Routing and Switching Certification Training

HCIA-Routing&Switching Training

Training Path

١	HCIA-R&S Entry	
	Lecture, Practice	٥,٠ days

٢	HCIA-R&S Intermediate	
	Lecture, Practice	٥,٠ days

Target Audience

Personnel who want to become data communication engineers

Personnel who want to obtain HCIA-R&S certification

Prerequisites

- Be familiar with PC operations..

- Have a basic understanding of IT technologies and network knowledge..

Objectives

On completion of this program, the participants will be able to:

- Describe the basic principles of data communication and be competent for basic O&M of IP networks.

- Plan and design IP addresses.

- Performing Basic VRP Operations

- Describe the functions and working principles of the switching equipment.

- Set up an efficient switching network by configuring switching devices and running the STP/RSTP protocol.

- Describe the basic principles of routing and routing protocols. Configure RIP/OSPF to build an efficient enterprise routing network.

- Configure common services on enterprise networks, such as DHCP, FTP, and Telnet, so that enterprises can efficiently use and manage the network.

- Set up a small-scale enterprise network.

- Configure link aggregation, VLAN, and GVRP to enhance the performance of enterprise Layer two networks.

- Configure HDLC, PPP, PPPoE, or FR on the serial link to implement WAN interconnection.

- Performing NAT Configuration

- Configuring the Enterprise Network to Access the ۳G Network

- Configure ACL, AAA, and IPSec/GRE to provide security solutions for enterprise IP networks.

- Configure SNMP and eSight to manage enterprise networks in a unified manner.

- Build a network that meets enterprise service requirements.

Training Contents

HCIA-R&S Entry

- Basic Knowledge of TCP/IP
  - Basic Enterprise Network Architecture
  - Introduction to Transmission Media
  - Ethernet framing
  - IP addressing
  - ICMP protocol
  - ARP protocol
  - Transport layer protocol
  - Data forwarding Scenario
- Introduction to the VRP
  - VRP Foundation
  - Navigating the CLI
  - File System Navigation and Management
  - VRP Operating system Image management
- Introduction to Switching Technologies
  - Establishing a Single Switched Network
  - Spanning Tree Protocol
  - Rapid Spanning Tree Protocol
- Introduction to Routing Technologies
  - Basic Knowledge of IP Routing
  - IP Static Route
  - Distance Vector Routing with RIP
  - Link State Routing with OSPF
- Introduction to IP Services
  - DHCP Protocol Principles
  - FTP Protocol Principles
  - Telnet Protocol Principles

HCIA-R&S Intermediate

- Advanced switching technologies
  - Advanced Enterprise Network Solution Overview
  - Link aggregation
  - VLAN Principle
  - GARP and GVRP
  - VLAN Routing
  - Wireless LAN Overview
- Introduction to WAN Technologies
  - Principles and Configuration of HDLC and PPP
  - Frame Relay Principles
  - Principles and Configuration of PPPoE
- Introduction to Access Control
  - Establishing Enterprise RAN Solution
  - Network address translation
  - Access control list
  - AAA
  - Securing Data with IPSec VPN
  - Generic Routing Encapsulation
- Introduction to Network Management
  - Simple Network Manangement Protocol
  - eSight Network Management Solution
- Introduction to IPv٦
  - Introducing IPv٦ Networks
  - IPv٦ Routing Technologies
  - Ipv٦ Application Service - DHCPv٦

Duration

١٠ working days

Class Size

Max ١٢