

# HCIE Datacom



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Duration	Delivery Method	Level
10 days	Online / Instructor Led	Professional

The Huawei Certified ICT Expert-Datacom certification is a prestigious qualification for networking professionals, particularly those working on Huawei technologies. It represents an advanced level of expertise in data communication networks, including the design, construction, analysis, and optimisation of complex network architectures. This certification is valuable for individuals aiming to validate their comprehensive knowledge and skills in Huawei's datacom solutions. Industries use the HCIE-Datacom certification as a benchmark to recruit skilled personnel who can manage and troubleshoot their sophisticated network infrastructures efficiently, ensuring robustness, reliability, and optimal performance of their communication and data transfer systems.

## Audience Profile

- Engineers who want to become senior Data Communication engineers.
- Engineers who want to obtain the HCIP-Datacom-Advanced Routing & Switching Technology Certification.

## Prerequisite

- Strong understanding of networking fundamentals - Proficient in datacom technologies
- HCIP-Datacom certification
- Practical experience with routers, switches, and network design
- Knowledge of Huawei datacom devices and solutions

## Course Objective

After completing this course, delegates should have a demonstrated ability and knowledge across the following areas:



- Describe OSPF and IS-IS fast convergence technologies.
- Configure OSPF and IS-IS equal-cost routes.
- Describe OSPF and IS-IS default routes advertisement.
- Describe the application scenarios of OSPF and IS-IS multi-process.
- Describe the GR and NSR principles of OSPF and IS-IS.
- Describe the application scenarios of OSPF forwarding addresses.
- Describe the working principles of IS-IS LSP fragment extension.
- Use AS Path Filter and Community Filter to implement BGP route control.
- Apply the ORF function and peer group function of BGP.
- Understand basic configuration for implementing BGP security.
- Describe the concept and usage of the 4-byte AS number.
- Describe the networking of BGP RRs.
- Clarify the types and configurations of port isolation.
- Clarify the technical principles of port security.
- Detect MAC address flapping.
- Clarify switch traffic suppression and storm control functions.
- Describe application scenarios of DHCP snooping.
- Clarify how IP Source Guard works.
- Describe the working scenarios of dual-system hot backup.
- Describe the basic concepts and terms of MPLS.
- Describe the working principles of MPLS.
- Configure static LSPs.
- Describe the MPLS forwarding process.

## Course Content

### Module 1: Advanced Routing and Switching Technology

- Advanced IGP Features
- Advanced BGP Features
- Network Security Technologies
- MPLS Fundamentals and Configuration
- MPLS LDP Fundamentals and Configuration
- MPLS VPN Fundamentals and Configuration
- MPLS VPN Deployment and Application
- Inter-AS MPLS L3VPN
- EVPN Fundamentals and Configuration
- IPv6 Routing
- IPv6 Transition Technologies
- QoS Fundamentals
- Network O&M



## **Module 2: Campus Network Planning and Deployment**

- Enterprise Network Introduction
- Enterprise Campus Network Overview
- VXLAN and Campus Network Virtualisation
- Network Admission Control
- Free Mobility
- Large- and Medium-Sized Virtualised Campus Network Design
- Virtualised Campus Network Deployment Guide
- Small- and Medium-Sized Cloud-Managed Campus Network Design
- Campus Insight Intelligent O&M

## **Module 3: WAN Interconnection Network Planning and Deployment**

- WAN Interconnection Solution and Technologies Overview
- Key Technologies of WAN Interconnection
- SD-WAN Solution Planning and Design

## **Module 4: Bearer WAN Planning and Deployment**

- Enterprise Bearer WAN Solution
- Enterprise Bearer WAN Architecture and Key Technologies
- Segment Routing
- SRv6 Fundamentals and Configuration
- Enterprise Bearer WAN Design
- IPE Key Technologies and Evolution Trends

## **Module 5: Network Automation**

- Network Automation Overview
- SSH Fundamentals and Practice
- NETCONF YANG Fundamentals and Practice
- Telemetry Fundamentals and Practice
- OPS Fundamentals and Practice
- RESTful Fundamentals and Practice
- iMaster NCE-Campus Open APIs Introduction
- iMaster NCE Service Openness And Programmability

