SEGRTE201 (IMPLEMENTING SEGMENT ROUTING ON CISCO IOS XR) 2.0

Objetivo

After taking this course, you should be able to: Describe the key concepts of segment routing Implement and verify IGP segment routing Migrate an existing Multiprotocol Label Switching (MPLS) LDP-based network to segment routing Implement and verify TI-LFA segment routing Instantiate segment routing policies Instantiate multidomain segment routing policies Configure and verify BGP prefix segments and SR-based services

PÃºblico Alvo

Systems engineers Network engineers Field engineers Technical support personnel Channel partners and resellers

PrÃ©-Requisitos

Before taking this course, you should have: Familiarity with Cisco Internetwork Operating System (IOSÂ®) XR software Knowledge of general networking concepts

Carga HorÃ¡ria

32 horas (4 dias).

ConteÃºdo ProgramÃ¡tico

Outline
Introduction to Segment Routing
Introduction
Examining Unified Fabric Routing
Exploring Segment Routing Concepts
Examining Segment Types
Examining the Segment Routing Global Block (SRGB)
IGP Segment Routing Implementation and Verification
Introduction
Examining the IGP Control Plane
Examining SRGB and IGP Interactions
Examining Prefix and Adjacency SIDs
Intermediate System to Intermediate System (IS-IS) Multilevel and Open Shortest Path First (OSPF) Multi-Area
Configuring and Verifying IS-IS SR Operation
Configuring and Verifying OSPF SR Operation
Segment Routing and LDP Interworking
Introduction

SR and LDP Interworking Data Plane
Mapping Server Function and Configuration
Interworking Deployment Models
Topology Independent – Loop Free Alternate
Introduction
Examining Classic LFA
Examining TI-LFA Fundamentals
Implementing and Verifying TI-LFA for SR Traffic
Implementing and Verifying SR TI-LFA for LDP Traffic
TI-LFA and SR LDP Interworking
Segment Routing Policies – Traffic Engineering (SR-TE)
Introduction
Exploring SR Policies
Anycast and Binding SIDs
Enabling and Verifying SR-TE
Explicit path SR-TE policies
Constrained dynamic path SR-TE policies
Instantiating SR Policies
Instantiating SR Policies using BGP Dynamic
Multidomain SR Policies
Introduction
Configuring and Verifying a Path Computation Element (PCE)
Configuring and Verifying BGP Link-State (LS)
Configuring Multidomain SR Policies with a PCE
Configuring Multidomain SR Policies with On Demand Next-Hop (ODN)
BGP Prefix Segment and Egress Peer Engineering
Introduction
Examining the BGP-based data center
Examining the BGP Prefix-SID Operation
Configuring and Verifying the BGP Prefix SID
Examining Egress Peer Engineering
Examining BGP peering segments
Configuring and verifying egress peer engineering

Lab outline
Configuring and Verifying IGP Segment Routing
Migrating from LDP to Segment Routing
Configuring and Verifying TI-LFA Fast Reroute
Configuring and Verifying SR Policies
Configuring and Verifying Multidomain SR-TE
Configuring and Verifying BGP Segment Routing