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## Cisco ASR 9000 Series IOS XR 64-Bit Software Migration and Operational Enhancements

DURATION: 4 DAYS

COURSE CODE: IOSXR211-V

FORMAT: VIRTUAL

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### COURSE DESCRIPTION

The Cisco ASR 9000 Series IOS XR 64-Bit Software Migration and Operational Enhancements (IOSXR211) v1.0 course covers the migration from classic 32-bit Cisco IOS® XR software to Cisco IOS XR 64-Bit software on the Cisco® ASR 9000 Series Aggregation Services Routers. This course will also examine the software architecture, boot process, and auto-provisioning of the Cisco IOS XR 64-bit software, as well as showing you how to install Cisco IOS XR and third-party software packages. In addition, it will investigate data models and show you how to implement telemetry, model-driven programmability, and application hosting services.

### WHO SHOULD ATTEND

System installers  
System integrators  
System administrators  
Network administrators  
Solutions designers

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### PREREQUISITES

The Introduction to IOS XR (IOSXR100) course  
The Cisco Aggregation Services Router 9000 Series Essentials (ASR9KE) course  
Familiarity with implementing routing protocols on Cisco IOS XR software-based network devices  
Experience working with Cisco IOS XR Command-Line Interface (CLI)-based network devices

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### LEARNING OBJECTIVES

Describe the Cisco IOS XR 64-Bit software architecture and Linux system fundamentals  
Describe the major differences between classic Cisco IOS XR software and Cisco IOS XR 64-Bit software on the ASR 9000 Series routers  
Migrate an ASR 9000 Series router from classic IOS XR software to Cisco IOS XR 64-Bit software  
Perform and explain Cisco IOS XR 64-Bit software installations  
Configure and describe Cisco IOS XR 64-Bit software features

This course will help you:

Understand the software architecture, boot process, and auto-provisioning of Cisco IOS XR 64-Bit software  
Learn to migrate an ASR 9000 Series router from classic Cisco IOS XR software to Cisco IOS XR 64-Bit software  
Practice installing Cisco IOS XR and third-party software packages  
Learn to implement telemetry, model-driven programmability, and application hosting services

## COURSE OUTLINE

### 1. Software Architecture and Linux Fundamentals

- Cisco IOS XR 64-Bit Software Fundamentals
- Cisco ASR 9000 Series IOS XR 64-Bit Software vs. Classic 32-Bit Software
- Exploring Linux Fundamentals
- Creating User Profiles

### 2. Cisco IOS XR 64-Bit Software Installation

- Examining Resource Allocations and Media Mappings
- Migrating to Cisco IOS XR 64-Bit Software
- Examining the Boot Process
- Performing Disaster Recovery
- Installing Software Packages

### 3. Cisco IOS XR 64-Bit Software Features

- Investigating Data Models
- Implementing Telemetry
- Exploring Model-Driven Programmability
- Employing Application Hosting

## DISCOVERY LABS

- 1: Using Basic Linux Commands and Creating User Profiles
- 2: Migrating to Cisco IOS XR 64-Bit Software
- 3: Configuring Auto-Provisioning
- 4: Installation of Cisco IOS XR Packages
- 5: Configuring Model-Driven Telemetry
- 6: Configuring Devices by Using Model-Driven Programmability
- 7: Using the YANG Development Kit
- 8: Deploying Native Application Hosting
- 9: Hosting an Application Within an LXC Container
- 10: Hosting an Application Within a Docker Container