

# Customer Training Catalog Course Descriptions C&C08



**HUAWEI**  
**HUAWEI Learning Service**  
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## 1.1 Training Course Descriptions

C&C08 Training Courses are designed as follows:

Code	Training Courses	Level	Duration (working days)	Training Location	Class Size
<b>C&amp;C08 Training Courses</b>					
OSC01	C&C08 Switch System Overview	I	0.5		6 ~ 12
OSC02	C&C08 Switch Hardware System	II	3.5		6 ~ 12
OSC03	C&C08 Switch Data Configuration	II	8		6 ~ 12
OSC04	C&C08 System Maintenance	II	5		6 ~ 12
OSC05	C&C08 Switch Troubleshooting	II	1		6 ~ 12
OSD01	C&C08 Switch In-depth Introduction	III	3		6 ~ 12
OSD02	C&C08 Switch Advanced Maintenance	III	7		6 ~ 12
OSD03	C&C08 Switch Advanced Troubleshooting	III	2		6 ~ 12
OSD04	C&C08 Switch Introduction to Special Subject	III	2.5		6 ~ 12
OSD05	C&C08 Switch Network Planning	III	0.5		6 ~ 12
OSP01	Basic Knowledge of Intelligent Network	II	3		6 ~ 12
OSP02	C&C08-SSP Hardware System	II	2		6 ~ 12
OSP03	C&C08-SSP Operation and Maintenance	II	4		6 ~ 12
OSP04	C&C08-SSP Troubleshooting	II	1		6 ~ 12

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## 1.2 C&C08 Training Course Descriptions

### 1.2.1 OSC01 C&C08 Switch System Overview



#### Objectives

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

- Explain the basic principle and structure of the C&C08 Switch system.
- Outline the performance of C&C08 Switch system.

#### Target Audience

NMS operator, Technical support engineer

#### Prerequisites

- A basic understanding of telecommunication

#### Content

- The overall knowledge of system structure, service configuration and system performance.

#### Training Methods

Lectures

#### Duration

0.5 working day

#### Class Size

Min 6, max 12

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## 1.2.2 OSC02 C&C08 Switch Hardware System



### Objectives

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

- Describe the system structure at module, frame and board level and the performance features of C&C08.
- Identify the hierarchy and network architecture of AM/CM.
- Explain the system resource allocation, the control architecture and the communication process of SM.
- Identify the general hardware structure of C&C08.

### Target Audience

Technical support engineer

### Prerequisites

- A basic understanding of telecommunication
- At least one year experience in operation and maintenance of PSTN field
- Completion of OSC01 C&C08 Switch System Overview course

### Content

- The overall architecture of Switch Module.
- Frame and board description of Switch Module.

- The functional structure, control structure, network structure and system resource allocation of Switch Module.
- Various modules composing the Central Module.
- Frame and board description of Central Module.
- Hardware architecture and functions of each functional module.
- C&C08 terminal system architecture.
- The hardware and software platform of BAM and WS.
- The hardware structure of alarm system.
- The general knowledge about internal cable/wire distribution of AMCM.
- Introduction of internal fiber, HDLC and HW connection.

### Training Methods

Lectures, Hands-on exercise

### Duration

3.5 working days

### Class Size

Min 6, max 12

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## 1.2.3 OSC03 C&C08 Switch Data Configuration



### Objectives

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

- Set and maintain the office data.
- Set and maintain the user data.
- Set and maintain the trunk data.
- Set and maintain the charging data.

### Target Audience

Technical support engineer

### Prerequisites

- Being familiar with computer operation
- A basic understanding of telecommunication
- At least one year experience in operation and maintenance of PSTN field
- Completion of OSC01 C&C08 Switch System Overview course and OSC02 C&C08 Switch Hardware System course

### Content

- Configure the hardware data of AM/CM and SM.
- Related concepts introduction of user data.
- Configure the primary subscriber data.
- PBX service introduction.

- Configure the PBX data.
- Centrex service introduction.
- Configure the Centrex data.
- The concept, function and hierarchy introduction of CCS7.
- MTP function detailed description.
- Basic signaling procedure of CCS7.
- SPM hardware and service introduction.
- Configure SPM data.
- Configure CCS7 trunk data.
- Configure CCS7 link data.
- The concept and application of PRA.
- Configure PRA data.
- Charging system working principle.
- Charging data setting.

### Training Methods

Lectures, Hands-on exercise

### Duration

8 working days

### Class Size

Min 6, max 12

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## 1.2.4 OSC04 C&C08 System Maintenance



### Objectives

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

- Use the common tools in the maintain subsystem.
- Perform the routine operations in the bill management subsystem.
- Perform the routine operations in the traffic statistics subsystem.
- Perform the routine maintenance tasks.

### Target Audience

Technical support engineer

### Prerequisites

- Being familiar with computer operation
- A basic understanding of telecommunication
- At least one year experience in operation and maintenance of PSTN field
- Completion of OSC01 C&C08 Switch System Overview course, OSC02 C&C08 Switch Hardware System course and OSC03 C&C08 Switch Data Configuration course

### Content

- Bill ticket management.
- Browse the bill information in bill pool and

BAM.

- Fetch the bill ticket from host to BAM.
- The caller number discrimination principle and application.
- The inter-group call restriction principle and application.
- Configure the special call barring group -Black list and White list.
- The outgoing call barring service.
- Describe the concept, function and structure of test system.
- Perform instant test and routine test.
- Discuss the traffic statistics result and test result application.
- Describe the concept, function and structure of traffic statistics.
- Manage traffic statistics tasks.
- The routine operation and maintenance.

### Training Methods

Lectures, Hands-on exercise

### Duration

5 working days

### Class Size

Min 6, max 12

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## 1.2.5 OSC05 C&C08 Switch Troubleshooting



### Objectives

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

- Perform the troubleshooting for minor faults.
- Explain the alarm subsystem and perform the routine operation.
- Perform the various tests and analyze the test results.

### Target Audience

Technical support engineer

### Prerequisites

- Being familiar with computer operation
- A basic understanding of telecommunication
- At least one year experience in operation and maintenance of PSTN field
- Completion of OSC01 C&C08 Switch System

Overview course, OSC02 C&C08 Switch Hardware System course, OSC03 C&C08 Switch Data

### Content

- The troubleshooting method for minor faults.
- The alarm subsystem and the routine operation.
- The various tests and analyze the test results.

### Training Methods

Lectures, Hands-on exercise

### Duration

1 working day

### Class Size

Min 6, max 12



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## 1.2.6 OSD01 C&C08 Switch In-depth Introduction



### Objectives

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

- Describe the knowledge of Windows NT and SQL Server.
- Describe the loading procedure of C&C08 hardware system.
- Describe the principle of C&C08 clock system.
- Describe the principle of C&C08 charging system.

### Target Audience

Specialist

### Prerequisites

- Completion of C&C08 Operation and Maintenance Training
- Being familiar with computer operation
- A basic understanding of telecommunication
- At least one year experience in operation and maintenance of PSTN field

### Content

- The overall architecture of C&C08 switching system.

- AM/CM hardware architecture.
- Signal flow in the central module.
- SM hardware architecture.
- Signal flow in the switching module.
- Structure of the clock system, communications control system, voice channel and signaling system.
- Concept of program and data loading of C&C08.
- Loading procedures of the key boards of AM/CM and SM.
- In-depth introduction of terminal system platform including operation system and database.
- BAM server and SQL server installation demonstration.

### Training Methods

Lectures, Hands-on exercise

### Duration

3 working days

### Class Size

Min 6, max 12

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## 1.2.7 OSD02 C&C08 Switch Advanced Maintenance



### Objectives

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

- Perform the whole system hardware configuration.
- Perform the whole system software installation.
- Perform the advanced data setting such as number change, call failure process and auxiliary signaling.
- Describe the principle of software parameter.

### Target Audience

Specialist

### Prerequisites

- Completion of C&C08 Operation and Maintenance Training
- Being familiar with computer operation
- A basic understanding of telecommunication
- At least one year experience in operation and maintenance of PSTN field

### Content

- Introduce some advanced data setting such as number change, auxiliary signaling, trunk bearer, call failure process.
- Introduce software parameter function and application.
- Charging and billing system advanced maintenance.
- Advanced charging data setting.
- Charging security management.
- CRG charging introduction.
- The rules of C&C08 project data setting.
- The general suggestions of C&C08 network structure and module configuration.

### Training Methods

Lectures, Hands-on exercise

### Duration

7 working days

### Class Size

Min 6, max 12

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## 1.2.8 OSD03 C&C08 Switch Advanced Troubleshooting



### Objectives

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

- State the general procedures and methods of troubleshooting.
- Describe the alarm information and use the maintenance tool for troubleshooting.
- Perform troubleshooting for various faults.

### Target Audience

Specialist

### Prerequisites

- Completion of C&C08 Operation and Maintenance Training
- Completion of OSD01 C&C08 Switch In-depth Introduction course and OSD02 C&C08 Switch Advanced Maintenance course
- Being familiar with computer operation

- A basic understanding of telecommunication
- At least one year experience in operation and maintenance of PSTN field

### Content

- The emergency recovery operation after making mistake of important operation.
- The important operation and commands usually used in C&C08.

### Training Methods

Lectures, Hands-on exercise

### Duration

2 working days

### Class Size

Min 6, max 12

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## 1.2.9 OSD04 C&C08 Switch Introduction to Special Subject



### Objectives

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

- Describe the detailed call process of C&C08 switch.
- Describe the principle of trunk line hunting.
- Describe the MTP and ISUP principle.

### Target Audience

Specialist

### Prerequisites

- Completion of C&C08 Operation and Maintenance Training
- Being familiar with computer operation
- A basic understanding of telecommunication
- At least one year experience in operation and maintenance of PSTN field

### Content

- MTP protocol principle and function detailed introduction.

- SS7 signaling link management.
- MTP message tracing and process instruction.
- ISUP protocol, message and parameter introduction.
- ISUP call setup process.
- ISUP message tracing concept and process instruction.
- The special introduction of route, sub-route, trunk group, trunk circuit and the relations among them.
- The selection principle and methods of route, sub-route, trunk group and trunk circuit.

### Training Methods

Lectures, Hands-on exercise

### Duration

2.5 working days

### Class Size

Min 6, max 12

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## 1.2.10 OSD05 C&C08 Switch Network Planning



### Objectives

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

- Describe the planning and configuration principle of C&C08 switch.
- Describe the network management principle of C&C08 switch.
- Perform the basic design of C&C08 switch according to requirements.

### Target Audience

Specialist

### Prerequisites

- Completion of C&C08 Operation and Maintenance Training

- A basic understanding of telecommunication
- At least one year experience in operation and maintenance of PSTN field

### Content

- Main procedures of Telecom Network design.
- C&C08 application in Telecom Network Design.

### Training Methods

Lectures

### Duration

0.5 working day

### Class Size

Min 6, max 12

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## 1.2.11 OSP01 Basic Knowledge of Intelligent Network



### Objectives

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

- Describe the basic knowledge of SS7 signaling system.
- Describe the basic knowledge of SCCP, TCAP and INAP protocol.
- State the application of SS7 in the IN system.

### Target Audience

C&C08 SSP technical support engineer

### Prerequisites

- At least one year experience in operation and maintenance of PSTN field
- A basic understanding of telecommunication

### Content

- The architecture, component and conceptual model of IN.
- TELLIN system networking, charging and application.
- The concept, function and hierarchy

introduction of CCS7.

- MTP function detailed description.
- Signaling units explanation.
- Basic signaling procedure of CCS7.
- Features and functions introduction of SCCP.
- Description of addressing and routing functions of SCCP.
- Introduction of SCCP message format.
- Features and functions introduction of TCAP.
- Introduction of TCAP message format.
- Introduction of INAP operations.
- INAP information flow.

### Training Methods

Lectures, Hands-on exercise

### Duration

3 working days

### Class Size

Min 6, max 12

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## 1.2.12 OSP02 C&C08-SSP Hardware System



### Objectives

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

- Describe the basic architecture of C&C08 SSP hardware.
- Describe the hierarchy and network architecture of AM/CM.
- Describe the system resource allocation, the control architecture and the communication process of SM.
- Identify the general hardware structure of C&C08 SSP.

### Target Audience

C&C08 SSP technical support engineer

### Prerequisites

- At least one year experience in operation and maintenance of PSTN field
- A basic understanding of telecommunication

### Content

- Various modules composing the Central Module.
- Frame and board description of Central Module.
- Hardware architecture and functions of each functional module.
- The general knowledge about internal cable/wire distribution of AMCM.
- Introduction of internal fiber, HDLC and HW connection.
- SPM hardware and service introduction.
- Configure SPM data.

### Training Methods

Lectures

### Duration

2 working days

### Class Size

Min 6, max 12

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### 1.2.13 OSP03 C&C08-SSP Operation and Maintenance



#### Objectives

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

- Describe the basic architecture of C&C08 SSP hardware.
- Describe the hierarchy and network architecture of AM/CM.
- Describe the system resource allocation, the control architecture and the communication process of SM.
- Identify the general hardware structure of C&C08 SSP.

#### Target Audience

C&C08 SSP technical support engineer

#### Prerequisites

- At least one year experience in operation and maintenance of PSTN field

- Being familiar with computer operation
- A basic understanding of telecommunication

#### Content

- Configure CCS7 trunk data.
- Configure CCS7 link data.
- Intelligent service data configuration method, procedure and maintenance.
- Description of PCS service feature, numbering format and call flow.

#### Training Methods

Lectures, Hands-on exercise

#### Duration

4 working days

#### Class Size

Min 6, max 12



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## 1.2.14 OSP04 C&C08-SSP Troubleshooting



### Objectives

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

- Analyze the general malfunction of the C&C08-SSP system.
- Perform the troubleshooting of the C&C08-SSP system.
- Describe troubleshooting flow of the C&C08-SSP.

### Target Audience

C&C08 SSP technical support engineer

### Prerequisites

- Completion of OSP01 Basic Knowledge of Intelligent Network course, OSP02 C&C08-SSP Hardware System course and OSP03 C&C08-SSP Operation and Maintenance course

- At least one year experience in operation and maintenance of PSTN field
- Being familiar with computer operation
- A basic understanding of telecommunication

### Content

- Troubleshooting flow of the C&C08-SSP.
- The general malfunction of the C&C08-SSP system.

### Training Methods

Lectures, Hands-on exercise

### Duration

1 working day

### Class Size

Min 6, max 12

