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Cisco IOS XR Ethernet VPN Implementation and Verification

The Cisco IOS XR Ethernet VPN Implementation and Verification\(^1\) (IOSXR303) course is an instructor-led, lab-based, hands-on course offered by Learning@Cisco. The overall course goal is for you to be able to implement and troubleshoot several Ethernet VPN (EVPN) technologies, including EVPN native, EVPN VPWS, PBB EVPN, EVPN IRB, and EVPN VXLAN, on Cisco IOS\(^\text{®}\) XR devices.

This course will examine next-generation solutions for Layer 2 VPN (L2VPN), EVPN terminology and concepts, and traffic forwarding. This course will also show students how to implement and troubleshoot the various EVPN technologies and investigate EVPN Multiprotocol Label Switching (MPLS) seamless integration with Virtual Private LAN Service (VPLS), EVPN out of service, virtual Ethernet segment, and EVPN route policy.

Duration
Instructor-Led Training (ILT): 3 days.
Virtual Instructor-Led Training (VILT): 4 days.

Target audience
The primary audience for this course is implementation and design engineers and network planning engineers.

\(^1\) Course content is dynamic and subject to change without notice.
Course objectives

Upon completion of this course, you should be able to:

- Describe the fundamentals of EVPN
- Describe and configure various EVPN technologies, including EVPN native, EVPN Virtual Private Wire Service (VPWS), Provider Backbone Bridging (PBB) EVPN, EVPN with integrated routing and bridging (IRB), and EVPN Virtual Extensible LAN (VXLAN)
- List and describe the advanced features of EVPN

Course prerequisites

- Experience working with Cisco IOS XR Software-based platforms
- Basic knowledge of Interior Gateway Protocol (Intermediate System to Intermediate System [IS-IS] and Open Shortest Path First [OSPF]) routing
- Understanding of Border Gateway Protocol (BGP) routing
- Understanding of MPLS

Course outline

- Module 1: EVPN Fundamentals
  - Examining Next-Generation Solutions for L2VPN
  - Examining EVPN Terminology and Concepts
  - Examining EVPN Traffic Forwarding
- Module 2: EVPN Configuration and Verification
  - Implementing EVPN Native
  - Implementing EVPN VPWS
  - Implementing PBB EVPN
  - Implementing EVPN IRB
  - Implementing EVPN-SR DC Fabric
  - Implementing EVPN VXLAN
- Module 3: EVPN Advanced Features
  - Examining EVPN Advanced Features

Lab outline

- Lab 1: Configuring EVPN Native
- Lab 2: Configuring EVPN VPWS
- Lab 3: Configuring PBB EVPN
- Lab 4: Configuring EVPN IRB
- Lab 5: Configuring EVPN and SR Fabric
- Lab 6: Configuring EVPN VXLAN Layer 3 Data Center Interconnect Gateway
- Lab 7: Configuring EVPN VXLAN Layer 2 Data Center Interconnect Gateway
- Lab 8: Configuring EVPN MPLS Seamless Integration with VPLS
- Lab 9: Configuring EVPN Routing Policy
Lab topology

Registration email
For more information about schedules and registration for this course, contact aeskt_registration@cisco.com.

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