# Contents

# 1 Training Description

## 1.1 H3C Certification Training

### 1.1.1 Building H3C High-Performance Campus Network V2.0 (V7)

#### Training Object

- Personnel who are interested in network technologies and H3C certification
- H3C's agent engineers
- H3C training partner's trainers
- H3C product O&M personnel and technical support personnel

#### Entry Requirements

- Personnel who have passed H3C Certified Network Engineer (H3CNE) certification, or have a comparable level of technology

#### Objectives

Upon completing this training, trainees will be able to:

- Master the local switching fabric technologies.
- Master the configurations of H3C switching products.
- Be proficient in applications of various types of technologies in the LAN environment.

## Courses

| Course ID | Course Name | Total Duration of Course (Working Days) | Practical Operation Duration (Working Days) |
|---|---|---|---|
| HM-010 | Campus Network Overview | 0.25 | |
| HM-011 | VLAN Technologies | 0.75 | 0.35 |
| HM-012 | Spanning Tree | 1 | 0.4 |
| HM-013 | High Availability Technologies | 0.75 | 0.35 |
| HM-014 | IP Multicast | 1 | 0.50 |
| HM-016 | Campus Network Security | 0.50 | 0.25 |
| HM-017 | Campus Network Management and Maintenance | 0.75 | 0.25 |
| Total | | 5 | 2.1 |

## Training Content

- Campus network development path and service deployment
- Virtual LAN (VLAN) overview, IEEE 802.1Q protocol, MVRP protocol, and configuration instances.
- VLAN routing concepts, configuration examples, L3 switching principles, and RIP and OSPF configurations for L3 switches
- Basic principles and configuration instances of the STP, RSTP, and MSTP
- Basic principles and configuration instances of high-reliability link aggregation, Smartlink, RRPP, IRF, and VRRP
- Principles and configuration instances of the IGMP, PIM-DM, PIM-SM, and multicast VLANs
- Campus network security technologies, including technical principles and configuration instances of AAA, Dotx authentication, port security, network access control, and SSH security login
- Campus network maintenance and management technologies, including technical principles and configuration instances such as SNMP, LLDP, mirroring, and NTP

## Training Mode

Class teaching and practical operation

## Training Duration

5 working days, including 2.1 working days of practical operation

# 2 Course Description

**HM-010 Campus Network Overview**

## Prerequisites

Personnel who have passed H3C Certified Network Engineer (H3CNE) certification, or have a comparable level of technology

## Course Objectives

- Master the basic structure and evolution of the campus network.
- Understand the technical applications and deployment of the campus network.

## Course Content

- Campus network development path
- Campus network structure
- Overview of campus network technologies
- Typical service deployment of the campus network

## Training Mode

Class teaching

## Maximum Number of Trainees

12

## Course Duration

0.25 working days

**HM-011 VLAN Technologies**

## Prerequisites

Personnel who have completed course HM-010 or have a comparable level of technology

## Course Objectives

- Master basic principles of VLAN implementation
- Master basic concepts and configurations of MVRP.
- Understand principles and configurations of the Super VLAN and Private VLAN.
- Master routing and forwarding principles of L3 switches.

## Course Content

- Overview of virtual LAN (VLAN)
- IEEE802.1Q protocol
- MVRP overview
- VLAN extension features: Super VLAN and Private VLAN
- L3 switch principles
- Inter-VLAN route configuration

## Training Mode

Class teaching and practical operation

## Maximum Number of Trainees

12

## Course Duration

0.75 working days, including 0.35 working days of practical operation

**HM-012 Spinning Tree**

## Prerequisites

Personnel who have completed course HM-011 or have a comparable level of technology

## Course Objectives

- Understand principles of the STP.
- Understand principles of the RSTP.
- Understand principles of the MSTP.
- Master STP configurations.

## Course Content

- Transparent bridging overview
- Basic principles of STP
- Basic principles of RSTP
- Basic principles of MSTP
- STP configurations

## Training Mode

Class teaching and practical operation

## Maximum Number of Trainees

12

## Course Duration

1 working days, including 0.4 working days of practical operation

**HM-013 High Availability Technologies**

## Prerequisites

Personnel who have completed course HM-012 or have a comparable level of technology

## Course Objectives

- Master the basic principles of link aggregation.
- Understand basic applications of Smart Link and Monitor Link
- Master basic principles and applications of RRPP.
- Master basic principles and applications of VRRP.
- Understand basic principles and applications of IRF.

## Course Content

- Forwarding principles and basic configuration of link aggregation
- Basic principles and configuration applications of the Smart Link and Monitor Link
- Implementation principles and configuration applications of RRPP
- Implementation principles and configuration applications of VRRP
- Implementation principles and basic configurations of IRF

## Training Mode

Class teaching and practical operation

## Maximum Number of Trainees

12

## Course Duration

0.75 working days, including 0.35 working days of practical operation

**HM-014 IP Multicast**

## Prerequisites

Personnel who have completed course HM-013 or have a comparable level of technology

## Course Objectives

- Understand multicast concepts and applications.
- Master composition of a multicast address.
- Master principles and configurations of IGMP.
- Master principles and configurations of PIM-DM.
- Master principles and configurations of PIM-SM.
- Understand principles and configurations of multicast VLANs.

## Course Content

- Multicast overview
- Overview of multicast implementation technologies
- L2 multicast implementation and applications
- Principles and configurations of IGMP
- Principles and configurations of PIM-DM
- Principles and configurations of PIM-SM

## Training Mode

Class teaching and practical operation

## Maximum Number of Trainees

12

## Course Duration

1.0 working days, including 0.50 working days of practical operation

**HM-016 Campus Network Security**

## Prerequisites

Personnel who have completed course HM-014 or have a comparable level of technology

## Course Objectives

- Understand the potential security risks and related security protection technologies of the campus network.
- Master the deployment of campus network security technologies.

## Course Content

- Overview of campus network security technologies
- AAA security architecture and RADIUS and TACACS protocols
- Port access control
- Network access control
- SSH login management

## Training Mode

Class teaching and practical operation

## Maximum Number of Trainees

12

## Course Duration

0.75 working days, including 0.25 working days of practical operation

**HM-017 Campus Network Management and Maintenance**

## Prerequisites

Personnel who have completed course HM-016 or have a comparable level of technology

## Course Objectives

- Understand the management and maintenance tasks of the campus network.
- Master the tools for maintaining and managing the campus network and related protocol principles.

## Course Content

- Overview of campus network maintenance and management
- SNMP principles and configurations
- LLDP principles and basic configurations
- Implementation and configuration of mirroring technology
- NTP principles and configurations

## Training Mode

Class teaching and practical operation

## Maximum Number of Trainees

12

## Course Duration

0.75 working days, including 0.25 working days of practical operation