MPLS

The MPLS course covers topics on MPLS Concepts, MPLS Label Assignment and Distribution, Frame-Mode/Cell-Mode MPLS Implementation on Cisco IOS Platforms, MPLS Virtual Private Networks Technology, MPLS VPN Implementation, Complex MPLS VPNs, and Internet Access from a MPLS VPN.

Duration: 5 days

Batch Size: 5 – 7

Prerequisites

- Cisco Certified Network Associate (CCNA) certification or equivalent level of working knowledge
- Building Scalable Cisco Internetworks (BSCI) and Configuring BGP on Cisco Routers (BGP) certifications of equivalent level of working knowledge
- Practical experience with deploying and operating networks based on Cisco network devices and Cisco IOS is strongly recommended.
- The QoS course is highly recommended because QoS knowledge is assumed in several sections of the course.

Course Objectives

After completing this course the student should be able to:

- Describe how the service provider infrastructure is attacked
- Describe the features of MPLS
- Describe how MPLS labels are assigned and distributed
- Identify the Cisco IOS tasks and command syntax necessary to implement MPLS on frame-mode Cisco IOS platforms
- Describe the MPLS peer-to-peer architecture and explain the routing and packet forwarding model in this architecture
- Identify the Cisco IOS command syntax required to successfully configure, monitor, and troubleshoot VPN operations
- Identify how the MPLS VPN model can be used to implement managed services and Internet access
- Describe the various Internet access implementations that are available and the benefits and drawbacks of each model
- Provide an overview of MPLS Traffic Engineering

Course Outline

- Introducing Basic MPLS Concepts
- Introducing MPLS Labels and Label Stack
- Identifying MPLS Applications
- Discovering LDP Neighbors
- Establishing the Service Provider IGP Routing Environment
- Introducing Typical Label Distribution in Frame-Mode MPLS
- Introducing Convergence in Frame-Mode MPLS
- Introducing MPLS Label Allocation, Distribution, and Retention Modes
- Introducing CEF Switching
- Configuring Frame-Mode MPLS on Cisco IOS Platforms
- Monitoring Frame-Mode MPLS on Cisco IOS Platforms
- Troubleshooting Frame-Mode MPLS on Cisco IOS Platforms
- Establishing the Core MPLS Environment

Website: www.krishinfocom.com Email: swapnil.shah@krishinfocom.com
Phone: +31 (0) 30 878 53 43 Phone: +91 9833921715

- Introducing Virtual Private Networks
- Introducing Overlay and Peer-to-Peer VPNs
- Categorizing VPNs
- Introducing MPLS VPN Architecture
- Introducing MPLS VPN Routing Model
- Forwarding MPLS VPN Packets
- Using MPLS VPN Mechanisms of Cisco IOS Platforms
- Configuring VRF Tables
- Configuring an MP-BGP Session Between PE Routers
- Configuring Small-Scale Routing Protocols Between PE and CE Routers
- Monitoring MPLS VPN Operations
- Initial MPLS VPN Setup
- Running EIGRP Between PE and CE Routers
- Configuring OSPF as the Routing Protocol Between PE and CE routers
- Running OSPF Between PE and CE Routers
- Configuring BGP as the Routing Protocol Between PE and CE routers
- Troubleshooting MPLS VPNs
- Running BGP Between PE and CE Routers