Cisco Aggregation Services Router 9000 Series Essentials (ASR9KE)

Duration: 4 days

Who should attend?

1. System engineers
2. Technical support personnel
3. Channel partners, resellers

Prerequisites

Before attending this course, you should have the following knowledge and skills:

1. Basic IOS XR 64-Bit Software configuration commands
2. Basic knowledge of router installation and some experience with installation tools
3. Routing protocol configuration experience with BGP, Intermediate System-to-Intermediate System (IS-IS), and Open Shortest Path First (OSPF)
4. Knowledge of Layer 2 IEEE switching and related protocols
5. Strong knowledge of MPLS configuration or multicast configuration experience
6. Experience troubleshooting Cisco routers in a large network environment

Course Objectives

1. List and describe the major features and benefits of a Cisco ASR 9000 Series router
2. List and describe the major features and benefits of the Cisco 64-Bit IOS XR operating system
3. Understand data flow through the Cisco ASR 9000 Series router
4. Configure Cisco ASR 9000, back out of configuration changes, and restore older versions of the configuration
5. Install the Cisco IOS XR 64-Bit Software operating system, package information envelopes, and software maintenance updates
6. Enable multicast routing on a Cisco ASR 9900 Series router
7. Configure Layer 3 VPN services
8. Configure Ethernet link bundles
9. Configure local Ethernet Line (E-Line) Layer 2 VPN (L2VPN)
10. Configure Ethernet over Multiprotocol Label Switching (EoMPLS) E-Line L2VPN
11. Configure EoMPLS with pseudowire backup
12. Configure local Ethernet LAN(E-LAN) L2VPN
13. Describe Virtual Private LAN Service (VPLS) L2VPN
14. Describe VPLS with Border Gateway Protocol (BGP) autodiscovery
15. Configure service-based Connectivity Fault Management (CFM)

16. **Configure Layer 2 multicast features**
17. **Describe basic QoS implementation**
18. **Describe how to configure and verify network Virtualization (nV) on the ASR 9000 series**

Course Content

The Cisco Aggregation Services Router 9000 Series Essentials (ASR9KE) v6.0 course introduces you to the features and functions of the Cisco® Aggregation Services Router (ASR) 9000 Series platforms. Through a combination of lecture and hands-on labs, you will gain an understanding of all major aspects of the platform, including hardware, Layer 2 and Layer 3 services, routing protocols including Segment Routing, Layer 2 and Layer 3 multicast, quality of service (QoS) features, and network virtualization. The course investigates Cisco Internetworking Operating System (IOS) XR 64-Bit Linux-based feature parity in the environment, as well as how to install Cisco IOS® XR 64-Bit software packages.