

# Introduction to Cisco IOS XR

## Outline:

- Cisco IOS XR Software Overview
  - Platform Overview
  - Cisco IOS XR Architecture
  - Cisco IOS XR High Availability
- Cisco IOS XR Software Configuration Basics
  - Cisco IOS XR Configuration Operations
  - Cisco IOS XR Initial Configuration
  - Reviewing the Configuration
- Cisco IOS XR Software Operations
  - Examining Configuration Operations
  - Examining Configuration Rollback and Recovery
- Configuration File System Overview
  - Examining the Binary Configuration
  - Examining the Commit Database
  - Examining the ASCII Configuration
  - Examining the Nonvolatile Generation (NVgen) Files
  - Verifying Cisco Fabric Services (CFS) Integrity
- Cisco IOS XR Software Installation
  - Software Package Basics
  - Installing Software Packages
- AAA Security
  - AAA Fundamentals
  - Task-Based Security
  - Configuring a User Security Policy
  - Authentication with Remote Servers
  - Configuring Router to AAA Server Communication
  - Configuring Authentication

- Terminal Access Controller Access-Control System Plus (TACACS+) Command Authorization
  - Configuring Accounting
  - AAA Troubleshooting
- Network Time Synchronization
  - Network Time Protocol
- SNMP, Telemetry, and Logging
  - Examining SNMP
  - Examining Telemetry
  - Examining Logging
- Basic Routing Configuration
  - Configuring Intermediate System to Intermediate System (IS-IS)
  - Configuring Open Shortest Path First (OSPF)
  - Configuring Border Gateway Protocol (BGP)
  - Configuring Routing Protocol for LLN (RPL) Policy
- Packet Filtering
  - Access Control Lists
  - Unicast Reverse Path Forwarding
  - Management Plane Protection
- Monitoring Process
  - Examining Processes and Threads
  - Process Crashes
  - Commands for Debugging Processes
  - Restartability of Processes
  - Process Monitoring
  - Identifying Memory Problems
  - Memory Depletion
- Core Dumps
  - Core Dump Fundamentals
  - Using Core Dump Information

Lab outline

- Initial Configuration of a Cisco IOS XR Router
- Configuration Commit and Rollback
- Configuration File System
- Cisco IOS XR Software Installation
- Configuring User Security Policies
- Cisco IOS XR AAA Configuration
- Configuring NTP
- Configuring SNMP, Telemetry, and Logging
- Configuring Routing Protocols
- Configuring IPv4 and IPv6 Filtering
- Configuring uRPF and MPP
- Using Monitoring and Restarting Processes