



Enterprise Computing Solutions - Education Services

## TRAINING OFFERING

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**Puoi raggiungerci qui**

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## HCIP-Routing & Switching (Fast-Track)

**CODE:**

HUA\_HCNP-RS-FT

**LENGTH:**

40 Hours (5 days)

**PRICE:**

Request Price

**Description**

The "HCIP Routing & Switching Fast Track" course allows those who already have a knowledge of Routing & Switching equivalent to that provided by the courses listed in the prerequisites, to follow a shorter course than the full course (HCIP-IERS + HCIP-IENP + HCIP-IEEP) to prepare for the HCIP-R&S (Composite Certification Training) exam.

**Objectives**

## Ethernet Technology (hands-on)

- Ethernet evolution process, port auto-negotiation technology, port trunking, port mirroring, working principles of a Layer 2 switch, and working principles of a Layer 3 switch

## VLAN (hands-on)

- 802.1Q encapsulation and implementation of VLAN in Huawei products
- Inter-VLAN routing, Super VLAN, MUX VLAN, ARP proxy, and VLAN mapping
- GVRP principles, configuration, and implementation
- QinQ principles, configuration, and implementation

## STP/RSTP/MSTP (hands-on)

- STP principles and configuration
- RSTP principles and configuration
- MSTP principles and configuration

## Network Access Technology

- 802.1X access authentication techniques and principles
- DHCP principles and extended switch feature, DHCP snooping

## MPLS VPN (hands-on)

- MPLS principles and implementation: MPLS frame format and encapsulation, MPLS data forwarding process, LDP neighbor discovery and session establishment, LDP label management, and MPLS loop avoidance
- Basic principles and implementation of MPLS VPN: single-domain MPLS VPN principles; implementation and application of OSPF in MPLS VPN
- MPLS VPN fault diagnosis: troubleshooting roadmap and debugging methods of control plane faults; troubleshooting roadmap and debugging methods of data plane faults

## Huawei Ethernet Switches (hands-on)

- Hardware structure and working principles of Huawei switches
- VRP software features of Huawei switches

## IP Basics (hands-on)

- IPv4 address planning: classless IP address planning and Classless Inter-Domain Routing (CIDR)

## OSPF Routing Protocols (hands-on)

- Basic principles of link state routing protocols
- OSPF principles, configuration, and implementation: neighbor and adjacency, protocol packet and LSA, database synchronization, intra-area route calculation, inter-area route calculation, and external route calculation
- Principles and configuration of OSPF special areas: stub area, totally stub area, and not-so-stubby area (NSSA)
- Basic methods of OSPF fault diagnosis

## BGP Routing Protocols (hands-on)

- BGP principles: AS, BGP neighbor, route distribution methods, and route advertisement rules
- BGP path selection
- BGP route aggregation
- BGP routing policy: common attributes and routing policies of BGP
- Basic principles and configuration of BGP route reflection and AS confederations for BGP
- BGP multi-homing
- BGP fault diagnosis methods

## Routing and Routing Control (hands-on)

- Route filtering by using filtering tools such as ACL, route policy, IP-prefix, and AS-Path
- Mutual route import between IP routing protocols and advertisement of default routes
- Policy-based route

## Multicast Protocols (hands-on)

- Basic principles and configuration of IGMPv1/v2/v3 and IGMP snooping
- Basic principles and configuration of PIM-DM and PIM-SM

## NE Routers (hands-on)

- Hardware structure and working principles of NE routers
- VRP software features of NE routers

## Network Security (hands-on)

- Basic concept of network security and basic functions and principles of firewall
- Firewall NAT technology and anti-attack techniques
- Dual-node cluster hot backup technique of firewall
- Knowledge and networking application of Eudemon firewalls of Huawei

## High Availability ,HA (hands-on)

- Bidirectional Forwarding Detection (BFD) principles
- Basic principles of VRRP,IP Reroute,FRR
- Principles and networking applications of NSF and GR

## QoS (hands-on)

- IP QoS model and differentiated services (DiffServ) model
- Basic principles of classification and marking, traffic policing and shaping, congestion management, congestion avoidance, and link efficiency mechanisms

## Class-based QoS principles

## **Audience**

Those who hope to become a network professional

Those who hope to obtain HCIP-Routing&Switching certificate

Those who have obtained the same level technical certificate in the industry, and hope to obtain Huawei certificate

## **Prerequisites**

The course is aimed at technicians who must take the HCIP certification exam having already acquired knowledge equivalent to that provided by a similar certification with other vendors

## **Programme**

## **Session Dates**

Su richiesta. Contattaci al n.ro +39 0471 099134 oppure via mail a [training.ecs.it@arrow.com](mailto:training.ecs.it@arrow.com)

## **Informazioni aggiuntive**

Questa formazione è disponibile anche come formazione in loco. Per favore, contattaci per saperne di più.