



# Training Proposal for USC Product Technology Training Project





## CONTENTS

1	Training Solution.....	3
1.1	Background Introduction.....	3
1.2	Overview .....	3
1.3	USC Product Technology Training Path .....	4
1.4	Required Training Programs.....	6
1.5	USC .....	8
1.5.1	SingleSDB Solution Introduction.....	8
1.5.2	ATCA Platform and USCDB Routine Operation and Maintenance Training .....	9
1.5.3	USCDB Principle and Redundancy Networking Solutions Instruction.....	12
1.5.4	HSS9860 Routine Operation and Maintenance Training(G/U) .....	14
1.5.5	HSS9860 Routine Operation and Maintenance Training(LTE).....	16
1.5.6	HLR9820 Routine Operation and Maintenance Training(G/U).....	18
1.5.7	HSS9860/HLR9820 Troubleshooting Training(G/U) .....	20
1.5.8	HSS9860 Troubleshooting Training(LTE) .....	21
1.5.9	HSS9860/HLR9820 Emergency Operation and Maintenance Training(GUL) .....	22
1.5.10	HSS9860/HLR9820 Network Planning and Design Training(GUL) .....	23
1.5.11	UPCC Routine Operation and Maintenance Training .....	25
1.5.12	UPCC Service Analysis Fundamental Training .....	27
1.5.13	UPCC Typical Service Application Training .....	29
1.5.14	UPCC Gx Interface Signaling Analysis and Troubleshooting Training .....	30
1.5.15	UPCC Network Design Training.....	31
1.5.16	SmartPCC Service Policy and Solution Introduction Training .....	32
1.5.17	Data Analysis and PCC Policy Planning Training .....	33
1.5.18	UEIR Routine Operation and Maintenance Training.....	35
1.5.19	UIM Routine Operation and Maintenance Training.....	37
1.5.20	SAE HSS9820 Routine Operation and Maintenance Training .....	39
1.5.21	HSS9860 Routine Operation and Maintenance Training(IMS) .....	41
1.5.22	ENS Routine Operation and Maintenance Training.....	42
1.5.23	GU HLR9820V900R003 Routine Operation and Maintenance Training .....	43
1.5.24	GU HLR9820V900R003 Special Topics Training .....	46
1.5.25	CDMA HLR9820V900R007 Routine Operation and Maintenance Training.....	48
1.5.26	SingleSDB Solution Introduction (WBT).....	51
1.5.27	ATCA Hardware Platform Introduction (WBT) .....	52
1.5.28	USCDB System Introduction (WBT) .....	53
1.5.29	G/U HLR9820 System Overview and Networking Introduction (WBT) .....	54
1.5.30	HSS9860 System Introduction (WBT).....	55
1.5.31	UPCC System Introduction (WBT).....	56

---

# 1 Training Solution

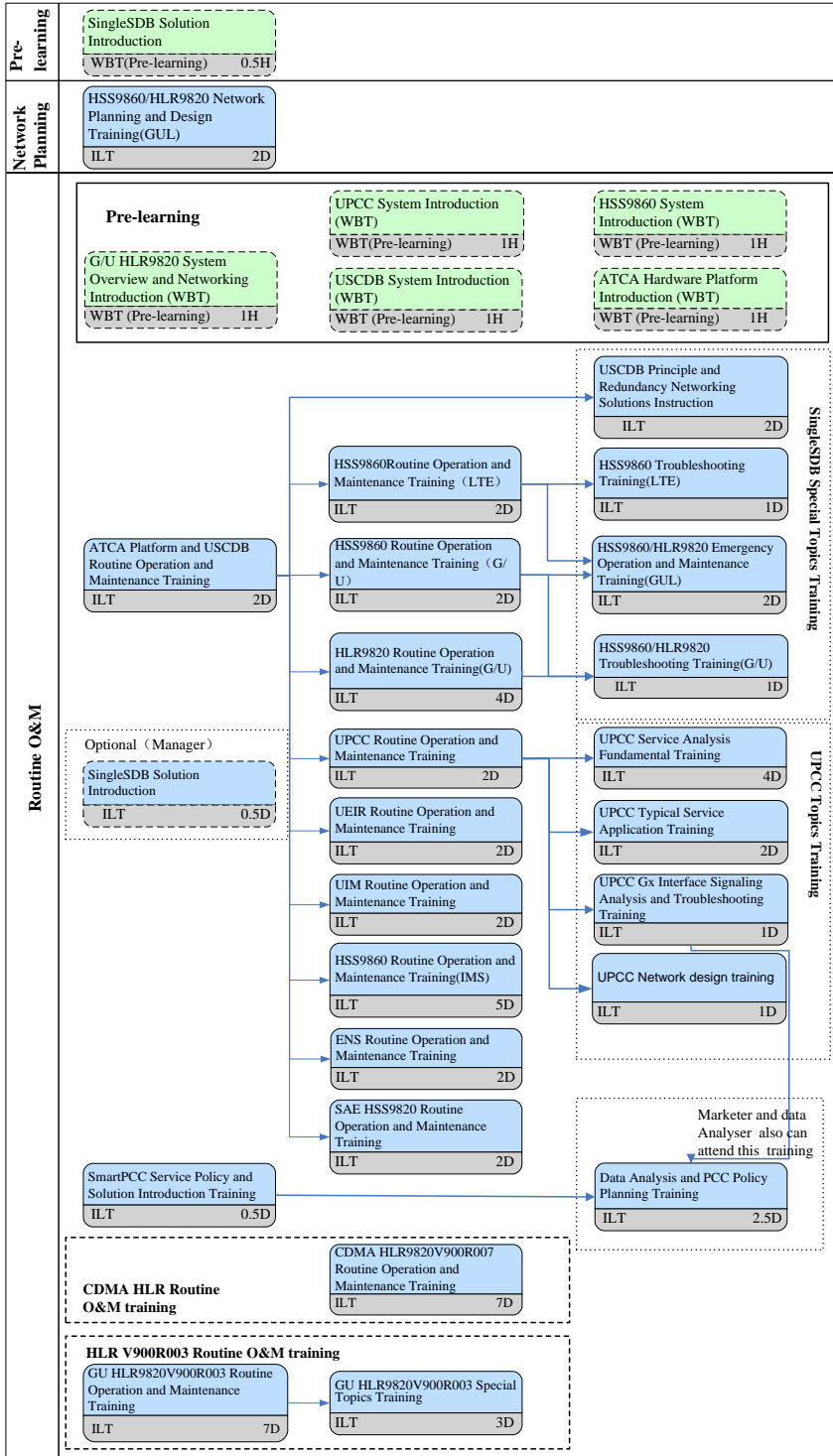
## 1.1 Background Introduction

### 1.2 Overview

Single Subscriber Database.

---

### 1.3 USC Product Technology Training Path



## 1.4 Required Training Programs

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

Training Program	Program Level	Duration (workdays)	Training Location	Class Size
<b>USC</b>				
SingleSDB Solution Introduction	II	0.5		6 ~ 12
ATCA Platform and USCDB Routine Operation and Maintenance Training	II	2		6 ~ 12
USCDB Principle and Redundancy Networking Solutions Instruction	III	2		6 ~ 12
HSS9860 Routine Operation and Maintenance Training(G/U)	II	2		6 ~ 12
HSS9860 Routine Operation and Maintenance Training(LTE)	II	2		6 ~ 12
HLR9820 Routine Operation and Maintenance Training(G/U)	II	4		6 ~ 12
HSS9860/HLR9820 Troubleshooting Training(G/U)	III	1		6 ~ 12
HSS9860 Troubleshooting Training(LTE)	III	1		6 ~ 12
HSS9860/HLR9820 Emergency Operation and Maintenance Training(GUL)	III	2		6 ~ 12
HSS9860/HLR9820 Network Planning and Design Training(GUL)	IV	2		6 ~ 12
UPCC Routine Operation and Maintenance Training	II	2		6 ~ 12
UPCC Service Analysis Fundamental Training	II	4		6 ~ 12
UPCC Typical Service Application Training	III	2		6 ~ 12
UPCC Gx Interface Signaling Analysis and Troubleshooting Training	IV	1		6 ~ 12
UPCC Network design training	IV	1		6 ~ 12
SmartPCC Service Policy and Solution Introduction Training	II	0.5		6 ~ 12
Data Analysis and PCC Policy Planning Training	IV	2.5		6 ~ 12

---

UEIR Routine Operation and Maintenance Training	II	2		6 ~ 12
UIM Routine Operation and Maintenance Training	II	2		6 ~ 12
SAE HSS9820 Routine Operation and Maintenance Training	II	2		6 ~ 12
HSS9860 Routine Operation and Maintenance Training(IMS)	II	5		6 ~ 12
ENS Routine Operation and Maintenance Training	II	2		6 ~ 12
GU HLR9820V900R003 Routine Operation and Maintenance Training	II	7		6 ~ 12
GU HLR9820V900R003 Special Topics Training	III	3		6 ~ 12
CDMA HLR9820V900R007 Routine Operation and Maintenance Training	II	7		6 ~ 12
SingleSDB Solution Introduction (WBT)	I	0.5H		6 ~ 12
ATCA Hardware Platform Introduction (WBT)	II	1H		6 ~ 12
USCDB System Introduction (WBT)	II	1H		6 ~ 12
G/U HLR9820 System Overview and Networking Introduction (WBT)	II	1H		6 ~ 12
HSS9860 System Introduction (WBT)	II	1H		6 ~ 12
UPCC System Introduction (WBT)	II	1H		6 ~ 12

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

---

## 1.5 USC

### 1.5.1 SingleSDB Solution Introduction

#### Training Path

SingleSDB Solution Introduction		
OHC00	Lecture, LVC	0.5d

#### Target Audience

Operation and Maintenance Engineer  
Technical Support Engineer

#### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments
- Being familiar with Windows operation and basic UNIX operation
- A basic knowledge of mobile communication

#### Objectives

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

- Describe SingleSDB general Solution
- Describe SingleSDB Redundancy Networking, Performance Feature
- Describe SingelSDB hardware and software structure, General working Principle

#### Training Content

##### OHC00 SingleSDB Solution Introduction

- SingleSDB Solution Introduction
  - Evolution Trend of the USC(Unified Subscriber Data Center)
  - Huawei proposition of SingleSDB
  - Unified OM structure of SingleSDB
  - Unified Provisioning structure of SingleSDB
  - Function and benefits of SingleSDB Solution
  - SingleSDB seamless geographic redundancy solution
  - SingelSDB hardware and software structure
  - General working Principle

#### Duration

0.5 working day

#### Class Size

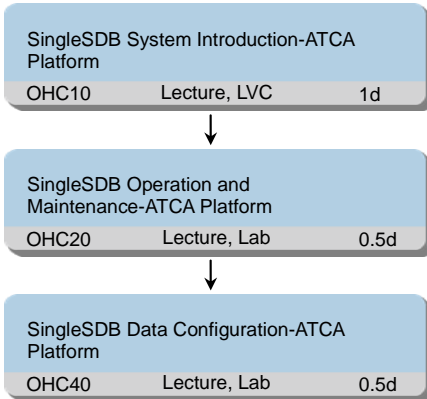
Min 6, Max 12



---

## 1.5.2 ATCA Platform and USCDB Routine Operation and Maintenance Training

### Training Path



### Target Audience

Operation and Maintenance Engineer  
Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments
- Being familiar with Windows operation and basic UNIX operation
- A basic knowledge of mobile communication

### Objectives

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

- Describe the architecture of SingleSDB
- Describe the Networking and Interfaces of SingleSDB
- Describe the hardware, logical structure of SingleSDB
- Describe the typical configurations of SingleSDB
- List key advantages of Huawei SingleSDB
- List technical specifications of SingleSDB
- Describe ATCA hardware structure
- Describe ATCA boards function
- Describe connections and cables
- Describe the internal networking of SingleSDB
- Describe the IP address configuration of the USCDB
- Check device running status
- Backup and restore the system database
- Perform parts replacement
- Perform daily, weekly and yearly maintenance tasks and complete the maintenance record

- 
- Check alarm and performance events and traffic information through LMT Client and perform the on-site diagnosis
  - Describe data configuration principles
  - Describe Board configuration principle
  - Describe data configuration principles and steps
  - Perform Hardware Data Configuration of USCDB
  - Perform Local Office Data Configuration of USCDB
  - Perform Signaling Data Configuration of USCDB

#### Training Content

##### OHC10 SingleSDB System Introduction-ATCA Platform

- ATCA Hardware Platform Introduction
  - The architecture of SingleSDB.
  - The Networking and Interfaces of SingleSDB.
  - The hardware, logical structure of SingleSDB.
  - The typical configurations of SingleSDB.
  - List key advantages of Huawei SingleSDB.
  - List technical specifications of SingleSDB.
  - ATCA hardware structure.
  - ATCA boards function.
  - Connections and cables.
  - The internal networking of SingleSDB.
  - The IP address configuration of the USCDB.
- USCDB System introduction
  - The architecture of USCDB.
  - The Networking and Interfaces of USCDB.
  - The hardware, logical structure of USCDB.
  - The typical configurations of USCDB.
  - List key advantages of Huawei USCDB.
  - List technical specifications of USCDB.

##### OHC20 SingleSDB Operation and Maintenance-ATCA Platform

- Operation and Maintenance-ATCA Platform
  - Check device running status.
  - Backup and restore the system database.
  - Parts replacement.
  - Daily, weekly and yearly maintenance tasks and complete the maintenance record.
  - Check alarm and events.
  - Traffic measurement through LMT Client.
  - On-site diagnosis.
  - Data configuration principles.

##### OHC40 SingleSDB Data Configuration-ATCA Platform

- USCDB Data Configuration

- 
- Board configuration principle.
  - Data configuration principles and steps.
  - Hardware Data Configuration of USCDB.
  - Local Office Data Configuration of USCDB.
  - Signaling Data Configuration of USCDB.

Duration

2 working days

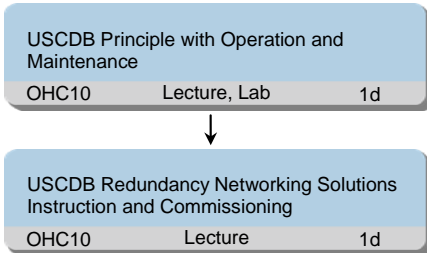
Class Size

Min 6, Max 12

---

### 1.5.3 USCDB Principle and Redundancy Networking Solutions Instruction

#### Training Path



#### Target Audience

Senior Technical Support Engineer

#### Prerequisites

- At least one year experience of USCDB operation
- Successful completion of the program USCDB Routine Operation and Maintenance Training

#### Objectives

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

- Describe SingleSDB general Solution
- Describe SingleSDB Redundancy Networking, Performance Feature
- Describe SingleSDB hardware and software structure, General working Principle
- Describe Service processing flows load balanced, message distribution principle
- Describe DS Principle Data synchronization, consistency and Replication Principle
- Describe data sync and check Principle
- Database, IM DB service application principle
- Describe PGW working principle, processes and configuration Principle
- Describe PGW service feature

#### Training Content

##### OHC10 USCDB Principle with Operation and Maintenance

- USCDB Principle with Operation and Maintenance
  - DS Principle Data synchronization, consistency and Replication Principle, and Operation and Maintenance
  - Data sync and check Principle, and Operation and Maintenance
  - Database, IM DB service application principle, and Operation and Maintenance
  - PGW working principle, processes and configuration Principle, and Operation and Maintenance
  - PGW service feature

##### OHC10 USCDB Redundancy Networking Solutions Instruction and Commissioning

- SingleSDB Redundancy Networking Solutions Instruction

- 
- SingleSDB general Solution
  - SingleSDB Redundancy Networking, Feature
  - SingleSDB hardware and software structure, General working Principle
  - SingleSDB Redundancy System Commissioning
    - Support for Redundancy Functions
    - Seamless Geographic Redundancy Commissioning
    - HLR Service Layer Redundancy Commissioning

Duration

2 working days

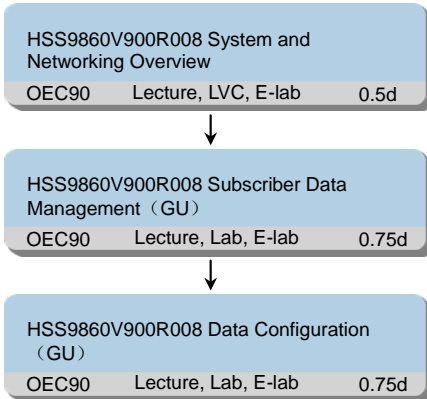
Class Size

Min 6, Max 12

---

## 1.5.4 HSS9860 Routine Operation and Maintenance Training(G/U)

### Training Path



### Target Audience

Operation and Maintenance Engineer  
Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments
- Being familiar with Windows operation and basic UNIX operation
- A basic knowledge of mobile communication

### Objectives

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

- Describe HSS9860V900R008 product function and application
- Describe HSS9860V900R008 interface protocol function
- Describe HSS9860V900R008 physical and logical structure
- Describe HSS9860V900R008 board function
- Describe HSS9860V900R008 signaling flow
- Describe HSS9860V900R008 software structure
- Describe HSS9860V900R008 IP planning
- Perform installation of operation PGW client with GU network
- Perform the method of adding or deleting subscriber
- Modify subscription according to customer requirement
- Perform configuration of subscription data
- Describe the steps of HSS9860 data configuration
- Perform hardware and system data configuration
- Perform interface data configuration
- Check the data configuration correctness and validity

- 
- Perform basic debugging of HSS9860 (GU)

Training Content

OEC90 HSS9860V900R008 System and Networking Overview

- HSS9860V900R008 System and Networking Overview
  - HSS9860V900R008 product function and application
  - HSS9860V900R008 interface protocol function
  - HSS9860V900R008 physical and logical structure
  - HSS9860V900R008 board function
  - HSS9860V900R008 signaling flow
  - HSS9860V900R008 software structure
  - HSS9860V900R008 IP planning

OEC90 HSS9860V900R008 Subscriber Data Management (GU)

- HSS9860V900R008 Subscriber Data Management (GU)
  - Installation of operation PGW client with G/U network
  - The method of adding or deleting subscriber
  - Modify subscription according to customer requirement
  - Configuration of subscription data

OEC90 HSS9860V900R008 Data Configuration (GU)

- HSS9860V900R008 Data Configuration (GU)
  - Procedure of HSS9860 data configuration
  - Hardware and system data configuration
  - Interface data configuration
  - Check the data configuration correctness and validity
  - Debugging operation of HSS9860 (GU)

Duration

2 working days

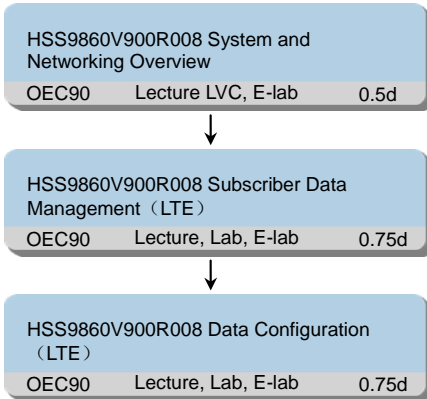
Class Size

Min 6, Max 12

---

## 1.5.5 HSS9860 Routine Operation and Maintenance Training(LTE)

### Training Path



### Target Audience

Operation and Maintenance Engineer  
Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments
- Being familiar with Windows operation and basic UNIX operation
- A basic knowledge of mobile communication

### Objectives

- On completion of this program, the participants will be able to:
- Describe HSS9860V900R008 product function and application
  - Describe HSS9860V900R008 interface protocol function
  - Describe HSS9860V900R008 physical and logical structure
  - Describe HSS9860V900R008 board function
  - Describe HSS9860V900R008 signaling flow
  - Describe HSS9860V900R008 software structure
  - Describe HSS9860V900R008 IP planning
  - Perform installation of operation PGW client with LTE network
  - Perform the method of adding or deleting subscriber
  - Modify subscription according to customer requirement
  - Perform configuration of subscription data
  - Describe the steps of HSS9860 data configuration
  - Perform hardware and system data configuration
  - Perform interface data configuration
  - Check the data configuration correctness and validity



- 
- Perform basic debugging of HSS9860 (LTE)

Training Content

OEC90 HSS9860V900R008 System and Networking Overview

- HSS9860V900R008 System and Networking Overview
  - HSS9860V900R008 product function and application
  - HSS9860V900R008 interface protocol function
  - HSS9860V900R008 physical and logical structure
  - HSS9860V900R008 board function
  - HSS9860V900R008 signaling flow
  - HSS9860V900R008 software structure
  - HSS9860V900R008 IP planning

OEC90 HSS9860V900R008 Subscriber Data Management (LTE)

- HSS9860V900R008 Subscriber Data Management (LTE)
  - Installation of operation PGW client with LTE network
  - The method of adding or deleting subscriber
  - Modify subscription according to customer requirement
  - Configuration of subscription data

OEC90 HSS9860V900R008 Data Configuration (LTE)

- HSS9860V900R008 Data Configuration (LTE)
  - Procedure of HSS9860 data configuration
  - Hardware and system data configuration
  - Interface data configuration
  - Check the data configuration correctness and validity
  - Debugging operation of HSS9860 (LTE)

Duration

2 working days

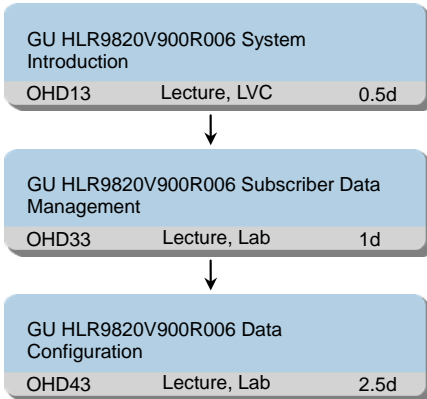
Class Size

Min 6, Max 12

---

## 1.5.6 HLR9820 Routine Operation and Maintenance Training(G/U)

### Training Path



### Target Audience

Operation and Maintenance Engineer  
Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments
- Being familiar with Windows operation and basic UNIX operation
- A basic knowledge of mobile communication

### Objectives

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

- Describe the architecture of G/U HLR9820
- Describe the Networking and Interfaces of G/U HLR9820
- Describe the hardware, logical structure of G/U HLR9820
- Describe the typical configurations of G/U HLR9820
- List technical specifications of G/U HLR9820
- Describe HLR9820 software and hardware structure
- Describe typical G/U service flow and working principle
- Describe G/U Common Service
- Perform Operator Management
- Perform Subscriber data management
- Perform Network maintenance
- Perform operation of templates to manage subscribers' profiles
- Describe data configuration principles and steps(G/U HLR9820 FE)
- Perform hardware data configuration(G/U HLR9820 FE)
- Perform local office data configuration(G/U HLR9820 FE)

- 
- Perform signaling data configuration(G/U HLR9820 FE)

Training Content

OHD13 GU HLR9820V900R006 System Introduction

- HLR9820 System Overview and Networking Introduction
  - The architecture of G/U HLR9820
  - The Networking and Interfaces of G/U HLR9820
  - The hardware, logical structure of G/U HLR9820
  - The typical configurations of G/U HLR9820
  - List technical specifications of G/U HLR9820
  - HLR9820 software and hardware structure
  - Typical G/U service flow and working principle

OHD33 GU HLR9820V900R006 Subscriber Data Management

- HLR9820 Subscription Data Management
  - G/U Common Service
  - Operator Management
  - Subscriber data management
  - Network maintenance
  - The HLR9820 subscriber management method and procedure
  - The operation to manage subscribers' profiles
  - The operation of templates to manage subscribers' profiles
  - Subscribers' profiles operations

OHD43 GU HLR9820V900R006 Data Configuration

- HLR9820 Data Configuration
  - Data configuration principles and steps(G/U HLR9820 FE)
  - Hardware Data Configuration(G/U HLR9820 FE)
  - Local Office Data Configuration(G/U HLR9820 FE)
  - Signaling Data Configuration(G/U HLR9820 FE)

Duration

4 working days

Class Size

Min 6, Max 12

---

## 1.5.7 HSS9860/HLR9820 Troubleshooting Training(G/U)

**Just for HSS9860V900R008 (G/U) and HLR9820V900R006.**

### Training Path

HSS9860 /HLR9820 Maintenance and Troubleshooting(GU)		
OEC95	Lecture, Lab, E-lab	1d

### Target Audience

Senior Technical Support Engineer

### Prerequisites

- At least one year experience of HLR9820 operation
- Successful completion of the program GU HLR9820 Routine Operation and Maintenance Training

### Objectives

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

- Describe HSS9860/HLR9820 Emergence Maintenance Processing flow
- Describe HSS9860/HLR9820 Equipment fault information collection and processing
- Describe procedures and methods of fault location and troubleshooting
- Describe troubleshooting of G/U service fault

### Training Content

OEC95 HSS9860 /HLR9820 Maintenance and Troubleshooting(GU)

- HSS9860/HLR9820 Maintenance and Troubleshooting(GU)
  - HSS9860/HLR9820 Emergence Maintenance Processing flow
  - HSS9860/HLR9820 Equipment fault information collection and processing
  - Procedures and methods of fault location and troubleshooting
  - G/U service fault troubleshooting: hardware fault; signaling fault; tele service; supplementary service; etc.

### Duration

1 working day

### Class Size

Min 6, Max 12

---

## 1.5.8 HSS9860 Troubleshooting Training(LTE)

### Training Path

HSS9860V900R008 Maintenance and Troubleshooting (LTE)		
OEC96	Lecture, Lab, E-lab	1d

### Target Audience

Senior Technical Support Engineer

### Prerequisites

- At least one year experience of HLR9820 operation
- Successful completion of the program GU HLR9820 Routine Operation and Maintenance Training

### Objectives

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

- Describe HSS9860 Emergence Maintenance Processing flow
- Describe HSS9860 Equipment fault information collection and processing
- Describe procedures and methods of fault location and troubleshooting
- Describe troubleshooting of LTE service fault
- Describer basic concepts of the S6a/S6d interface
- Describer main signaling procedures related to the S6a/S6d interface
- Describer main Information element of signalling

### Training Content

OEC96 HLR9860V900R008 Maintenance and Troubleshooting (LTE)

- HSS9860 Maintenance and Troubleshooting(LTE)
  - HSS9860 Emergence Maintenance Processing flow
  - HSS9860 Equipment fault information collection and processing
  - Procedures and methods of fault location and troubleshooting
  - LTE service fault troubleshooting: hardware fault; etc.
- S6a interface and Diameter protocol Analysis
  - Basic concepts of the S6a/S6d interface
  - Main signaling procedures related to the S6a/S6d interface
  - Main Information element of signaling

### Duration

1 working day

### Class Size

Min 6, Max 12

---

## 1.5.9 HSS9860/HLR9820 Emergency Operation and Maintenance Training(GUL)

### Training Path

HSS9860/HLR9820 Emergency Operation and Maintenance (GUL)		
OEC97	Lecture, Lab, E-lab	2d

### Target Audience

Operation and Maintenance Engineer  
Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments

### Objectives

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

- Describe HSS9860/HLR9820 Emergence Maintenance Processing flow
- Describe Procedures and methods of fault location and troubleshooting
- Describe troubleshooting of G/U/LTE service fault
- Perform system management, cluster management, disk management and Database management
- Handle hardware, components or service faults

### Training Content

OEC97 HSS9860/HLR9820 Emergency Operation and Maintenance (GUL)

- HSS9860/HLR9820 Emergency Operation and Maintenance (GUL)
  - HSS9860/HLR9820 Emergence Maintenance Processing flow
  - ATCA Platform fault information collection and processing
  - Procedures and methods of fault location and troubleshooting
  - Practice and Solve service fault troubleshooting: hardware fault; signaling fault; tele service; supplementary service

### Duration

2 working days

### Class Size

Min 6, Max 12

---

## 1.5.10 HSS9860/HLR9820 Network Planning and Design Training(GUL)

### Training Path

HSS9860 /HLR9820 Network Planning and Design (GUL)		
OHD92	Lecture	2d

### Target Audience

Senior Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments

### Objectives

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

- Describe Factors Affecting the NE Configuration
- Describe Calculation of the Traffic
- Describe Calculation Methods
- Describe Calculation Principle
- Describe the flow and content of SingleSDB network design
- Describe the functions and content of IP interconnection design
- Describe the principle for IP port quantity and NM bandwidth calculation

### Training Content

OHD92 HSS9860 /HLR9820 Network Planning and Design (GUL)

- SingleSDB Network Design Basics
  - The function of network design
  - The flow and content of SingleSDB network design
  - The flow and content of SingleSDB network design
- SingleSDB Network Design (IP Interconnection Design)
  - The functions of IP interconnection design
  - The content of IP interconnection design
  - The methods and principles of IP interconnection design
- HSS9860/HLR9820 Bandwidth Calculation Principle (GU)
  - The function of bandwidth calculation
  - The principle for signaling bandwidth calculation
  - The principle for data-plane bandwidth calculation
  - The principle for business hall and NM bandwidth calculation
  - The principle for IP port quantity calculation
- SingleSDB Configuration Rule
  - Factors Affecting the NE Configuration
  - Calculation of the Traffic

- 
- Calculation Methods
  - Calculation Principle
  - HSS9860 Bandwidth Calculation Principle (LTE)
    - The function of bandwidth calculation
    - The principle for signaling bandwidth calculation
    - The principle for data-plane bandwidth calculation
    - The principle for business hall and NM bandwidth calculation
    - The principle for IP port quantity calculation
  - HSS9860 Configuration Rule (LTE)
    - Factors Affecting the NE Configuration
    - Calculation of the Traffic
    - Calculation Methods
    - Calculation Principle

Duration

2 working days

Class Size

Min 6, Max 12



---

## 1.5.11 UPCC Routine Operation and Maintenance Training

### Training Path

UPCC Data Configuration		
OWR21	Lecture, Lab	2d

### Target Audience

Senior Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments

### Objectives

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

- Describe the basic services and functions of UPCC
- Describe the hardware and software components
- Describe the background knowledge of data configuration
- Perform the hardware data configuration
- Perform BE and FE data configuration
- Perform the commissioning of interconnection between UPCC and PCEF, between UPCC and the provisioning system, between the UPCC and the M2000
- Perform the installation of operation PGW client with UPCC
- Perform adding or deleting subscriber
- Perform the configuration of subscription data

### Training Content

#### OWR21 UPCC Data Configuration

- UPCC System Overview and Networking Introduction
  - Product positioning
  - Basic services and functions
  - Hardware and software components
  - Product reliability
  - Technical specifications of UPCC
- UPCC Data Configuration and Commissioning
  - Background knowledge of data configuration
  - Hardware data configuration
  - BE data configuration
  - FE data configuration
  - The commissioning of interconnection between UPCC and PCEF
  - The commissioning of interconnection between UPCC and the provisioning system
  - The commissioning of interconnection between the UPCC and the M2000

- 
- UPCC Subscriber Data Management
    - Installation of operation PGW client with UPCC
    - The method of adding or deleting subscriber
    - Modify subscription according to customer requirement
    - Configuration of subscription data

Duration

2 working days

Class Size

Min 6, Max 12

## 1.5.12 UPCC Service Analysis Fundamental Training

### Training Path

UPCC Service Analysis Fundamental		
OWR22	Lecture, Lab	4d

批注 [D(1)]: 时长修改

### Target Audience

Senior Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments

### Objectives

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

- Describe PS QoS basic theory
- Describe Gx,Rx,Sy interface signaling procedrue
- Describe UPCC service configuration base
- Perform UPCC service configuration analysis
- Perform UPCC service configuration cases study

批注 [D(2)]: 新增描述

### Training Content

#### OWR22 UPCC Service Analysis Fundamental

批注 [D(3)]: 新增大量修改

- PS QoS basic theory
  - GPRS/UMTS QoS concept introduction
  - QoS information transfer in Attach and PDP activation procedure in GPRS/UMTS network
  - EPC QoS concept introduction
  - QoS information transfer in Attach and Dedicated bearer activation procedure in EPC network
  - GPRS/UMTS and EPC QoS mapping
- UPCC Gx Interface Signaling Analysis
  - Introduce Diameter Protocol flow and messages.
  - Describe DCCA Protocol flow and messages.
  - Describe PCC service signaling flow messages analysis and key parameter.
- UPCC Rx Interface Signaling Analysis
  - Describe Rx interface signaling flow and messages.
  - Describe Rx interface messages flow in VOLTE service
- UPCC Sy Interface Signaling Analysis
  - Describe Sy interface signaling flow and messages.
  - Describe Sy interface messages flow in FUP service

批注 [D(4)]: 新增

- 
- UPCC Service Analysis and Configuration Fundamental
    - UPCC service configuration base
    - UPCC service configuration analysis
    - UPCC service configuration cases
  - UPCC Service analysis theory
    - UPCC service analysis theory(Analyze services according to object, condition and action)
    - Introduce the theory of condition combination, event trigger selection and action selection
    - UPCC service analysis and configuration cases

批注 [D(5)]: 新增描述

Duration

4 working days, 1 day for practice

批注 [D(6)]: 修改时长,增加上机时长描述

Class Size

Min 6, Max 12

---

### 1.5.13 UPCC Typical Service Application Training

#### Training Path

UPCC Typical Service Application		
OWR23	Lecture, Lab	2d

#### Target Audience

Senior Technical Support Engineer

#### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments

#### Objectives

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

- Perform low-value service management
- Perform VIP guarantee
- Perform quota sharing
- Perform hot-spot traffic management
- Perform subscriber guarantee based on terminal type
- Perform visitor traffic management

#### Training Content

##### OWR23 UPCC Typical Service Application

- UPCC Typical Service Application and Configuration
  - Low-value Service Management
  - VIP Guarantee
  - Quota Sharing
  - Hot-spot Traffic Management
  - Subscriber Guarantee based on Terminal Type
  - Visitor Traffic Management

#### Duration

2 working days

#### Class Size

Min 6, Max 12

## 1.5.14 UPCC Gx Interface Signaling Analysis and Troubleshooting Training

### Training Path

UPCC Gx Interface Signaling Analysis and Troubleshooting		
OWR24	Lecture, Lab	1d

### Target Audience

Network Planning Engineer

### Prerequisites

- Master UPCC operation and maintenance
- At least half a year experience of operation and maintenance of telecommunication equipments

### Objectives

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

- Describe Diameter base protocol
- Describe Diameter credit control application
- Perform signaling analysis of the FUP service
- Describe basic knowledge for UPCC troubleshooting
- Perform the prerequisite for UPCC activation
- Perform common faults troubleshooting
- Perform case study

### Training Content

- UPCC Gx Interface Troubleshooting
  - Describe Gx Troubleshooting Methods.
  - Perform Gx Interface troubleshooting based on signaling analysis.

批注 [D(7)]: 删除 Gx 信令

### Duration

1 working day, 0.5 day for practice

批注 [D(8)]: 增加上机描述

### Class Size

Min 6, Max 12

批注 [D(9)]: 新增章节

### 1.5.15 UPCC Network Design Training

#### Training Path

UPCC Network design training		
OWR25	Lecture	1d

#### Target Audience

Senior Technical Support Engineer

#### Prerequisites

- Master UPCC operation and maintenance
- At least half a year experience of operation and maintenance of telecommunication equipments

#### Objectives

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

- Describe UPCC network design function and procedure
- Describe UPCC network design rules and methods
- Describe UPCC network interfaces bandwidth calculation methods.

#### Training Content

- UPCC network design
  - Describe the function of network design.
  - Describe UPCC network design rules and methods
  - Describe information collection during network design
- UPCC configuration rules
  - Describe the principle of UPCC hardware configuration
  - Describe the rules of UPCC module configuration.
- UPCC interface bandwidth calculation theory
  - Describe the traffic model of UPCC
  - Describe the method of UPCC interface bandwidth calculation.

#### Duration

1 working day

#### Class Size

Min 6, Max 12

---

## 1.5.16 SmartPCC Service Policy and Solution Introduction Training

### Training Path

SmartPCC Service Policy and Solution Introduction		
OHP10	Lecture	0.5d

### Target Audience

Senior Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments

### Objectives

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

- Describe PS network service development background
- Describe SmartPCC solution functions and features
- Perform SmartPCC solution application cases study

### Training Content

OHP10 SmartPCC Service Policy and Solution Introduction

- SmartPCC Service Policy and Solution Introduction
  - PS network service development background
  - SmartPCC solution functions and features
  - SmartPCC solution application cases

### Duration

0.5 working day

### Class Size

Min 6, Max 12



---

## 1.5.17 Data Analysis and PCC Policy Planning Training

### Training Path

Data Analysis and PCC Policy Planning		
OHP60	Lecture, Lab	2.5d

### Target Audience

Senior Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments

### Objectives

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

- Describe PCC service policy and solution introduction
- Describe PS Network Service Policy Analysis Overview
- Perform PS Network Service Policy-Service Analysis
- Perform PS Network Service Policy-Location Analysis
- Perform PS Network Service Policy-User Analysis
- Perform PS Network Service Policy-Terminal Analysis
- Describe the data analysis and PCC service deployment cases

### Training Content

#### OHP60 Data Analysis and PCC Policy Planning

- PS Network Service Police Analysis Overview
  - PS network service development
  - Data service analysis methods
  - Successful cases
- PS Network Service Policy-Service Analysis
  - Service analysis introduction
  - Service type analysis
  - Service access type analysis
  - Self-operating service analysis
  - Skype service analysis
  - APN analysis
  - Service policy implementation methods
- PS Network Service Policy-Location Analysis
  - Location analysis introduction
  - Whole network cell traffic analysis
  - Cell traffic analysis according zone type
  - Cell busy hour times distribution

- 
- Busy cell busy hour distribution
  - Location policy implementation methods
  - PS Network Service Policy-User Analysis
    - User analysis introduction
    - User traffic distribution analysis
    - Top traffic user analysis
    - Low traffic user analysis
    - User service package analysis
  - PS Network Service Policy-Terminal Analysis
    - Terminal analysis introduction
    - High value terminal/low value terminal analysis
    - Terminal swapping analysis
    - Locked terminal analysis
    - Terminal OS analysis
    - High traffic user's terminal analysis
    - Pre-install software analysis
  - Data analysis and PCC service deployment
    - Network analysis case
    - Congested Region Analysis and Optimization
    - Top-Up Analysis and Recommendation
    - Valuable Service Analysis and Recommendation
    - Tethering Analysis and Control

Duration

2.5 working days

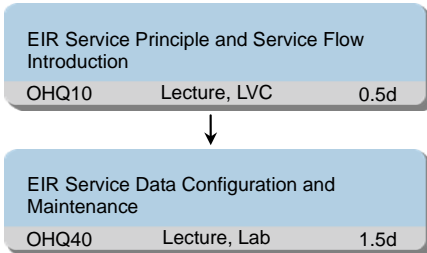
Class Size

Min 6, Max 12

---

## 1.5.18 UEIR Routine Operation and Maintenance Training

### Training Path



### Target Audience

Operation and Maintenance Engineer  
Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments
- Being familiar with Windows operation and basic UNIX operation
- A basic knowledge of mobile communication

### Objectives

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

- Describe EIR system structure, networking, hardware and software feature
- Describe EIR service feature and working principle
- Describe EIR service flow and message introduction
- Perform EIR installation, service data configuration
- Explain the service provisioning principle, procedure and Perform operation
- Complete EIR service provisioning
- Complete EIR routine operation and maintenance tasks
- Accomplish the basic maintenance for the processes, links and services fault

### Training Content

#### OHQ10 EIR Service Principle and Service Flow Introduction

- EIR Service Principle and Service Flow Introduction
  - UEIR system structure, networking, hardware and software feature
  - UEIR service feature and working principle
  - UEIR service flow and message introduction

#### OHQ40 EIR Service Data Configuration and Maintenance

- EIR Service Data Configuration and Maintenance
  - UEIR installation, service data configuration
  - Service provisioning principle, procedure and operation
  - UEIR service provisioning configuration

- 
- UEIR routine operation and maintenance tasks
  - Basic maintenance of service processes, links and services fault

Duration

2 working days

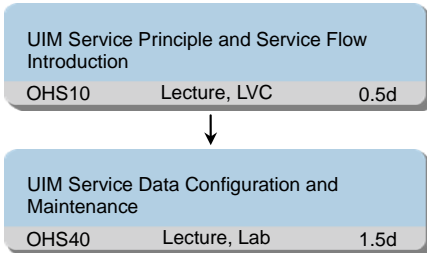
Class Size

Min 6, Max 12

---

## 1.5.19 UIM Routine Operation and Maintenance Training

### Training Path



### Target Audience

Operation and Maintenance Engineer  
Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments

### Objectives

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

- Describe UIM system structure, networking, hardware and software feature
- Describe UIM service feature and working principle
- Describe UIM service flow and message introduction
- Perform UIM installation, service data configuration
- Explain the service provisioning principle, procedure and Perform operation
- Complete UIM service provisioning
- Complete UIM routine operation and maintenance tasks
- Accomplish the basic maintenance for the processes, links and services fault

### Training Content

#### OHS10 UIM Service Principle and Service Flow Introduction

- UIM Service Principle and Service Flow Introduction
  - UIM system structure, networking, hardware and software feature
  - UIM service feature and working principle
  - UIM service flow and message introduction

#### OHS40 UIM Service Data Configuration and Maintenance

- UIM Service Data Configuration and Maintenance
  - UIM installation, service data configuration
  - Service provisioning principle, procedure and operation
  - UIM service provisioning configuration
  - UIM routine operation and maintenance tasks
  - Basic maintenance of service processes, links and services fault

---

Duration

2 working days

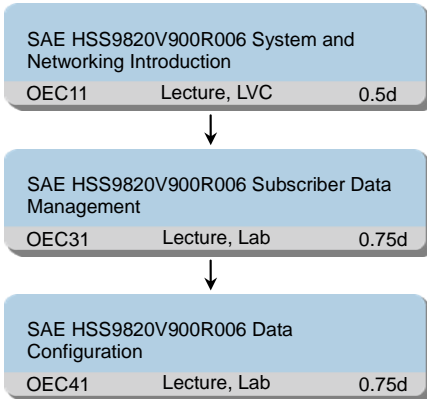
Class Size

Min 6, Max 12

---

## 1.5.20 SAE HSS9820 Routine Operation and Maintenance Training

### Training Path



### Target Audience

Operation and Maintenance Engineer  
Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments
- Being familiar with Windows operation and basic UNIX operation
- A basic knowledge of mobile communication

### Objectives

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

- Describe HSS9820V900R006 product function and application
- Describe HSS9820V900R006 interface protocol function
- Describe HSS9820V900R006 physical and logical structure
- Describe HSS9820V900R006 board function
- Describe HSS9820V900R006 signaling flow
- Describe HSS9820V900R006 software structure
- Describe HSS9820V900R006 IP planning
- Perform installation of operation PGW client
- Perform the method of adding or deleting subscriber
- Modify subscription according to customer requirement
- Perform configuration of subscription data
- Describe the steps of HSS9820 data configuration
- Perform hardware and system data configuration
- Perform interface data configuration
- Check the data configuration correctness and validity

- 
- Perform basic debugging of SAE-HSS9820

Training Content

OEC11 SAE HSS9820V900R006 System and Networking Introduction

- SAE HSS9820V900R006 System and Networking Overview
  - HSS9820V900R006 product function and application
  - HSS9820V900R006 interface protocol function
  - HSS9820V900R006 physical and logical structure
  - HSS9820V900R006 board function
  - HSS9820V900R006 signaling flow
  - HSS9820V900R006 software structure
  - HSS9820V900R006 IP planning

OEC31 SAE HSS9820V900R006 Subscriber Data Management

- SAE HSS9820V900R006 Subscriber Data Management(SAE)
  - Installation of operation PGW client
  - The method of adding or deleting subscriber
  - Modify subscription according to customer requirement
  - Configuration of subscription data
- SAE HSS9820V900R006 Subscriber Data Management(GU)
  - Installation of operation PGW client
  - The method of adding or deleting subscriber
  - Modify subscription according to customer requirement
  - Configuration of subscription data

OEC41 SAE HSS9820V900R006 Data Configuration

- SAE HSS9820V900R006 Data Configuration(SAE)
  - Procedure of HSS9820 data configuration
  - Hardware and system data configuration
  - Interface data configuration
  - Check the data configuration correctness and validity
  - Debugging operation of SAE-HSS9820
- SAE HSS9820V900R006 Data Configuration(GU)
  - Procedure of HSS9820 data configuration
  - Hardware and system data configuration
  - Interface data configuration
  - Check the data configuration correctness and validity
  - Debugging operation of SAE-HSS9820

Duration

2 working days

Class Size

Min 6, Max 12



---

## 1.5.21 HSS9860 Routine Operation and Maintenance Training(IMS)

### Training Path

See 2014 Customer Training Catalog - Training Programs (IMS Product Technology Training)  
OZA025001 IMS System Overview  
OZA05 IMS Huawei Products and Solution Introduction  
OZC02 HSS9860 (IMS) Operation and Maintenance  
OZC11 IMS Service Provisioning (SPG2800) Operation and Maintenance

### Target Audience

Operation and Maintenance Engineer  
Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments
- Being familiar with Windows operation and basic UNIX operation
- A basic knowledge of mobile communication

### Objectives

See 2014 Customer Training Catalog - Training Programs (IMS Product Technology Training)  
OZA025001 IMS System Overview  
OZA05 IMS Huawei Products and Solution Introduction  
OZC02 HSS9860 (IMS) Operation and Maintenance  
OZC11 IMS Service Provisioning (SPG2800) Operation and Maintenance

### Training Content

See 2014 Customer Training Catalog - Training Programs (IMS Product Technology Training)  
OZA025001 IMS System Overview  
OZA05 IMS Huawei Products and Solution Introduction  
OZC02 HSS9860 (IMS) Operation and Maintenance  
OZC11 IMS Service Provisioning (SPG2800) Operation and Maintenance

### Duration

5 working days

### Class Size

Min 6, Max 12

---

## 1.5.22 ENS Routine Operation and Maintenance Training

### Training Path

See 2014 Customer Training Catalog - Training Programs (IMS Product Technology Training)  
ENUM/DNS (ENUMS8000 or ENS) Operation and Maintenance

### Target Audience

Operation and Maintenance Engineer  
Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments
- Being familiar with Windows operation and basic UNIX operation
- A basic knowledge of mobile communication

### Objectives

See 2014 Customer Training Catalog - Training Programs (IMS Product Technology Training)  
ENUM/DNS (ENUMS8000 or ENS) Operation and Maintenance

### Training Content

See 2014 Customer Training Catalog - Training Programs (IMS Product Technology Training)  
ENUM/DNS (ENUMS8000 or ENS) Operation and Maintenance

### Duration

2 working days

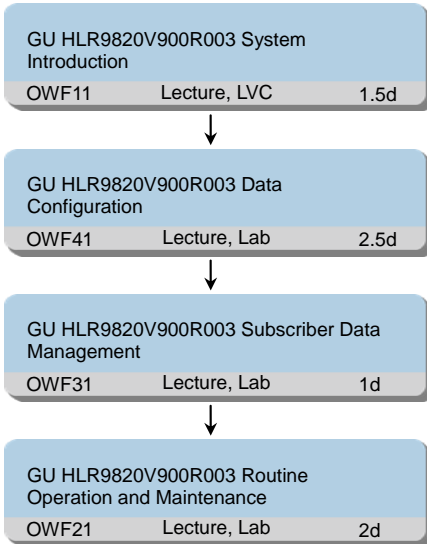
### Class Size

Min 6, Max 12

---

### 1.5.23 GU HLR9820V900R003 Routine Operation and Maintenance Training

#### Training Path



#### Target Audience

Operation and Maintenance Engineer  
Technical Support Engineer

#### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments
- Being familiar with Windows operation and basic UNIX operation
- A basic knowledge of mobile communication

#### Objectives

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

- Describe the structure of HUAWEI HLR9820
- Describe the functions of each part
- Describe the elements of HLR9820 and the relationship of them
- Describe the basic performance parameter
- Describe System architecture
- Describe Functional modules
- Describe Working principles of the HLR9820 modules
- Describe HLR9820 hardware structure
- Describe HLR9820 boards function
- Describe connections and cables
- Describe the internal networking of HLR9820

- 
- Describe the IP address configuration of the HLR9820
  - Perform Operations of HLR9820 routine maintenance
  - Describe Usage of the Autocheck tool
  - Perform Security Management
  - Perform BAM Operation
  - Perform Alarm Operations
  - Perform Tracing Operations
  - Perform Performance Operations
  - Describe UMTS common service feature
  - Perform Operator Management
  - Perform Network maintenance
  - Describe the HLR9820 subscriber management method and procedure
  - Perform operation to manage subscribers' profiles
  - Perform operation of templates to manage subscribers' profiles
  - Perform operation to modify services according to the requests from subscribers
  - Perform operation to check subscribers' profiles based on different fault phenomena
  - Perform Hardware Data Configuration
  - Perform Local Office Data Configuration
  - Perform Signaling Data Configuration

#### Training Content

##### OWF11 GU HLR9820V900R003 System Introduction

- GU HLR9820V900R003 System Overview
  - The structure of HUAWEI HLR9820
  - The functions of each part
  - The elements of HLR9820 and the relationship of them
  - The basic parameter
- GU HLR9820V900R003 System Principle
  - System architecture
  - Functional modules
  - Working principles of the HLR9820 modules
- GU HLR9820V900R003 Hardware System
  - HLR9820 hardware structure
  - HLR9820 boards function
  - Connections and cables

##### OWF41 GU HLR9820V900R003 Data Configuration

- GU HLR9820V900R003 Data Configuration
  - Hardware Data Configuration
  - Local Office Data Configuration
  - Signaling Data Configuration
- GU HLR9820V900R003 System Networking
  - The internal networking of HLR9820

- 
- The IP address configuration of the HLR9820

OWF31 GU HLR9820V900R003 Subscriber Data Management

- GU HLR9820V900R003 SMU Subscriber Data Management
  - UMTS Common Service Feature
  - Operator Management
  - Network maintenance method
  - HLR9820 subscriber management method and procedure
  - Operation to manage subscribers' profiles
  - Operation of templates to manage subscribers' profiles
  - Modify services according to the requests from subscribers
  - Check subscribers' profiles based on different fault phenomena

OWF21 GU HLR9820V900R003 Routine Operation and Maintenance

- GU HLR9820V900R003 Routine Maintenance
  - Operations of HLR9820 routine maintenance
  - Usage of the Autocheck tool
  - Security Management
  - BAM Operation
  - Alarm Operations
  - Tracing Operations

Duration

7 working days

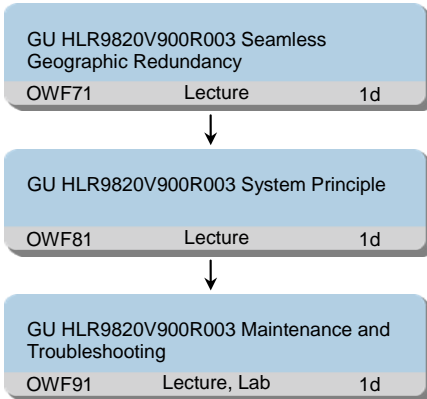
Class Size

Min 6, Max 12

---

## 1.5.24 GU HLR9820V900R003 Special Topics Training

### Training Path



### Target Audience

Senior Technical Support Engineer

### Prerequisites

- At least one year experience of HLR9820 operation
- Successful completion of the program GU HLR9820 Routine Operation and Maintenance Training

### Objectives

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

- Describe HLR9820 typical networking and configuration
- Describe DS layer redundancy, data and service distribution
- Describe Redundancy Principle
- Describe Baseline establishment, increment data synchronization, recovery operation Key parameters and configuration
- Describe SAU inner flows load balanced, message distribution Principle
- Describe BAM working principle, processes and configuration Principle
- Describe SMU working principle, processes and configuration Principle
- Describe DS Principle Data synchronization, consistency and Replication Principle
- Describe data sync and check Principle
- Database, IM DB service application principle
- HLR9820 FE and BE Emergence Maintenance Processing flow
- HLR9820 Equipment fault information collection and processing
- Procedures and methods of fault location and troubleshooting: Use the HDU system maintenance tools
- Perform HDU system management, cluster management, disk management and Database

---

management

- Handle hardware, components or service faults

#### Training Content

##### OWF71 GU HLR9820V900R003 Seamless Geographic Redundancy

- HLR9820 V93 Seamless Geographic Redundancy
  - HLR9820 Typical networking and configuration
  - DS layer redundancy, data and service distribution
  - DS Redundancy Principle
  - DS Baseline establishment principle
  - DS increment data synchronization principle
  - DS recovery operation Key parameters and configuration

##### OWF81 GU HLR9820V900R003 System Principle

- System Principle and Advanced Maintenance
  - SAU inner flows load balanced, message distribution Principle
  - BAM working principle, processes and configuration Principle
  - SMU working principle, processes and configuration Principle
  - DS Principle Data synchronization Principle
  - DS consistency and Replication Principle
  - DS data sync and check Principle
  - Database, IM DB service application principle

##### OWF91 GU HLR9820V900R003 Maintenance and Troubleshooting

- HLR9820V9 Maintenance and Troubleshooting
  - HLR9820 FE and BE emergence maintenance processing flow
  - HLR9820 Equipment fault information collection and processing
  - Procedures and methods of fault locating and troubleshooting
  - Method to Use the system maintenance tools
  - Hardware, cluster management and Database management
  - Typical service faults treatment
  - Typical hardware and components faults treatment

#### Duration

3 working days

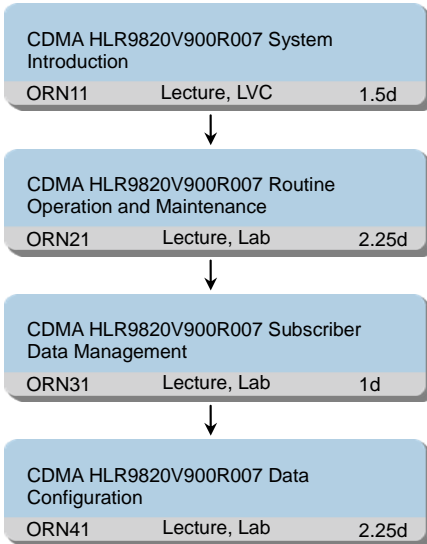
#### Class Size

Min 6, Max 12

---

## 1.5.25 CDMA HLR9820V900R007 Routine Operation and Maintenance Training

### Training Path



### Target Audience

Operation and Maintenance Engineer  
Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments
- Being familiar with Windows operation and basic UNIX operation
- A basic knowledge of mobile communication

### Objectives

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

- Describe the architecture of CDMA HLR9820
- Describe the Networking and Interfaces of CDMA HLR9820
- Describe the hardware, logical structure of CDMA HLR9820
- Describe the typical configurations of CDMA HLR9820
- List key advantages of CDMA HLR9820
- List technical specifications of CDMA HLR9820
- Describe HLR9820 boards function
- Describe connections and cables
- Describe the IP address configuration of the HLR9820
- Perform Security Management
- Perform LMT Operation and Maintenance



- 
- Perform Performance Operations
  - Perform SMM Operations
  - Describe CDMA Common Service
  - Perform Operator Management
  - Perform Subscriber data management
  - Perform Network maintenance
  - Describe data configuration principles and steps
  - Perform Hardware Data Configuration
  - Perform Local Office Data Configuration
  - Perform Signaling Data Configuration

#### Training Content

##### ORN11 CDMA HLR9820V900R007 System Introduction

- CHLR9820 SYSTEM OVERVIEW
  - The structure of HUAWEI HLR9820
  - The functions of each part
  - The elements of HLR9820 and the relationship of them
  - The basic parameter
- CHLR9820 SYSTEM PRINCIPLE
  - System architecture
  - System modules function
  - Working principles of the HLR9820 modules
- CHLR9820 HARDWARE SYSTEM
  - HLR9820 hardware structure
  - HLR9820 boards function
  - Connections and cables

##### ORN21 CDMA HLR9820V900R007 Routine Operation and Maintenance

- Linux COMMAND GUIDE
  - Commands for Operating Folders
  - Commands for Operating Files
  - Commands for Viewing Files
  - Commands for Managing Users
  - Commands for Managing Resources
  - Commands for Network Communication
- CHLR9820 OPERATION GUIDE
  - Operations of HLR9820 routine maintenance
  - Usage of the Autocheck tool

##### ORN31 CDMA HLR9820V900R007 Subscriber Data Management

- CHLR9820 SMU Subscriber Data Management
  - CDMA Common Service
  - Operator Management
  - Subscriber data management

- 
- Network maintenance

ORN41 CDMA HLR9820V900R007 Data Configuration

- CHLR9820 DATA CONFIGURATION
  - Hardware Data Configuration
  - Local Office Data Configuration
  - Signaling Data Configuration
- CHLR9820 SYSTEM NETWORKING
  - The internal networking of HLR9820
  - The IP address configuration of the HLR9820

Duration

7 working days

Class Size

Min 6, Max 12

---

## 1.5.26 SingleSDB Solution Introduction (WBT)

### Training Path

SingleSDB Solution Introduction (WBT)		
OHC10	WBT	0.5H

### Target Audience

Senior Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments

### Objectives

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

- Describe SingleSDB general Solution
- Describe SingleSDB Redundancy Networking, Performance Feature
- Describe SingleSDB hardware and software structure, General working Principle

### Training Content

#### OHC10 SingleSDB Solution Introduction (WBT)

- SingleSDB Solution Introduction (WBT)
  - Evolution Trend of the USC(Unified Subscriber Data Center)
  - Huawei proposition of SingleSDB
  - Unified OM structure of SingleSDB
  - Unified Provisioning structure of SingleSDB
  - Function and benefits of SingleSDB Solution
  - SingleSDB seamless geographic redundancy solution
  - SingleSDB hardware and software structure
  - General working Principle

### Duration

0.5H

### Class Size

Min 6, Max 12

---

## 1.5.27 ATCA Hardware Platform Introduction (WBT)

### Training Path

ATCA Hardware Platform Introduction (WBT)		
OHC10	WBT	1H

### Target Audience

Senior Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments

### Objectives

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

- Describe ATCA hardware structure
- Describe ATCA boards function
- Describe connections and cables
- Describe the internal networking of SingleSDB
- Describe the IP address configuration of the USCDB

### Training Content

#### OHC10 ATCA Hardware Platform Introduction (WBT)

- ATCA Hardware Platform Introduction (WBT)
  - The functions, interfaces, connections of boards
  - ATCA hardware structure and Internal buses
  - ATCA boards function and configuration rules
  - Connections and cables
  - The cascading mode between subtracks
  - The internal networking of SingleSDB
  - The configuration mode and performance of boards
  - The IP address configuration of the USCDB

### Duration

1H

### Class Size

Min 6, Max 12

---

## 1.5.28 USCDB System Introduction (WBT)

### Training Path

USCDB System introduction (WBT)		
OHC10	WBT	1H

### Target Audience

Senior Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments

### Objectives

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

- Describe the architecture of USCDB
- Describe the Interfaces of USCDB
- Describe the hardware, logical structure of USCDB
- Describe the typical configurations of USCDB

### Training Content

#### OHC10 USCDB System introduction (WBT)

- USCDB System introduction (WBT)
  - The architecture of USCDB
  - The Networking and Interfaces of USCDB
  - The hardware, logical structure of USCDB
  - The typical configurations of USCDB
  - List key advantages of Huawei USCDB
  - List technical specifications of USCDB

### Duration

1H

### Class Size

Min 6, Max 12

---

## 1.5.29 G/U HLR9820 System Overview and Networking Introduction (WBT)

### Training Path

G/U HLR9820 System Overview and Networking Introduction (WBT)		
OHD90	WBT	1H

### Target Audience

Senior Technical Support Engineer

### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments

### Objectives

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

- Describe the architecture of G/U HLR9820
- Describe the Networking and Interfaces of G/U HLR9820
- Describe the hardware, logical structure of G/U HLR9820
- Describe the typical configurations of G/U HLR9820
- List technical specifications of G/U HLR9820
- Describe HLR9820 software and hardware structure
- Describe typical G/U service flow and working principle

### Training Content

OHD90 G/U HLR9820 System Overview and Networking Introduction (WBT)

- G/U HLR9820 System Overview and Networking Introduction (WBT)
  - The architecture of G/U HLR9820
  - The Networking and Interfaces of G/U HLR9820
  - The hardware, logical structure of G/U HLR9820
  - The typical configurations of G/U HLR9820
  - List technical specifications of G/U HLR9820
  - HLR9820 software and hardware structure
  - Typical G/U service flow and working principle

### Duration

1H

### Class Size

Min 6, Max 12

---

### 1.5.30 HSS9860 System Introduction (WBT)

#### Training Path

HSS9860 System Overview and Networking Introduction (WBT)		
OHD90	WBT	1H

#### Target Audience

Senior Technical Support Engineer

#### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments

#### Objectives

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

- Describe the architecture of G/U HLR9820
- Describe the architecture of HSS9860
- Describe the Networking and Interfaces of HSS9860
- Describe the hardware, logical structure of HSS9860
- Describe the typical configurations of HSS9860
- List technical specifications of HSS9860
- Describe HSS9860 software and hardware structure
- Describe typical G/U and LTE service flow and working principle

#### Training Content

OHD90 HSS9860 System Overview and Networking Introduction (WBT)

- HSS9860 System Overview and Networking Introduction (WBT)
  - The architecture of HSS9860
  - The Networking and Interfaces of HSS9860
  - The hardware, logical structure of HSS9860
  - The typical configurations of HSS9860
  - List technical specifications of HSS9860
  - HSS9860 software and hardware structure
  - Typical G/U and LTE service flow and working principle

#### Duration

1H

#### Class Size

Min 6, Max 12

---

### 1.5.31 UPCC System Introduction (WBT)

#### Training Path

UPCC System Overview and Networking Introduction (WBT)		
OHD90	WBT	1H

#### Target Audience

Senior Technical Support Engineer

#### Prerequisites

- At least half a year experience of operation and maintenance of telecommunication equipments

#### Objectives

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

- Describe the architecture of UPCC
- Describe the Networking and Interfaces of UPCC
- Describe the hardware, logical structure of UPCC
- Describe the typical configurations of UPCC
- List technical specifications of UPCC
- Describe UPCC software and hardware structure
- Describe typical UPCC service flow and working principle

#### Training Content

OHD90 UPCC System Overview and Networking Introduction (WBT)

- UPCC System Overview and Networking Introduction (WBT)
  - The architecture of UPCC
  - The networking and interfaces of UPCC
  - The hardware, logical structure of UPCC
  - The typical configurations of UPCC
  - List technical specifications of UPCC
  - UPCC software and hardware structure
  - Typical UPCC service flow and working principle

#### Duration

1H

#### Class Size

Min 6, Max 12



