FSM

ACHIEVING THE IMPOSSIBLE

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Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR) v1.0

Course details

Objectives

After taking this course, you should be able to:

- Describe the Service Provider network architectures, concepts, and transport technologies

- Describe the Cisco Internetwork Operating System (Cisco IOS®) software architectures, main IOS types, and their differences

- Implement Open Shortest Path First (OSPF) in the Service Provider network

- Implement Integrated Intermediate System-to-Intermediate System (IS-IS) in the Service Provider network

- Implement Border Gateway Protocol (BGP) routing in Service Provider environments

- Implement route maps and routing policy language

- Describe IPv6 transition mechanisms used in the Service Provider networks

- Implement high-availability mechanisms in Cisco IOS XR software

- Implement traffic engineering in modern Service Provider networks for optimal resource utilization

- Describe segment routing and segment routing traffic engineering concepts

- Describe the VPN technologies used in the Service Provider environment

- Configure and verify Multiprotocol Label Switching (MPLS) L2VPN in Service Provider environments

- Configure and verify MPLS L3VPN in Service Provider environments
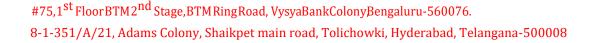
- Implement IP multicast services

- Describe the Quality of Service (QoS) architecture and QoS benefits for SP networks

- Implement QoS in Service Provider environments

- Implement control plane security in Cisco devices

- Implement management plane security in Cisco devices

- Implement data plane security in Cisco devices

- Describe the Yet Another Next Generation (YANG) data modeling language

- Implement automation and assurance tools and protocols

- Describe the role of Cisco Network Services Orchestrator (NSO) in Service Provider environments

- Implement virtualization technologies in Service Provider environments

Prerequisites

- Intermediate knowledge of Cisco IOS or IOS XE

- Familiarity with Cisco IOS or IOS XE and Cisco IOS XR Software configuration

- Knowledge of IPv4 and IPv6 TCP/IP networking

- Intermediate knowledge of IP routing protocols

- Understanding of MPLS technologies

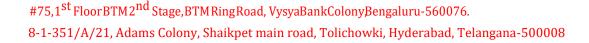- Familiarity with VPN technologies

Outline

- Describing Service Provider Network Architectures

- Describing Cisco IOS Software Architectures

- Implementing OSPF

- Implementing IS-IS

- Implementing BGP

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- Implementing Route Maps and Routing Protocol for LLN [Low-Power and Lossy Networks] (RPL)

- Transitioning to IPv6

- Implementing High Availability in Networking

- Implementing MPLS

- Implementing Cisco MPLS Traffic Engineering

- Describing Segment Routing

- Describing VPN Services

- Configuring L2VPN Services

- Configuring L3VPN Services

- Implementing Multicast

- Describing QoS Architecture

- Implementing QoS

- Implementing Control Plane Security

- Implementing Management Plane Security

- Implementing Data Plane Security

- Introducing Network Programmability

- Implementing Automation and Assurance

- Introducing Cisco NSO

- Implementing Virtualization in Service Provider Environments

Lab outline

- Deploy Cisco IOS XR and IOS XE Basic Device Configuration

- Implement OSPF Routing

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- Implement Integrated IS-IS Routing

- Implement Basic BGP Routing

- Filter BGP Prefixes Using RPL

- Implement MPLS in the Service Provider Core

- Implement Cisco MPLS Traffic Engineering (TE)

- Implement Segment Routing

- Implement Ethernet over MPLS (EoMPLS)

- Implement MPLS L3VPN

- Implement BGP Security

- Implement Remotely Triggered Black Hole (RTBH) Filtering

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ABOUT US

Who We Are:

We the FSM have remained a premier provider of business transformational solutions, assisting our valuable clients to completely revolutionize their customer management activities. Backed by extensive experience with similar architectures, we are skilled at anticipating potential risks and developing risk mitigation plans. Successful planning and implementation of an enterprise-level contact center and UC project deliveries has our track record. What sets us apart from the competition and makes us an ideal partner for your support requirements? – It is the pursuit of excellence in providing:

•   Enhanced Technical Capabilities

•   Experience and Proven Success

•   Reduced Costs

Why Consulting Us?

As a leading institution for IT network training in the country, headquartered in Bangalore, we started our program in the year 2014. The center has been providing training across multiple CISCO systems including Security, Collaboration, Routing & Switching, Data Center, Wireless, Service Provider, UCCX, UCCE, CVP ETC, and Microsoft Skype for Business 2015. The labs, equipped with the latest technology hardware equipment, are open around the clock for the students.

We provide the most sought after programs in IT – the prestigious Cisco powered Unified Communication (Cisco Spark & Microsoft Skype for Business), and CCIE training and

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Certification. The training provides holistic knowledge and practical experience resulting in creating the best engineers in networking industry.

Our pool of certified trainers with a total of 25+ years of industry experience has been proved efficient and successful time and again by the numbers of students placed. We maintain uncompromised commitment of ensuring that every student is job-ready at the end of the course.

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