

# ASR9KE - CISCO AGGREGATION SERVICES ROUTER 9000 SERIES ESSENTIALS V6.1

Course Code: 5481

Learn the features and functions of the Cisco ASR 9000 Series platforms.

In this course, you will learn about 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.

**Note: You are required to bring your own laptop and Ethernet cable to class.**

This course is eligible for 32 Continuing Education Credits (ILT & ELT Modality).

## What You'll Learn

- Major features and benefits of a Cisco ASR 9000 Series router
- Major features and benefits of the Cisco IOS XR Software operating system
- 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)
- Multiple Spanning Tree-Access Gateway (MST-AG)
- Configure Layer 2 multicast features
- Basic QoS implementation
- How to configure and verify network virtualization (nV) on the ASR 9000 series

### Who Needs to Attend

- Technical professionals, including system engineers, technical support personnel, channel partners, and resellers, who need to know how to deploy Cisco ASR 9000 Series routers in their network environment

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CLASSROOM LIVE

\$4,500 USD

5 Day

## Classroom Live Outline

1. Introduction to the Cisco ASR 9000 Aggregation Series
2. Cisco ASR 9000 Hardware
3. Cisco IOS XR Software Overview
4. Cisco IOS XR Software Basics
5. Cisco IOS XR Software Installation
6. Cisco IOS XR Software Operations
7. Cisco IOS XR Routing Protocols
8. Layer 3 Multicast
9. Cisco IOS XR MPLS
10. Cisco IOS XR Layer 3 VPN
11. Cisco ASR 9000 Layer 2 Architecture
12. Cisco ASR 9000 Point-to-Point Layer 2 Services
13. Cisco ASR 9000 Multipoint Layer 2 Services
14. Cisco ASR 9000 Operations, Administration, and Maintenance
15. Cisco ASR 9000 Layer 2 Multicast
16. Cisco ASR 9000 QoS
17. Cisco ASR 9000 Network Virtualization

## Classroom Live Labs

- 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

# ASR9KE - CISCO AGGREGATION SERVICES ROUTER 9000 SERIES ESSENTIALS V6.1

Course Code: 5481

VIRTUAL CLASSROOM LIVE

\$3,600 USD

5 Day

## Virtual Classroom Live Outline

1. Introduction to the Cisco ASR 9000 Aggregation Series
2. Cisco ASR 9000 Hardware
3. Cisco IOS XR Software Overview
4. Cisco IOS XR Software Basics
5. Cisco IOS XR Software Installation
6. Cisco IOS XR Software Operations
7. Cisco IOS XR Routing Protocols
8. Layer 3 Multicast
9. Cisco IOS XR MPLS
10. Cisco IOS XR Layer 3 VPN
11. Cisco ASR 9000 Layer 2 Architecture
12. Cisco ASR 9000 Point-to-Point Layer 2 Services
13. Cisco ASR 9000 Multipoint Layer 2 Services
14. Cisco ASR 9000 Operations, Administration, and Maintenance
15. Cisco ASR 9000 Layer 2 Multicast
16. Cisco ASR 9000 QoS
17. Cisco ASR 9000 Network Virtualization

## Virtual Classroom Live Labs

- 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
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- Lab 11: EoMPLS E-Line
- Lab 12: Local E-LAN
- Lab 13: VPLS
- Lab 14: OAM
- Lab 15: Layer 2 Multicast

May 12 - 15, 2025 | 9:00 AM - 5:00 PM EDT

Jun 23 - 26, 2025 | 9:00 AM - 5:00 PM CDT

Jul 21 - 24, 2025 | 9:00 AM - 5:00 PM EDT

# ASR9KE - CISCO AGGREGATION SERVICES ROUTER 9000 SERIES ESSENTIALS V6.1

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ON-DEMAND

\$1,000 USD

## On-Demand Outline

1. Introduction to the Cisco ASR 9000 Aggregation Series
2. Cisco ASR 9000 Hardware
3. Cisco IOS XR Software Overview
4. Cisco IOS XR Software Basics
5. Cisco IOS XR Software Installation
6. Cisco IOS XR Software Operations
7. Cisco IOS XR Routing Protocols
8. Layer 3 Multicast
9. Cisco IOS XR MPLS
10. Cisco IOS XR Layer 3 VPN
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12. Cisco ASR 9000 Point-to-Point Layer 2 Services
13. Cisco ASR 9000 Multipoint Layer 2 Services
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15. Cisco ASR 9000 Layer 2 Multicast
16. Cisco ASR 9000 QoS
17. Cisco ASR 9000 Network Virtualization

## On-Demand Labs

- Lab 1: Hardware Discovery and Initial Configuration
- Lab 2: Cisco IOS XR Software Installation
- Lab 3: Cisco IOS XR Operations
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- Lab 5: IS-IS Routing Configuration

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