Customer Training Catalog
Training Programs
USC Product Technology Training
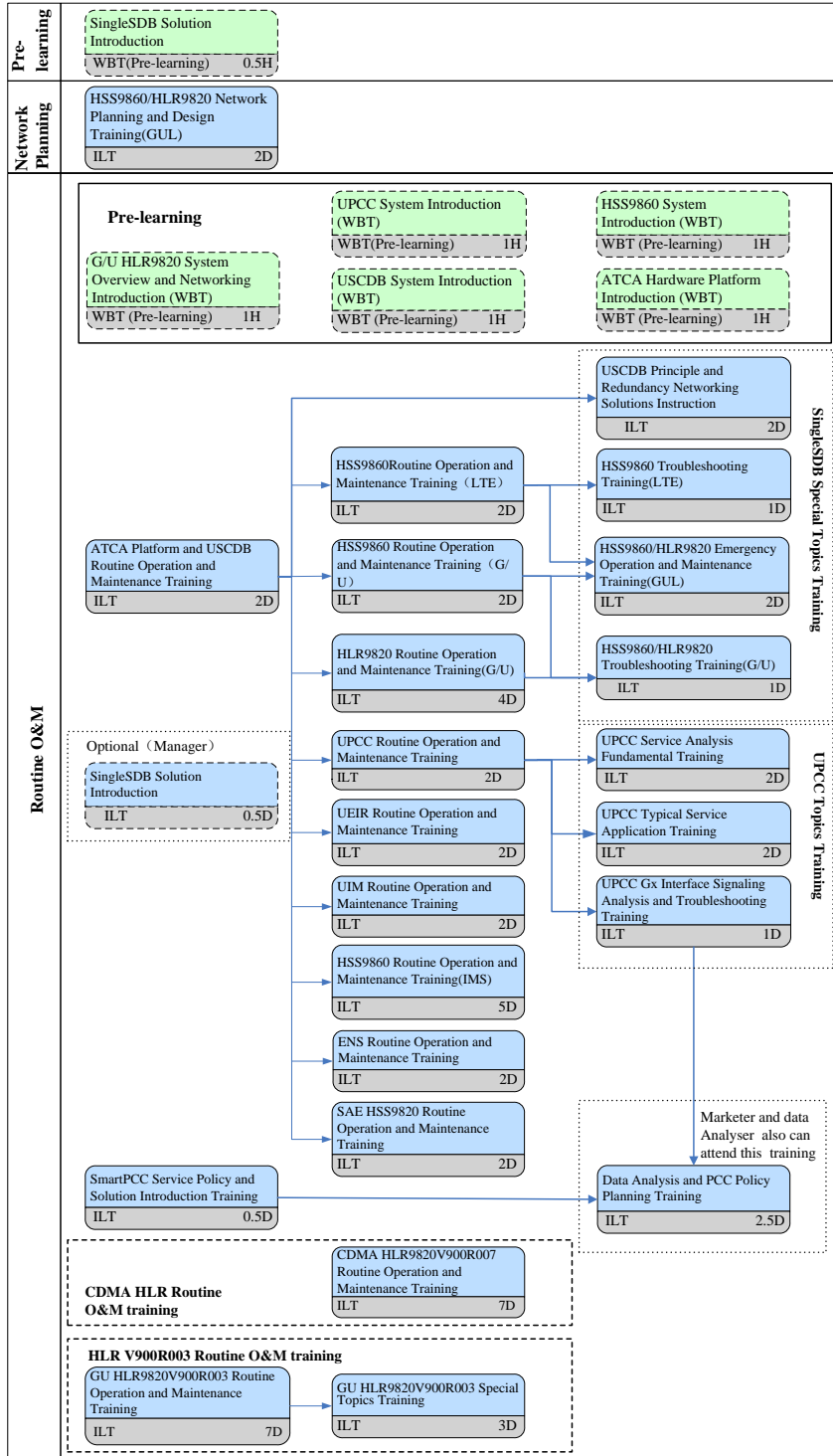
HUAWEI Learning Service
2015

CONTENTS

1 Training Path

1.1 USC Training Path

Pre-learning

SingleSDB Solution Introduction
WBT(Pre-learning)　　0.5H

Network Planning

HSS9860/HLR9820 Network Planning and Design Training(GUL)
ILT　　2D

Routine O&M

Pre-learning

G/U HLR9820 System Overview and Networking Introduction (WBT)
WBT (Pre-learning)　　1H

UPCC System Introduction (WBT)
WBT(Pre-learning)　　1H

USCDB System Introduction (WBT)
WBT (Pre-learning)　　1H

HSS9860 System Introduction (WBT)
WBT (Pre-learning)　　1H

ATCA Hardware Platform Introduction (WBT)
WBT (Pre-learning)　　1H

ATCA Platform and USCDB Routine Operation and Maintenance Training
ILT　　2D

Optional（Manager）

SingleSDB Solution Introduction
ILT　　0.5D

HSS9860 Routine Operation and Maintenance Training（LTE）
ILT　　2D

HSS9860 Routine Operation and Maintenance Training（G/U）
ILT　　2D

HLR9820 Routine Operation and Maintenance Training(G/U)
ILT　　4D

UPCC Routine Operation and Maintenance Training
ILT　　2D

UEIR Routine Operation and Maintenance Training
ILT　　2D

UIM Routine Operation and Maintenance Training
ILT　　2D

HSS9860 Routine Operation and Maintenance Training(IMS)
ILT　　5D

ENS Routine Operation and Maintenance Training
ILT　　2D

SAE HSS9820 Routine Operation and Maintenance Training
ILT　　2D

SmartPCC Service Policy and Solution Introduction Training
ILT　　0.5D

SingleSDB Special Topics Training

USCDB Principle and Redundancy Networking Solutions Instruction
ILT　　2D

HSS9860 Troubleshooting Training(LTE)
ILT　　1D

HSS9860/HLR9820 Emergency Operation and Maintenance Training(GUL)
ILT　　2D

HSS9860/HLR9820 Troubleshooting Training(G/U)
ILT　　1D

UPCC Topics Training

UPCC Service Analysis Fundamental Training
ILT　　2D

UPCC Typical Service Application Training
ILT　　2D

UPCC Gx Interface Signaling Analysis and Troubleshooting Training
ILT　　1D

Marketer and data Analyser also can attend this training

Data Analysis and PCC Policy Planning Training
ILT　　2.5D

CDMA HLR Routine O&M training

CDMA HLR9820V900R007 Routine Operation and Maintenance Training
ILT　　7D

HLR V900R003 Routine O&M training

GU HLR9820V900R003 Routine Operation and Maintenance Training
ILT　　7D

GU HLR9820V900R003 Special Topics Training
ILT　　3D

2 Training Programs

USC Product Technology Training Programs are designed as follows:

Training Programs	Level	Duration (working days)	Training Location	Class Size
USC				
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	2		6 ~ 12
UPCC Typical Service Application Training	III	2		6 ~ 12
UPCC Gx Interface Signaling Analysis and Troubleshooting 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

2.1 USC Training Programs

2.1.1 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
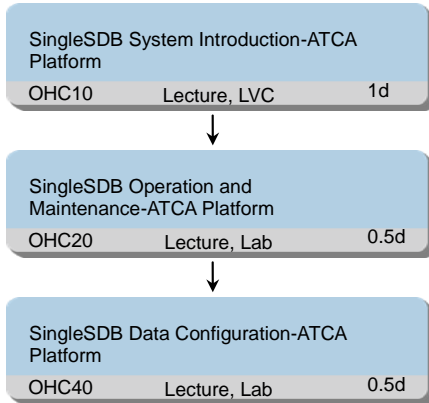
Duration

0.5 working day

Class Size

Min 6, Max 12

2.1.2 ATCA Platform and USCDB Routine Operation and Maintenance Training

Training Path

```
┌─────────────────────────────────────┐
│ SingleSDB System Introduction-ATCA   │
│ Platform                             │
│ OHC10      Lecture, LVC        1d    │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ SingleSDB Operation and              │
│ Maintenance-ATCA Platform            │
│ OHC20      Lecture, Lab        0.5d  │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ SingleSDB Data Configuration-ATCA    │
│ Platform                             │
│ OHC40      Lecture, Lab        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 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
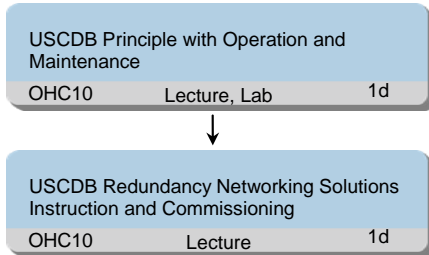- Perform Signaling Data Configuration of USCDB

Duration

2 working days

Class Size

Min 6, Max 12

2.1.3 USCDB Principle and Redundancy Networking Solutions Instruction

Training Path

```
┌─────────────────────────────────────┐
│ USCDB Principle with Operation and  │
│ Maintenance                         │
│ OHC10      Lecture, Lab         1d  │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ USCDB Redundancy Networking Solutions│
│ Instruction and Commissioning       │
│ OHC10         Lecture           1d  │
└─────────────────────────────────────┘
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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 SingelSDB 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
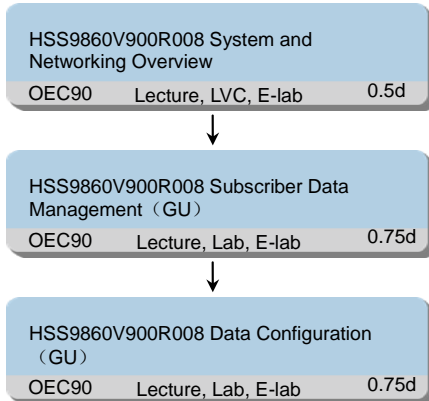● Describe PGW service feature

Duration

2 working days

Class Size

Min 6, Max 12

2.1.4 HSS9860 Routine Operation and Maintenance Training(G/U)

Training Path

HSS9860V900R008 System and Networking Overview		
OEC90	Lecture, LVC, E-lab	0.5d

↓

HSS9860V900R008 Subscriber Data Management（GU）		
OEC90	Lecture, Lab, E-lab	0.75d

↓

HSS9860V900R008 Data Configuration （GU）		
OEC90	Lecture, Lab, E-lab	0.75d

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
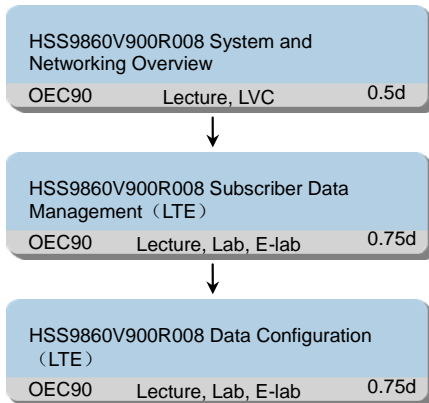- Perform basic debugging of HSS9860 (GU)

Duration

> 2 working days

Class Size

> Min 6, Max 12

2.1.5   HSS9860 Routine Operation and Maintenance Training(LTE)

Training Path

HSS9860V900R008 System and Networking Overview		
OEC90	Lecture, LVC	0.5d

↓

HSS9860V900R008 Subscriber Data Management（LTE）		
OEC90	Lecture, Lab, E-lab	0.75d

↓

HSS9860V900R008 Data Configuration （LTE）		
OEC90	Lecture, Lab, E-lab	0.75d

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
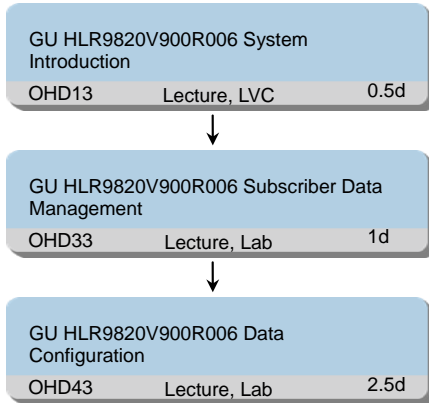- Perform basic debugging of HSS9860 (LTE)

Duration

2 working days

Class Size

Min 6, Max 12

2.1.6 HLR9820 Routine Operation and Maintenance Training(G/U)

Training Path

GU HLR9820V900R006 System Introduction		
OHD13	Lecture, LVC	0.5d

↓

GU HLR9820V900R006 Subscriber Data Management		
OHD33	Lecture, Lab	1d

↓

GU HLR9820V900R006 Data Configuration		
OHD43	Lecture, Lab	2.5d

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 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)

Duration

4 working days

Class Size

Min 6, Max 12

2.1.7   HSS9860/HLR9820 Troubleshooting Training(G/U)

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

Duration

1 working day

Class Size

Min 6, Max 12

2.1.8 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 HSS9860 operation

Successful completion of the program HSS9860 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 signaling

Duration

1 working day

Class Size

Min 6, Max 12

2.1.9 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

Duration

2 working days

Class Size

Min 6, Max 12

2.1.10 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

Duration

2 working days

Class Size

Min 6, Max 12

2.1.11 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

Duration

2 working days

Class Size

Min 6, Max 12

2.1.12 UPCC Service Analysis Fundamental Training

Training Path

UPCC Service Analysis Fundamental

OWR22   Lecture, Lab   4d

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

Duration

4 working days, 1 day for practice

Class Size

Min 6, Max 12

批注 [D(1): 修改时长

批注 [D(2): 增加描述

批注 [D(3): 修改时间描述

2.1.13 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

Duration

2 working days

Class Size

Min 6, Max 12

2.1.14 UPCC Gx Interface Signaling Analysis and Troubleshooting Training

Training Path

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

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 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

Duration

1 working day,0.5 day for practice

批注 [D(4): 增加上机描述

Class Size

Min 6, Max 12

2.1.15 UPCC Network Design Training

批注 [D(5): 新增章节

Training Path

> UPCC Network Design Training
> OWR25   Lecture, Lab   1d

Target Audience

Senior 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 UPCC and PS

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.

Duration

1 working day

Class Size

Min 6, Max 12

2.1.16 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

Duration

0.5 working day

Class Size

Min 6, Max 12

2.1.17 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 Police Analysis

> Overview
> - Perform PS Network Service Police-Service
>   Analysis
> - Perform PS Network Service Police-Location
>   Analysis
> - Perform PS Network Service Police-User
>   Analysis
> - Perform PS Network Service Police-Terminal
>   Analysis
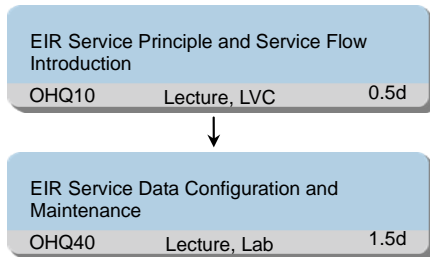> - Describe the data analysis and PCC service
>   deployment cases

Duration

> 2.5 working days

Class Size

> Min 6, Max 12

2.1.18 UEIR Routine Operation and Maintenance Training

Training Path

EIR Service Principle and Service Flow Introduction		
OHQ10	Lecture, LVC	0.5d

↓

EIR Service Data Configuration and Maintenance		
OHQ40	Lecture, Lab	1.5d

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 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
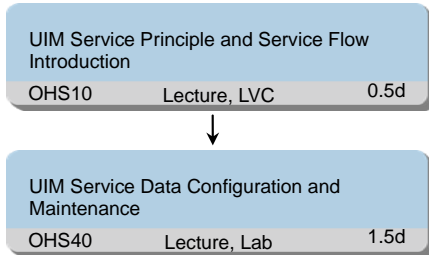- Accomplish the basic maintenance for the processes, links and services fault

Duration

2 working days

Class Size

Min 6, Max 12

2.1.19　UIM Routine Operation and Maintenance Training

Training Path

UIM Service Principle and Service Flow Introduction		
OHS10	Lecture, LVC	0.5d

↓

UIM Service Data Configuration and Maintenance		
OHS40	Lecture, Lab	1.5d

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
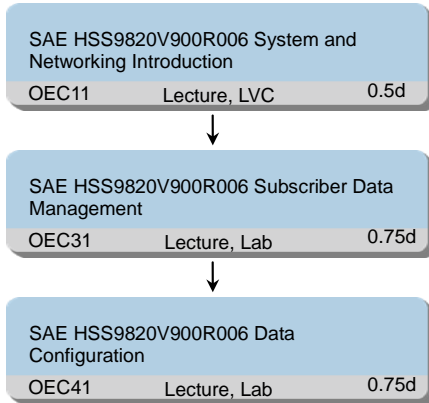> - Accomplish the basic maintenance for the processes, links and services fault

Duration

> 2 working days

Class Size

> Min 6, Max 12

2.1.20 SAE HSS9820 Routine Operation and Maintenance Training

Training Path

SAE HSS9820V900R006 System and Networking Introduction		
OEC11	Lecture, LVC	0.5d

↓

SAE HSS9820V900R006 Subscriber Data Management		
OEC31	Lecture, Lab	0.75d

↓

SAE HSS9820V900R006 Data Configuration		
OEC41	Lecture, Lab	0.75d

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

Duration

2 working days

Class Size

Min 6, Max 12

2.1.21 HSS9860 Routine Operation and Maintenance Training(IMS)

Training Path

See 2014 Customer Training Catalog - Training Programs (IMS Product Technology Training)

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)

Duration

5 working days

Class Size

Min 6, Max 12

2.1.22 ENS Routine Operation and Maintenance Training

Training Path

> See 2014 Customer Training Catalog - Training
> Programs (IMS Product Technology Training)

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
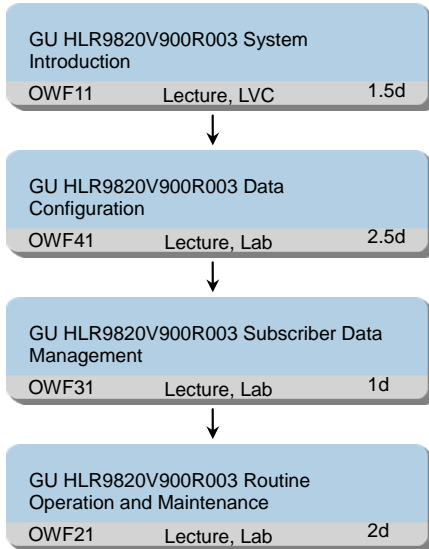> Programs (IMS Product Technology Training)

Duration

> 2 working days

Class Size

> Min 6, Max 12

2.1.23 GU HLR9820V900R003 Routine Operation and Maintenance Training

Training Path

```
┌─────────────────────────────────────┐
│ GU HLR9820V900R003 System            │
│ Introduction                         │
├──────────────────────────────────────┤
│ OWF11        Lecture, LVC      1.5d  │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ GU HLR9820V900R003 Data              │
│ Configuration                        │
├──────────────────────────────────────┤
│ OWF41        Lecture, Lab      2.5d  │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ GU HLR9820V900R003 Subscriber Data   │
│ Management                           │
├──────────────────────────────────────┤
│ OWF31        Lecture, Lab      1d    │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ GU HLR9820V900R003 Routine           │
│ Operation and Maintenance            │
├──────────────────────────────────────┤
│ OWF21        Lecture, 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

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
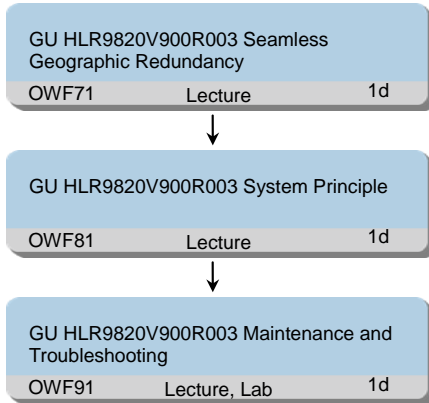- Perform Signaling Data Configuration

Duration

7 working days

Class Size

Min 6, Max 12

2.1.24 GU HLR9820V900R003 Special Topics Training

Training Path

GU HLR9820V900R003 Seamless Geographic Redundancy		
OWF71	Lecture	1d

↓

GU HLR9820V900R003 System Principle		
OWF81	Lecture	1d

↓

GU HLR9820V900R003 Maintenance and Troubleshooting		
OWF91	Lecture, 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 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
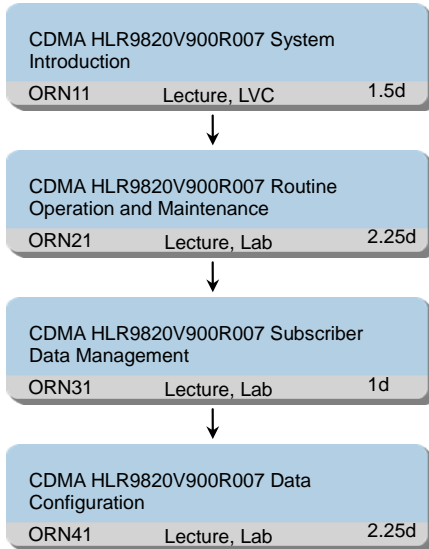- Handle hardware, components or service faults

Duration

3 working days

Class Size

Min 6, Max 12

2.1.25 CDMA HLR9820V900R007 Routine Operation and Maintenance Training

Training Path

CDMA HLR9820V900R007 System
Introduction

ORN11   Lecture, LVC   1.5d

↓

CDMA HLR9820V900R007 Routine
Operation and Maintenance

ORN21   Lecture, Lab   2.25d

↓

CDMA HLR9820V900R007 Subscriber
Data Management

ORN31   Lecture, Lab   1d

↓

CDMA HLR9820V900R007 Data
Configuration

ORN41   Lecture, Lab   2.25d

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

Duration

7 working days

Class Size

Min 6, Max 12

2.1.26 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 SingelSDB hardware and software structure, General working Principle

Duration

0.5H

Class Size

Min 6, Max 12

2.1.27 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

Duration

1H

Class Size

Min 6, Max 12

2.1.28 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

Duration

1H

Class Size

Min 6, Max 12

2.1.29 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

Duration

1H

Class Size

Min 6, Max 12

2.1.30 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 HSS9860
- Describe the Networking and Interfaces of HSS9860
- Describe the hardware, logical structure of HSS9860
- Describe the typical   configurations of HSS9860
- List technical specifications ofHSS9860
- Describe HSS9860 software and hardware structure
- Describe typical G/U and LTE service flow and working principle

Duration

1H

Class Size

Min 6, Max 12

2.1.31 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

Duration

1H

Class Size

Min 6, Max 12