HCIP-Datacom-Campus Network Planning and Deployment

Duration: **5 Days**

Prerequisites:

Suggest to acquire HCIP-Datacom-Core Technology abilities.

Course Objectives:

Passing the HCIP-Datacom-Campus Network Planning and Deployment certification will indicate that you: 1) understand and master traditional campus network technologies, Huawei CloudCampus solution, network admission control, free mobility, VXLAN, BGP EVPN, campus network virtualization, and Campus WLAN planning and design and CampusInsight intelligent O&M. 2) are qualified for the positions of enterprise campus network scenarios (account manager, project manager, pre-sales engineer, post-sales engineer, and O&M engineer) and be able to use Huawei datacom devices to independently plan, design, deploy, and maintain enterprise campus networks.

Intended Audience:

- Those who wants to be datacom campus network senior engineer
- Those who wants to achieve HCIP-Datacom-Campus Network Planning and Deployment certification.

Course Outlines:

1. **HUAWEI CAMPUS NETWORK SOLUTION OVERVIEW**
   - HUAWEI CLOUDCAMPUS SOLUTION
     - CloudCampus Solution Architecture, Key Components, and Functions
     - Ultra-Broadband and Simplified Network Defined by the CloudCampus Solution
     - VXLAN-based Virtual Campus and Application Scenarios
     - Common Campus Network Admission Authentication Solutions
     - CloudCampus Intelligent Policy and Intelligent O&M Implementation

2. **CAMPUS NETWORK DESIGN AND DEPLOYMENT**
   - LARGE- AND MEDIUM-SIZED VXLAN VIRTUAL CAMPUS NETWORK DESIGN GUIDE
     - Requirements and Challenges for Large- and Medium-sized Campus Networks
     - Network Layers and Architecture of the CloudCampus Large- and Medium-Sized Campus Network
     - Concepts and Relationships of Underlay, Fabric, and Overlay on Campus Networks
     - Underlay Network Design for VXLAN-based Virtual Campus Networks
     - Fabric and Overlay Network Design for VXLAN-based Virtual Campus Networks
     - WLAN Service Design, Authentication Design, and O&M Management Design
     - VXLAN-based Virtualized Campus Network Deployment Guide
     - Deployment Process of the VXLAN-based Virtual Campus Network Using iMaster NCE-Campus
     - Deploying a Typical VXLAN-based Virtual Campus Network
     - Configuring iMaster NCE-Campus to Manage and Maintain the VXLAN Virtual Campus Network
   - SMALL- AND MEDIUM-SIZED CAMPUS NETWORK DESIGN GUIDE
     - Service Requirements, Development Trends, and Challenges of Small- and Medium-sized Campus Networks
     - Huawei CloudCampus Solution Architecture for Small- and Medium-Sized Campus Networks
     - Typical Small- and Medium-Sized Campus Network Solution
   - SMALL- AND MEDIUM-SIZED CAMPUS NETWORK DEPLOYMENT GUIDE
     - AR Routers PnP through DHCP
     - AR Routers PnP through Command Lines
     - Configure AR Routers Using iMaster NCE-Campus
     - Configure Wireless Services on iMaster NCE-Campus
   - CAMPUS WIRELESS NETWORK PLANNING AND DESIGN
     - WLAN Network Planning and Delivery Process
     - WLAN Requirement Collection and Site Survey
     - Signal Coverage Analysis, Service Analysis, Capacity Design, and AP Selection
     - Wireless Channel Planning, AP Deployment Design, Power Supply and Cab Installation Design
     - WLAN Acceptance

3. **CAMPUS NETWORK AND COMMON TECHNOLOGIES**
   - CAMPUS NETWORK AND SOLUTION OVERVIEW
     - Campus Network Concept
     - Different Types of Campus Networks and their Main Features
     - Common Campus Networks and their Characteristics
     - Logical and Physical Architecture of a Typical Campus Network
     - Development Trends and Challenges of Campus Networks
     - Huawei Campus Network Solution
   - CAMPUS NETWORK ARCHITECTURE AND TYPICAL TECHNOLOGY APPLICATIONS
     - Typical Campus Network Architecture
     - Common Ethernet Switching Technologies
     - Common WLAN Network Architecture
     - Campus Network Reliability Technologies
     - Common Network Services and Management Technologies for Campus Networks
     - Common Network Security Technologies on Campus Networks
     - Common VPN Technologies on Campus Networks

4. **CAMPUS NETWORK TECHNOLOGY DETAILS**
   - NETWORK ADMISSION CONTROL
     - Basic Concepts of Network Admission Control
     - Common Authentication Technologies, Working Principles, and Application Scenarios
     - Basic User Access Authentication Configuration
     - Function and Principle of Policy Association
   - FREE MOBILITY
     - Policy Control Requirements of Large-Scale Campus Networks
     - Differences Between Free Mobility and Traditional Technologies or Solutions
     - Basic Functions and Working Mechanism of Free Mobility
     - Relationship between Free Mobility and Campus Network Admission Authentication
     - Typical Application Solution of Free Mobility
   - VXLAN AND CAMPUS NETWORK VIRTUALIZATION
     - New Network Requirements in Data Center Scenarios and How VXLAN Can Meet These Requirements
     - Basic Concepts of VXLAN
     - Basic Principles of VXLAN
     - VXLAN Application in Campus Network Virtualization
     - Application of BGP EVPN in Campus Virtualization Scenarios and Cooperation with VXLAN
   - CAMPUS MULTI-BRANCH INTERCONNECTION TECHNOLOGY
     - Enterprise WAN Development Trend
     - Common Campus Network Interconnection Solutions
     - Basic Concepts, Application Scenarios, and Working Principles of IPsec VPN
     - Basic Concepts of SD-WAN
     - Technical Architecture of Huawei SD-WAN Solution
     - SD-WAN Interconnection Solution Implementation

5. **INTELLIGENT CAMPUS NETWORK O&M**
   - CAMPUSINSIGHT INTELLIGENT O&M
     - Pain Points and Requirements of Intelligent Campus Network O&M
     - Application Scenarios and Deployment Modes of CampusInsight
     - Typical CampusInsight Network Scenarios
     - Logical Architecture and External Interfaces of CampusInsight
     - Main Functions and Features of CampusInsight
     - Technical Principles and Applications of CampusInsight
     - Main Operations of CampusInsight