ENARSI

Implementing Cisco Enterprise Advanced Routing and Services

40 horas | Enterprise Network | Cisco

Cisco Continuing Education Credits

40 CE Credits

INTRODUÇÃO

Course Description

The Implementing Cisco Enterprise Advanced Routing and Services (ENARSI) v1.0 gives you the knowledge you need to install, configure, operate, and troubleshoot an enterprise network. This course covers advanced routing and infrastructure technologies, expanding on the topics covered in the Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR) v1.0 course.

OBJETIVO DO CURSO

After taking this course, you should be able to:

Configure classic Enhanced Interior Gateway Routing Protocol (EIGRP) and named EIGRP for IPv4 and IPv6

Optimize classic EIGRP and named EIGRP for IPv4 and IPv6

Troubleshoot classic EIGRP and named EIGRP for IPv4 and IPv6

Configure Open Shortest Path First (OSPF)v2 and OSPFv3 in IPv4 and IPv6 environments

Optimize OSPFv2 and OSPFv3 behavior

Troubleshoot OSPFv2 for IPv4 and OSPFv3 for IPv4 and IPv6

Implement route redistribution using filtering mechanisms

Troubleshoot redistribution

Implement path control using Policy-Based Routing (PBR) and IP service level agreement (SLA)

Configure Multiprotocol-Border Gateway Protocol (MP-BGP) in IPv4 and IPv6 environments

Optimize MP-BGP in IPv4 and IPv6 environments

Troubleshoot MP-BGP for IPv4 and IPv6

Describe the features of Multiprotocol Label Switching (MPLS)

Describe the major architectural components of an MPLS VPN

Identify the routing and packet forwarding functionalities for MPLS VPNs

Explain how packets are forwarded in an MPLS VPN environment

Implement Cisco Internetwork Operating System (IOS®) Dynamic Multipoint VPNs (DMVPNs)

Implement Dynamic Host Configuration Protocol (DHCP)

Describe the tools available to secure the IPV6 first hop

Troubleshoot Cisco router security features

Troubleshoot infrastructure security and services

PÚBLICO-ALVO

Enterprise network engineers

System engineers

System administrators

Network administrators

PRÉ-REQUISITOS

Before taking this course, you should have:

General understanding of network fundamentals

Basic knowledge of how to implement LANs

General understanding of how to manage network devices

General understanding of how to secure network devices

Basic knowledge of network automation

CONTEÚDO PROGRAMÁTICO

Implementing EIGRP

Optimizing EIGRP

Troubleshooting EIGRP

Implementing OSPF

Optimizing OSPF

Troubleshooting OSPF

Implementing Internal Border Gateway Protocol (IBGP)

Optimizing BGP

Implementing MP-BGP

Troubleshooting BGP

Configuring Redistribution

Troubleshooting Redistribution (Self Study)

Implementing Path Control

Exploring MPLS (Self Study)

Introducing MPLS L3 VPN Architecture (Self Study)

Introducing MPLS L3 VPN Routing (Self Study)

Configuring Virtual Routing and Forwarding (VRF)-Lite

Implementing DMVPN

Implementing DHCP

Troubleshooting DHCP

Introducing IPv6 First Hop Security (Self Study)

Securing Cisco Routers

Troubleshooting Infrastructure Security and Services (Self Study)

Lab Outline

Configure EIGRP Using Classic Mode and Named Mode for IPv4 and IPv6

Verify the EIGRP Topology Table

Configure EIGRP Stub Routing, Summarization, and Default Routing

Configure EIGRP Load Balancing and Authentication

LAB: Troubleshoot EIGRP Issues

Configure OSPFv3 for IPv4 and IPv6

Verify the Link-State Database

Configure OSPF Stub Areas and Summarization

Configure OSPF Authentication

Troubleshoot OSPF

Implement Routing Protocol Redistribution

Manipulate Redistribution

Manipulate Redistribution Using Route Maps

Troubleshoot Redistribution Issues

Implement PBR

Configure IBGP and External Border Gateway Protocol (EBGP)

Implement BGP Path Selection

Configure BGP Advanced Features

Configure BGP Route Reflectors

Configure MP-BGP for IPv4 and IPv6

Troubleshoot BGP Issues

Implement PBR

Configure Routing with VRF-Lite

Implement Cisco IOS DMVPN

Obtain IPv6 Addresses Dynamically

Troubleshoot DHCPv4 and DHCPv6 Issues

Troubleshoot IPv4 and IPv6 Access Control List (ACL) Issues

Configure and Verify Control Plane Policing

Configure and Verify Unicast Reverse Path Forwarding (uRPF)

Troubleshoot Network Management Protocol Issues: Lab 1

Troubleshoot Network Management Protocol Issues: Lab 2