

HCIA-Access V2.5

Training Content

1. Access Network Evolution and Application

(1) Overview and Technology Evolution of Wired Communication Access Network. (2) Characteristics, Advantages, and Typical Applications of PON. (3) Data Encapsulation Process for PON Access.

2. Network Communication Basics

(1) Overview of Data Communication. (2) TCP/IP protocol stack. (3) Ethernet Overview.

3. VLAN Technology Principle

(1) Causes of VLAN. (2) VLAN Division Method. (3) VLAN Configuration and Implementation. (4) VLAN route. (5) Features of VLANs in the Access Network

4. Routing Basics

(1) IP routing table. (2) Route classification. (3) Introduction to Static Routes. (4) Inter-VLAN routing.

5. PON System Overview

(1) PON Network Overview. (2) Introduction to PON Devices.

6. GPON Principles

(1) GPON Network Architecture. (2) GPON Protocol Analysis. (3) Key GPON Technologies. (4) Management and Service Provisioning Modes of the GPON System. (5) GPON Network Protection

7. XG(S) - PON Principles

(1) System Overview. (2) XG(S)-PON Technical Principles. (3) Typical XG(S)-PON Networking. (4) Evolution from GPON to XG(S)-PON

8. xDSL Principles and Applications

(1) xDSL Technology Overview. (2) ADSL/ADSL2+ Technical Principles. (3) Introduction to the VDSL/VDSL2 Technology. (4) GPON MxU HSI Service Configuration Example

9. Vectoring and G.fast Principles

(1) xDSL Development. (2) Vectoring Principle and Application. (3) G.fast Principle and Application

10. PPP and PPPoE Protocols

(1) PPP protocol. (2) PPPoE protocol

11. DHCP Principles

(1) Basic DHCP Principles. (2) DHCP Relay Principles. (3) DHCP Networking Application.

12. ONU Service Interfaces

(1) Overview of ONU Deployment Scenarios and Interface Types. (2) ONU Interface Description.

13. VLANs and Service Flows of Huawei Access Network

(1) Access Network VLAN. (2) Service Flow. (3) Layer 2 Interoperation

14. GPON OLT Basic Operations

(1) Device Connection. (2) Introduction to Command Line Features. (3) Basic System Operations. (4) Management Environment Configuration.

15. GPON ONU Basic Operations

(1) ONU Profile Types. (2) Process of adding an ONU. (3) ONU Service Deployment Example. (4) ONU Maintenance and Query

16. GPON Data Service Configuration

(1) Introduction to Data Services. (2) Typical Scenarios and Configurations of Data Services. (3) Data Service Maintenance

17. ODN Engineering and Maintenance

(1) ODN Components. (2) ODN Engineering Implementation. (3) ODN Test and Acceptance. (4) ODN O&M

18. NMS Basics

(1) NMS Architecture. (2) SNMP. (3) Overview of Huawei Access NMSs. (4) eSight. (5) iManager U2000. (6) NCE (Access Domain)