

ASR9KE (ESSENTIALS OF CISCO ASR 9000 SERIES AGGREGATION SERVICES ROUTER) 4.0

Objetivo

The Cisco Aggregation Services Router 9000 Series Essential version 4 instructor-led course offered by High-Touch Delivery Learning Services introduces you to the features and functions of the Cisco® 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; software; Layer 2 and Layer 3 services; Layer 2 and Layer 3 multicast; operations, administration, and management (OAM); quality of service (QoS) features; and network virtualization. Upon completion of this course, you should be able to:

- List and describe the major features and benefits of a Cisco ASR 9000 Series router
- List and describe the major features and benefits of the Cisco IOS® XR Software operating system
- Understand data flow through the Cisco ASR 9000 Series router
- Configure the Cisco ASR 9000, back out of configuration changes, and restore older versions of the configuration
- Install the Cisco IOS XR operating system, package information envelopes (PIEs), and software maintenance updates (SMUs)
- Enable multicast routing on a Cisco ASR 9000 Series router
- Configure Multiprotocol Label Switch–Traffic Engineering (MPLS-TE) on a Cisco ASR 9000 Series router
- Configure Layer 3 VPN services
- Configure Ethernet link bundles
- Configure local E-Line L2VPN
- Configure Ethernet over MPLS E-Line L2VPN
- Configure EoMPLS with pseudowire backup
- Configure local E-LAN L2VPN
- Configure link-based Ethernet operations, administration, and maintenance (E-OAM)
- Configure virtual private LAN service (VPLS) L2VPN
- Configure VPLS with Border Gateway Protocol (BGP) autodiscovery
- Configure service-based connectivity fault management (CFM)
- Describe Multiple Spanning Tree–Access Gateway (MST-AG)
- Configure Layer 2 multicast features
- Describe basic QoS implementation
- Describe how to configure and verify network virtualization (nV) on the ASR 9000 series

Público Alvo

- System engineers
- Technical support personnel
- Channel partners, resellers

Pré-Requisitos

- Basic knowledge of router installation and some experience with installation tools
- Routing protocol configuration experience with BGP, Intermediate System-to-Intermediate System (IS-IS), and Open Shortest Path First (OSPF)
- Knowledge of Layer 2 IEEE switching and related protocols
- Strong knowledge of MPLS configuration or multicast configuration experience
- Experience troubleshooting Cisco routers in a large network environment

Carga Horária

40 horas (5 dias).

Conteúdo Programático

- Module 1: Introduction to the Cisco ASR 9000 Aggregation Series
 - Module 2: Cisco ASR 9000 Hardware
 - Module 3: Cisco IOS XR Software Overview
 - Module 4: Cisco IOS XR Software Basics
 - Module 5: Cisco IOS XR Software Software Installation
 - Module 6: Cisco IOS XR Software Operations
 - Module 7: Cisco IOS XR Routing Protocols
 - Module 8: Layer 3 Multicast
 - Module 9: Cisco IOS XR MPLS
 - Module 10: Cisco IOS XR Layer 3 VPN
 - Module 11: Cisco ASR 9000 Layer 2 Architecture
 - Module 12: Cisco ASR 9000 Point-to-Point Layer 2 Services
 - Module 13: Cisco ASR 9000 Multipoint Layer 2 Services
 - Module 14: Cisco ASR 9000 Operations, Administration, and Maintenance
 - Module 15: Cisco ASR 9000 Layer 2 Multicast
 - Module 16: Cisco ASR 9000 QoS
 - Module 17: Cisco ASR 9000 Network Virtualization
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- Lab 1: Hardware Discovery and Initial Configuration
 - Lab 2: Cisco IOS XR Software Installation
 - Lab 3: Cisco IOS XR Operations
 - Lab 4: OSPF Routing Configuration
 - Lab 5: IS-IS Routing Configuration
 - Lab 6: BGP Routing Configuration
 - Lab 7: Layer 3 Multicast
 - Lab 8: MPLS
 - Lab 9: Layer 3 VPN
 - Lab 10: Local E-Line
 - Lab 11: EoMPLS E-Line
 - Lab 12: Local E-LAN
 - Lab 13: VPLS
 - Lab 14: OAM
 - Lab 15: Layer 2 Multicast