

Cisco 8000 Series Routers Essentials (SP8KE)

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The Cisco 8000 Series Routers Essentials (SP8KE) v1.0 course introduces you to the features and functions of the Cisco® 8000 Series router platforms. Through a combination of lectures and labs, you will gain an understanding of all major aspects of the platform, including hardware, software, Layer 2 and Layer 3 services, Quality of Service (QoS) features, network virtualization, and programmability.

How you'll benefit

This class will help you:

- Increase your experience with the Cisco 8000 Series system
- Describe and implement the Cisco 8000 Series system and its components
- Gain hands-on experience with the Cisco 8000 Series system in a lab setting

Why Attend with Current Technologies CLC

- Our Instructors are in the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

Who Should Attend

The primary audience for this course is as follows:

- System Engineers
- Technical Support Personnel
- Channel Partners and Resellers

Prerequisites

Before taking this course, you should have:

- Basic knowledge of router installation and some experience with installation tools
- Routing protocol configuration experience with Border Gateway Protocol (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 experience
- Experience troubleshooting Cisco routers in a large network environment

Course Duration

5 days

Course Price

\$4,195.00 or 42 CLCs

Methods of Delivery

- Instructor Led
- Virtual ILT
- On-Site

OUTLINE

Module 1: Cisco 8000 Series Hardware Fundamentals

Module 2: Cisco 8000 System Architecture

Module 3: Packet Flow Through the Cisco 8000 Series Router

Module 4: Traffic Management and QoS on Cisco 8000 Routers

Module 5: SONiC Basics

Module 6: Cisco IOS XR Software Architecture

Module 7: Cisco IOS XR Software Installation

Module 8: Automatic Provisioning

Module 9: Cisco IOS XR MPLS

Module 10: Introducing Segment Routing

Module 11: Segment Routing TI-LFA and Traffic Engineering

Module 12: EVPN Layer 2 Basics

Module 13: Layer 3 VPNs

Module 14: Advanced SR-TE Features

Module 15: SRv6

Module 16: Telemetry

Module 17: Cisco IOS XR Programmability

Module 18: Application Hosting Overview

LAB OUTLINE

Lab 1: Investigate and Monitor Cisco 8000 Series Hardware

Lab 2: Troubleshoot Traffic Through the Cisco 8000 Router

Lab 3: Cisco IOS XR Software Installation

Lab 4: Configure and Verify Zero Touch Provisioning (ZTP)

Lab 5: Configure and Verify Multiprotocol Label Switching

Lab 6: Configure and Verify Segment Routing (SR)

Lab 7: Configure and Verify SR TI-LFA Using IS-IS

Lab 8: Configure and Verify SR TI-LFA Using OSPF

Lab 9: Configure and Verify SR-TE Using IS-IS

Lab 10: Configure and Verify SR-TE Using OSPF

Lab 11: Configure and Verify Basic EVPN

Lab 12: Configure and Verify Layer 3 VPN

Lab 13: Configure and Verify On-Demand Next-Hop (ODN) and Flexible Algorithm

Lab 14: Configure and Verify Segment Routing over IPv6 (SRv6)

Lab 15: Configure and Verify Model-Driven Telemetry

Lab 16: Configure and Verify Devices by Using Model-Driven Programmability

Lab 17: Configure and Verify Application Hosting Within a Docker Container