

COURSE OUTLINE

**Course Name: Huawei Certified Specialist Professional –
HCSP - Presales Data Center Network Planning and Design V1.0**
Course Code: HW-HCSP-IPNDS

DURATION	SKILL LEVEL	DELIVERY METHOD	TRAINING CREDITS	TECHNOLOGY
5 Days	Intermediate	VILT / In Person Theoretic teaching + Hands-on practice	Huawei Voucher	IP Networks

COURSE OVERVIEW

This course is targeted at pre-sales professionals of partners who sell Huawei enterprise Data Center Network products and solutions. It equips learners with the knowledge and skills required to plan, design, and position Huawei data center network solutions in enterprise environments.

Course Objectives

Upon completion of this training, participants will be able to:

- Have a deeper understanding of the key technologies in the data center (DC) field, as an enhancement of HCSA, including underlay/overlay, VXLAN, M-LAG, BGP EVPN, virtualization, network security, and intelligent network O&M technologies.
- Describe the typical data center network (DCN) architecture.
- Describe the common DCN virtualization and reliability technologies, their working principles, as well as the application scenarios of various virtualization technologies.
- Describe the basic principles and functions of the CloudFabric Solution.
- Describe the basic concepts and working principles of VXLAN, as well as the benefits brought by VXLAN in DCNs.
- Describe the intelligent lossless Ethernet technology.
- Describe the M-LAG technology for DCs.
- Describe the four scenarios for automatic service provisioning in the CloudFabric scenario.

- Design the CloudFabric underlay and overlay network solutions.
- Design large- and medium-sized CloudFabric DCN solutions.
- Describe the main functions and cases of FabricInsight-based intelligent O&M.

Target Audience

Presales engineers who are expected to have basic knowledge and capabilities in the data center field and be familiar with Huawei CloudFabric products and solutions.

Prerequisites

- The participants have a fundamental understanding of IP technologies and networks.
- It is recommended that you complete the HCSA certification course before attending this training.

Training Content

- **Data Center Network Overview**
 - DC and DCN overview
 - Terms and key technologies of DCs
- **Technical Fundamentals of Data Communications Networks**
 - Basics of Ethernet switching
 - Network reachability
 - Network reliability
 - Network service and management
 - Network security
 - VPN
- **VXLAN and BGP EVPN**
 - Overview of VXLAN and DCN virtualization
 - Basic concepts of VXLAN
 - VXLAN fundamentals
 - Application of VXLAN on DCNs
- **M-LAG**
 - Overview of M-LAG
 - Fundamentals of M-LAG
 - M-LAG failure protection
 - M-LAG deployment scenarios
- **Intelligent Lossless Data Center Network**
 - Data center network in the era of intelligence
 - Key technical principles of intelligent lossless Ethernet networks
 - Typical networking
- **Huawei CloudFabric Solution**
 - Basic concepts of Huawei CloudFabric solution
 - Architecture and functions of Huawei CloudFabric solution
 - Components of Huawei CloudFabric solution

- Four CloudFabric Service Automation Scenarios and Related Solutions**
 - Overview of the four CloudFabric service automation scenarios
 - Service automation scenarios of CloudFabric: network virtualization – hosting, network virtualization – computing, cloud-network integration – OpenStack, and Kubernetes container network
- iMaster NCE-Fabric**
 - Introduction to iMaster NCE-Fabric
 - Key functions of iMaster NCE-Fabric
 - Installation and deployment, reliability, and openness of iMaster NCE-Fabric
- CloudFabric Underlay and Overlay Network Design**
 - Underlay network design
 - Overlay network design
 - High reliability design of a physical network
- Typical Data Center Network Design Guide**
 - DCN overview
 - DCN planning and design methods
 - Typical DCN design case
- CloudFabric Solution Demonstration for the Network Virtualization Scenario**
 - Huawei CloudFabric solution overview
 - Huawei CloudFabric solution demonstration
- CloudFabric Solution Demonstration for the Cloud-Network Integration Scenario**
 - Huawei CloudFabric solution overview
 - Huawei CloudFabric solution demonstration
- Intelligent O&M of the CloudFabric Solution**
 - Overview of CloudFabric intelligent O&M
 - iMaster NCE-Fabric O&M functions
 - iMaster NCE-FabricInsight O&M functions

Professional Certification & Exam

HCSP-Presales-Data Center Network Planning and Design

Huawei Certified Specialist Professional-Presales-Data Center Network Planning and Design

Target Audience

Targeted at the pre-sales professionals of partners who sell Huawei enterprise Data Center Network products and Data Center Network solutions.

Prerequisites

- The participants have a fundamental understanding of IP technologies and networks.
- It is recommended that the participants complete HCSA courses.

Exam

Exam Code	Certification Exam
H19-402	HCSP-Presales-Data Center Network Planning and Design (ENU)

Current Version: V1.0. The new version is recommended.

Version Description: The HCSP-Presales-Data Center Network Planning and Design V1.0 certification validates the knowledge and capabilities required for presales planning and design of Huawei data center network solutions.

