HCIP Routing & Switching IERS

Huawei

- **Nível:**
- **Duração:** 35h

Sobre o curso

With **HCIP-Routing & Switching certification**, you demonstrate a comprehensive and thorough understanding of small and medium-sized networks, including general network technologies, and the ability to design small and medium-sized networks independently and implement the designs using Huawei routing and switching devices.
With engineers who are HCIP-Routing & Switching certified, enterprises are able to construct complete small and medium-sized networks and integrate voice, wireless, cloud, security, and storage technologies into their networks in order to support a variety of applications while providing enhanced security, availability, and reliability.

This HCIP Routing & Switching IERS course is one of the three recommended trainings that prepares you for the HCIP-Routing & Switching certification.

The other 2 recommended courses for this certification are: HCIP Routing & Switching IENP and HCIP Routing & Switching IEEP.

This 5 day course prepares you for the H12-221 exam.

Objetivos

- On completion of this program, the participants will be able to:
  - Configure OSPF
  - Configure ISIS
  - Configure BGP
  - Describe the principle of IGMP, PIM-DM/SM
  - Describe the principle of Eth-Trunk, MUX VLAN, Port Isolation, RSTP and MSTP
  - Configure Eth-Trunk, MUX VLAN, Port Isolation, RSTP and MSTP

Destinatários

- Those who hope to become a network professional
- Those who hope to obtain HCIP-Routing & Switching certification.

Pré-requisitos

- HCIA certification or the similar knowledge

Programa

- OSPF
- ISIS
- BGP
- IP Multicast Basics
- IGMP
- PIM
- Route Control
- Eth-Trunk
- Advanced Features of Switches
- RSTP
- MSTP

OSPF

- RIP problems in large network
- OSPF characteristics
- Network types supported by OSPF
- The process of establishing OSPF neighbor relationships
- The concepts and functions of OSPF DR and BDR
- The Router-LSA contents and functions
- The Network-LSA contents and functions
- The shortest path first (SPF) algorithm
- The inter-area route transmission process
- Prevent inter-area routing loops
- Application scenarios of OSPF virtual links
- Configure virtual links
- The functions of AS-External-LSAs and ASBR-Summary-LSAs
- Calculate OSPF external routes

- How suboptimal external routes are generated
- The OSPF route summarization principle
- The OSPF update mechanism
- The OSPF authentication mechanism

ISIS

- IS-IS principles
- The differences between IS-IS and OSPF
- Configure IS-IS

BGP

- Working Principle of BGP
- BGP attributes and applications
- BGP route summarization applications

IP Multicast Basics

- Characteristics of point-to-multipoint applications
- The basic multicast architecture
- The structure of multicast addresses

IGMP

- IGMP working mechanisms and configurations
- The differences between different IGMP versions
- The mechanism of IGMP snooping

PIM

- Multicast forwarding requirements
- PIM-DM working mechanisms and configurations
- PIM-SM working mechanisms and configurations

Route Control

- Control traffic reachability
- Adjust network traffic paths
- The problems caused by route import and solutions

Eth-Trunk

- The Eth-Trunk principle

- The Eth-Trunk configuration

Advanced Features of Switches

- The application scenario and configuration of MUX VLAN
- The application scenario and configuration of port isolation
- The application scenario and configuration of port security

RSTP

- The working principle of RSTP
- Similarities and differences between RSTP and STP
- The RSTP configuration in typical application scenarios

MSTP

- Limitations of a single spanning tree
- The MSTP working mechanism
- Configure MSTP