are in high demand worldwide. Due to shortage of CCIE's globally, CCIE tag can surely give you a plethora of job opportunities across diverse countries. CCIE is your ticket to abroad.

Exponential Growth Oppurtunities

Upon competing CCIe Certification, your job opportunities will increase manifolds as numerous top IT companies require highly skilled CCIE certified professionals for Implementing, Managin, Operating and Troubleshooting their or client networks. As of date IT companies have multiple vacancies for the post of Network Engineer. Network Security Engineer, IT Administrator, Principal Solution Architect, Technical Consultant, etc. But they are unable to get a skilled professional. In addition to this, CCIE is the pinnacle in the field of networking and it takes dedicated years of effort to accomplish the goal of becoming CCIE Certified. Thus post competion of your certification, there is no death of job roles that will be waiting at your doorstep.

Attract More Recruiters

With the passage of time, technology is developing at a very fast pace, and next-generation networking devices are introduced in the market. Converged, Innovative and Highly secure networks are the requirement of every IT company in the world, and thus there is a high demand for the CCIE professionals in Networking Industry. Due to shortage of needed applications and fast developing next-generation technology, the demand of CCIE is rising and attracts more recruiters.

With CCIE, Your Career is Secure

The demand for CCIE certified professionals will not be fulfilled in the years to come, thats why the fear of recession is barely any concern for CCIE professionals. for companies like Orange, NTT, Dimension Data, World Wide, TCS, Wipro etc implementing complex, innovative and highly secured Network is of immense value as a downtime in the network for a short period can result in substantial losses. Hence, CCIE professionals are of great significance and importance to the IT companies. However, remember that the technology is advancing and you must update it to meet the increasing demands of the IT industry. So, if you are planning your career path and networking is your iinterest, then step forward to becoming CCIE certified professionals for exploring the availablepossibilities and climbing up the ladder of success.

Prestige and Credibility

Cracking of CCIE examination is considered to be a herculean task. The CCIE is the most difficult IT certification in the world and becoming a CCIE makes you a member of an elite CCIE Club. Having an active CCIE certification automatically comes with a lot of prestige. It not only commands respect and admiration from employers but also instill confidence and credibility among your customers. Clients start finding you relaible specially if you are working as a consultant.

Privileges enjoyed by a CCIE

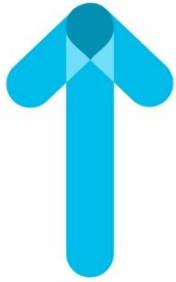| Highest Paid Salary in IT Sector | International Job Opportunity | Flexible Working Hours | Cisco Partnership Requirement | Expert Level Skillset | Prestige & Credibilty |

Certified employees are valued assets

Increased perfomance of certified employees

+59%

higher quality of service

+42%

better selection of technology solutions

+41%

more efficient operations

Cisco certified employees

...build credibility and trust

...build more successful

...build more influential

Make it easy for the hiring managers to select you

85 %

of technology executives and managers consider technical certifications a critical success factor

99 %

of organization use certifications to make hiring decisions

WORLDS NEEDS OVER 500,000 CCIE CERTIFIED ENGINEERS.

CAN YOU SEE THE OPPORTUNITY?

ONLY 66,000 CERTIFIED ENGINEERS WORLDWIDE

World's first Institute to Create

CCIE ENTERPRISE v1.0

Nour Mohamad
CCIE# 54826

World's first Institute to Create

CCIE SECURITY v6.0

Muhammad Areeb
CCIE# 65762

World's first Institute to Create

CCIE COLLABORATION v3.0

Sidheequl Akbar
CCIE# 65781

CCIE Enterprise Infrastructure v1.0
Zero to Hero Program

Courses Covered

| CCNA | Python | CCNP Enterprise (ENCOR + ENARSI) | CCIE Enterprise Infrastructure |

Course Highlights

Training Mode	-	Classroom and Online
Learning Method	-	Lecture & Self-Study
Duration	-	6 Months
Training Hours	-	2 Hours per day
Hands on Labs	-	Yes
Study Material	-	Yes
Certificate	-	Yes
Batches	-	Weekdays & Weekend

100% JOB
PLACEMENT GUARANTEE
Starting package 4-5 Lacs p.a.

SOFT SKILLS TRAINING TO MAKE YOU JOB READY!
Spoken English, Group Discussion, Presentation Skills, CV Writing, Interview Preparation, Industrial Seminars, Mock Interviews.

JOB ROLES
Post completion of this Program you will be eligible for

✓ Enterprise network engineer

✓ Lead Consulting systems engineer

✓ Technical solution architect

✓ L3 Network designer

CCIE Security v6.0
Zero to Hero Program

Courses Covered

CCNA	Python	CCNP Enterprise (ENARSI)	CCNP Security (SCOR + SCNF)	CCIE Security

Course Highlights

Training Mode	-	Classroom and Online
Learning Method	-	Lecture & Self-Study
Duration	-	7 Months
Training Hours	-	2 Hours per day
Hands on Labs	-	Yes
Study Material	-	Yes
Certificate	-	Yes
Batches	-	Weekdays & Weekend

100% JOB
PLACEMENT GUARANTEE
Starting package 4-5 Lacs p.a.

SOFT SKILLS TRAINING TO MAKE YOU JOB READY!
Spoken English, Group Discussion, Presentation Skills, CV Writing, Interview Preparation, Industrial Seminars, Mock Interviews.

JOB ROLES
Post completion of this Program you will be eligible for

- ✓ Security engineer
- ✓ Consulting systems engineer
- ✓ Lead Consultant Security
- ✓ Technical Solutions Architect

CCIE Data Center v3.0
Zero to Hero Program

Courses Covered

| CCNA | Python | CCNP Enterprise (ENARSI) | CCNP Data Center (DCCOR + DCACI) | CCIE Data Center |

Course Highlights

Training Mode	–	Classroom and Online
Learning Method	–	Lecture & Self-Study
Duration	–	7 Months
Training Hours	–	2 Hours per day
Hands on Labs	–	Yes
Study Material	–	Yes
Certificate	–	Yes
Batches	–	Weekdays & Weekend

100% JOB
PLACEMENT GUARANTEE
Starting package 4-5 Lacs p.a.

SOFT SKILLS TRAINING TO MAKE YOU JOB READY!
Spoken English, Group Discussion, Presentation Skills, CV Writing, Interview Preparation, Industrial Seminars, Mock Interviews.

JOB ROLES
Post completion of this Program you will be eligible for

- ✓ Data center engineer
- ✓ Data center engineer
- ✓ Lead Consulting systems engineer
- ✓ L3 Network designer

CCIE Collaboration v3.0
Zero to Hero Program

Courses Covered

| CCNA | Python | CCNP Enterprise (ENARSI) | CCNP Collaboration (CLCOR + CLICA) | CCIE Collaboration |

Course Highlights

Training Mode	–	Classroom and Online	
Learning Method	–	Lecture & Self-Study	
Duration	–	7 Months	
Training Hours	–	2 Hours per day	
Hands on Labs	–	Yes	
Study Material	–	Yes	
Certificate	–	Yes	
Batches	–	Weekdays & Weekend	

100% JOB
PLACEMENT GUARANTEE
Starting package 4-5 Lacs p.a.

SOFT SKILLS TRAINING TO MAKE YOU JOB READY!
Spoken English, Group Discussion, Presentation Skills, CV Writing, Interview Preparation, Industrial Seminars, Mock Interviews.

JOB ROLES
Post completion of this Program you will be eligible for

- Collaboration engineer
- Collaboration administrators
- Lead Consultant UC
- Technical Solutions Architect

Multi Vendor Security
Zero to Hero Program

Courses Covered

CCNA

Python

CCNP Enterprise (ENARSI)

CCNP Security (SCOR + SCNF)

CCIE Security

Palo Alto (PCNSE)

Check Point (CCSA)

Course Highlights

Training Mode	-	Classroom and Online
Learning Method	-	Lecture & Self-Study
Duration	-	9 Months
Training Hours	-	2 Hours per day
Hands on Labs	-	Yes
Study Material	-	Yes
Certificate	-	Yes
Batches	-	Weekdays & Weekend

100% JOB
PLACEMENT GUARANTEE
Starting package 4-5 Lacs p.a.

SOFT SKILLS TRAINING TO MAKE YOU JOB READY!
Spoken English, Group Discussion, Presentation Skills, CV Writing, Interview Preparation, Industrial Seminars, Mock Interviews.

JOB ROLES

Post completion of this Program you will be eligible for

- ✓ Collaboration engineer
- ✓ Collaboration administrators
- ✓ Lead Consultant UC
- ✓ Technical Solutions Architect

Multi Vendor Cloud
Zero to Hero Program

Courses Covered

CCNA

Python

CCNP Enterprise
(ENARSI)

CCNP Data Center
(DCCOR + DCACI)

CCIE Data Center

Vmware
(Vsphere + Vcap-NV)

AWS Associate
(Solution Architect)

Course Highlights

Training Mode	-	Classroom and Online
Learning Method	-	Lecture & Self-Study
Duration	-	9 Months
Training Hours	-	2 Hours per day
Hands on Labs	-	Yes
Study Material	-	Yes
Certificate	-	Yes
Batches	-	Weekdays & Weekend

100% JOB
PLACEMENT GUARANTEE
Starting package 4-5 Lacs p.a.

SOFT SKILLS TRAINING TO MAKE YOU JOB READY!
Spoken English, Group Discussion, Presentation Skills, CV Writing, Interview Preparation, Industrial Seminars, Mock Interviews.

JOB ROLES

Post completion of this Program you will be eligible for

- ✓ Collaboration engineer
- ✓ Collaboration administrators
- ✓ Lead Consultant UC
- ✓ Technical Solutions Architect

Training and Placement Process

Enroll for Zero to Hero
Program @Octa Networks

Get Rigorous Practical
Training on Real Devices

Attend Interview
Preparation Classes and
Mock Interview

Yippy !!!
Candidates Gets a Job

Get Quality In-depth
Cisco Training

Submit Project with
HLD and LLD

Attend Job Interview
through our Placement
Team

How we make Candidates Job Ready

Resume Writing

Presentation Skill

Documentation Skill

Visio Skill

Mock Interview
with Manager/HR

Group Discussion

Email Etiquette

Soft Skill & Personality
Development Classes

Choose the right training center for your career

2x OCTA CCIE's as Mentors

8+ YEARS of Delivering Innovative Training

85% Students Get Placed Without Appearing CCIE Lab

100K+ Candidates Trained

State Of Art Infrastructure

90% CCIE Students Passed in First Attempt
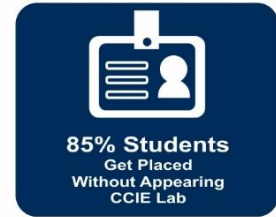
Few reasons, why Octa Networks is ideal for you

Worlds Largest Cisco Labs

Biggest Team of CCIE Certified Trainers

100% Practicals on Real Devices

24x7 Lab Facility

Free Practical Workbooks

Unlimited Repetition

Dedicated Placement Cell

Free Interview Questionnaire

Soft Skill Training

Biggest pool of certified trainers

Mr. Joaquim Fernandes
CCIE# 26908 (Hepta)
CCDE# 2016::28
Mentors

Mr. Arshad Dhunna
CCIE# 27253 (Hepta)
CCDE# 2017::56
Mentors

Mr. Sagar Sherla
CCIE Collaboration# 51562
Master Trainer

Mr. Swapnil Manjalkar
CCIE SP Written
Master Trainer

MR. MUNAWAR KHAN
CCIE SECURITY
MASTER TRAINER

Mr. Qayyum Sayed
CCNP R&S
Senior Trainer

Mr. Rizwan
CCIE Wireless

Mr. Akshay Hegde
CCNA

What students says about Octa Networks

One of the best training institutes out there in the market today for technical certification. I recently received the CCIE cert training from them and they were thoroughly professional and helpful throughout the course of the certification . process. The bootcamps conducted were highly informative down to the minute details. The lab rack access was totally satisfactory barring a few niggles here and there which wasn't a major obstacle in preparation anyway. I'd honestly recommend Octa Networks for any of your technical certification needs! Cheers!

- Jaidev Hattiangadi
★ ★ ★ ★ ★

If you are looking for training's for any Cisco certification, Octa Networks is a one-stop-shop! I recently underwent training for CCIE and the stand out for me were the training racks which will give you hands-on practice on real devices and the in-depth training provided by the trainer and was readily available to help out with any queries and doubts throughout the training program. Highly recommended to all the network engineers out there who want to one-up their networking careers!

- Utkarsh Asthana
★ ★ ★ ★ ★

I would like to recommend anyone who wants to pursue their CCIE journey or any certification exam to enroll with Octa Networks.First of all they have the best professional trainers in the world and and you get to practice on real devices 24/7 guided by the only 2 Octa s and professional trainers.The pass rate is very high and I have learnt a lot of security technologies from them and I am confidently ready for the CCIE lab and real world work challenges.I have witnessed lot of students coming to Octa Networks empty handed and walking out reach with technologies,knowledge,skills and qualifications that gives them high salaries and even takes them abroad.Recruiters head hunt in Octa Networks everyday, so make sure that you don't miss this lifetime opportunity.

- Emmanuel Talane
★ ★ ★ ★ ★

Octa Networks is a truly unique and fabulous training institute. In fact, it's not a training institute but a true partnership. A partnership in which highly qualified CCIE instructors impart, guide, mentor, test and explain concepts in a truly unique format and you, as a student, absorb those concepts and do your part by working hard in a focused manner to achieve optimum results. It was very difficult for me to understand the complex wireless technologies until My trainer explained these concepts in his truly unique style. Now they're ingrained in me for life. Octa Networks instructors are not just your guides and mentors but your true friends. They'll ensure and won't give up until you succeed and they make your success their own personal goal. I'll definitely be coming back to them for future training requirement, just to understand the concepts even if I don't intend to pursue a CCIE in those tracks.

- Dhamodaran K
★ ★ ★ ★ ★

Get CISCO Certified & Get 100% Job Placements

Sahil Darvesh
Intuit
US

Owais Ansari
NSE
India

Faris Baig
Cisco
India

Aditya Gupta
Capgemini
France

Vikas Tawde
Accenture
India

Muaawiyah Agwan
Orange
France

Suryakant
Cisco
India

Vaibhav Kaiser
NSE
India

Aalam Shaikh
Servion
France

Hassan Shah
IBM
India

Rashid Patel
Aricent
India

Kamlesh Surve
CITRIX
India

Students Placed in 25+ MNCs

Octa Networks Success Stories

Cisco Certifications
Avijith Talukdar

has successfully completed the Cisco certification exam requirements and is recognized as a

CCIE Enterprise Infrastructure

Date Certified
Valid Through
CCIE No. 65702

Validate this certificate's authenticity at
www.cisco.com/go/verifycertificate
Certificate Verification No.

Chuck Robbins
Chief Executive Officer
Cisco Systems, Inc.

© 2020 Cisco and/or its affiliates

Cisco Certifications
Mudassir Iqbal

has successfully completed the Cisco certification exam requirements and is recognized as a

CCIE Enterprise Infrastructure

Date Certified
Valid Through
CCIE No. 65706

Validate this certificate's authenticity at
www.cisco.com/go/verifycertificate
Certificate Verification No.

Chuck Robbins
Chief Executive Officer
Cisco Systems, Inc.

© 2020 Cisco and/or its affiliates

Cisco Certifications
Alejandra lopez Espinosa

has successfully completed the Cisco certification exam requirements and is recognized as a

CCIE Enterprise Infrastructure

Date Certified
Valid Through
CCIE No. 65631

Validate this certificate's authenticity at
www.cisco.com/go/verifycertificate
Certificate Verification No.

Chuck Robbins
Chief Executive Officer
Cisco Systems, Inc.

© 2020 Cisco and/or its affiliates

Cisco Certifications
Jeffery Mugabe

has successfully completed the Cisco certification exam requirements and is recognized as a

CCIE Enterprise Infrastructure

Date Certified
Valid Through
CCIE No. 65645

Validate this certificate's authenticity at
www.cisco.com/go/verifycertificate
Certificate Verification No.

Chuck Robbins
Chief Executive Officer
Cisco Systems, Inc.

© 2020 Cisco and/or its affiliates

Cisco Certifications
Yaakov Zagury

has successfully completed the Cisco certification exam requirements and is recognized as a

CCIE Enterprise Infrastructure

Date Certified
Valid Through
CCIE No. 65635

Validate this certificate's authenticity at
www.cisco.com/go/verifycertificate
Certificate Verification No.

Chuck Robbins
Chief Executive Officer
Cisco Systems, Inc.

© 2020 Cisco and/or its affiliates

Cisco Certifications
Justin Njau

has successfully completed the Cisco certification exam requirements and is recognized as a

CCIE Enterprise Infrastructure

Date Certified
Valid Through
CCIE No. 65710

Validate this certificate's authenticity at
www.cisco.com/go/verifycertificate
Certificate Verification No.

Chuck Robbins
Chief Executive Officer
Cisco Systems, Inc.

© 2020 Cisco and/or its affiliates

OCTA NETWORKS

www.octanetworks.com

Learn Today. Lead Tomorrow.

Get training from Industry Experts

Stay informed about new trainings and offers

Learn real world Knowledge

Ask any questions related to Enterprise networks

Locate us — Ground Floor, Syed House,Old Cadell Rd, Mahim West, Mumbai 400016.

Call us — +91 89 766 766 89