CCNP Service
Provider
COURSE OUTLINE
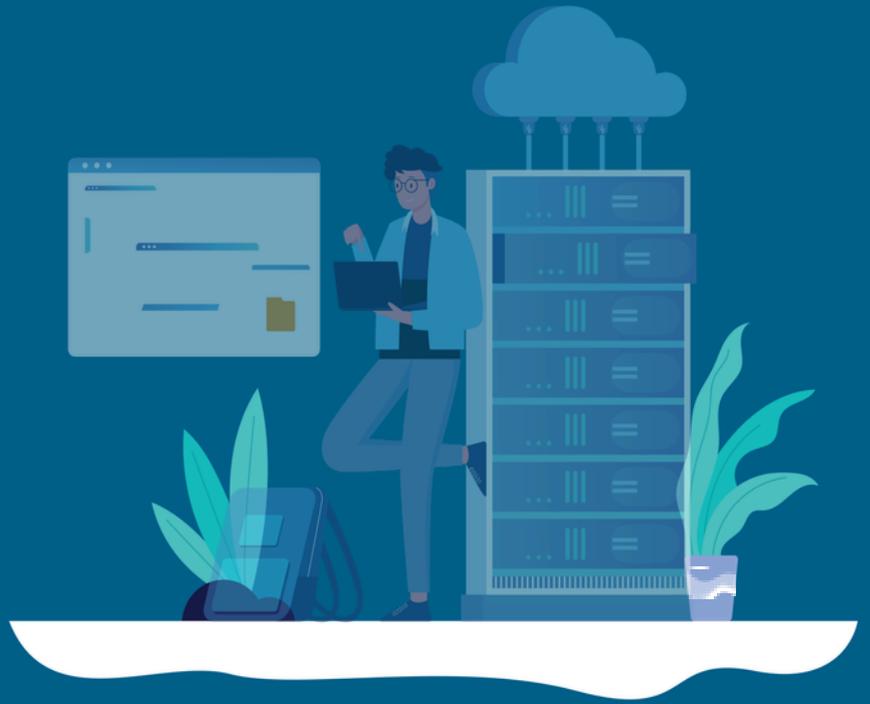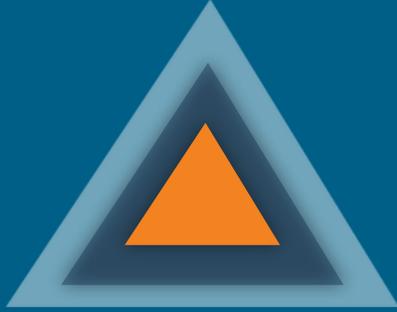
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NS3EDU: BRIDGE YOUR

IT DREAMS
TO REALITY

EMPOWERING CAREERS
THROUGH KNOWLEDGE

Looking to make it big in the world of IT networking? Look no further than NS3Edu! We help beginners learn the ropes & experienced pros master new skills. Come join us and build your dream career!

MISSION

The mission of NS3Edu is to empower our candidates with in-depth knowledge of IT fundamentals along with real-time industry experience and also take 100% responsibility for the placement by making them Industry fit.

CERTIFICATES

VISION

In-depth knowledge + hands-on experience + analytical thinking = placement

Learning   Opportunity   Experience   Career

ROADMAP OF
JOB
PLACEMENT

Confused in **Different** Career Options

Career Diagnosis System

Counselling & Demo sessions

Student **Enrollment** & **Induction** session

Course Kick off **(Live Classes)**

Access to Recorded Sessions, **E book & Lab Manual**

Qualifies- Job Placement

Opportunities for **Job Placement**

Screening by **Corporate HR & Tech Team**

2 Week **Technical** Task Training

NS3 Tech Industrial Exposure

Course Completion

WHAT MAKES US UNIQUE?

USP'S

Industry Demand & Customized Courses

Smart Classrooms

100% Job Placement

Offline/Online Classroom Mode

Lifetime Membership

Recorded Sessions & Mock Interviews

Employability Enhancement Program

100% Industry Fit

24*7 Lab Access & Real-time Troubleshooting

Certified Trainers & Advance Lab

Course Outline

LEVEL 1: Service Provider Core Foundations (Professional Level)

Part 1: Service Provider Network Architecture
- What is a Service Provider Network
- ISP vs Enterprise Networks
- Core, Distribution & Edge in ISP
- Internet Backbone Architecture
- Access, Aggregation & Core Layers

Part 2: Advanced Routing Fundamentals
- Role of Routing in ISPs
- Interior vs Exterior Routing Protocols
- OSPF & IS-IS Overview
- Routing Scalability Challenges

Part 3: OSPF & IS-IS (Service Provider View)
- OSPF Deep Dive (SP Design)
- IS-IS Fundamentals
- Level-1 & Level-2 IS-IS
- OSPF vs IS-IS in ISP Networks
- Fast Convergence Concepts

Part 4: BGP Fundamentals

- What is BGP & Why ISPs Use It
- iBGP vs eBGP
- BGP Path Attributes
- Internet Routing Basics

LEVEL 2: MPLS & Traffic Engineering (Advanced Level)

Part 5: MPLS Fundamentals

- MPLS Concepts & Terminology
- Label Switching Basics
- MPLS Architecture
- MPLS Use-Cases in ISP

Part 6: MPLS L2 & L3 VPNs

- MPLS L3 VPN Architecture
- VRF Concepts
- Route Targets & Route Distinguishers
- MPLS L2 VPN (VPLS Intro)

Part 7: MPLS Traffic Engineering

- MPLS-TE Concepts
- Constraint-Based Routing
- RSVP-TE Overview
- Fast Reroute (FRR)

Part 8: BGP Advanced Concepts

- BGP Policy Control
- Route Maps & Prefix Lists
- Traffic Engineering with BGP
- Internet Multihoming
- BGP Security Basics

LEVEL 3: Service Provider Services & Operations (Expert Level)

Part 9: Quality of Service (QoS)

- QoS Fundamentals
- Traffic Classification & Marking
- Congestion Management
- QoS in Service Provider Networks

Part 10: Multicast in Service Provider Networks

- Multicast Concepts
- PIM Dense & Sparse Mode
- Multicast in ISP Environments
- IPTV Basics

Part 11: High Availability & Scalability

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- Fast Convergence Techniques
- High Availability Design
- Network Resiliency

Part 12: Monitoring & Troubleshooting

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- SNMP, NetFlow & Telemetry
- Routing & MPLS Troubleshooting
- Real-World ISP Failure Scenarios

Part 13: Automation & Programmability

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- APIs & Telemetry
- Python Basics for SP
- Automation Use-Cases

Part 14: Real-World ISP Projects

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- MPLS VPN Service Deployment
- Internet Edge with BGP
- Traffic Engineering Project
- ISP Troubleshooting Case Studies

Part 15: Career & Certification Preparation

- CCNP Service Provider Certification Overview
- SPCOR Exam Blueprint
- ISP / Telecom Network Engineer Roles
- Interview Questions & Scenarios
- Resume & Lab Portfolio Guidance
- Mock Interviews

OUR PLACEMENT
PARTNERS

Partner logos: CISCO, HCL, Microsoft, airtel, Infosys, wipro, STL, DELL, BOSE, aws, velocis, HP, Capgemini, poly, NETGEAR, intel, BOSCH, aruba (a Hewlett Packard Enterprise company), IBM, FORTINET, genpact, NTT, ARICENT, SailPoint, paloalto NETWORKS, netskope, CLOUDFLARE, tcs TATA CONSULTANCY SERVICES, Tech Mahindra, CSS CORP, KONVERGE TECHNOLOGIES

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