HCIP-Datacom-Enterprise Network Solution Design Training V1.0

Duration:5.0Training Method:Course Level:Update Time:2022-04-26 16:44:34

Objectives

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

 Describe the definition, architecture, and application scenarios of OpenStack.

 Understand campus network pain points and Huawei solutions.

 Have a good command of common technologies and applications on campus networks.

 Have a good command of large- and medium-sized virtualized campus network design based on Huawei CloudCampus solution.

 Have a good command of small- and medium-sized cloud managed campus networks design based on Huawei CloudCampus solution.

 Have a good command of common technologies and applications in enterprise WAN interconnection.

 Have a good command of common technologies and applications in data centers (DCs) and data center networks (DCNs).

 Have a good command of the DCN design based on Huawei CloudFabric solution.

 Have a good command of common technologies and applications on bearer WAN.

 Have a good command of enterprise bearer WAN design based on Huawei CloudWAN solution.

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Target Audience

Personnel who want to become enterprise network solution design senior engineer.

Personnel who want to obtain HCIP-Datacom-Enterprise Network Solution Design certification.

Prerequisites

Be familiar with common operations on Huawei network devices.

Knowledge and skills described in the HCIP-Datacom-Core Technology course.

Training Content

1. Enterprise Network and Solution Overview

Enterprise Network and Solution Overview

- Definition of Enterprise Networks
- Typical Enterprise Network Scenarios
- Development Trends and Challenges of Enterprise Networks
- Huawei Enterprise Network Solution

2. Campus Network Planning and Design

Campus Network Architecture and Key Technology Applications

- Campus Network Overview
- Campus Network Ethernet Technologies and IP Routing Technologies and their Applications
- Campus Network Wireless Access Technologies and Campus Egress Technologies and Applications
- Campus Network Reliability and Network Security Technologies and Applications
- Campus Network Service and Management Technology and Application
- Typical Applications of Campus Network Technologies

Large- and Medium-Sized Virtualized Campus Network Design

- Requirements and Challenges of Large- and Medium-Sized Campus Networks
- Huawei CloudCampus Solution Overview, Deployment Mode, Key Components, and Network Architecture
- Application of Huawei CloudCampus Solution on Medium- and Large-Sized Virtualized Campus Networks
- Underlay Network Design for Medium- and Large-Sized Virtualized Campus Networks
- Fabric and Overlay Network Design for Medium- and Large-Sized Virtualized Campus Networks
- Network Admission Control and Free Mobility Design for Large- and Medium-Sized Virtualized Campus Networks
- WLAN Design, Network Security Design, and O&M design for Large- and Medium-Sized Virtualized Campus Networks

Small- and Medium-Sized Cloud-Managed Campus Network Design

- Trends and Challenges of Small- and Medium-Sized Campus Networks
- Huawei CloudCampus Solution Overview, Deployment Mode, Solution Components, and Key Technologies

 Application of Huawei CloudCampus Solution on Small- and Medium-Sized Cloud Managed Campus Networks

 Network Management Mode, Network O&M Mode, and License Scheme Design for Small- and Medium-Sized Cloud Management Campus Networks

 Network Architecture, Networking Solution, and Reliability Design for Small- and Medium-Sized Cloud Management Campus Networks

 Small- and Medium-Sized Cloud Management Campus Networks Basic Services, Network Deployment, WLAN, and NAC Design

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3. WAN Interconnection Planning and Design

Key Technologies for Enterprise WAN Interconnection and Their Applications

 Basic Architecture of a Typical WAN Interconnection Solution

 WAN Interconnection Network Technologies and their Applications, including WAN Interconnection Networking Solution, Private Line Technologies, and VPN Technologies

 WAN Interconnection Reliability Technologies and their Applications, including Link Detection and Network and Service Reliability Technologies

 WAN Interconnection Optimization Technologies and their Applications, including QoS and FEC Technologies

 WAN Interconnection Security Technologies and their Applications, including WAN Transmission Security and Service Security Technologies

Enterprise WAN Interconnection Design

 Development Trends and Challenges of Enterprise WAN Interconnection

 Huawei SD-WAN Solution Overview, Main Functions, and Application Scenarios

 Huawei SD-WAN Networking Design: Site Design, Tunnel Design, and VPN Design

 Huawei SD-WAN Service Design: Application Service Design, Network Service Design

 Huawei SD-WAN Reliability and Security Design: Site Reliability Design, Controller Reliability Design, and Security Design

4. Data Center Network Planning and Design

Data Center Network Architecture and Key Technology Application Overview

 Data Center(DC) and Data Center Network(DCN) Overview

 Typical DCN Architecture

 Common Terms of DCs

 Key Services of DCs

 Key services of DCNs

 Huawei CloudFabric Solution

Data Center Network Design

 DCN Requirements and Challenges

 Huawei CloudFabric Solution Overview, Solution Components, Network Architecture, Typical Scenarios, and Key Technologies

 DCN Planning and Design Methods

 Typical DCN Overall Architecture Design and Network Zone Design

 Typical DCN Key Attribute Design, Network Security Design, and O&M Design

5. Bearer WAN Planning and Design

Bearer WAN Architecture and Key Technologies

 Bearer WAN Architecture

 Bearer WAN Basics: Overview and Application of MPLS, SR-MPLS, and SRv6

 VPN Service: WAN VPN Overview and Tunnel Management Overview

 Network Traffic Optimization: Network Information Collection, Path Computation for Network Traffic Optimization, and Optimization Result Delivery

 Service Level Agreements (SLAs): QoS, Channelized Sub-interface, and FlexE

 Network Reliability: TE Tunnel Protection Technologies

 Network Management and O&M

Enterprise Bearer WAN Design

 Current Situation and Challenges of the Enterprise Bearer WAN

 Huawei CloudWAN Solution Overview

 Basic Design for the Enterprise Bearer WAN: Physical Network Design, IP Address Planning, and Routing Design

 Tunnel and VPN Design for the Enterprise Bearer WAN: Tunnel Design and VPN Design

 SLA and Reliability Design for the Enterprise Bearer WAN: SLA Design and Reliability Design

 Optimization and O&M Design for the Enterprise Bearer WAN: Network Optimization Design and O&M Design