

Training Proposal for CloudEngine Series Switches Training Project



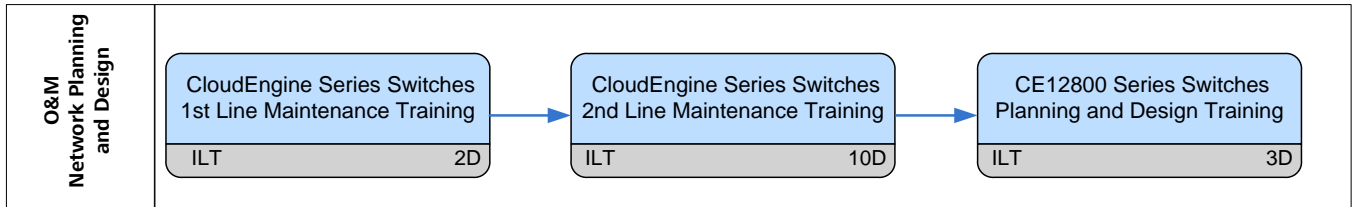
HUAWEI
HUAWEI Learning Service
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1 Training Solution

1.1 CloudEngine Series Switches Training Training Path



1.2 Required Training Programs

CloudEngine Series Switches Training For this project, the whole training solution is designed into the following programs. List of Training Program(s) for CloudEngine Series Switches Training Project:

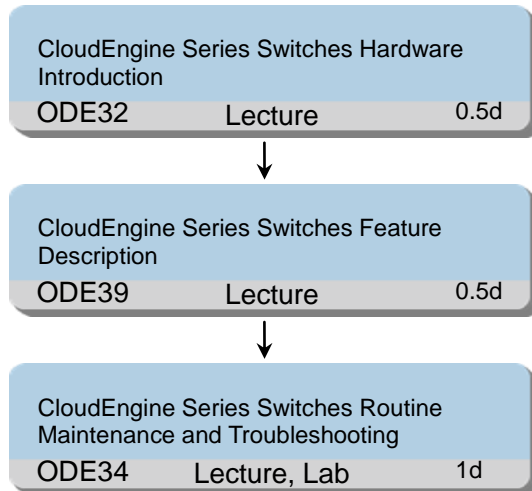
Training Program	Program Level	Duration (workdays)	Training Location	Class Size
CloudEngine Series Switches Operation and Maintenance Training				
CloudEngine Series Switches 1st Line Maintenance Training	I	2		6 ~ 12
CloudEngine Series Switches 2nd Line Maintenance Training	II	10		6 ~ 12
CloudEngine Series Switches Planning and Design Training				
CE12800 Series Switches Planning and Design Training	IV	3		6 ~ 12

Level Description: I : Basic Course II : Intermediate Course III: Advanced Course IV: Expert Course

1.3 CloudEngine Series Switches Operation and Maintenance Training

1.3.1 CloudEngine Series Switches 1st Line Maintenance Training

Training Path



Target Audience

CloudEngine Series Switches 1st line /field maintenance engineers

Prerequisites

- Having basic knowledge of TCP/IP

Objectives

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

- Know the trend of data center development
- Know the basic concepts of data center
- Grasp CE series data center switches hardware
- Know CE series data center switches advantages
- Know CE series data center switches features
- Understand the principle and application of CloudEngine Series Switches key features
- View device status
- Describe the routine maintenance contents of CE series switches
- Know the precautions during maintenance
- Know how to replace the parts of CE series switches
- Know the precautions of replacement of parts

Training Content

ODE32 CloudEngine Series Switch Hardware Introduction

- CloudEngine Series Switches Hardware Introduction
 - Products Position
 - Products Architecture

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- Boards and Modules
 - Products Features
 - Products Applications

ODE39 CloudEngine Series Switches Feature Description

- CloudEngine Series Switches Feature Description
 - Feature Overview
 - Data Center Features
 - Device Virtualization
 - VPN Features
 - Reliability
 - Security
 - QoS

ODE34 CloudEngine Series Switch Switch Routine Maintenance and Troubleshooting

- CloudEngine Series Switch Switch Routine Maintenance and Troubleshooting
 - Routine Maintenance Overview
 - Risky Operations
 - Common Maintenance Commands
 - Parts Replacement

Duration

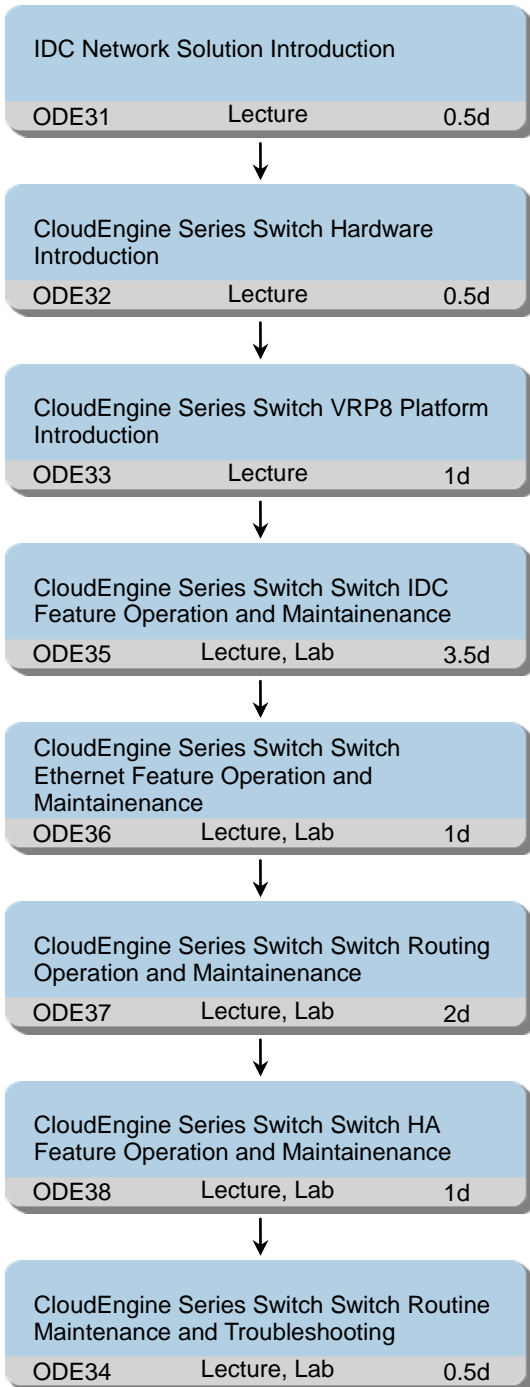
2 working days

Class Size

Min 6, Max 12

1.3.2 CloudEngine Series Switches 2nd Line Maintenance Training

Training Path



Target Audience

CloudEngine Series Switches 2nd Line maintenance engineers

Prerequisites

- Having basic knowledge of Lanswitch

Objectives

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

- Describe Data Center Network Overview
- Describe Data Center Network Trend
- Describe Data Center Network Solution
- Know the trend of data center development
- Know the basic concepts of data center
- Grasp CE series data center switches hardware
- Know CE series data center switches advantages
- Know CE series data center switches features.
- Know the development of VRP Network Operation System
- Know VRP8 Features
- Grasp VRP8 Basic Operation and Configuration
- Know the background of the TRILL technology
- Be familiar with the concepts related to TRILL
- Know the working mechanism of the TRILL protocol
- Understand the data forwarding process
- Know the applications of TRILL on modern networks
- Grasp TRILL configurations on Huawei devices
- Understand the stack working mechanism Implementation on CE switches
- Describe the differences between Implementations on TOR and CE12800
- Grasp the stack configurations on TOR
- Grasp the stack configurations on CE12800
- Know the VS application advantages
- Know the VS technology principles
- Know the VS deployment modes
- Grasp the Basic VS configurations
- Know the data center development trend in the virtualization era
- Know the vCenter and nCenter Working mechanisms
- Understand the VM Migration Process
- Grasp the nCenter Network Deployment
- Know the FCoE background
- Understand the FCoE implementation
- Be familiar with relevant FCoE technologies
- Know the technologies used by lossless Ethernet
- Grasp Huawei FCoE solution
- Know what VLAN is
- Be familiar with the concepts about VLAN
- Grasp the mechanism and configuration of communication between VLANs
- Know the mechanism and configuration of VLAN aggregation
- Know the mechanism and configuration of MUX VLAN

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- Know the mechanism and configuration of Management VLAN
 - Understand trunk implementation
 - Understand trunk forwarding
 - Be familiar with LACP concepts
 - Grasp the configurations of link aggregation
 - Describe the IP routing process
 - Understand the fields in the routing table
 - Configure a static route on CE series switches
 - Configure OSPF on the network consisting of CE series switches
 - Troubleshooting OSPF on CE series switches
 - Describe the meanings and functions of IS-IS configuration parameters
 - Configure IS-IS on a network that consists of CE series switches
 - Analyze and handle common faults that occur during IS-IS configuration on CE series switches
 - Describe the meanings and functions of the parameters relevant to the BGP configuration
 - Configure BGP on CE series switches
 - Analyze and troubleshoot common faults in the BGP configuration on CE series switches
 - Be familiar with the basic VRRP concepts
 - Understand common VRRP features
 - Configure VRRP on CE series switches
 - Know STP functions
 - Know STP implementation
 - Know RSTP improvement compared with STP
 - Understand MSTP calculation
 - Configure MSTP on CE series switches
 - View device status
 - Describe the routine maintenance contents of CE series switches
 - Know the precautions during maintenance.
 - Know how to replace the parts of CE series switches
 - Know the precautions of replacement of parts

Training Content

ODE31 IDC Network Solution Introduction

- Cloud Fabric IDC Network Solution Introduction
 - DCN Overview
 - DCN Trend
 - DCN Solution

ODE32 CloudEngine Series Switch Hardware Introduction

- CloudEngine Series Switches Hardware Introduction
 - Products Position
 - Products Architecture
 - Boards and Modules
 - Products Features

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- Products Applications
- ODE33 CloudEngine Series Switch VRP8 Platform Introduction
- CloudEngine Series Switch VRP8 Platform Introduction
 - VRP Network Operation System Overview
 - VRP8 Features
 - VRP8 Basic Operation and Configuration
- ODE35 CloudEngine Series Switch Switch IDC Feature Operation and Maintenance
- CloudEngine Series Switch TRILL Feature Operation and Maintenance
 - TRILL Overview
 - Protocol Mechanism
 - Data Forwarding
 - Applications
 - Basic Configuration
 - CloudEngine Series Switch iStack Feature Operation and Maintenance
 - Stack Overview
 - Implementation Mechanism
 - Applications
 - Data Forwarding and Failover
 - Basic Configurations
 - CloudEngine Series Switch VirtualSystem Feature Operation and Maintenance
 - VS Overview
 - VS Implementation
 - VS Deployment
 - VS Typical Applications
 - CloudEngine Series Switch nCenter Virtual perception Feature Introduction
 - Challenge of Server Virtualization Facing Data Centers
 - Virtualization Awareness Technical Principles
 - Virtualization Awareness Deployments
 - CloudEngine Series Switch FCoE Feature Introduction
 - Data Center Network Development Trend
 - FC Network Overview
 - FCoE Network Overview
 - FCoE Data Forwarding
 - Enhanced Ethernet Technologies
 - Huawei FCoE Network Convergence Solution
 - Basic Configurations of FCoE
- ODE36 CloudEngine Series Switch Switch Ethernet Feature Operation and Maintenance
- CE Switch VLAN Feature Operation and Maintenance
 - VLAN Overview
 - VLAN Aggregation Overview and Configuration
 - MUX VLAN Overview and Configuration
 - Management VLAN Overview and Configuration

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- Hands-on Exercises
 - CE Switch Link-Aggregation Feature Operation and Maintenance
 - Eth-Trunk Overview
 - LACP
 - Link Aggregation Hands-on Practice
- ODE37 CloudEngine Series Switch Switch Routing Operation and Maintenance
- CE Switch OSPF Feature Operation and Maintenance
 - IP Routing Overview
 - Static Route
 - OSPF Overview
 - Basic Concepts of OSPF
 - Calculating OSPF Routes
 - CE OSPF Hands-on Practice
 - CE Switch IS-IS Feature Operation and Maintenance
 - IS-IS Overview
 - Basic Concepts of IS-IS
 - IS-IS Route Calculations
 - IS-IS Configuration on CE5850 Switch
 - Hands-on IS-IS Configuration Practice
 - CE Switch BGP Feature Operation and Maintenance
 - BGP Overview
 - BGP Route Transmission
 - BGP Path Selection and Control
 - BGP Configuration on CE
 - BGP Hands-on Exercises on CE
- ODE38 CloudEngine Series Switch Switch HA Feature Operation and Maintenance
- CE Switch VRRP Operation and Maintenance
 - VRRP Overview
 - VRRP Configuration
 - VRRP Hands-on Practice
 - CE Switch MSTP Operation and Maintenance
 - STP Overview
 - MSTP Overview
 - MSTP Configuration
 - MSTP Hands-on Practice on CE
- ODE34 CloudEngine Series Switch Switch Routine Maintenance and Troubleshooting
- CloudEngine Series Switch Switch Routine Maintenance and Troubleshooting
 - Routine Maintenance Overview
 - Risky Operations
 - Common Maintenance Commands
 - Parts Replacement

Duration

10 working days

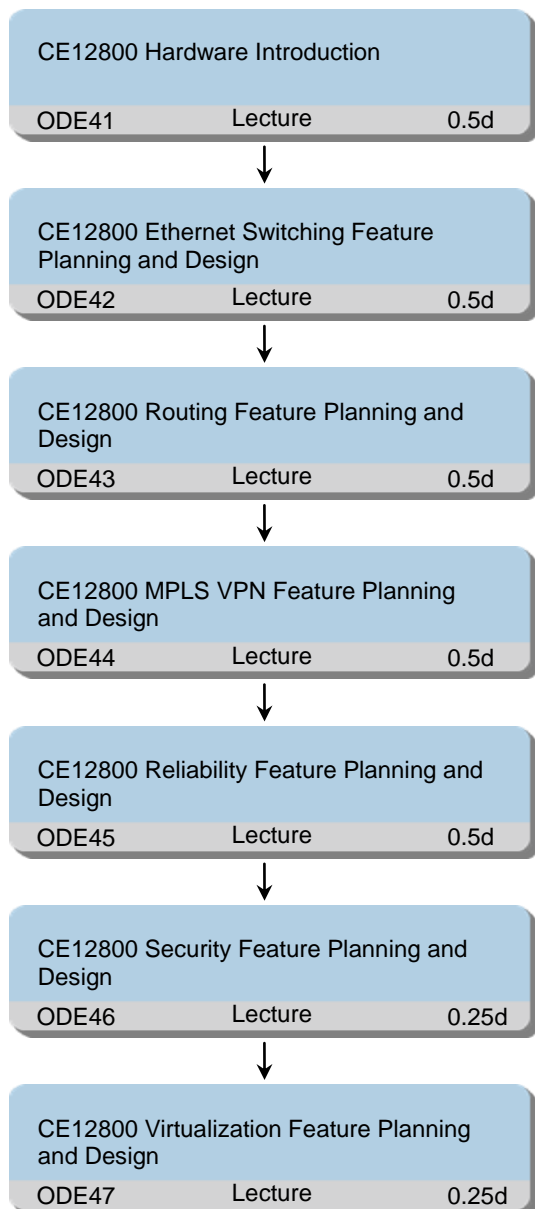
Class Size

Min 6, Max 12

1.4 CloudEngine Series Switches Planning and Design Training

1.4.1 CE12800 Series Switches Planning and Design Training

Training Path



Target Audience

CloudEngine Series Switches Planning and Design engineers

Prerequisites

- Completion of CloudEngine Series Switches 2nd Line Maintenance Training

Objectives

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

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- Know the product positioning of CE12800
 - Grasp the product architecture and cards of CE12800
 - Understand the product applications of CE12800
 - Understand the working principles of CE12800 Ethernet Switching Feature
 - Grasp the planning and designing principles of CE12800 Ethernet Switching Feature
 - Understand the functions and selection principles of the IGP for an IDC
 - Grasp the principles of OSPF planning
 - Grasp the principles of IS-IS planning
 - Grasp the principles of BGP planning
 - Grasp the planning rules of MPLS L2 VPN in DC
 - Grasp the planning rules of MPLS L3 VPN in DC
 - Understand the DC interconnection solutions in DC
 - Understand CE12800 Reliability Feature
 - Grasp CE12800 E2E reliability Feature Planning and Design
 - Understand CE12800 Security Feature
 - Grasp CE12800 Security Feature Planning and Design
 - Understand the stack working mechanism
 - Understand the Virtual System working mechanism
 - Grasp how to plan and design CSS and virtual system in DC network

Training Content

ODE41 CE12800 Hardware Introduction

- CE12800 Hardware Introduction
 - Product Positioning
 - Product Architecture
 - Cards and Modules
 - Product Applications

ODE42 CE12800 Ethernet Switching Feature Planning and Design

- CE12800 Ethernet Switching Feature Planning and Design
 - Ethernet Switching Feature Overview
 - Ethernet Switching Feature Planning and Design

ODE43 CE12800 Routing Feature Planning and Design

- CE12800 Routing Feature Planning and Design
 - Overview of IDC Routing Planning
 - IDC OSPF Planning
 - IDC IS-IS Planning
 - IDC BGP Planning

ODE44 CE12800 MPLS VPN Feature Planning and Design

- CE12800 MPLS VPN Feature Planning and Design
 - Overview of DC Interconnection
 - MPLS L2 VPN Service Planning for a DC Network
 - MPLS L3 VPN Service Planning for a DC Network

ODE45 CE12800 Reliability Feature Planning and Design

- CE12800 Reliability Feature Planning and Design
 - CE12800 Reliability Feature Overview
 - CE12800 E2E Reliability Feature Planning and Design

ODE46 CE12800 Security Feature Planning and Design

- CE12800 Security Feature Planning and Design
 - CE12800 Security Feature
 - CE12800 Security Feature Planning and Design

ODE47 CE12800 Virtualization Feature Planning and Design

- CE12800 Virtualization Feature Planning and Design
 - Stack Overview
 - CSS Implementation Mechanism
 - CSS feature Planning for a DC network
 - Virtual System Overview
 - Virtual System Implementation Mechanism
 - Virtual System Planning for a DC Network

Duration

3 working days

Class Size

Min 6, Max 12