SPRI (IMPLEMENTING CISCO SERVICE PROVIDER ADVANCED ROUTING SOLUTIONS) 1.0

Objetivo

After taking this course, you should be able to: â¢ Describe the main characteristics of routing protocols that are used in Service provider environments; â¢ Implement advanced features of multiarea Open Shortest Path First (OSPFv2) running in Service Provider networks; â¢ Implement advanced features of multilevel Intermediate System to Intermediate System (ISIS) running in Service Provider networks; â¢ Configure route redistribution; â¢ Configure Border Gateway Protocol (BGP) in order to successfully connect the Service Provider network to the customer or upstream Service Provider; â¢ Configure BGP scalability in Service Provider networks; â¢ Implement BGP security options; â¢ Implement advanced features in order to improve convergence in BGP networks; â¢ Troubleshoot OSPF, ISIS, and BGP; â¢ Implement and verify MPLS; â¢ Implement and troubleshoot MPLS traffic engineering; â¢ Implement and verify segment routing technology within an interior gateway protocol; â¢ Describe how traffic engineering is used in segment routing networks; â¢ Implement IPv6 tunneling mechanisms; â¢ Describe and compare core multicast concepts; â¢ Implement and verifying the PIM-SM protocol; â¢ Implement enhanced Protocol-Independent Multicast - Sparse Mode (PIM-SM) features; â¢ Implement Multicast Source Discovery Protocol (MSDP) in the interdomain environment; â¢ Implement mechanisms for dynamic Rendezvous Point (RP) distribution.

PÃºblico Alvo

This course is for professionals who need knowledge about implementing various Service Provider core technologies and advanced routing technologies. â¢ Network administrators â¢ System engineers â¢ Project managers â¢ Network designers

PrÃ©-Requisitos

Before taking this course, you should have the following knowledge and skills: â¢ Intermediate to advanced knowledge of Cisco Internetwork Operating System (Cisco IOSÂ®) or IOS XE and Cisco IOS XR Software configuration; â¢ Knowledge of IPv4 and IPv6 TCP/IP networking; â¢ Intermediate knowledge of BGP, OSPF, and ISIS routing protocols; â¢ Understanding of MPLS technologies; â¢ Understanding of multicast technologies; â¢ Familiarity with segment routing; The following Cisco courses can help you gain the knowledge you need to prepare for this course: â¢ Building Cisco Service Provider Next-Generation Networks Part 1 (SPNGN1); â¢ Building Cisco Service Provider Next-Generation Networks Part 2 (SPNGN2); â¢ Deploying Cisco Service Provider Network Routing (SPROUTE); â¢ Implementing and Administering Cisco Solutions (CCNAÂ®); â¢ Understanding Cisco Service Provider Network Foundations (SPFNDU); â¢ Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR).

Carga HorÃ¡ria

40 horas (5 dias).

ConteÃºdo ProgramÃitico

Implementing and Verifying Open Shortest Path First Multiarea Networks
Implementing and Verifying Intermediate System to Intermediate System Multilevel Networks
Introducing Routing Protocol Tools, Route Maps, and Routing Policy Language
Implementing Route Redistribution
Influencing Border Gateway Protocol Route Selection
Scaling BGP in Service Provider Networks
Securing BGP in Service Provider Networks
Improving BGP Convergence and Implementing Advanced Operations
Troubleshooting Routing Protocols
Implementing and Verifying MPLS
Implementing Cisco MPLS Traffic Engineering
Implementing Segment Routing
Describing Segment Routing Traffic Engineering (SR TE)
Deploying IPv6 Tunneling Mechanisms
Implementing IP Multicast Concepts and Technologies
Implementing PIM-SM Protocol
Implementing PIM-SM Enhancements
Implementing Interdomain IP Multicast
Implementing Distributed Rendezvous Point Solution in Multicast Network

Lab outline

Implement OSPF Special Area Types (IPv4 and IPv6)
Implement Multiarea IS-IS
Implement Route Redistribution
Influence BGP Route Selection
Implement BGP Route Reflectors
Implement BGP Security Options
Troubleshoot Routing Protocols
Implement MPLS in the Service Provider Core
Implement Cisco MPLS TE
Configure and Verify Interior Gateway Protocol (IGP) Segment Routing
Implement Tunnels for IPv6
Enable and Optimize PIM-SM
Implement PIM-SM Enhancements
Implement Rendezvous Point Distribution