

Length: 5-day Workshop

The Cisco IOS XR IPv6 Routing for Service Providers (XIPv6R), Version 2, course provides technical training to Cisco service provider customers so that they can successfully deploy IPv6 on routers running Cisco IOS® XR Software in an existing IPv4/Multiprotocol Label Switching (MPLS) environment. We review fundamental IPv6 behavior, IPv6-supported routing protocols, and mechanisms for tunneling of IPv6 over IPv4/MPLS. In addition, this course provides extensive hands-on lab exercises involving two service provider core networks and multiple customer sites connected into a multi- Autonomous System Internet

You will learn to:

- Characterize the types of IPv6 addresses, changes made to IP packet headers, and how neighbor discovery takes place
- Describe the various integration technologies that can be employed in implementing IPv6
- Describe the changes made to IPv4 routing protocols to support IPv6
- Configure IPv6 routing protocols on Cisco IOS XR Software routers and verify operation
- Configure and verify operation of IPv6 multicast
- Implement IPv6 provider edge (6PE) in an IPv4/MPLS environment
- Implement IPv6 VPN provider edge (6VPE) in an IPv4/MPLS environment

Recommended for:

This course is for technical professionals who design, implement, and operate IPv4 routing protocols in a service provider network consisting of routers running Cisco IOS® XR Software. The following are considered the primary audience for this course:

- Network operations center (NOC) engineers
- Network and senior engineers
- Support engineers

Prerequisites:

- Students should have knowledge of the Cisco IOS XR Software configuration syntax to the extent covered in the Cisco CRS-1 Essentials, Cisco ASR9000 Series Essentials, or Cisco XR12000 Series Essentials course.
- Students attending this class should be able to establish, without assistance, a configuration for Open Shortest Path First Version 2 (OSPFv2), Intermediate System-to-Intermediate System (IS-IS), and Border Gateway Protocol (BGP) with Routing Policy Language (RPL) policies as accomplished in the Cisco IOS XR IPv4 Routing course labs.
- Students must have a basic understanding of MPLS configuration and operation as covered in the Cisco CRS-1 Essentials, Cisco ASR9000 Series Essentials, or Cisco XR12000 Series Essentials course.
- Students must have a basic understanding of IPv6 concepts as covered in IPv6 Fundamentals (IPVSF).