



# **IPLOOK\_IKEPC500 Website Manual V2.3**

IPLOOK Technologies

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## Catalogue

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## 1. Summarize

This product is a 4G core network network management system for IPLOOK's IKEPC500, designed to provide a web platform for users to interact with core network devices.

### 1.1. Advantages

The interface is simple and generous, very user-friendly, available as long as you have a browser, installation-free and adapted to terminals of various resolutions.

Support for HTTPS protocols to improve security.

Support for internationalization and localization, with Chinese and English currently implemented and other languages to be added in the future according to actual needs.

Deploy independently and support concurrent operations.

### 1.2. Functional division

Web Webmaster has the following features.

- **Configuration management:** configuration of several important network elements MME/GW/HSS/PCRF
- **System management:** contains device management, configuration management, security management, log management, topology management, software management, License management, Web information management, signaling tracking, template management, UE information.
- **Statistics:** includes task management and performance thresholds
- **Alarms:** including real-time alarms, historical alarms, alarm summary view, alarm file management, alarm storage time, alarm generation time, CPU threshold setting
- **Integration portal**

## 2. Webmaster Login

Login to the system: Fill in the IP address at the URL of your browser to enter the login page. Enter the corresponding user name and password on the login page (the default user name and password for the initial installation are: admin, 123456), and click Sign in (or directly Enter key) to login the web page.

As shown in Figure 1.

Tips: In order to have a better user experience, it is recommended to use Google or Firefox browser.

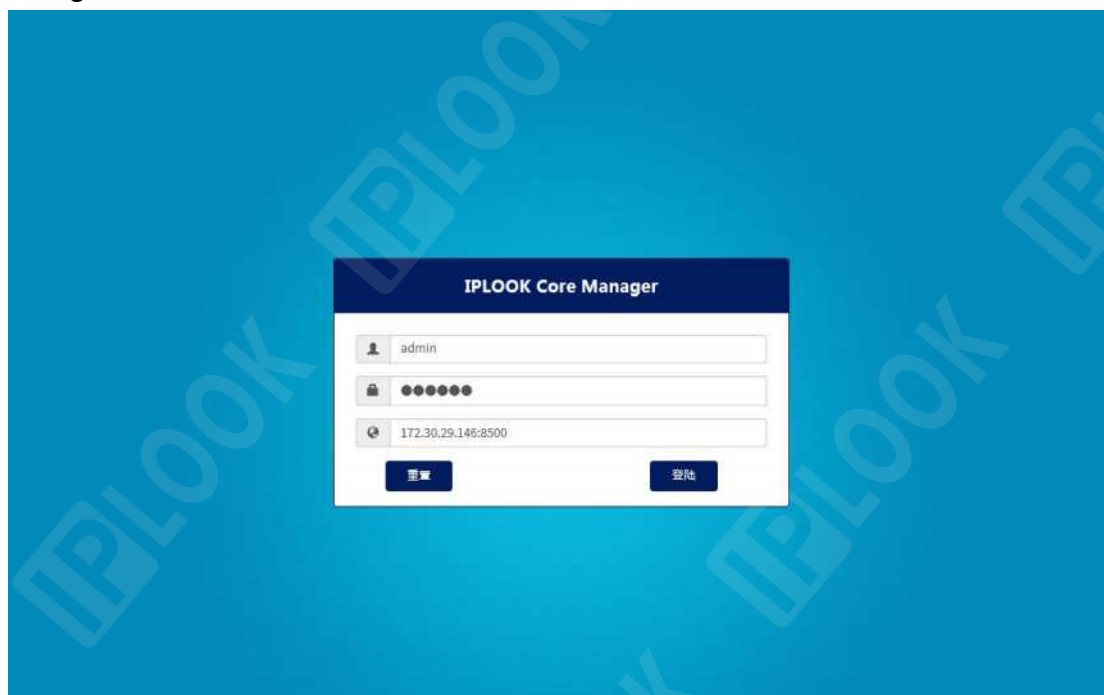


Figure 1 Login screen

The system interface after initial login is shown in Figure 2.



Figure 2 The screen after initial login to the system

The screen after configuring each network element login is shown in Figure 3.

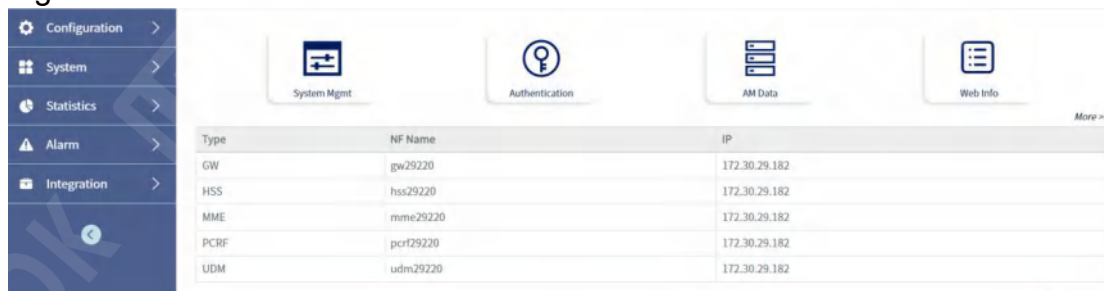


Figure 3 Interface after logging into the system

### 3. Configuration

#### 3.1. MME

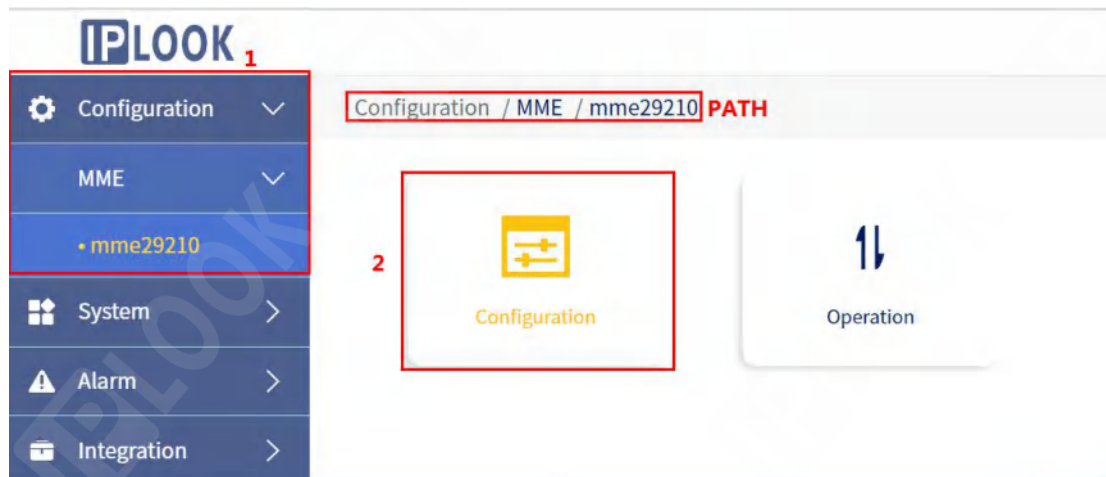


Figure 1.1-1 MME-Configuration path

##### 3.1.1. Service Interface

**Description:** Used to add, delete and query the IP addresses of S1, S6, S11, S10 and other interfaces of MME

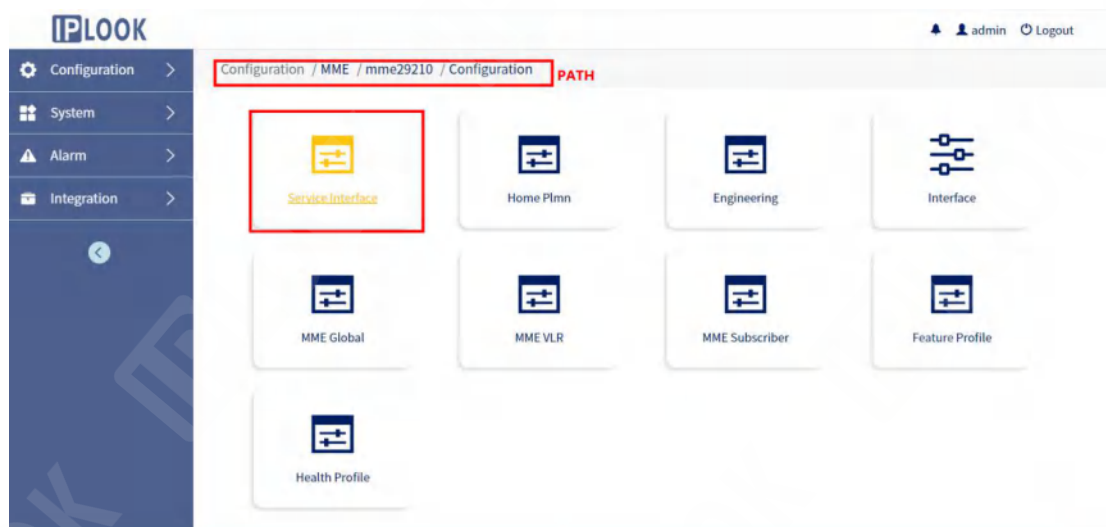


Figure 3.1.1-1 Service Interface Path

##### 3.1.1.1. Adding Service Interface

**Path:** Configuration-->MME-->Configuration-->Service Interface-->Service Interface

**Steps:** Click the "Add" button under the Service interface page --> fill in the

configuration information in the pop-up box --> click the "Add" button in the pop-up box to save the configuration.

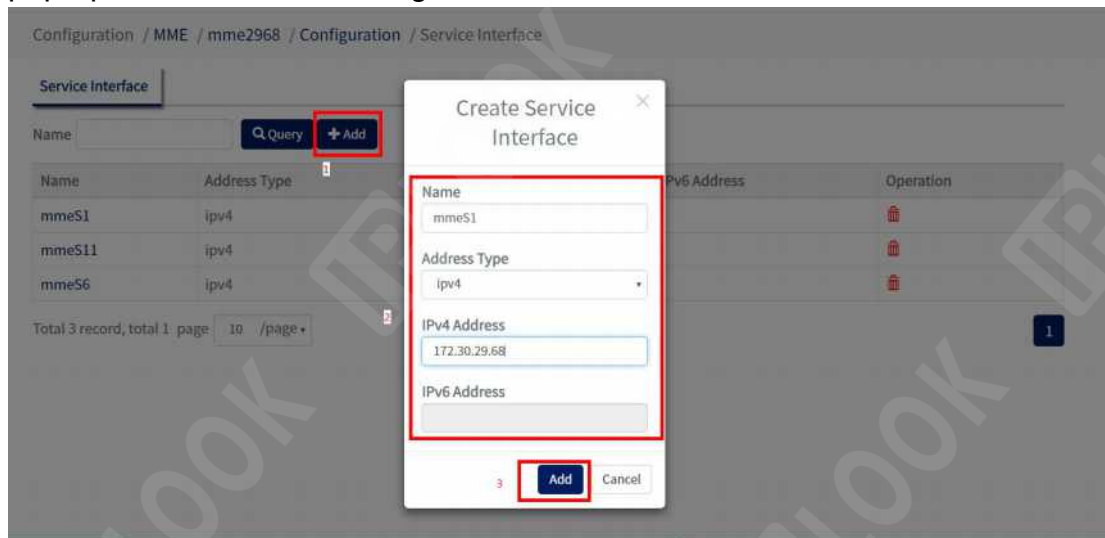


Figure 3.1.1-2 Example of S1 interface for adding mme Configuration items and descriptions.

configuration item	instructions
Name	Configure the interface name
Address Type	ipv4 address type:select ipv4 or ipv6
IPV4 Address	ipv4 address
IPV6 Address	IPv6 address

### 3.1.1.2. Query Service Interface

**Path:** Configuration-->MME-->Configuration-->Service Interface-->Service Interface

**Step:** Enter the name of the interface you want to query in the Name box --> click Query, if it exists, it will be displayed in the interface list below, if it does not exist, a "Not exist" prompt box will pop up.

### 3.1.1.3. Delete Service Interface

**Path:** Configuration-->MME-->Configuration-->Service Interface-->Service Interface

**Step:** Click the delete icon of the corresponding row of the interface you want to delete in the list in the Service interface page --> click "OK" in the pop-up box to delete successfully.



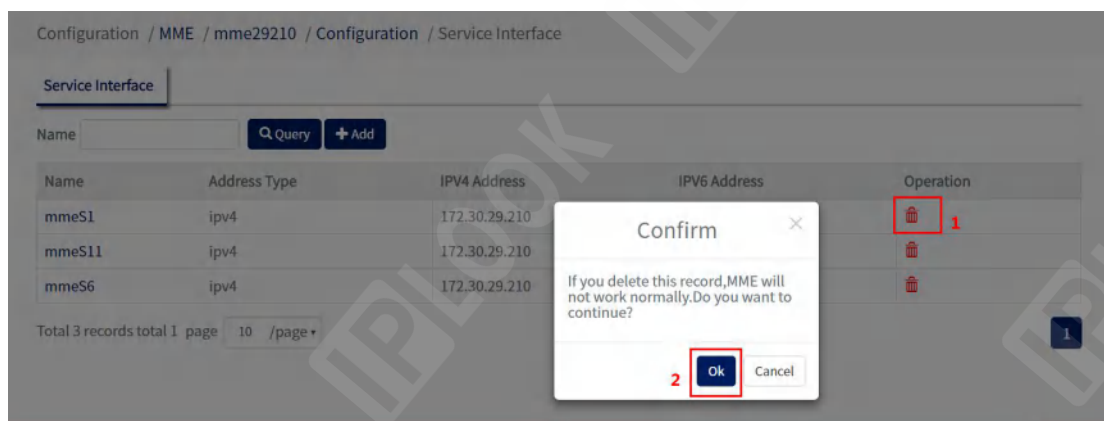


Figure 3.1.1-3 Example of S1 interface for deleting mme

### 3.1.2. Home Plmn

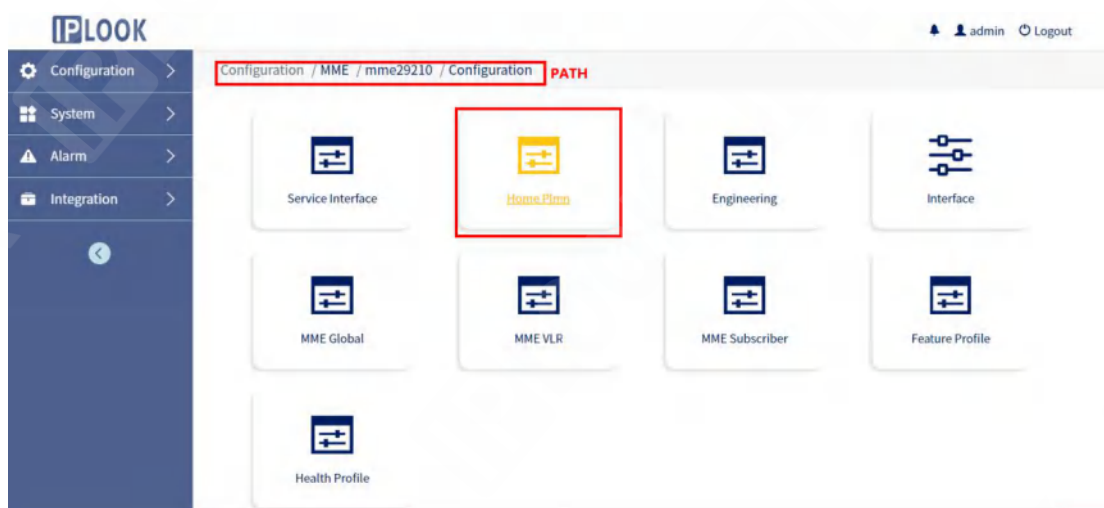


Figure 3.1.2-1 Home Plmn's path

**Description:** Local PLMN configuration is mainly to configure the MME's logo and local PLMN parameters, providing add, delete, query and modify PLMM configuration.

#### 3.1.2.1. Add HOME PLMN

**Path:** Configuration-->MME-->Configuration-->Home Plmn-->HOME PLMN

**Steps:** Click "Add" --> fill in the information --> click "Add", add successfully.

Figure 3.1.2-2 Example of adding a PLMN configuration

Configuration items and descriptions.

configuration item	instructions
PLMN ID	PLMN used
MME Group ID	mme group identifier, unique within plmn, uniquely corresponds to a location region

MME Code	MME number, a unique mme number within a mme group
Relative Capacity	mme's load weight, the base station selects a mme with normal operating state for ue based on this value, and the mme sends this value down to the base station via S1SetupResponse

### 3.1.2.2. Inquire about HOME PLMN

**Path:** Configuration-->MME-->Configuration-->Home Plmn-->HOME PLMN

**Step:** Fill in the PLMN ID box with the plmn you want to query --> click the "Query" button, if it exists, it will be displayed under the PLMN list, if it does not exist, the "Not exist" prompt box will pop up.

### 3.1.2.3. Delete HOME PLMN

**Path:** Configuration-->MME-->Configuration-->Home Plmn-->HOME PLMN

**Step:** Click the delete icon of the corresponding row under the list in the HOME PLMN page --> click the "OK" button in the pop-up box to delete successfully.

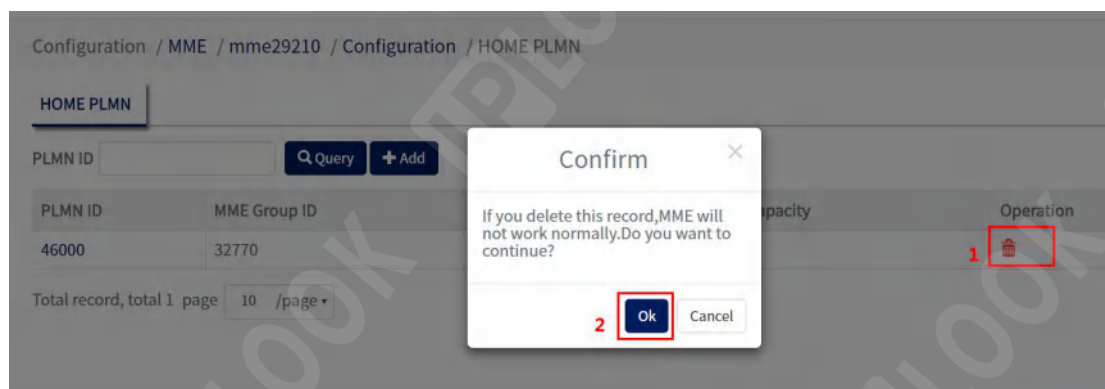


Figure 3.1.2-3 Example of deleting a PLMN configuration

### 3.1.3. Engineering

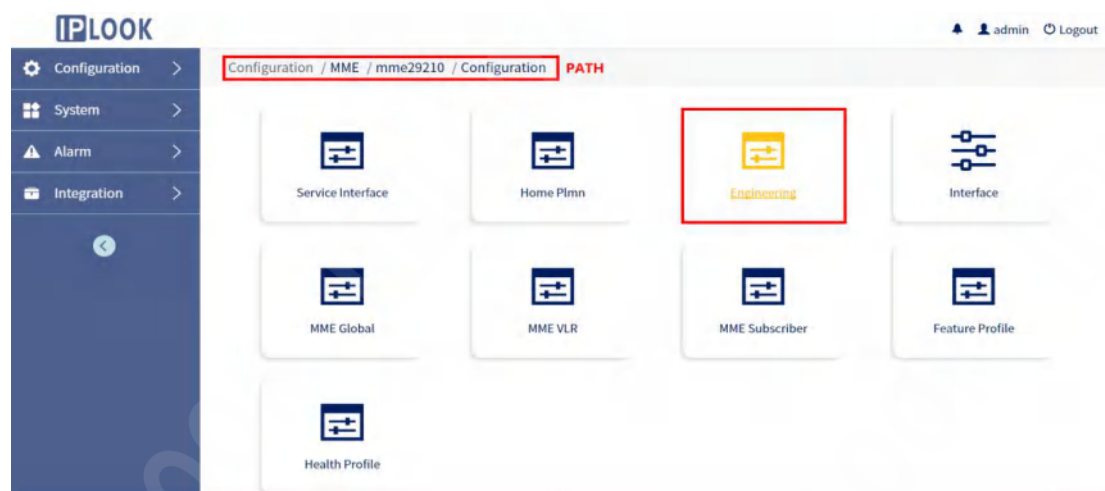


Figure 3.1.3-1 Engineering path

#### 3.1.3.1. S1 Capacity Profile

**Description:** Add, modify and delete the number of control base stations

##### 3.1.3.1.1. Add S1 Capacity Profile

**Path:** Configuration-->MME-->Configuration-->Engineering-->S1-Capacity Profile

**Steps:** Fill in the information in the Name box and S1 Capacity box --> Click the "Add" button to add successfully.

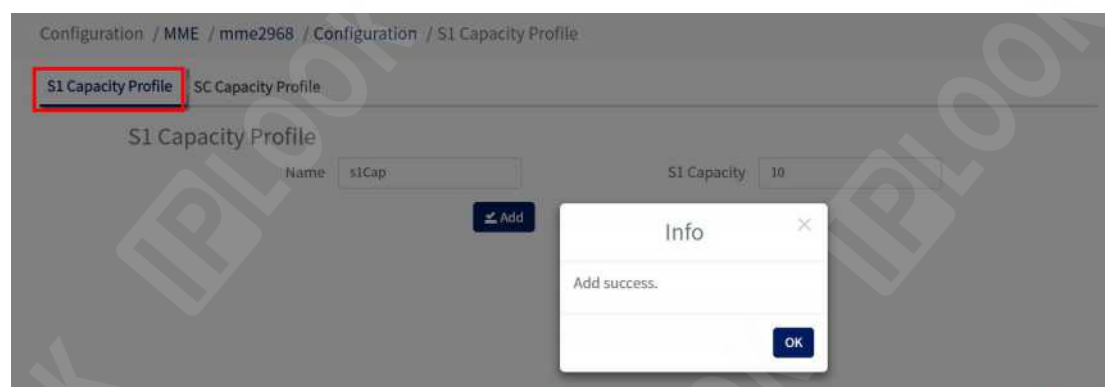


Figure 3.1.3.1-2 Example of Adding S1 Capacity Configuration

Configuration items and descriptions.

configuration item	instructions
Name	name
S1 Capacity	Maximum number of base stations to which the MME can be connected (for

	pre-allocation of resources, actual number of accessible base stations <= this value, restarting the process takes effect, configured according to system resources)
--	--

### 3.1.3.1.2. Modify S1 Capacity Profile

**Path:** Configuration-->MME-->Configuration-->Engineering-->S1-Capacity Profile

**Step:** Fill in the information in S1 Capacity box -> click "Update", the modification is successful.

### 3.1.3.1.3. Delete S1 Capacity Profile

**Path:** Configuration-->MME-->Configuration-->Engineering-->S1-Capacity Profile

**Steps:** Click "Delete" --> click "OK" in the pop-up box, the deletion is complete.

### 3.1.3.2. SC Capacity Profile

**Description:** Mainly to configure the SC capacity related parameters of MME.

#### 3.1.3.2.1. Add SC Capacity Profile

**Path:** Configuration-->MME-->Configuration-->Engineering-->SC Capacity Profile

**Step:** Click the "SC Capacity Profile" button --> fill in the information under the configuration box --> click "Add" to finish adding.

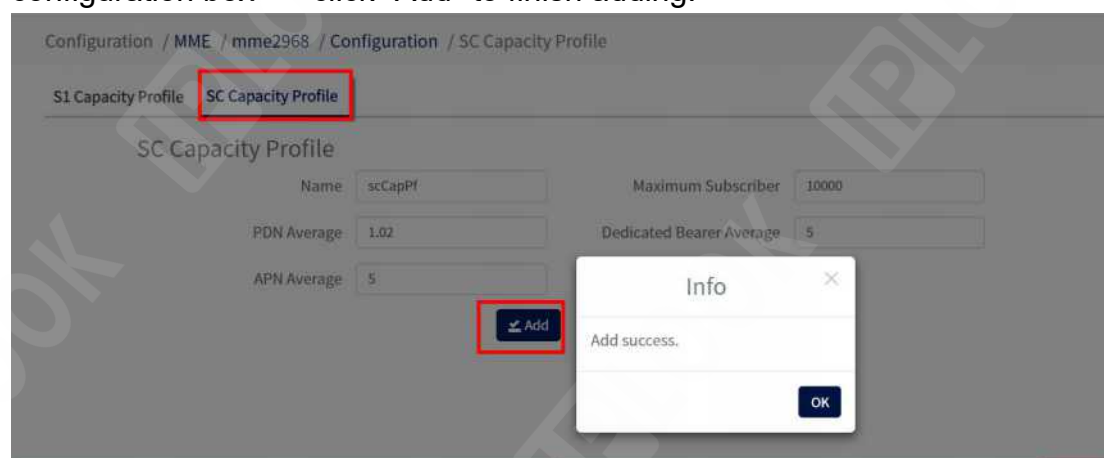


Figure 3.1.3.2-1 Example of adding an SC Capacity Profile configuration Configuration items and descriptions.

configuration item	Configuration item description
--------------------	--------------------------------

Name	Name this configuration
Maximum Subscriber	Maximum number of users supported by MME (for pre-allocation of resources, actual number of accessible users <= this value, restarting the process takes effect, configured according to system resources)
PDN Average	Average number of PDNs supported per user on MME
Dedicated Bearer Average	Average number of bearers supported per user on MME
APN Average	Average number of apn supported per user on MMW

#### 3.1.3.2.2.Modify SC Capacity Profile

**Path:** Configuration-->MME-->Configuration-->Engineering-->SC Capacity Profile

**Steps:** Mouse click the configuration box you need to modify (such as PDN Average) --> fill in the modified information --> click the "Update" button --> click the "OK" button in the pop-up box to modify successfully.

#### 3.1.3.2.3.Delete SC Capacity Profile

**Path:** Configuration-->MME-->Configuration-->Engineering-->SC Capacity Profile

**Steps:** Click the "Delete" button on the page --> click the "OK" button in the pop-up box to delete successfully.



### 3.1.4. Interface

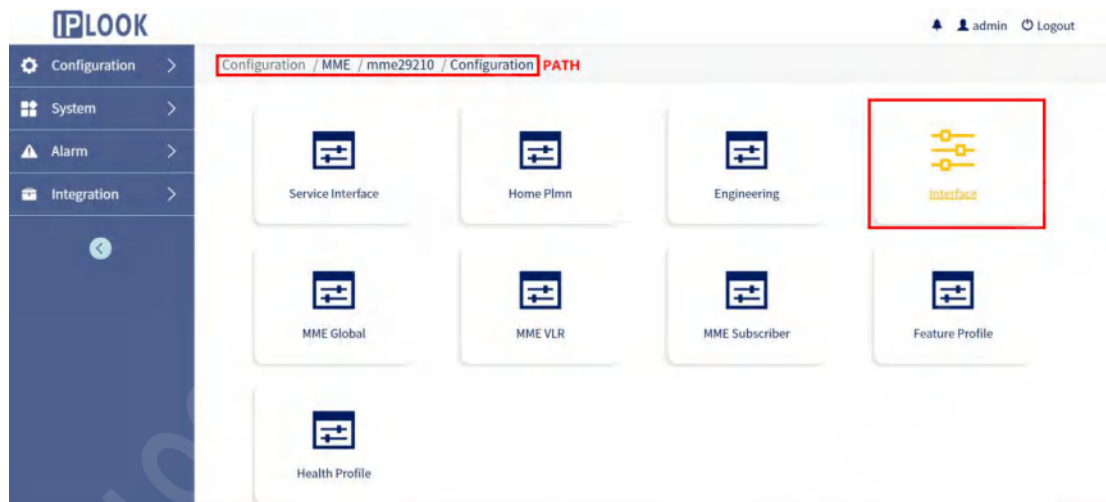


Figure 3.1.4-1 InterfaceInterface path

#### 3.1.4.1. SCTP Profile

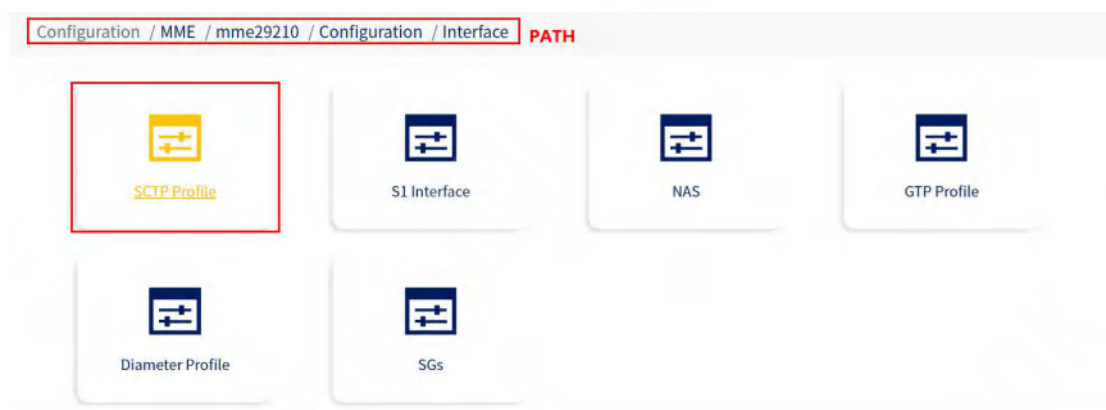


Figure 3.1.4.1-1 Sctp Profile path

**Description:** Configure the SCTP address of interfaces S1, S6, etc. of MME

##### 3.1.4.1.1. Adding an SCTP Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->SCTP Profile

**Steps:** Click "Add" on the SCTP Profile page --> fill in the information in the pop-up box --> click "Add" in the pop-up box to add successfully.

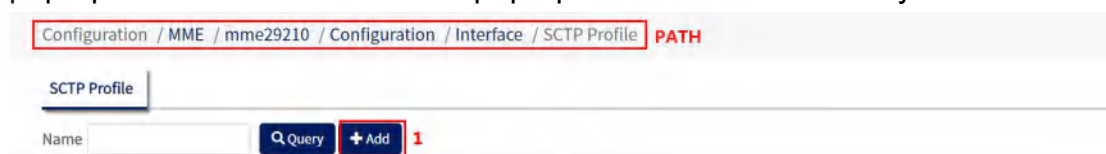


Figure 3.1.4.1-1 Example of Adding S1 Interface Step 1

Configuration / MME / mme29210 / Interface / SCTP Profile

SCTP Profile

### Create SCTP Profile

Name	Initial RTO(millisecond)
S1Sctp	1000
Minimal RTO(millisecond)	Maximal RTO(millisecond)
1000	5000
Association Maximal Retransmit	Path Maximal Retransmit
10	5
Association Init Max Retransmit	Nodelay
2	True
Communication Lost Timer(second)	Address Unreachable Timer(second)
30	30
Max Out Stream	Max In Stream
5	5

Figure 3.1.4.1-2 Example of Adding S1 Interface Step 2

Max Out Stream	Max In Stream
5	5
Heartbeat Interval(second)	RTO Initial Maximal Timeout(second)
5	60
Reconnect Timer(second)	
5	
<b>3</b> Add	Back

Figure 3.1.4.1-3 Example of Adding S1 Interface Step 3  
Configuration items and configuration notes.

configuration item	instructions
Name	naming
Initial RTO (millisecond)	SCTP protocol initial retransmission timeout value (there are multiple interfaces that are SCTP protocol)
Minimal RTO (millisecond)	SCTP protocol minimum retransmission timeout value
Maximal RTO (millisecond)	SCTP protocol maximum retransmission timeout value
Association Maximal Retransmit	SCTP protocol coupling path maximum reconnections
Path Maximal Retransmit	Maximum number of reconnections for a specified path of the SCTP

	protocol
Association Lost Timer (second)	SCTP Protocol Coupled Link Disconnect Timer
Nodelay	Whether the SCTP protocol uses the nodelay parameter, True is on, False is off
Communication Lost Timer (second)	SCTP protocol communication link disconnect timer
Address Unreachable Timer (second)	SCTP protocol communication address unreachable timer
Max Out Stream	SCTP protocol link maximum output stream
Max in Stream	SCTP protocol link maximum input flow
Heartbeat Interval(second)	Heartbeat interval
RTO Initial Maximal Timeout(second)	INIT message retransmission maximum timeout
Reconnect Timer (second)	Link Reconnect Timer

### 3.1.4.1.2.Modify the SCTP Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->SCTP Profile

**Steps::** Select the configuration box you need to modify -> fill in/select the configuration information -> click "Update" -> click the "OK" button in the pop-up box to modify successfully.

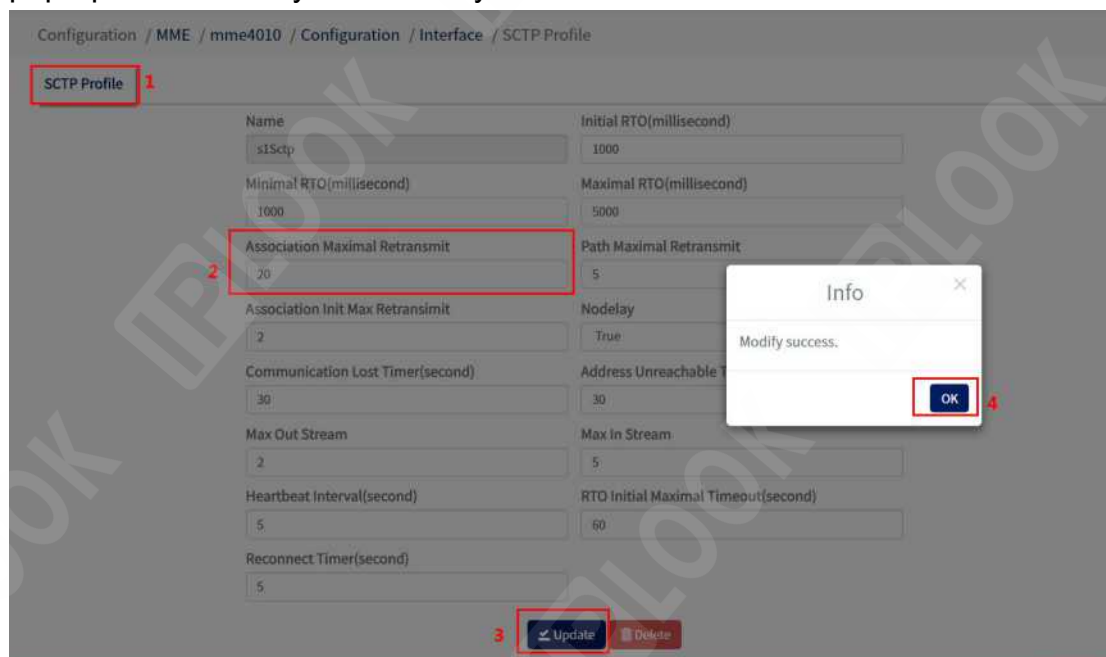


Figure 3.1.4.1-4 Example of Modifying SCTP Profile Configuration

### 3.1.4.1.3.Delete SCTP Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->SCTP Profile

**Step:** Click the delete icon of the corresponding row in the list on the SCTP Profile page --> click "OK" in the pop-up box to delete successfully.

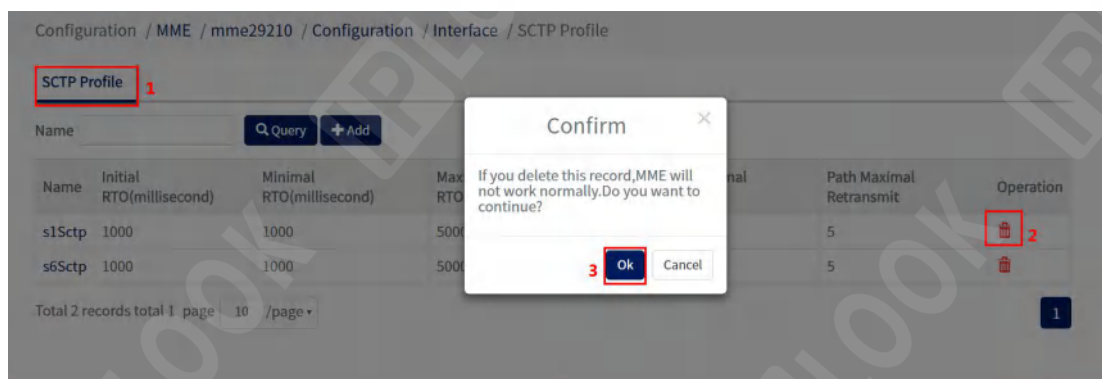


Figure 3.1.4.1-5 Example of Deleting S1 Interface

### 3.1.4.2. S1 Interface



Figure 3.1.4.2-1 S1 Interface path

**Description:** Configure S1AP protocol parameters for S1 interface of MME

#### 3.1.4.2.1.Add S1 Interface

**Path:** Configuration-->MME-->Configuration-->Interface-->S1 Interface

**Step:** Fill in the configuration information in the S1 Interface page --> Click "Add" to add successfully.

Configuration / MME / mme1830 / Configuration / Interface / S1 Interface

**S1 Interface**

1

Name	S1_if	Service Interface Name	mmeS1
SCTP Profile	s1Sctp	Port	36412
Time to Wait(second)	0	HO Preparation Timer(second)	3
HO overall timer(second)	5	Source eNB S1 HO Hold Timer(second)	1
Indirect Tunnel Hold Timer(second)	2	Ue Context Release Timer(second)	5

2

**Add**

Figure 3.1.4.2-2 Example of Adding S1 Interface Configuration

Configuration and configuration notes.

configuration item	instructions
Name	S1 interface configuration name
Interface Name	S1 interface name in mme, drop down and select the mmeS1 set under service Interface
SCTP Profile	sctp profile used, drop down and select s1Sctp set under SCTP Profile
Port	Listening ports
Time to Wait (second)	Used in the S1AP protocol S1SetupFailure message of the S1 interface to indicate the waiting time for the base station to send the S1SetupRequest message again
HO Preparation Timer (second)	S1AP protocol switchover preparation phase timer
HO overall timer (second)	S1AP protocol entire switching process timer
Source eNB S1 HO Hold Timer(second)	S1 Interface switchover when the source base station maintains the switchover state timer
Indirect Tunnel Hold Timer (second)	Forwarding tunnel maintenance timer



	configured between base stations during S1 interface switching
Ue Context Release Timer (second)	S1AP Protocol UE Context Release Timer for S1 Interface

### 3.1.4.2.2.Modify S1 Interface

**Path:** Configuration-->MME-->Configuration-->Interface-->S1 Interface

**Step:** Modify the configuration information in the S1 Interface page --> click "Update" --> click "OK" in the pop-up box to modify successfully.

Configuration / MME / mme1830 / Configuration / Interface / S1 Interface

**S1 Interface** 1

2

Name	S1_if	Service Interface Name	mmeS1
SCTP Profile	s1Sctp	Port	36412
Time to Wait(second)	2	HO Preparation Timer(second)	3
HO overall timer(second)	5	Source eNB S1 HO Hold Timer(second)	1
Indirect Tunnel Hold Timer(second)	2	Ue Context Release Timer(second)	5

3 **Update** **Delete**

**Info** X

Modify success.

4 **OK**

Figure 3.1.4.2-3 Example of Updating S1 Interface Configuration

### 3.1.4.2.3.Delete S1 Interface

**Path:** Configuration-->MME-->Configuration-->Interface-->S1 Interface

**Step:** Click the "Delete" button on the S1 Interface page --> click "OK" in the pop-up box to delete successfully.

Figure 3.1.4.2-3 Example of Updating S1 Interface Configuration

### 3.1.4.2.4.Delete S1 Interface

**Path:** Configuration-->MME-->Configuration-->Interface-->S1 Interface

**Step:** Click the "Delete" button on the S1 Interface page --> click "OK" in the pop-up box to delete successfully.



Figure 3.1.4.2-4 Example of Deleting S1 Interface Configuration

### 3.1.4.3. GTP Profile

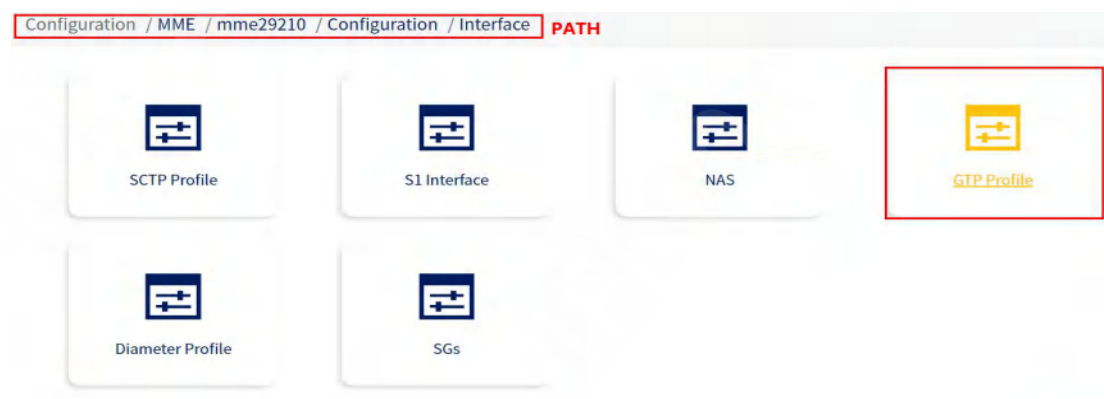


Figure 3.1.4.3-1 GTP Profile path

### 3.1.4.3.1.GTP Profile

**Description:** Configure the GTP protocol parameters for the S10, S11, etc. interfaces of the MME

#### 3.1.4.3.1.1. Adding a GTP Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->GTP Profile-->GTP Profile

**Steps:** Click the "Add" button under the GTP Profile page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box to add successfully.

Figure 3.1.4.3-2 Example of adding a gtp profile for S11 interface Step 1

Figure 3.1.4.3-3 Example Step 2 of adding a gtp profile for an S11 interface Configuration and description.

configuration item	Configuration Notes
Name	name
Echo Interval(minute)	Emit echo heartbeat interval
T3 of Echo (second)	Waiting for Echo heartbeat message timer
N3 of Echo	Number of Echo heartbeat messages sent
T3(second)	answer timer
N3	Number of retransmissions requested
Inactivity Timer(minute)	Inactive state timer

Max Pending Transactions	Maximum number of waiting transactions
--------------------------	--

### 3.1.4.3.1.2. Check GTP Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->GTP Profile-->GTP Profile

**Step:** Enter the name of the gtp profile you want to query in the Name box --> click the "Query" button, if it exists, it will be displayed under the list, if it doesn't exist, the "Not exist" prompt box will pop up.

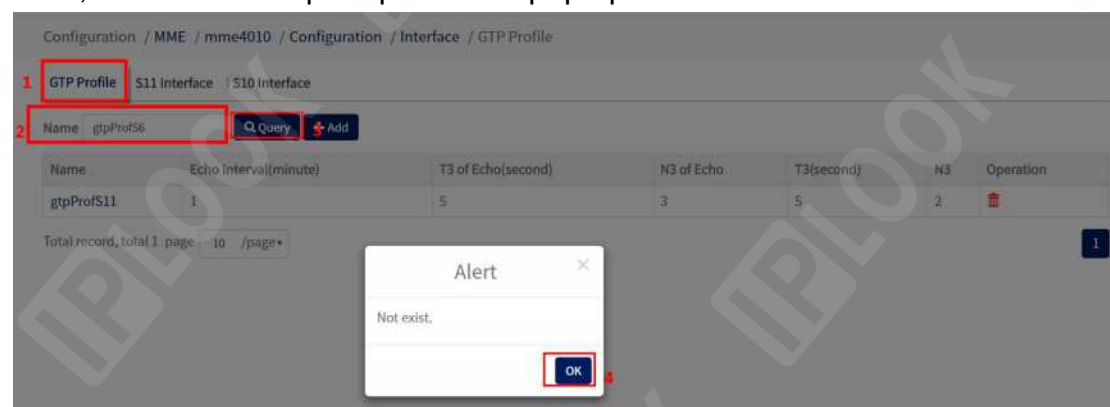


Figure 3.1.4.3-4 Configuration Example of Querying the S11 Interface

### 3.1.4.3.1.3. Modify GTP Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->GTP Profile-->GTP Profile

**Steps:** Mouse click the configuration box you need to modify --> fill in the modification information --> click the "Update" button --> click "OK" in the pop-up box, the modification is successful.



Figure 3.1.4.3-5 Example of Modifying the S11 Interface Configuration

### 3.1.4.3.1.4. Delete GTP Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->GTP Profile-->GTP Profile

**Step:** Click the delete icon in the corresponding row of the list in the GTP Profile page --> click the "OK" button in the pop-up box to delete successfully.

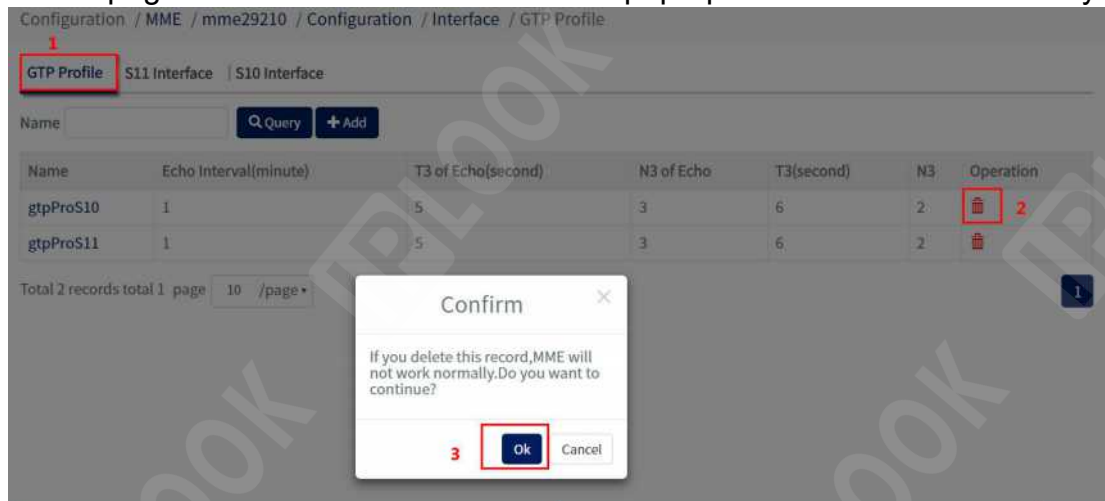


Figure 3.1.4.3-6 Example of the operation to delete a GTP Profile

### 3.1.4.3.2. S11 Interface

**Description:** Configure the address and GTP protocol parameters of the S11 interface of the MME

#### 3.1.4.3.2.1. Add S11 Interface

**Path:** Configuration-->MME-->Configuration-->Interface-->GTP Profile-->S11 Interface

**Steps:** Fill in the configuration information in S11 Interface --> Click "Add" button to add successfully.

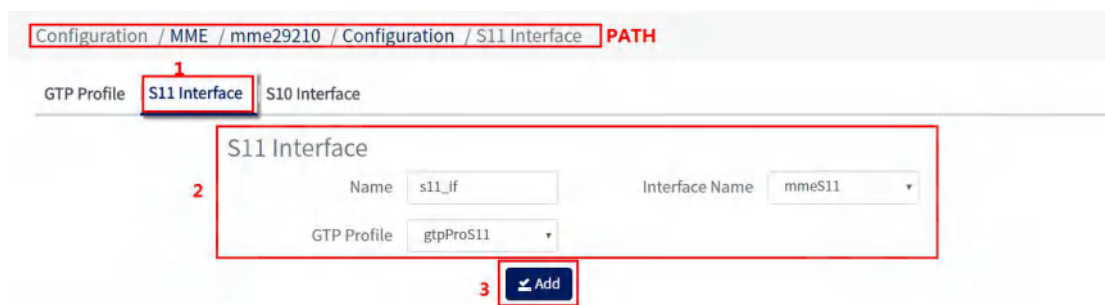


Figure 3.1.4.3.2-1 Example of Adding an S11 Interface Configuration

#### 3.1.4.3.2.2. Modify S11 Interface

**Path:** Configuration-->MME-->Configuration-->Interface-->GTP Profile-->S11 Interface

**Steps:** Select the configuration box you need to modify --> fill in/select the configuration information --> click "Update" --> click the "OK" button in the pop-up box to modify successfully.





Figure 3.1.4.3.2-2 Example of Modifying the S11 Interface Configuration

### 3.1.4.3.2.3. Delete S11 Interface

**Path:** Configuration-->MME-->Configuration-->Interface-->GTP Profile-->S11 Interface

**Steps:** Click the "Delete" button in the S11 Interface page --> click the "OK" button in the pop-up box to delete successfully.



Figure 3.1.4.3.2-3 Example of Deleting S11 Interface Configuration

### 3.1.4.3.3.S10 Interface

**Description:** Configure the address and GTP protocol parameters of the S10 interface of the MME

#### 3.1.4.3.3.1. Add S10 Interface

**Path:** Configuration-->MME-->Configuration-->Interface-->GTP Profile-->S10

## Interface

**Steps:** Fill in the configuration information in S10 Interface --> Click "Add" button to add successfully.

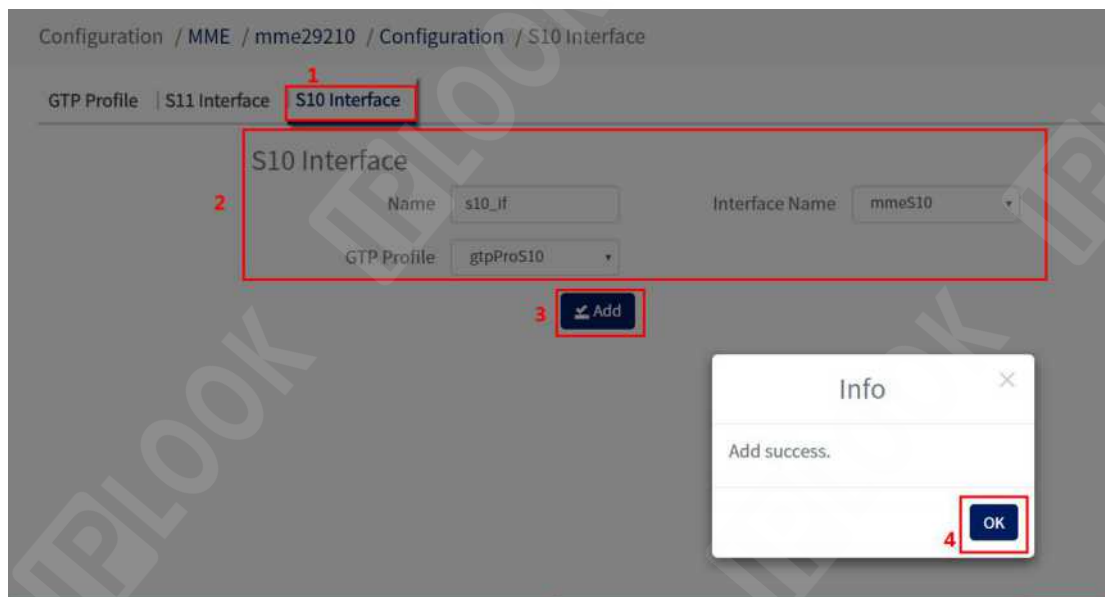


Figure 3.1.4.3.3-1 Example of Adding an S10 Interface Configuration

### 3.1.4.3.3.2. Modify S10 Interface

**Path:** Configuration-->MME-->Configuration-->Interface-->GTP Profile-->S10 Interface

**Steps:** Select the configuration box you need to modify --> fill in/select the configuration information --> click "Update" --> click the "OK" button in the pop-up box to modify successfully.



Figure 3.1.4.3.3-2 Example of Modifying the S10 Interface Configuration

### 3.1.4.3.3. Delete S10 Interface

**Path:** Configuration-->MME-->Configuration-->Interface-->GTP Profile-->S10 Interface

**Steps:** Click the "Delete" button in the S11 Interface page --> click the "OK" button in the pop-up box to delete successfully.

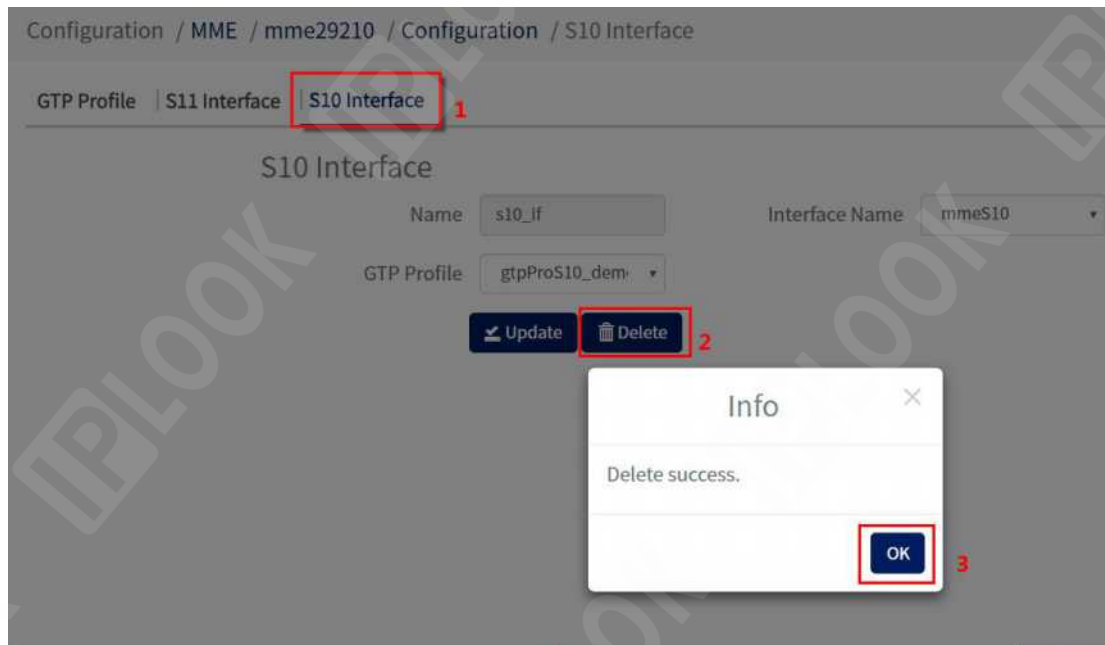


Figure 3.1.4.3.3-3 Example of Deleting S10 Interface Configuration

### 3.1.4.4. NAS

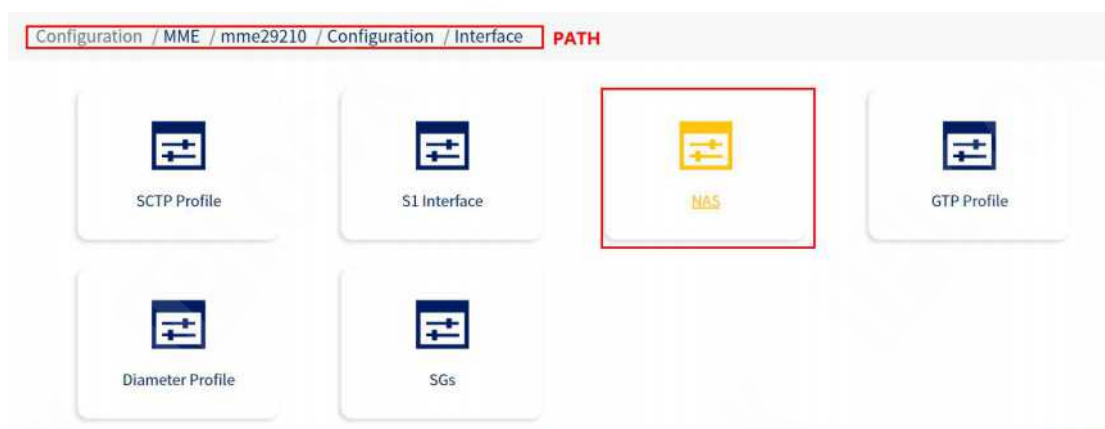


Figure 3.1.4.4-1 NAS path

#### 3.1.4.4.1.NAS EMM Profile

**Description:** Add, modify and delete the configuration of the NAS emm Profile

### 3.1.4.4.1.1. Adding a NAS EMM Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->NAS-->NAS EMM Profile

**Steps:** Fill in the configuration information in the page --> click "Add" button, add successfully

Configuration / MME / mme29210 / Configuration / Interface / NAS EMM Profile

**1**

**NAS EMM Profile** NAS ESM Profile

Name	T3402(minute)
nas_emm_pf	12
T3412(minute)	Initial T3413(second)
54	5
T3413 Increment(second)	N3413
2	2
T3422(second)	N3422
6	2
T3450(second)	N3450
6	3
GUTI Life Time(hour)	T3460(second)
12	6
N3460	T3470(second)
2	6

**2**

Figure 3.1.4.4-2 Add NAS EMM Profile Configuration Example Step 1

Configuration / MME / mme29210 / Configuration / Interface / NAS EMM Profile

**NAS EMM Profile** NAS ESM Profile

Security Context Life Time(hour)	Ciphering Algorithms
0	eea0
Integrity Algorithms	Old SGW Hold Timer(second)
All selected (4)	5
Cancel Location Wait Timer(second)	Request IMEISV
10	True
MME Reset Timer(minute)	Purge UE Cycle(hour)
60	744
Purge UE Interval(second)	Mobile Implicit Detach Timer(minute)
3600	4
Authenticaton	NAS Security
True	True
EMM Information	
False	

**3** **Add**

Figure 3.1.4.4-3 Adding a NAS EMM Profile Configuration Example Step 2 Configuration and description.

configuration item	instructions
Name	name
T3402 (minute)	MME corresponding to retry UE attachment or tracking area periodic modification timer
T3412 (minute)	UE Periodic Update Timer
Initial T3413(second)	MME initial paging timer
T3413 Increment (second)	MME Paging Timer Increment
N3413	Number of MME paging retries
T3422(second)	MME's network initiates de-registration timer
N3422	MME's network initiates de-registration retry counts
T3450 (second)	MME's allocation of GUTI timers
N3450	Number of GUTI reassignments for MME
GUTI Life Time (hour)	GUTI life cycle assigned by MME
T3460 (second)	Timers for Authentication and Security Mode Processes
N3460	Number of Authentication and Security Mode Process Retries
T3470(second)	Timer for endpoint identification query process
N3470	Number of retries for terminal identification query process
Mobile Reachable Timer	Mobile reachable timer
Authentication Option	Authentication method, select off by default off:off attach:Forensics at each attachment service-request: authenticate each service request inter-mme-tau:mme forensics when changing tau detach: forensics on de-attachment intra-mme-tau:mme invariant tau when forensic
Vector Retrieval Failure	The behavior of the MME when it receives a failed recovery message, optional ignore/fail, default ignore
Security Context Life Time (hour)	Lifecycle of the security context
Ciphering Algorithms	Encryption algorithm, default choice eea0 There are four options of

	eea3,eea2,eea1,eea0
Integrity Algorithms	Guaranteed integrity algorithm, select default Four options are available: eia3, eia2, eia1 and null
Old SGW Hold Timer (second)	Old SGW data retention time
Cancel Location Wait Timer(second)	Cancel position wait timer
Request IMEISV	Whether to use the security mode for IMEI requests
MME Reset Timer (minute)	MME Reset Timer
Purge UE Cycle (hour)	Clearing the UE Context Cycle
Purge UE Interval(second)	Clear UE Context Interval
Mobile Implicit Detach Timer (minute)	Implicit de-attachment timer
Authentication	Whether to turn on forensics True: Turn on forensics False:Do not enable forensics
NAS Security	Whether to turn on the safe mode process True:On for use False:Do not turn on the use of
EMM Information	Whether to send EMM messages True: Issued False:Do not send

#### 3.1.4.4.1.2. Modifying the NAS EMM Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->NAS-->NAS EMM Profile

**Steps:** Select the configuration box you need to modify --> fill in/select the configuration information --> click "Update" --> click the "OK" button in the pop-up box to modify successfully.



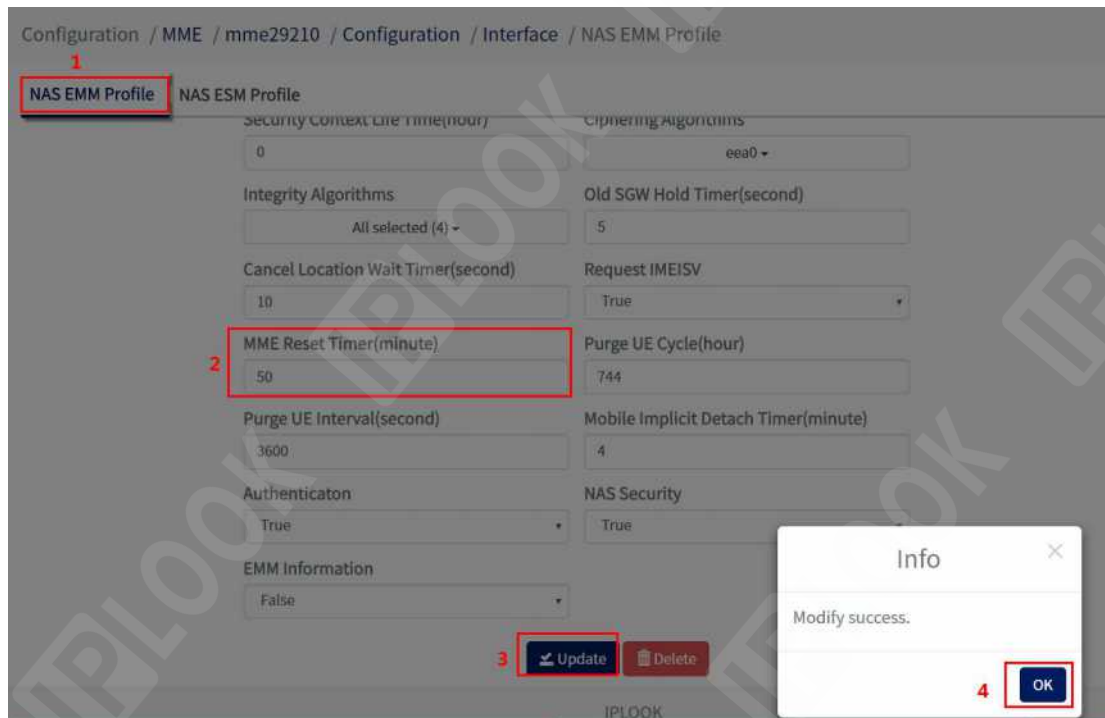


Figure 3.1.4.4-4 Example of Modifying NAS EMM Profile Configuration

#### 3.1.4.4.1.3. Delete NAS EMM Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->NAS-->NAS EMM Profile

**Steps:** Mouse down the page to see the location of the "Delete" button --> click the "Delete" button --> click "OK" in the pop-up box button in the pop-up box to delete successfully.



Figure 3.1.4.4-5 Example of Deleting NAS EMM Profile Configuration

### 3.1.4.4.2.NAS ESM Profile

**Description:** Provides configuration to add, modify and delete NAS esm Profile

#### 3.1.4.4.2.1. Adding a NAS ESM Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->NAS-->NAS ESM Profile

**Step:** Fill in the configuration information in the NAS ESM Profile page --> Click the "Add" button to add successfully.

Configuration / MME / mme29210 / Configuration / Interface / NAS ESM Profile

NAS EMM Profile **NAS ESM Profile** 1

**2**

Name	T3485(second)
<input type="text" value="nas_esm_pf"/>	<input type="text" value="5"/>
N3485	T3486(second)
<input type="text" value="2"/>	<input type="text" value="5"/>
N3486	T3489(second)
<input type="text" value="2"/>	<input type="text" value="4"/>
N3489	T3495(second)
<input type="text" value="2"/>	<input type="text" value="5"/>
N3495	Topological Search
<input type="text" value="2"/>	<input type="text" value="True"/>

**3** Add

Figure 3.1.4.4.3-1 Example of adding a NAS ESM Profile configuration Configuration and description.

configure	instructions
Name	name
T3485(second)	Activation of the bearer timer
N3485	Retry to activate the bearer timer
T3486(second)	Modification of the bearer timer
N3486	Number of retries to modify the bearer
T3489(second)	Session message transmission timer
N3489	Timer for session message retransmission
T3495 (second)	Bears de-activated timers
N3495	Number of re-attempts to carry de-activation
Topological Search	Whether to use topology queries True:Select to use False:Do not choose to use

### 3.1.4.4.2.2. Modifying the NAS ESM Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->NAS-->NAS ESM Profile

**Steps:** Select the configuration box you need to modify -> fill in the new configuration information -> click "Update" -> click the "OK" button in the pop-up box to modify successfully.

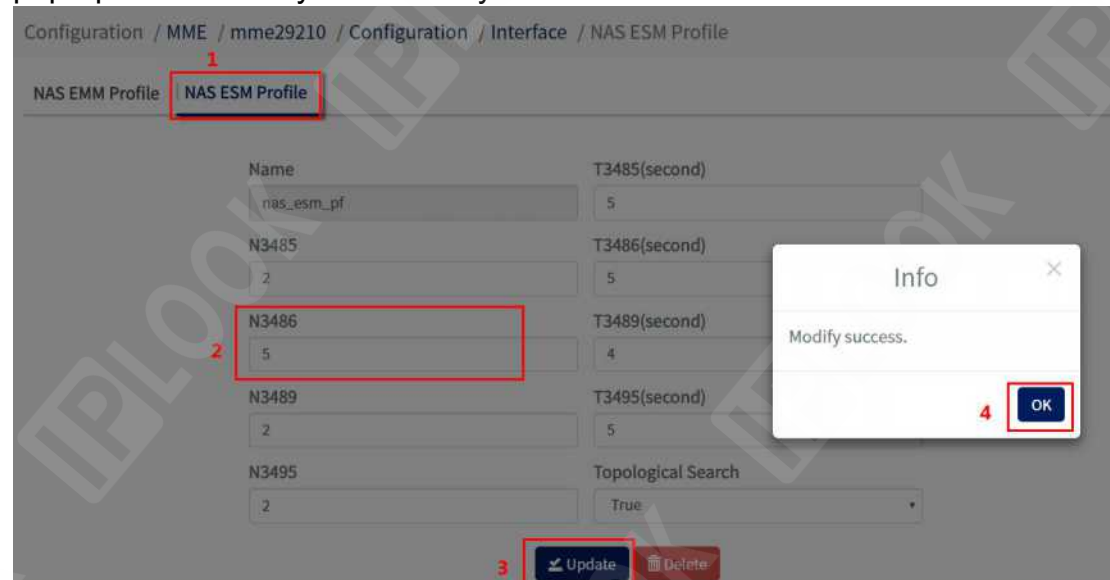


Figure 3.1.4.4.3-2 Example of Modifying NAS ESM Profile Configuration

### 3.1.4.4.2.3. Delete NAS ESM Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->NAS-->NAS ESM Profile

**Steps:** Mouse down the page to see the location of the "Delete" button --> click the "Delete" button --> click "OK" in the pop-up box button in the pop-up box to delete successfully.

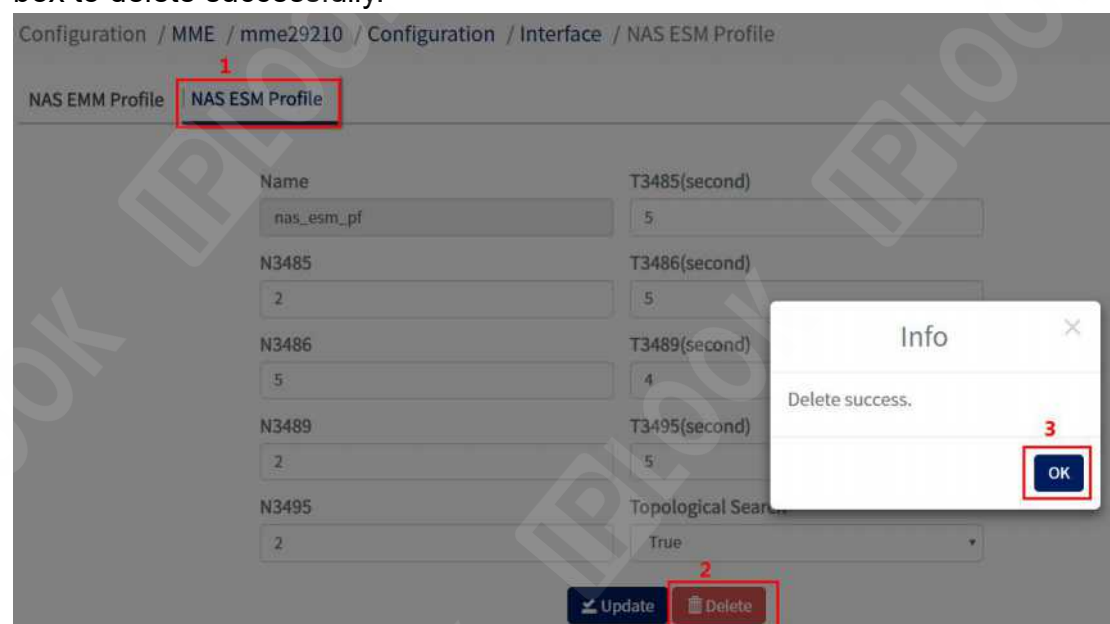


Figure 3.1.4.4.3-3 Example of Deleting NAS ESM Profile Configuration

### 3.1.4.5. Diameter Profile

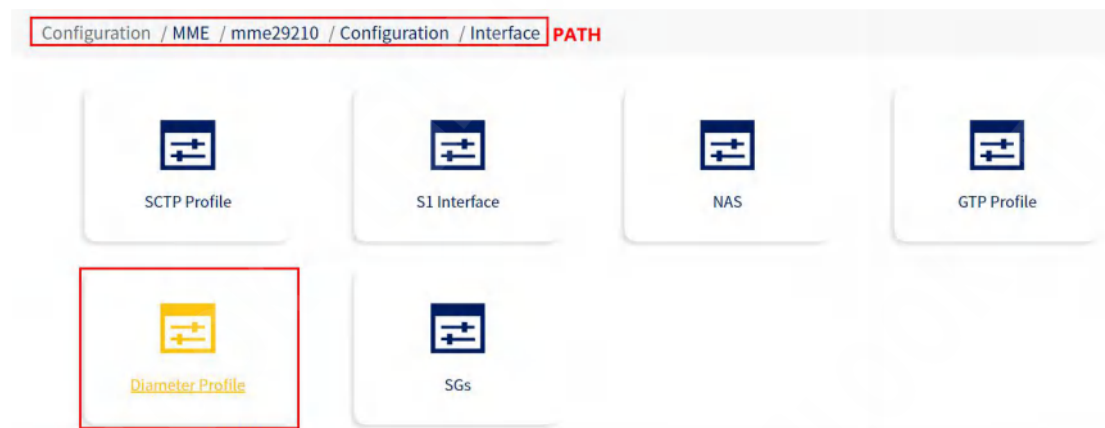


Figure 3.1.4.5-1 Diameter Profile path

#### 3.1.4.5.1. Diameter Profile

**Description:** Configure Diameter protocol parameters for interfaces such as S6 of MME

##### 3.1.4.5.1.1. Add Diameter Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->Diameter Profile

**Steps:** Click the "Add" button under the Diameter Profile page --> fill in the configuration information in the pop-up box --> click "Add" in the pop-up box to add successfully.

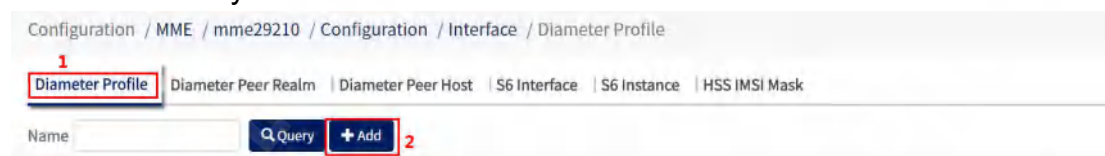


Figure 3.1.4.5-1 Diameter Profile Configuration Example Step 1

Configuration / MME / mme29210 / Interface / Diameter Profile

**Diameter Profile** | Diameter Peer Realm | Diameter Peer Host | S6 Interface | S6 Instance | HSS IMSI Mask

### Create Diameter Profile

3

Name

S6DmPf

MME Realm

mme.com

Watchdog Timer(second)

5

Max Connection Retry

2

Failover Support

True

SCTP Profile

s6Sctp

Default Destination Realm

hss.com

Reconnect Timer(second)

30

Peer State Timer(second)

30

4

Add

Back

Figure 3.1.4.5-2 Diameter Profile Configuration Example Step 2  
Configuration items and descriptions.

configuration item	instructions
Name	name
SCTP Profile	Selected sctp profile
MME Realm	Domain name of mme
Default Destination Realm	Default destination domain name
Watchdog Timer (second)	Heartbeat Timer
Reconnect Timer (second)	Reconnecting the timer
Max Connection Retry	Maximum number of reconnections
Peer State Timer (second)	Counter-side status timer
Failover Support	Whether to support failover, default select true True:Select False:Do not select

#### 3.1.4.5.1.2. Query Diameter Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->Diameter Profile

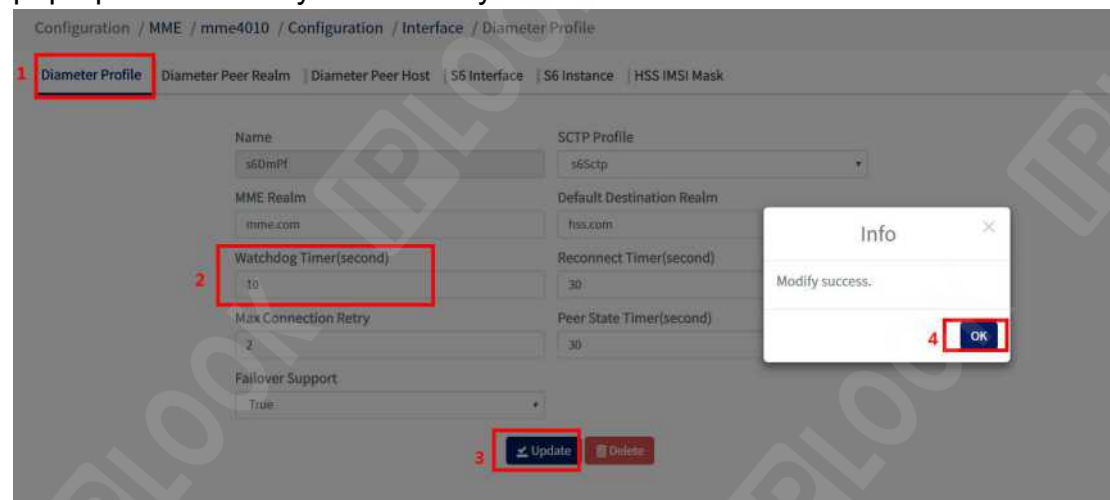
**Step:** Fill in the Name box with the Diameter profile you want to query --> click the "Query" button, if it exists, it will be displayed in the list, if it does not exist, then the "Not exist" pop-up box will appear. If it does not exist, the "Not exist" box will pop up.

#### 3.1.4.5.1.3. Modify Diameter Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter

Profile-->Diameter Profile

**Steps:** Select the configuration box you need to modify --> fill in/select the configuration information --> click "Update" --> click the "OK" button in the pop-up box to modify successfully.



#### 3.1.4.5.1.4. Delete Diameter Profile

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->Diameter Profile

**Step:** Click the Delete icon of the corresponding row in the Diameter Profile page -> click "OK" in the pop-up box to delete successfully.

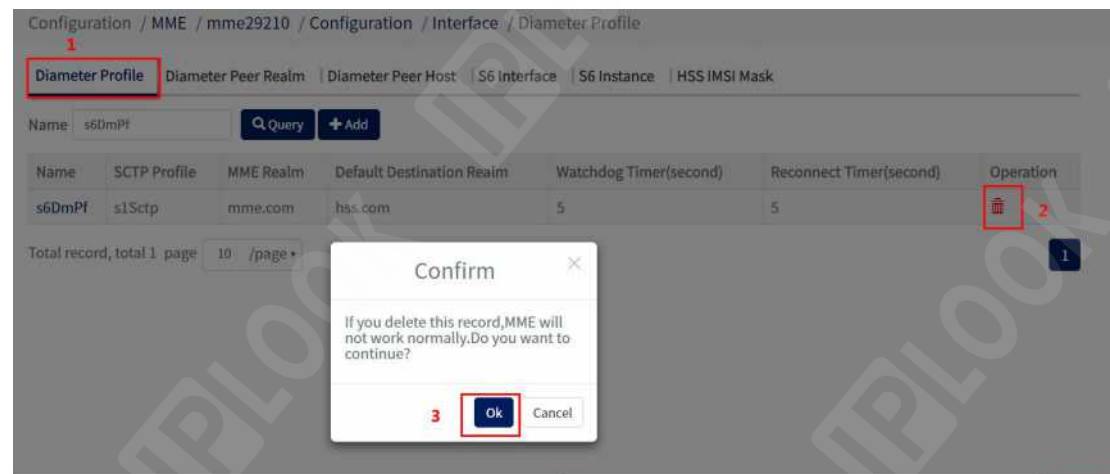


Figure 1.1-61 Example of Deleting Diameter Profile Configuration

#### 3.1.4.5.2. Diameter Peer Realm

**Description:** Configure the HSS domain connection parameters on the Diameter protocol counterpart of the MME to HSS connection

##### 3.1.4.5.2.1. Add Diameter Peer Realm

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter



Profile-->Diameter Peer Realm

**Steps:** Click the "Add" button under Diameter Peer Realm page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box to add successfully.

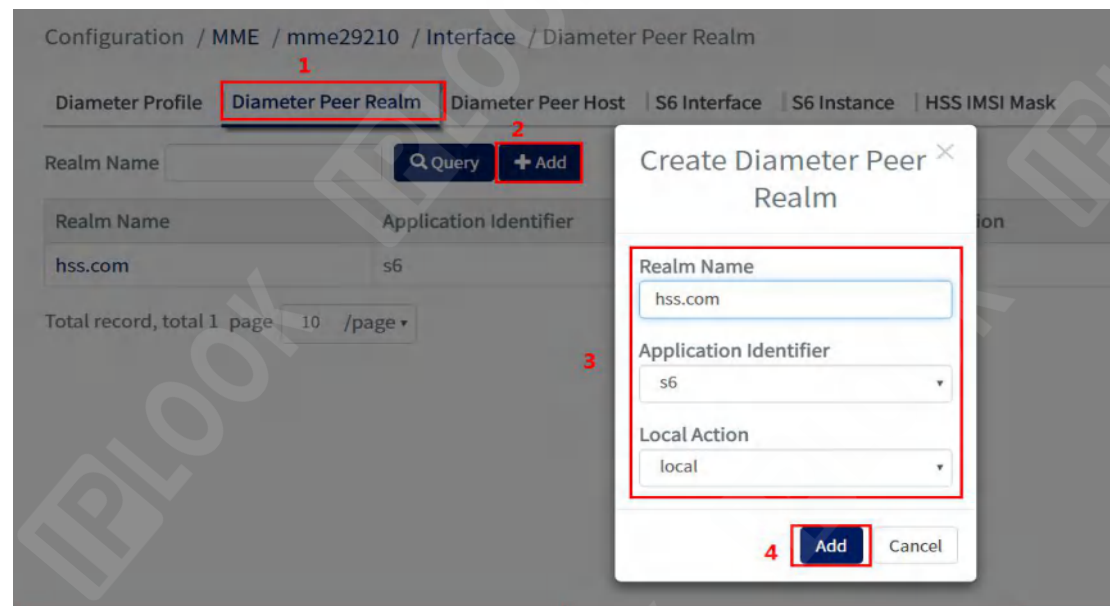


Figure 3.1.4.5.2-1 Example of adding a Diameter Peer Realm configuration Configuration items and descriptions.

configuration item	Configuration item description
Realm Name	Diameter-to-End Domain
Application Identifier	Application interface type: s6 is selected by default Available in s6, s13 options
Local Action	Select local action local:local relay:relay proxy:proxy redirect:redirect

### 3.1.4.5.2.2. Query Diameter Peer Realm

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->Diameter Peer Realm

**Step:** Fill in the Diameter Peer Realm name you want to query in the Realm Name box --> click the "Query" button, if it exists, it will be displayed in the list, if not, then "Not exist If it exists, it will be displayed in the list, if not, "Not exist" box will pop up.

### 3.1.4.5.2.3. Modify Diameter Peer Realm

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->Diameter Peer Realm

**Steps:** Select the configuration box you need to modify --> fill in/select the

configuration information --> click "Update" --> click the "OK" button in the pop-up box to modify successfully.

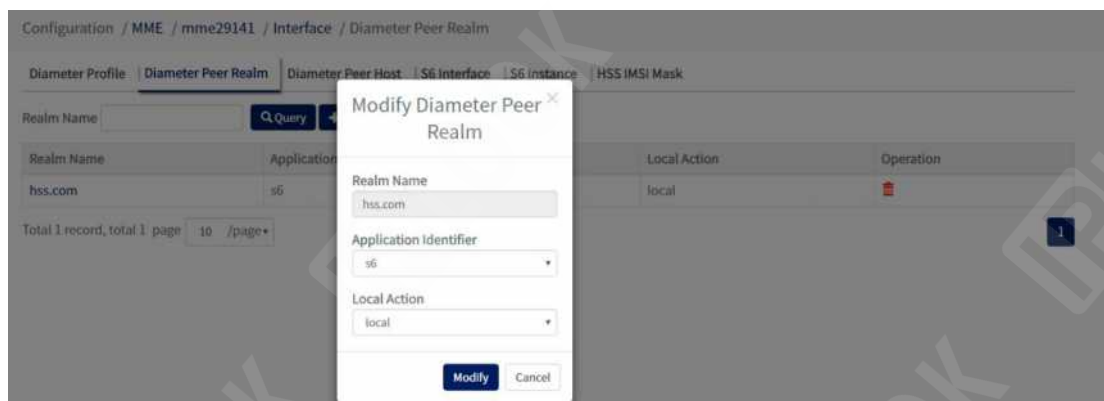


Figure 3.1.4.5.2-2 Example of Modifying Diameter Peer Realm Configuration

#### 3.1.4.5.2.4. Delete Diameter Peer Realm

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->Diameter Peer Realm

**Step:** Click the Delete icon of the corresponding row in the list in the Diameter Peer Realm page --> Click the "OK" button in the pop-up box to delete successfully.

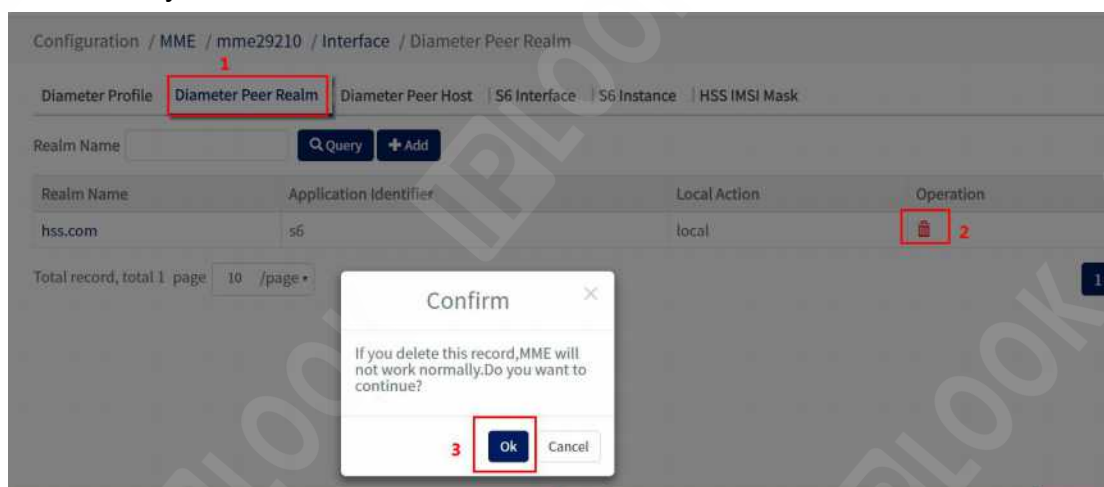


Figure 3.1.4.5.2-3 Example of Deleting Diameter Peer Realm Configuration

#### 3.1.4.5.3. Diameter Peer Host

**Description:** Configure the Diameter protocol peer host connection parameters for interfaces such as S6 of MME

##### 3.1.4.5.3.1. Add Diameter Peer Host

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->Diameter Peer Host

**Steps:** Click the "Add" button under Diameter Peer Host page --> fill in the

configuration information in the pop-up box --> click "Add" to add successfully.

The screenshot shows the 'Create Diameter Peer Host' dialog box in the IPLOOK interface. The dialog box has the following fields:

- Host Id Prefix: 61
- Realm Name: hss.com
- Address Type: ipv4
- IP Address: 172.30.29.61
- Port: 3868
- Activity Role: primary

The 'Add' button is highlighted with a red box and the number 4. The background shows the navigation menu with 'Diameter Peer Host' selected, and a table of existing hosts.

Figure 3.1.4.5.3-1 Example of Adding a Diameter Peer Host Configuration Configuration items and descriptions.

configuration item	Configuration Notes
Host Id Prefix	Diameter hostname prefix on the opposite end
Realm Name	Diameter-to-End Domain
Address Type	Diameter address type on the other side, choose ipv4 or ipv6
IP Address	Diameter ip address on the other side
Port	The port on the Diameter pair, default is 3868
Activity Role	The role of the host on the other end primary:main secondary:ready

### 3.1.4.5.3.2. Query Diameter Peer Host

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->Diameter Peer Host

**Steps:** Fill in the Host Identity box with the prefix of the host name you want to query --> click the "Query" button, if it exists, it will be displayed in the list, if it does not exist, the "Not exist" prompt box will pop up.

### 3.1.4.5.3.3. Modify Diameter Peer Host

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->Diameter Peer Host

**Steps:** Select the configuration box you need to modify --> fill in/select the

configuration information --> click "Update" --> click the "OK" button in the pop-up box to modify successfully.

### 3.1.4.5.3.4. Delete Diameter Peer Host

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->Diameter Peer Host

**Step:** Click the Delete button in the corresponding row of the list in the Diameter Peer Host page --> click "OK" in the pop-up box to delete successfully.

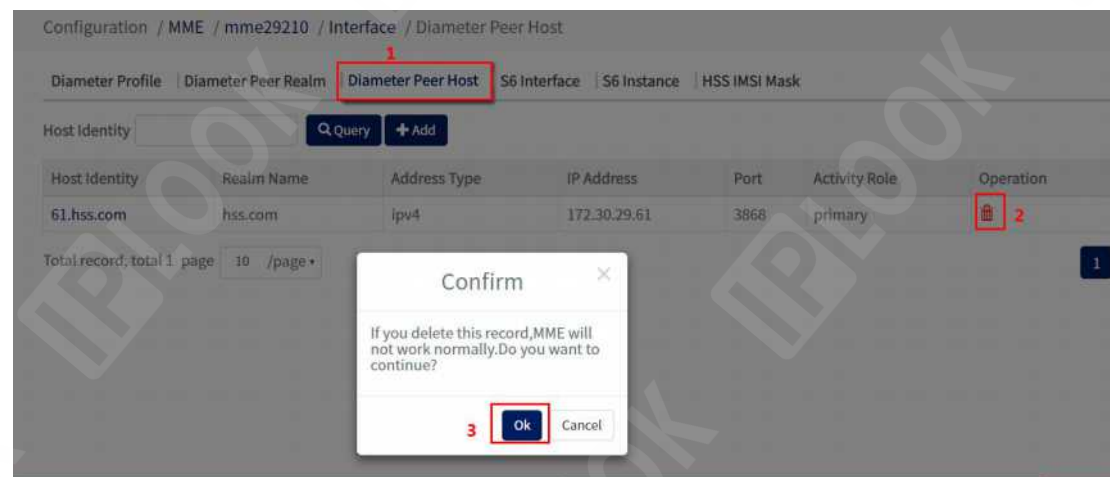


Figure 3.1.4.5.3-2 Example of Deleting Diameter Peer Host Configuration

### 3.1.4.5.4. S6 Interface

**Description:** Configure the parameters of the S6 interface of the MME

#### 3.1.4.5.4.1. Add S6 Interface

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->S6 Interface

**Step:** Fill in the configuration information under S6 Interface --> Click the "Add" button to add successfully.

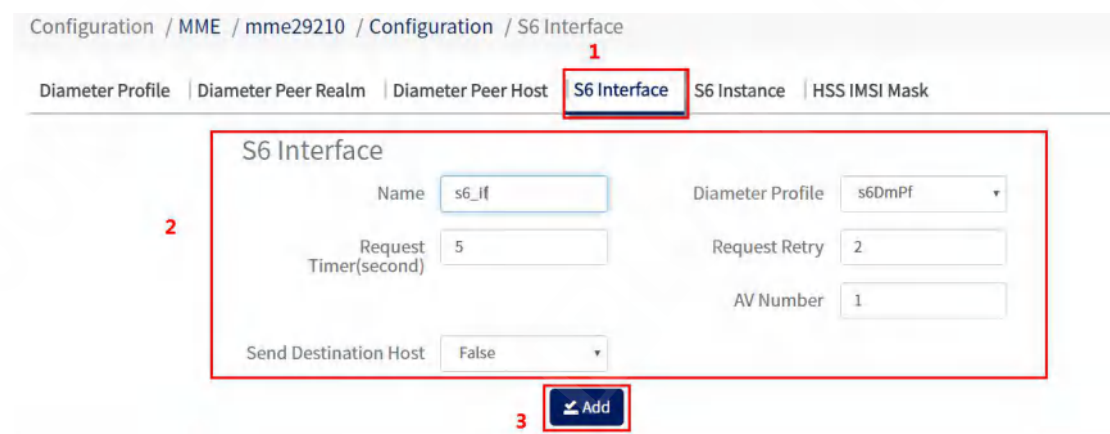


Figure 3.1.4.5.4-1 S6 Interface Configuration Example  
Configuration items and descriptions.

configuration item	Configuration Notes
Name	name
Diameter Profile	Select the diameter profile belonging to the s6 port
Request Timer(second)	Timer for S6 interface request message flow
Request Retry	Number of times the S6 interface requested message retransmissions
AV Number	Forensic vector vector number of requests
Send Destination Host	Whether the target HSS hostname is carried, and if present True:Select to send False:Select not to send

#### 3.1.4.5.4.2. Modify S6 Interface

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->S6 Interface

**Steps:** Select the configuration box you need to modify --> fill in/select the configuration information --> click "Update" --> click the "OK" button in the pop-up box to modify successfully.

#### 3.1.4.5.4.3. Delete S6 Interface

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->S6 Interface

**Step:** Click the Delete button under the corresponding row in the list on the S6 Interface page --> click "OK" in the pop-up box to delete successfully.

#### 3.1.4.5.5.S6 Instance

**Description:** Configure the S6 instance parameters for MME

##### 3.1.4.5.5.1. Add S6 Instance

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->S6 Instance

**Step:** Fill in the configuration information in the information field on the S6 Instance page --> click "Add" to add successfully.

Figure 3.1.4.5.5-1 Example of Adding an S6 Instance Configuration

Configuration items and descriptions.

configuration item	Configuration Notes
Name	name
Host Identity Prefix	Hostname prefix for mme
Interface Name	Interface name of mme, select mmeS6
Port	mme S6 interface port, default is 3868
Max Pending Transaction	Largest pending transactions

### 3.1.4.5.5.2. Modify S6 Instance

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->S6 Instance

**Steps:** Select the configuration box you need to modify --> fill in/select the configuration information --> click "Update" --> click the "OK" button in the pop-up box to modify successfully.

### 3.1.4.5.5.3. Delete S6 Instance

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->S6 Instance

**Step:** Click the "Delete" button on the S6 Instance page --> click "OK" in the pop-up box to delete successfully.



Figure 3.1.4.5.5-2 Example of Deleting an S6 Instance Interface

### 3.1.4.5.6.HSS IMSI Mask

Function: Configure the IMSI mask parameter of the HSS between the MME and the HSS

#### 3.1.4.5.6.1. Add HSS IMSI Mask

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->HSS IMSI Mask

**Steps:** Click the "Add" button under the HSS IMSI Mask page --> fill in the configuration information in the pop-up box --> click "Add" in the pop-up box to finish adding.

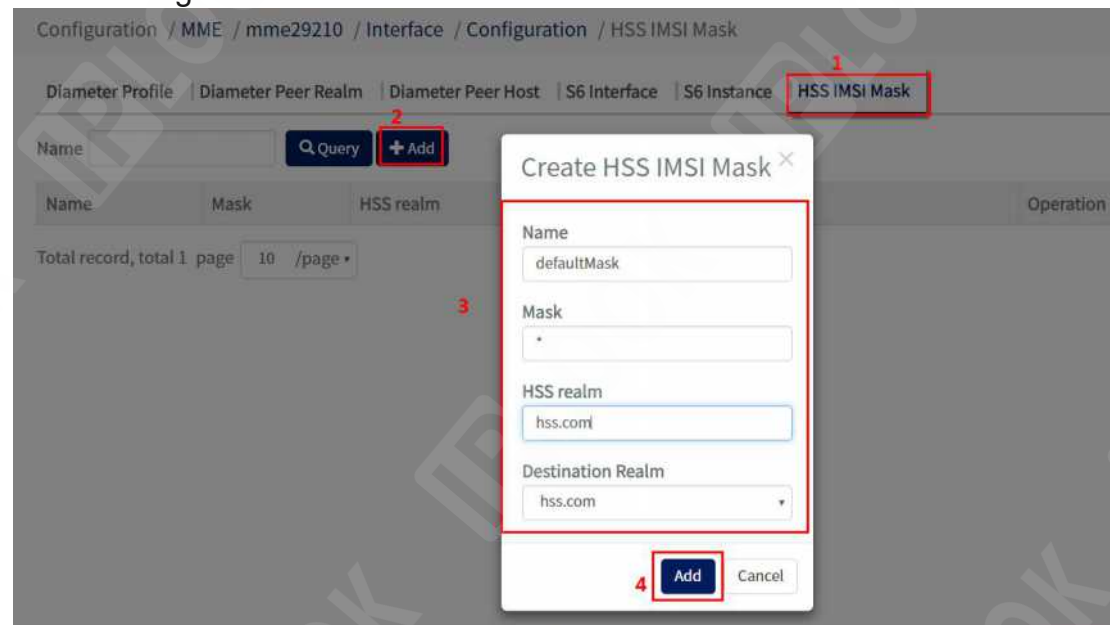


Figure 3.1.4.5.6-1 Example of Adding an HSS IMSI Mask Configuration Configuration items and descriptions.

configuration item	Configuration Notes
Name	name
Mask	Mask for IMSI routing, prefix
HSS realm	Diameter-to-End Domain
Destination Realm	Destination domain names (HSS domains)

#### 3.1.4.5.6.2. Query HSS IMSI Mask

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->HSS IMSI Mask

**Step:** Fill in the Name box with the name of the HSS IMSI Mask you want to query --> click the "Query" button, if it exists, it will be displayed in the list, if not, the "Not exist" prompt box will pop up.

### 3.1.4.5.6.3. Modify the HSS IMSI Mask

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->HSS IMSI Mask

**Steps:** Select the configuration box you need to modify --> fill in/select the configuration information --> click "Update" --> click the "OK" button in the pop-up box to modify successfully.

### 3.1.4.5.6.4. Remove HSS IMSI Mask

**Path:** Configuration-->MME-->Configuration-->Interface-->Diameter Profile-->HSS IMSI Mask

**Step:** Click the delete icon in the list of HSS IMSI Mask page --> click "OK" in the pop-up box, the deletion is completed.

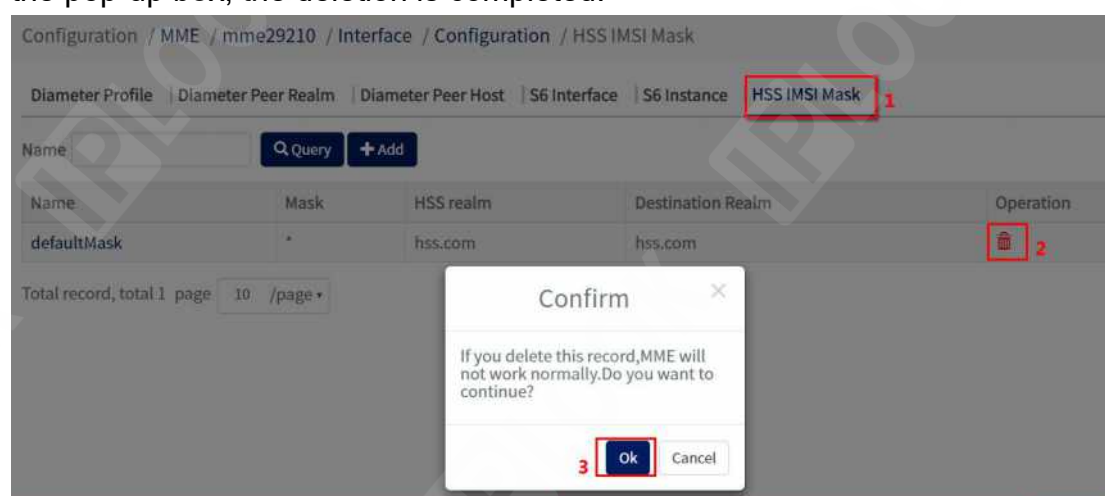


Figure 3.1.4.5.6-2 Example of Deleting HSS IMSI Mask Configuration

## 3.1.5. MME Global



Figure 3.1.5-1 MME Global path

### 3.1.5.1. MME Global

**Description:** Configure some global configuration item parameters of MME

#### 3.1.5.1.1.Add MME Global

**Path:** Configuration-->MME-->Configuration-->MME Global-->MME Global

**Steps:** Fill in the information in the Name box and select the information in the other drop-down boxes --> click "Add" to add successfully.

Configuration / MME / mme29210 / Configuration / MME Global

MME Global

1

Name

global

Last Visited TAI

False

EPS Network Feature

ims-vops

APN NI Only

True

Dual Address Bearer Flag

False

2

Add

Figure 3.1.5.1-1 Example of Adding an MME Global Configuration Configuration items and descriptions.

configuration item	Configuration Notes
Name	name
APN NI Only	Does the S11 interface carry only APN NI True:Select Yes False:Select No
Last Visited TAI	Whether to save the last registered TAI
Dual Address Bearer Flag	Whether to carry the double address bearer flag bit
EPS Network Feature	eps network support features, select ims-vops by default The types that can be selected are: emc-bs,epc-lcs,cs-lcs,ncs-lcs,serps,er vorOpdn,cpCioT,upCioT,s1uData,hcc PCiot,ePco,restrictEc

#### 3.1.5.1.2.Modify MME Global

**Path:** Configuration-->MME-->Configuration-->MME Global-->MME Global

**Steps:** Select the configuration box you need to modify -> fill in the new configuration information -> click "Update" -> click the "OK" button in the pop-up box to modify successfully.

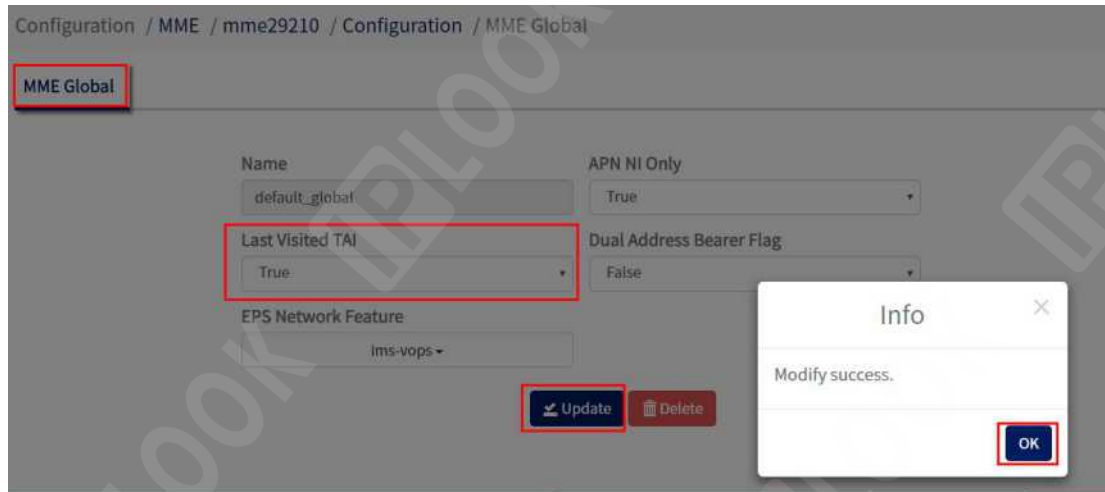


Figure 3.1.5.1-2 Example of Modifying the MME Global Configuration

### 3.1.5.1.3.Delete MME Global

**Path:** Configuration-->MME-->Configuration-->MME Global-->MME Global

**Step:** Click the "Delete" button on the MME Global page --> click "OK" in the pop-up box to delete successfully.



Figure 3.1.5.1-3 Example of Deleting MME Global Configuration

### 3.1.6. MME VLR



Figure 3.1.5-1 MME VLR path

#### 3.1.6.1. VLR

**Description:** Add, modify and delete VLR configurations

##### 3.1.6.1.1.Add VLR

**Path:** Configuration-->MME-->Configuration-->VLR-->VLR

**Steps:** Fill in the configuration information in the VLR page --> Click the "Add" button to add successfully.

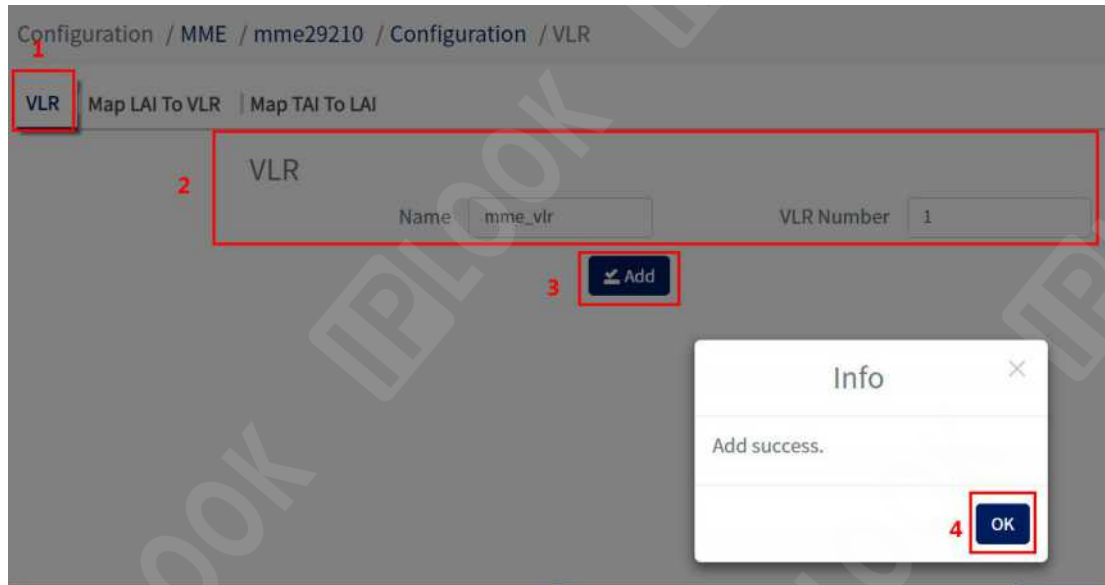


Figure 3.1.6.1-1 Example of adding a VLR configuration

Configuration items and descriptions.

configuration item	instructions
Name	name
VLR Number	VLR Number

### 3.1.6.1.2.Modify VLR

**Path:** Configuration-->MME-->Configuration-->VLR-->VLR

**Steps:** Select the configuration box you need to modify -> fill in the new configuration information -> click "Update" -> click the "OK" button in the pop-up box to modify successfully.

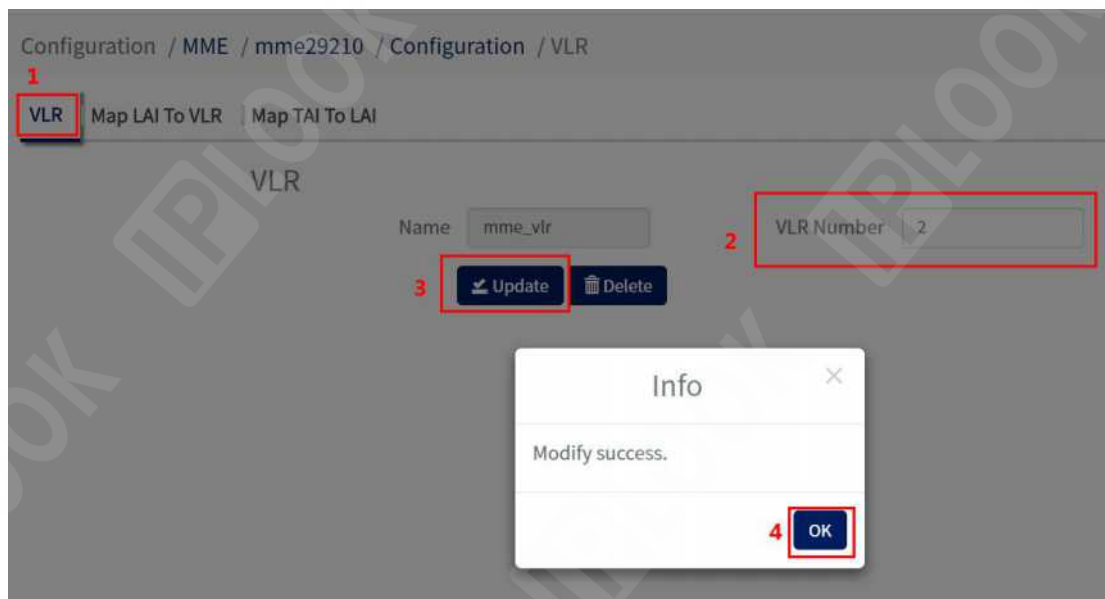


Figure 3.1.6.1-2 Example of Updating VLR Configuration



### 3.1.6.1.3.Delete VLR

**Path:** Configuration-->MME-->Configuration-->VLR-->VLR

**Step:** Click the "Delete" button on the VLR page --> click "OK" in the pop-up box to delete successfully.

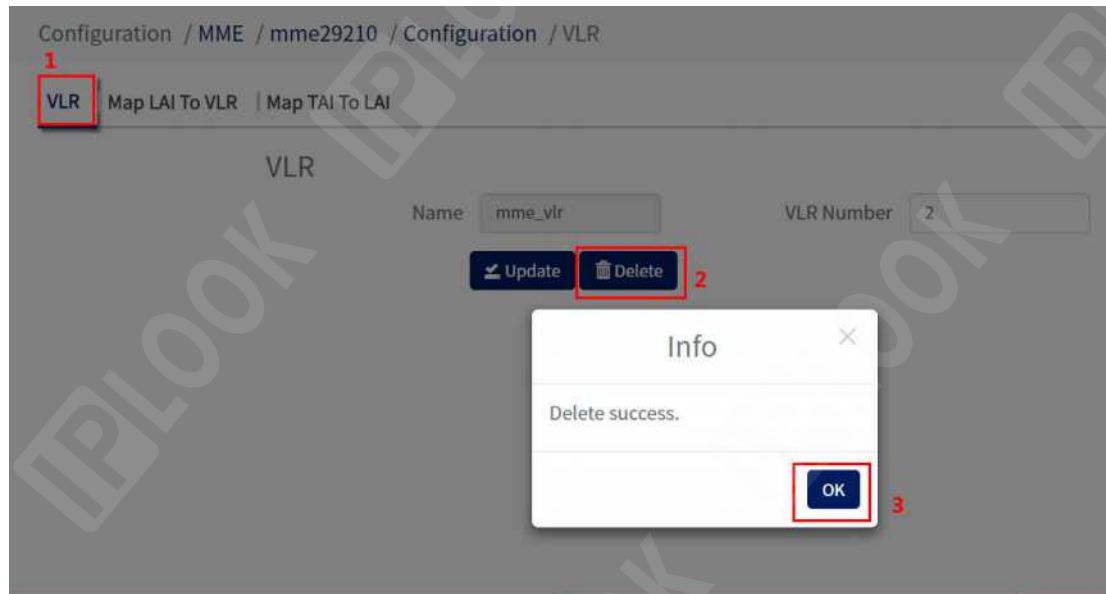


Figure 3.1.6.1-2 Example of Deleting VLR Configuration

### 3.1.6.2. Map LAI To VLR

**Description:** Add, modify and delete Map LAI To VLR configuration

#### 3.1.6.2.1.Add Map LAI To VLR

**Path:** Configuration-->MME-->Configuration-->VLR-->Map LAI To VLR

**Steps:** Fill in the configuration information in the Map LAI To VLR page --> Click the "Add" button to add successfully.

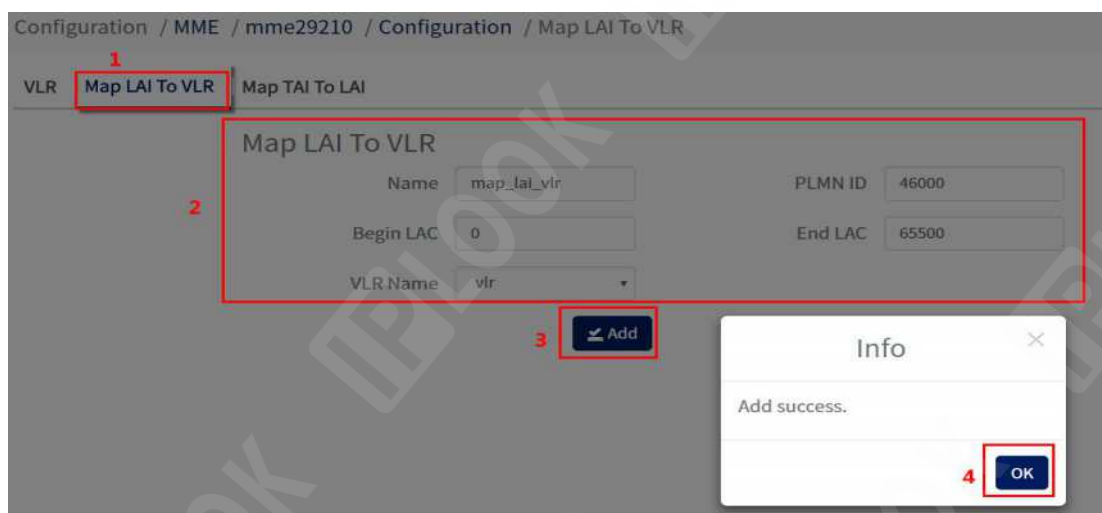


Figure 3.1.6.2-1 Example of Adding Map LAI To VLR Configuration  
Configuration items and descriptions.

configuration item	instructions
Name	name
PLMN ID	Plmn used
Begin LAC	Starting location area
End LAC	Ending location area
VLR Name	For the vlr used, select the VLR configured in the previous step

### 3.1.6.2.2.Modify Map LAI To VLR

**Path:** Configuration-->MME-->Configuration-->VLR-->Map LAI To VLR

**Steps:** Select the configuration box you need to modify -> fill in the new configuration information -> click "Update" -> click the "OK" button in the pop-up box to modify successfully.

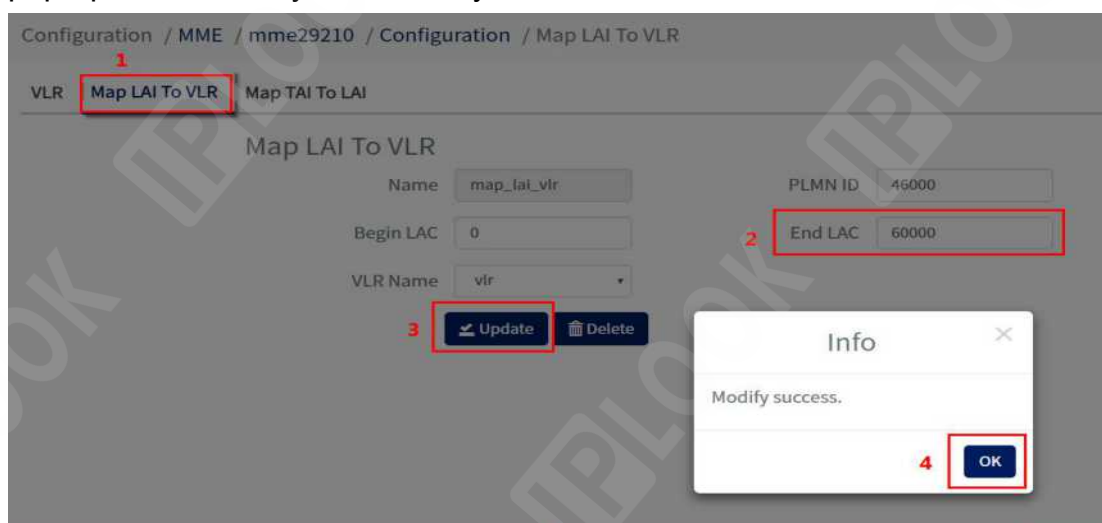


Figure 3.1.6.2-2 Example of Modifying Map LAI To VLR Configuration

### 3.1.6.2.3.Delete Map LAI To VLR

**Path:** Configuration-->MME-->Configuration-->VLR-->Map LAI To VLR

**Step:** Click the "Delete" button on the Map LAI To VLR page --> click "OK" in the pop-up box to delete successfully.

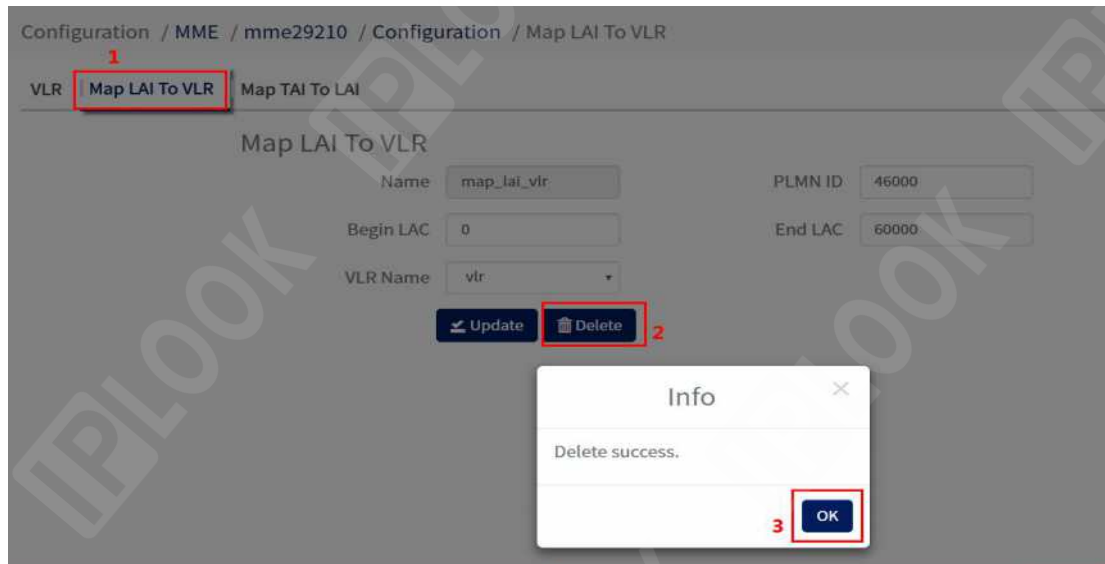


Figure 3.1.6.2-2 Example of Deleting Map LAI To VLR Configuration

### 3.1.6.3. Map TAI To LAI

**Description:** Add, modify and delete Map TAI To LAI configuration

#### 3.1.6.3.1.Add Map TAI To LAI

**Path:** Configuration-->MME-->Configuration-->VLR-->Map TAI To LAI

**Step:** Fill in the configuration information in the Map TAI To LAI page --> Click the "Add" button to add successfully.

Configuration / MME / mme29210 / Configuration / Map TAI To LAI

VLR | Map LAI To VLR | **Map TAI To LAI**

**Map TAI To LAI**

Name: map\_tai\_lai PLMN ID: 46000

Begin TAC: 1 End TAC: 65500

PLMN ID of LAI: 1 LAC of LAI: 1

**Add**

**Info**

Add success.

**OK**

Figure 3.1.6.3-1 Example of Adding Map TAI To LAI Configuration  
Configuration items and descriptions.

configuration item	instructions
Name	name
PLMN ID	Plmn used
Begin TAC	Starting location area number
End TAC	Ending location zone number
PLMN ID of LAI	The plmn number in the LAI
LAC of LAI	LAC (Location Area Number) in LAI (Location Area Identifier)

### 3.1.6.3.2.Modify Map TAI To LAI

**Path:** Configuration-->MME-->Configuration-->VLR-->Map TAI To LAI

**Steps:** Select the configuration box you need to modify -> fill in the new configuration information -> click "Update" -> click the "OK" button in the pop-up box to modify successfully.



Figure 3.1.6.3-2 Example of Modifying Map TAI To LAI Configuration

### 3.1.6.3.3.Delete Map TAI To LAI

**Path:** Configuration-->MME-->Configuration-->VLR-->Map TAI To LAI

**Step:** Click the "Delete" button on the Map TAI To LAI page --> click "OK" in the pop-up box to delete successfully.



Figure 3.1.6.3-3 Example of Deleting Map TAI To LAI Configuration

### 3.1.7. MME Subscriber

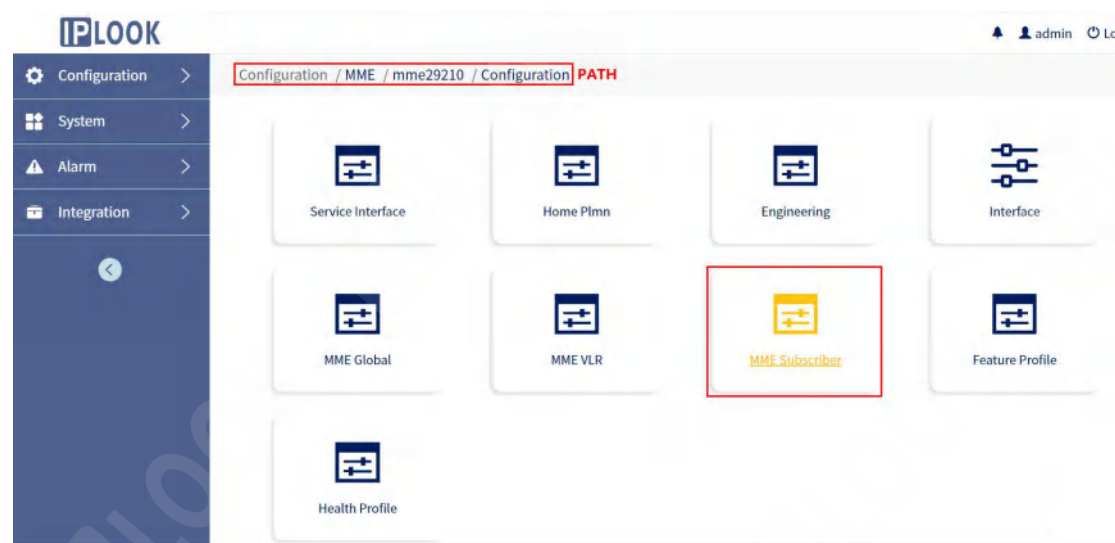


Figure 3.1.7-1 MME Subscriber path

#### 3.1.7.1. MCC Table

**Description:** add, modify and delete MCC Table configuration, configure to get MCC from imsi for 3-bit MNC.

##### 3.1.7.1.1.Add MCC Table

**Path:** Configuration-->MME-->Configuration-->MME Subscriber-->MCC Table

**Steps:** Fill in the configuration information in the MCC Table page --> Click the "Add" button --> Click the "OK" button in the pop-up box to add successfully.

Figure 3.1.7.1-1 Example of Adding an MCC Table Configuration  
Configuration items and descriptions.

configuration item	instructions
Name	name
MCC	mcc used, mcc:mobile country code

##### 3.1.7.1.2.Modify MCC Table

**Path:** Configuration-->MME-->Configuration-->MME Subscriber-->MCC Table

**Steps:** Select the configuration box you need to modify -> fill in the new configuration information -> click "Update" -> click the "OK" button in the pop-up box to modify successfully.



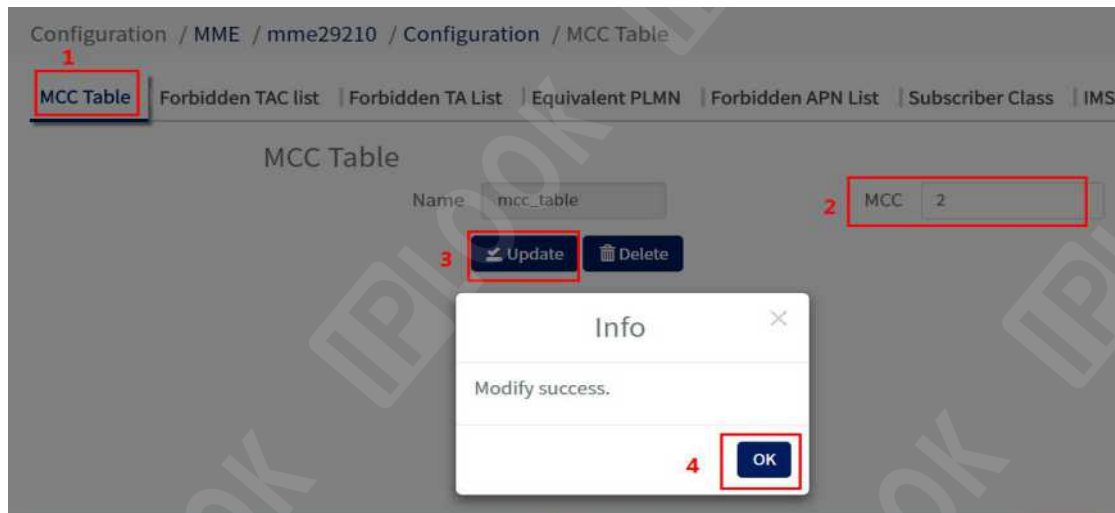


Figure 3.1.7.1-2 Example of Modifying MCC Table Configuration

### 3.1.7.1.3.Delete MCC Table

**Path:** Configuration-->MME-->Configuration-->MME Subscriber-->MCC Table

**Step:** Click the "Delete" button on the MCC Table page --> click "OK" in the pop-up box to delete successfully.

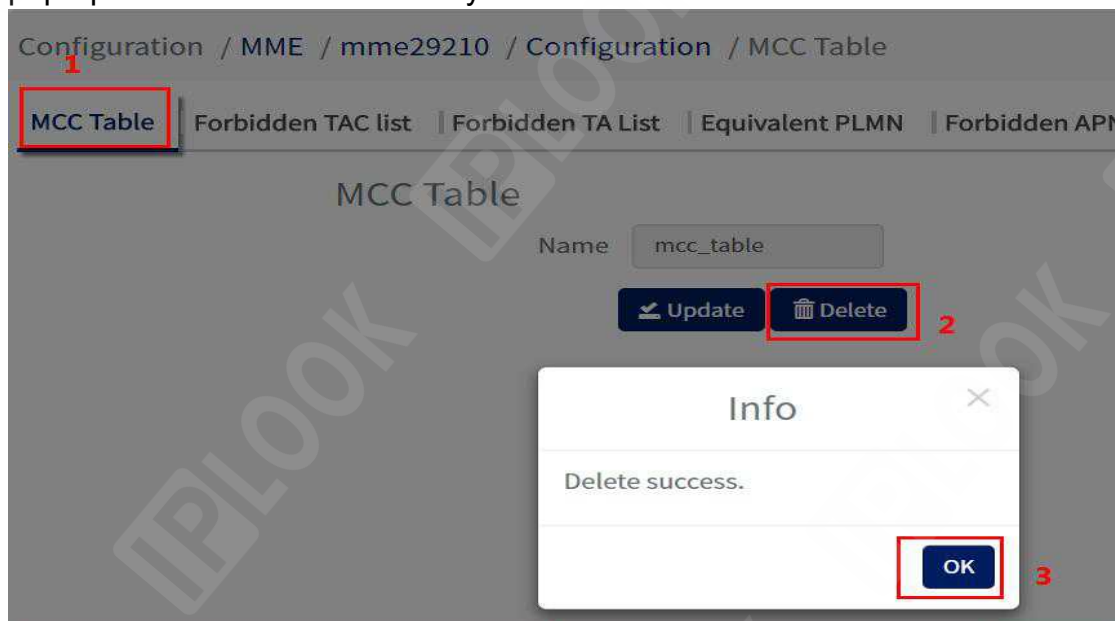


Figure 3.1.7.1-3 Example of Deleting MCC Table Configuration

### 3.1.7.2. EIR

**Description:** add, modify and delete EIR configurations for configuring whether to check the IMEI (docking EIR), with the device access policy.

### 3.1.7.2.1.Add EIR

**Path:** Configuration-->MME-->Configuration-->MME Subscriber--> EIR

**Steps:** Fill in the configuration information in the EIR page --> Click the "Add" button --> Click the "OK" button in the pop-up box to add successfully.

Figure 3.1.7.1-4 Example of Adding an EIR Configuration  
Configuration items and descriptions.

configuration item	instructions
Name	Configuration name of eir
Check IMEI	Select whether to enable the check imei function, False/True
Allow Black List	Whether to allow access to the device when the EIR returns that the device is on the blacklist, optional False/True
Allow Gray List	Whether to allow access to the device when the EIR returns that the device is in the gray table, optional False/True
Allow Unknown Equipment	Whether to allow access to the device when the EIR returns an unknown device, optional False/True

### 3.1.7.2.2.Modification of EIR

**Path:** Configuration-->MME-->Configuration-->MME Subscriber--> EIR

**Steps:** Select the configuration box you need to modify -> fill in the new configuration information -> click "Update" -> click the "OK" button in the pop-up box to modify successfully.

### 3.1.7.2.3.Delete EIR

**Path:** Configuration-->MME-->Configuration-->MME Subscriber--> EIR

**Step:** Click the "Delete" button on the EIR page --> click "OK" in the pop-up

box to delete successfully.

### 3.1.8. Feature Profile

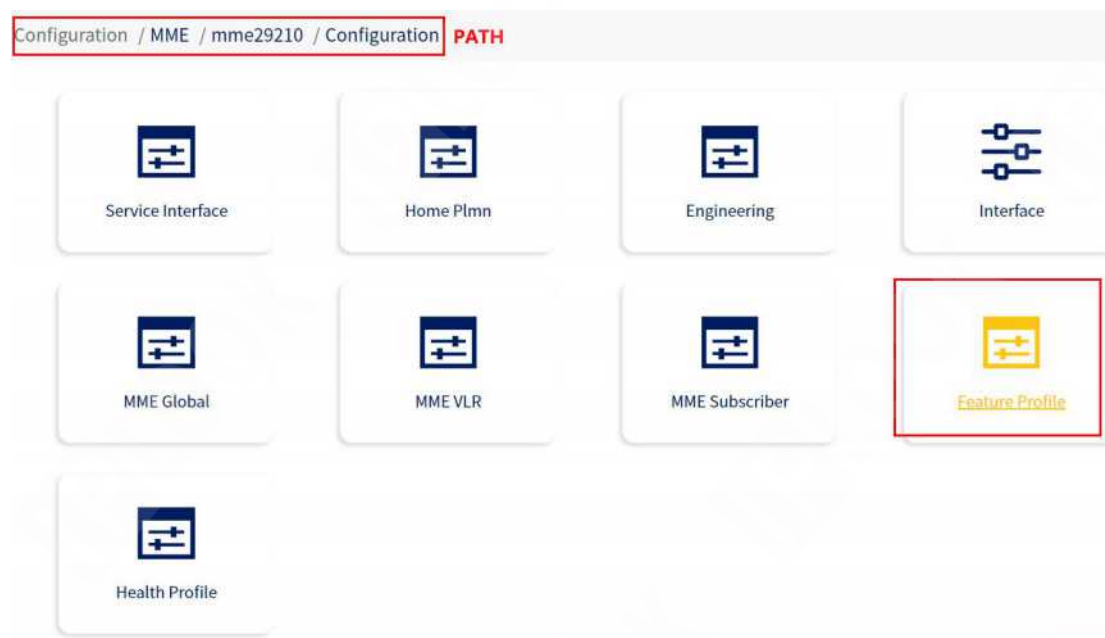


Figure 3.1.8-1 Feature Profile path

#### 3.1.8.1. Purge Trigger

**Description:** Used to add, modify and delete Purge Trigger configurations

##### 3.1.8.1.1.Add Purge Trigger

**Path:** Configuration-->MME-->Configuration-->Feature Profile-->Purge Trigger

**Steps:** Fill in the configuration information in the Purge Trigger page --> click the "Add" button --> click the "OK" button in the pop-up box to add successfully.

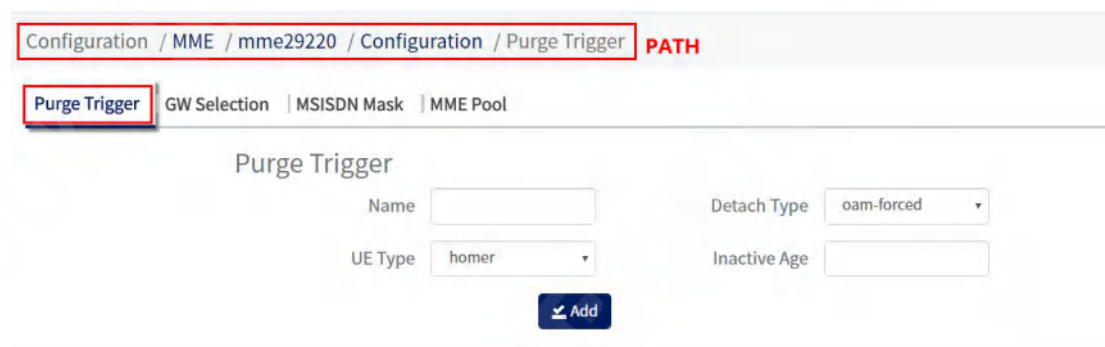


Figure 3.1.8.1-1 Purge Trigger Interface  
Configuration items and descriptions.

configuration item	instructions
Name	name
Detach Type	Select the type of de-attachment, optionally oam-forced/explicit/implicit/all
UE Type	Select user type homer:local user roamer:roaming user all:All users
Inactive Age	Duration of inactivity (in NAS EMM configuration purge-ue-interval value)

#### 3.1.8.1.2.Modify Purge Trigger

**Path:** Configuration-->MME-->Configuration-->Feature Profile-->Purge Trigger

**Steps:** Select the configuration box you need to modify -> fill in the new configuration information -> click "Update" -> click the "OK" button in the pop-up box to modify successfully.

#### 3.1.8.1.3.Remove Purge Trigger

**Path:** Configuration-->MME-->Configuration-->Feature Profile-->Purge Trigger

**Steps:** Click the "Delete" button on the Purge Trigger page --> click "OK" in the pop-up box to delete successfully.

### 3.1.8.2. GW Selection

**Description:** Used to add, modify and delete GW Selection configurations

#### 3.1.8.2.1.Add GW Selection

**Path:** Configuration-->MME-->Configuration-->Feature Profile-->GW Selection

**Steps:** Fill in the configuration information in the GW Selection page --> click the "Add" button --> click the "OK" button in the pop-up box to add successfully.

Configuration / MME / mme29220 / Configuration / GW Selection

Purge Trigger **GW Selection** MSISDN Mask MME Pool

---

GW Selection

Name  APN Correction

PGW Selection Priority  PGW Selection By TAI

PGW Selection By MSISDN  SGW Selection By MSISDN boolean

Figure 3.1.8.2-1 GW Selection interface

Configuration items and descriptions

configuration item	instructions
Name	name
APN Correction	APN Error Correction
PGW Selection Priority	PGW selection priority
PGW Selection By TAI	Whether to select PGW based on TAI
PGW Selection By MSISDN	Whether to select PGW based on MSISDN
SGW Selection By MSISDN	Whether to select SGW based on MSISDN

### 3.1.8.2.2.Modify GW Selection

**Path:** Configuration-->MME-->Configuration-->Feature Profile-->GW Selection

**Step:** Click the "Delete" button in the GW Selection page --> click "OK" in the pop-up box to delete successfully.

### 3.1.8.2.3.Delete GW Selection

**Path:** Configuration-->MME-->Configuration-->Feature Profile-->GW Selection

**Step:** Click the "Delete" button on the Purge Trigger page --> click "OK" in the pop-up box to delete successfully.

### 3.1.8.3. MSISDN Mask

**Description:** Used to add, modify and delete MISIDN Mask

#### 3.1.8.3.1.Add MISIDN Mask

**Path:** Configuration-->MME-->Configuration-->Feature Profile-->MISIDN Mask

**Steps:** Click the "Add" button under the MISIDN Mask page --> fill in the

configuration information in the pop-up box --> click the "Add" button to add successfully.

Figure 3.1.8.3-1 MSISDN Mask Interface

Configuration items and descriptions.

configuration item	instructions
Mask	MSISDN mask/prefix
PGW Address	IP address of PGW
SGW Address	IP address of SGW

### 3.1.8.3.2.Modify MISIDN Mask

**Path:** Configuration-->MME-->Configuration-->Feature Profile-->MISIDN Mask

**Steps:** Click the Mask you need to modify under the list --> modify the configuration in the pop-up box --> click "Modify" --> click the "OK" button in the pop-up box, the modification is successful.

### 3.1.8.3.3.Delete MISIDN Mask

**Path:** Configuration-->MME-->Configuration-->Feature Profile-->MISIDN Mask

**Steps:** Click the delete icon corresponding to the row of the configuration you want to delete under the list --> click "OK" in the pop-up box, the deletion is successful.

### 3.1.8.4. MME Pool

**Description:** MME Pool is multiple MMEs serving the same wireless area (MME Pool area) at the same time. the MMEs within the Pool interconnect with all eNodeBs within the Pool area to achieve resource sharing and service load sharing among the MMEs within the Pool. which MME the UE accesses is related to the load balancing policy of the eNodeB. so the eNodeB needs to sense the MME's device status. If it detects that the MME is not available, it needs to adjust the load balancing policy in time and assign the new access service request message to other normal state MMEs. in addition, the eNodeB



needs to obtain the load weight of the MME and combine the load weight to select the access MME for the UE.

#### 3.1.8.4.1.Add MME Pool

**Path:** Configuration-->MME-->Configuration-->Feature Profile-->MME Pool

**Steps:** Fill in the configuration information in the MME Pool page --> Click the "Add" button --> Click the "OK" button in the pop-up box to add successfully.

Configuration / MME / mme29220 / Configuration / MME Pool

Purge Trigger | GW Selection | MSISDN Mask | **MME Pool**

MME Pool

Name  Overload Start Threshold

Overload Stop Threshold  Overload Action

Figure 1.1-111 MME Pool Page

Configuration items and descriptions.

configuration item	instructions
Name	name
Overload Start Threshold	Overload Start Threshold
Overload Stop Threshold	Overload Stop Threshold
Overload Action	Overload action

#### 3.1.8.4.2.Modify MME Pool

**Path:** Configuration-->MME-->Configuration-->Feature Profile-->MME Pool

**Steps:** Select the configuration box you need to modify -> fill in the new configuration information -> click "Update" -> click the "OK" button in the pop-up box to modify successfully.

#### 3.1.8.4.3.Delete MME Pool

**Path:** Configuration-->MME-->Configuration-->Feature Profile-->MME Pool

**Step:** Click the "Delete" button in the MME Pool page --> click "OK" in the pop-up box to delete successfully.

### 3.1.9. Health Profile

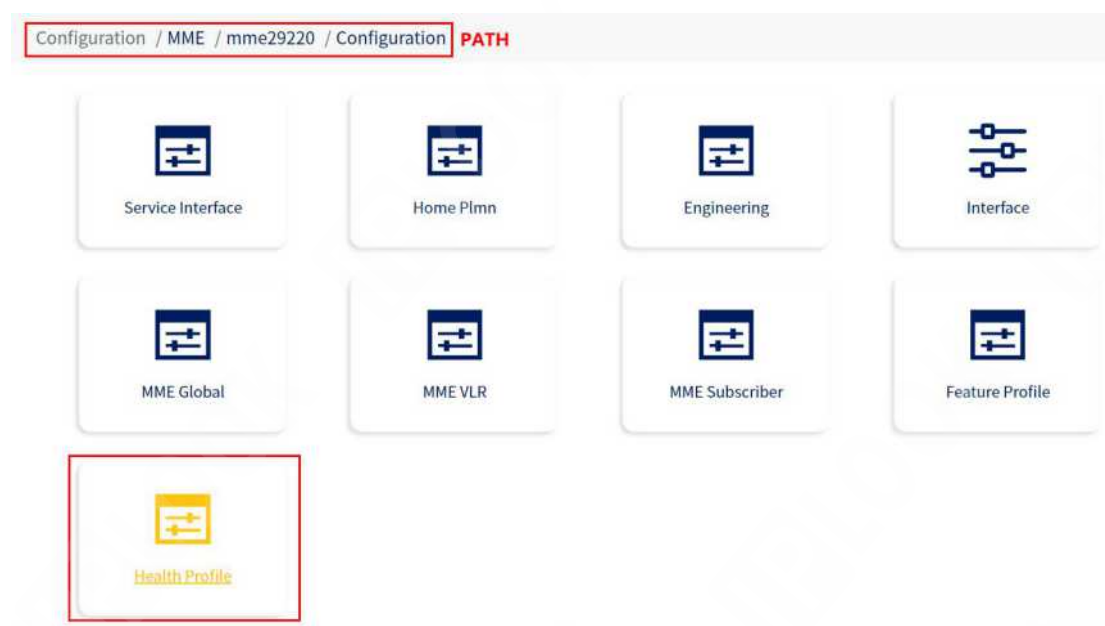


Figure 3.1.9 Health Profile path

#### 3.1.9.1. Health Profile

**Description:** Used to add, query, modify and delete Health Profile

##### 3.1.9.1.1.Adding a Health Profile

**Path:** Configuration-->MME-->Configuration-->Health Profile-->Health Profile

**Steps:** Click the "Add" button under the Health Profile page --> fill in the configuration information in the pop-up box --> click the "Add" button to add successfully.



Figure 3.1.9.1-1 Health Profile page

Configuration items and descriptions.

configuration item	instructions
Name	name
Update Period	Update cycle
Window	time window

Min Data Threshold	minimum time limit
Attach Major Threshold	With significant warning thresholds
Attach Minor Threshold	Attachment of secondary warning thresholds

#### 3.1.9.1.2. Check Health Profile

**Path:** Configuration-->MME-->Configuration-->Health Profile-->Health Profile

**Steps:** Fill in the Name box with the name of the Health Profile you want to query --> click the "Query" button, if it exists, it will be displayed in the list, if not, a "Not exist" box will pop up. If it does not exist, the "Not exist" box will pop up.

#### 3.1.9.1.3. Modify Health Profile

**Path:** Configuration-->MME-->Configuration-->Health Profile-->Health Profile

**Steps:** Click the name of the configuration you want to modify in the Name column under the page list --> Modify the configuration in the pop-up box --> Click the "Modify" button --> Click "OK" in the pop-up box, the modification is successful.

#### 3.1.9.1.4. Delete Health Profile

**Path:** Configuration-->MME-->Configuration-->Health Profile-->Health Profile

**Steps:** Click the delete icon in the corresponding row of the information to be deleted under the list in the Health Profile page --> click "OK" in the pop-up box to delete successfully.

### 3.1.9.2. Attach Success

**Description:** Used to add, modify and delete Attach Success configurations

#### 3.1.9.2.1. Add Attach Success

**Path:** Configuration-->MME-->Configuration-->Health Profile-->Attach Success

**Steps:** Fill in the configuration information in the Attach Success page --> click the "Add" button --> click the "OK" button in the pop-up box to add successfully.

Configuration / MME / mme2983 / Configuration / Attach Success

Health Profile **Attach Success** service request

### Attach Success

Name

Clear Major Alarm Threshold

Clear Minor Alarm Threshold

Active Major Alarm Threshold

Active Minor Alarm Threshold

[Add](#)

Figure 3.1.9.2-1 Attach Success page

Configuration items and descriptions.

configuration item	instructions
Name	name
Active Major Alarm Threshold	Critical Active Alert Threshold
Clear Major Alarm Threshold	Clear critical alarm thresholds
Active Minor Alarm Threshold	Secondary active alert threshold
Clear Minor Alarm Threshold	Clear secondary active alarm thresholds

### 3.1.9.2.2.Modify Attach Success

**Path:** Configuration-->MME-->Configuration-->Health Profile-->Attach Success

**Steps:** Select the configuration box you need to modify -> fill in the new configuration information -> click "Update" -> click the "OK" button in the pop-up box to modify successfully.

### 3.1.9.2.3.Delete Attach Success

**Path:** Configuration-->MME-->Configuration-->Health Profile-->Attach Success

**Step:** Click the "Delete" button in the Attach Success page --> click "OK" in the pop-up box to delete successfully.

### 3.1.9.2.4.Service Request

**Description:** Used to add, modify and delete Service Request configurations

### 3.1.9.2.5.Add Service Request

**Path:** Configuration-->MME-->Configuration-->Health Profile-->Service

## Request

**Steps:** Fill in the configuration information in the Service Request page --> Click the "Add" button --> Click the "OK" button in the pop-up box to add successfully.

Configuration / MME / mme2983 / Configuration / Service Request

Health Profile | Attach Success | **Service Request**

Service Request

Name

Active Major Alarm Threshold

Clear Major Alarm Threshold

Active Minor Alarm Threshold

Clear Minor Alarm Threshold

Figure 3.1.9.2-1 Service Request page

Configuration items and descriptions.

configuration item	instructions
Name	naming
Active Major Alarm Threshold	Critical Active Alert Threshold
Clear Major Alarm Threshold	Clear critical alarm thresholds
Active Minor Alarm Threshold	Secondary active alert threshold
Clear Minor Alarm Threshold	Clear secondary active alarm thresholds

### 3.1.9.2.6.Modify Service Request

**Path:** Configuration-->MME-->Configuration-->Health Profile-->Service Request

**Steps:** Select the configuration box you need to modify -> fill in the new configuration information -> click "Update" -> click the "OK" button in the pop-up box to modify successfully.

### 3.1.9.2.7.Delete Service Request

**Path:** Configuration-->MME-->Configuration-->Health Profile-->Service Request

**Step:** Click the "Delete" button in the Service Request page --> click "OK" in the pop-up box to delete successfully.

### 3.1.10. UE Context



Figure 3.2.1-1 UE Context Path

#### 3.1.10.1. Check UE Information

**Description:** Used to query user information

**Path:** Configuration-->MME-->Operation-->UE Context-->UE Information

**Steps:** Enter the user's IMSI number in the input box --> click the "Query" button, if it exists, the result will be displayed in the list, if it does not exist, then the "Failure" message will pop up.



Figure 1.2-3 UE Information page

Configuration items and descriptions.

configuration item	instructions
IMSI	User's IMSI information
ECM State	ECM status information
EMM State	EMM status information
Last Known TAI	Last known TAI (Tracking Area Identifier)

#### 3.1.10.2. Query Session Context

**Description:** query session context ID by IMSI

**Path:** Configuration-->MME-->Operation-->UE Context-->IMSI List

**Step:** Enter the IMSI number in the input box --> click the "Query" button, if it exists, the result will be displayed in the list.





Figure 3.1.10.3-1 Session Context page

### 3.1.11. eNB

#### 3.1.11.1. Search ENB Information

**Description:** Used to display base station information

**Path:** Configuration-->MME-->Operation--> eNB--> eNB Information

**Way 1:** Select eNB ID in Query Type-->Enter ENB ID-->Click "Query", if it exists, the result will be displayed under the list.

**Way 2:** Select IP Address in Query Type --> enter IP address --> click "Query" button, if it exists, the result will be displayed under the list.

**Way 3:** Select All in Query Type --> enter IP address --> click "Query" button, if it exists, the result will be displayed under the list.

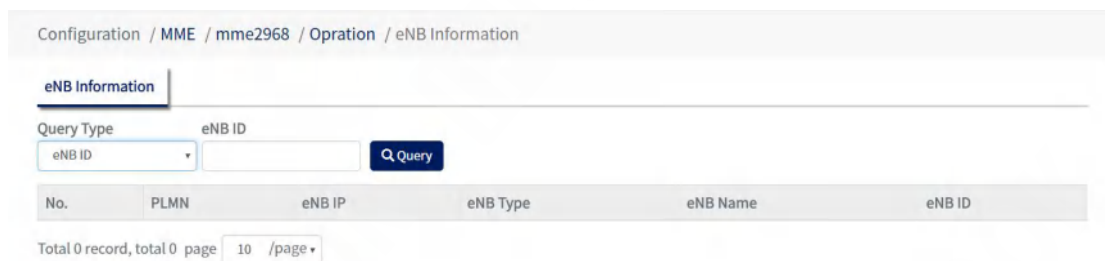


Figure 3.1.11.1-1 Querying Base Station Information Mode I

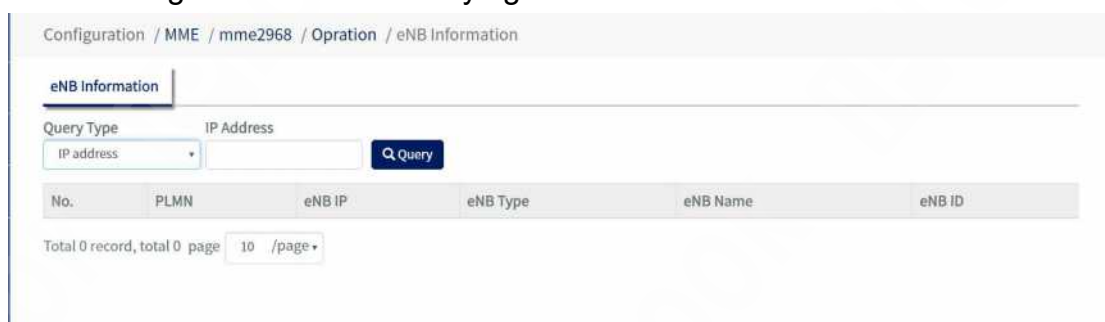


Figure 3.1.11.1-2 Querying Base Station Information Mode II

Configuration / MME / mme2968 / Opration / eNB Information

**eNB Information**

Query Type:  IP Address:

No.	PLMN	eNB IP	eNB Type	eNB Name	eNB ID
-----	------	--------	----------	----------	--------

Total 0 record, total 0 page  /page

Figure 3.1.11.1-3 Querying Base Station Information Mode III

### 3.1.12. MME Interface Info

**Description:** Used to display the information of S11,S6 and other interfaces of MME

#### 3.1.12.1. Show GTP Path

**Description:** Used to display the connection status and ip address of port S11  
**Path:** Configuration-->MME-->Option-->MME Interface Info-->GTP Path

Configuration / MME / mme2968 / Opration / MME Interface Info

**GTP Path** S6 DM Peer

Type	State	IP Address
------	-------	------------

Total 0 record, total 1 page  /page

1

Figure 3.1.12.1-1 GTP Path page

#### 3.1.12.2. Show S6 DM Peer

**Description:** Used to display the connection status with hss

**Path:** Configuration-->MME-->Option-->MME Interface Info-->S6 DM Peer

Configuration / MME / mme2968 / Opration / MME Interface Info

GTP Path **S6 DM Peer**

Host ID	Status
3.hss.com	in-service

Total 1 record, total 1 page  /page

1

Figure 3.1.12.2-1 S6 DM Peer Page

## 3.2. PGW

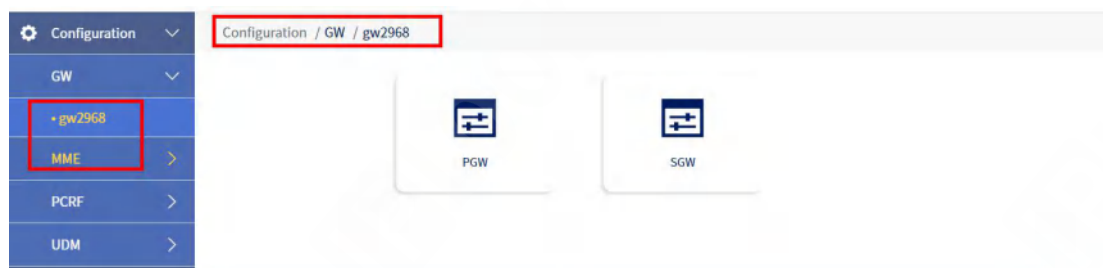


Figure 3.2-1 PGW path

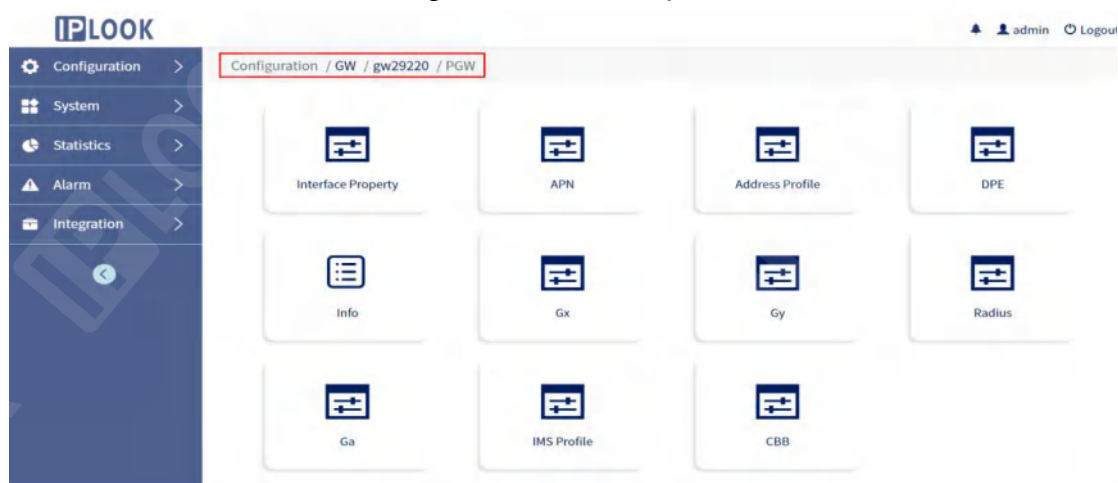


Figure 3.2-2 PGW Configuration Page

### 3.2.1. Interface Property

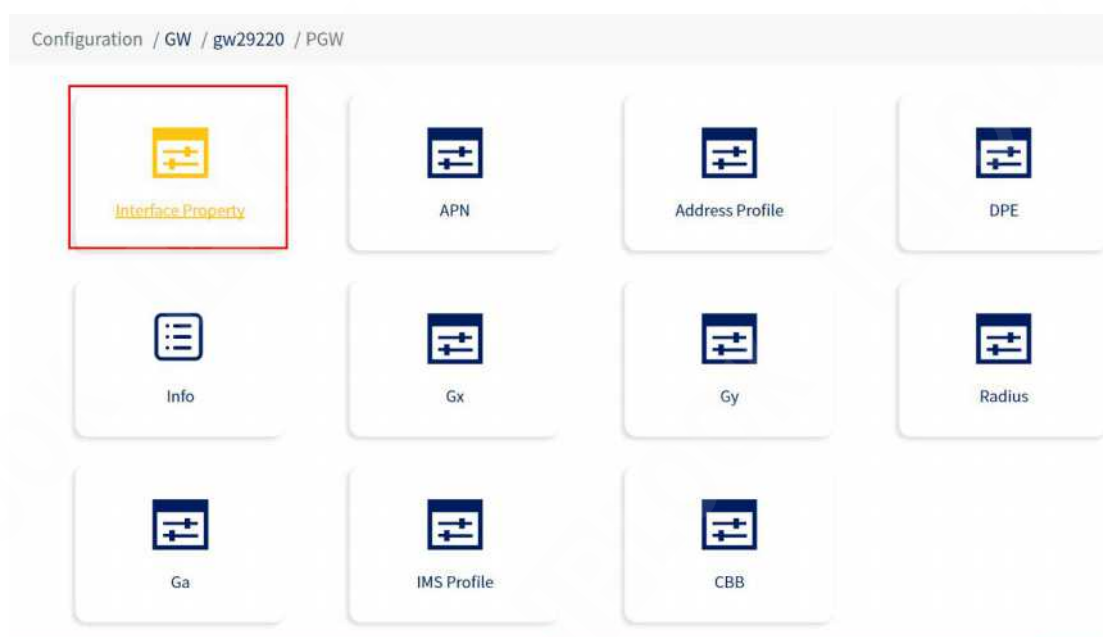


Figure 3.2.1-1 Interface Property Path

### 3.2.1.1. GTP Profile

**Description:** Used to add, modify and delete GTP signaling configurations

#### 3.2.1.1.1.Adding a GTP Profile

**Path:** Configuration-->GW-->PGW-->Interface Property-->GTP Profile

**Steps:** Click the "Add" button on the GTP Profile page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully.

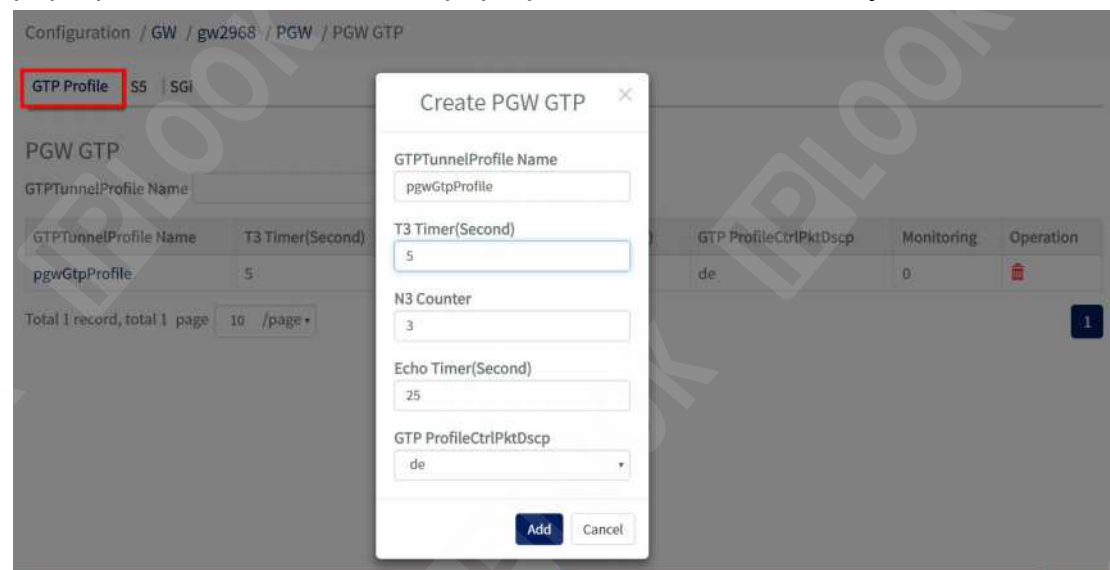


Figure 3.2.1.1-1 Example of Adding a GTP Profile Configuration Configuration items and descriptions.

configuration item	instructions
GTP Tunnel Profile Name	pgwGtpTunnelProfile profile name for configuration management parameters
T3 Timer	Timeout time for GTP signaling messages
N3 Counter	Count of timeout retransmissions for GTP signaling messages
Echo Timer (Second)	PGW's ECHO packet sending interval
GTP ProfileCtrlPktDscp	The DSCP value filled in the signaling packet of the PGW

#### 3.2.1.1.2.Check GTP Profile

**Path:** Configuration-->GW-->PGW-->Interface Property-->GTP Profile

**Step:** Enter the name of the gtp profile under the GTP Tunnel Profile Name box --> click the "Query" button, if it exists, the result will be displayed under the list,

if not, the list will be empty.

### 3.2.1.1.3.Modify GTP Profile

**Path:** Configuration-->GW-->PGW-->Interface Property-->GTP Profile

**Steps:** Click the name of the configuration you want to modify in the GTP TunnelProfile Name column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box ", the modification is successful.

### 3.2.1.1.4.Delete GTP Profile

**Path:** Configuration-->GW-->PGW-->Interface Property-->GTP Profile

**Step:** Click the delete icon of the row of data you want to delete in the list in the GTP Profile page --> click the "OK" button in the pop-up box to delete successfully.

### 3.2.1.2. S5

**Description:** Add, modify and delete S5 interface configuration

#### 3.2.1.2.1.Add S5

**Path:** Configuration-->GW-->PGW-->Interface Property-->S5

**Steps:** Fill in the configuration information under the S5 page --> Click "Add" button --> Click "OK" in the pop-up box to add successfully.

Configuration / GW / gw2968 / PGW / PGW S5

GTP Profile **S5** SGI

PGW S5

S5 Name

pgwS5

GTP Name

pgwGtpProfile

Roamer Radius Time Limit(min)

0

Roamer Time Limit(min)

0

Roamer Volume Limit

0

Flt Bill Time Limit(min)

0

Flt Bill Volume Limit(byte)

0

Hysteresis Timer(Second)

0

Service IPv4

172.26.3.1

Modify

Delete

Figure 3.2.1.2-1 S5 Configuration Page

Configuration items and descriptions.

configuration item	instructions
--------------------	--------------

S5 Name	Name of the S5 configuration management parameter
GTP Name	The name of the pgw gtp tunnel profile used
Roamer Radius Time Limit(min)	Time interval for roaming user radius call reporting
Roamer Time Limit(min)	Time interval for roaming user call report
Roamer Volume Limit	Traffic interval reported on the roaming user's phone bill
Flt Bill Time Limit(min)	Time interval for billing
Flt Bill Volume Limit(byte)	Billed traffic limits
Hysteresis Timer (Second)	Timer to start SAQ Qos degradation case
Service IPv4	Address of the s5/8 interface on the pgw

### 3.2.1.2.2.Modification of S5

**Path:** Configuration-->GW-->PGW-->Interface Property-->S5

**Steps:** Select the configuration box you want to modify -> fill in the configuration information -> click the "Modify" button -> click "OK" in the pop-up box to modify successfully.

### 3.2.1.2.3.Delete S5

**Path:** Configuration-->GW-->PGW-->Interface Property-->S5

**Steps:** Click the "Delete" icon under the S5 page --> click "OK" in the pop-up box to delete successfully.

### 3.2.1.3. SGi

**Description:** Add, modify and delete SGi configurations

#### 3.2.1.3.1.Add SGi

**Path:** Configuration-->GW-->PGW-->Interface Property-->SGi

**Steps:** Fill in the configuration information under SGi page --> Click "Add" button --> Click "OK" in the pop-up box to add successfully.



Configuration / GW / gw2971 / PGW / PGW SGi

GTP Profile | SS | **SGi**

PGW SGi

Server Interface SGi Name pgwSgi	Service IPv4 172.30.29.71
-------------------------------------	------------------------------

Modify Delete

Figure 3.2.1.3-1 SGi Configuration Example

### 3.2.1.3.2.Modification of SGi

**Path:** Configuration-->GW-->PGW-->Interface Property-->SGi

**Steps:** Select the configuration box you want to modify -> fill in the configuration information -> click the "Modify" button -> click "OK" in the pop-up box to modify successfully.

### 3.2.1.3.3.Delete SGi

**Path:** Configuration-->GW-->PGW-->Interface Property-->SGi

**Steps:** Click the "Delete" icon under the SGi page --> click "OK" in the pop-up box to delete successfully.

## 3.2.2. APN

Configuration / GW / gw29220 / PGW **PATH**

Interface Property	<b>APN</b>	Address Profile	DPE
Info	Gx	Gy	Radius
Ga	IMS Profile	CBB	

Figure 3.2.2-1 APN path

### 3.2.2.1. APN

**Description:** Add, query, modify and delete APN configuration

#### 3.2.2.1.1. Add APN

**Path:** Configuration-->GW-->PGW-->APN-->APN

**Steps:** Click the "Add" button on the APN page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully.

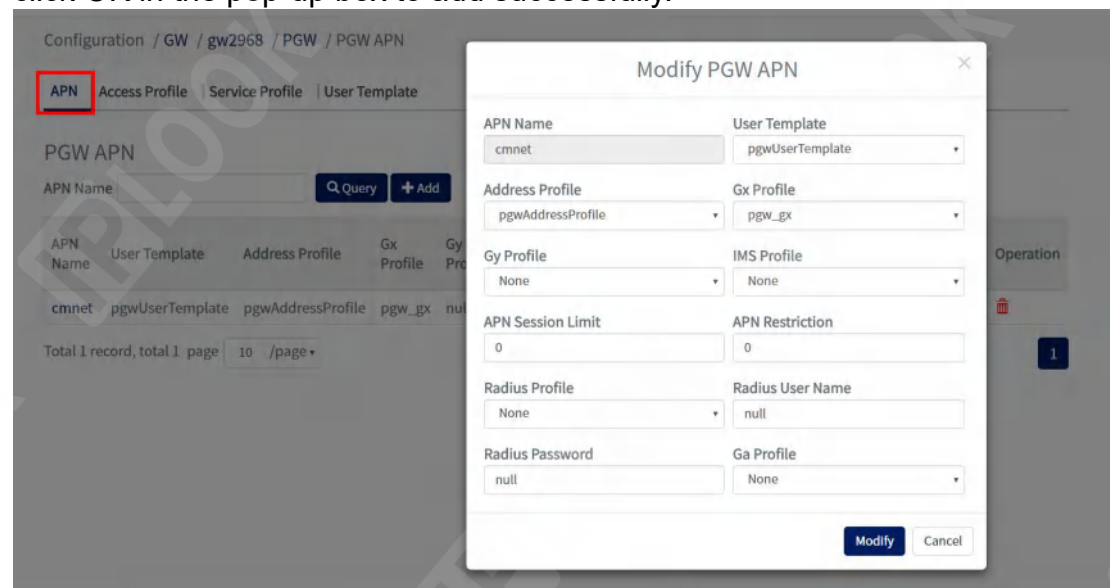


Figure 3.2.2.1-1 APN Configuration Example

Configuration items and descriptions.

configuration item	instructions
Apn Name	Name of the apn used
User Template	The user template to be used is set in "User Template".
Address Profile	The associated address pool policy, the UE IP is assigned from the associated address pool for PDN-connected sessions established with this apn.
Gx Profile	Associated gx port policy, when attached request PGW sends CCR-I to PCRF requesting user policy, null is not associated
Gy Profile	Associated gy port policy, PGW sends CCR-I to OCS requesting user policy when attached request, null is not associated

IMS Profile	associated with the ims policy, the PGW will have a register message sent to the specified P-CSCF address after the user is attached online, requesting registration to the IMS network
Apn Session Limit	apn session limit, fill in 0 for no limit
Apn Restriction	Constraint values for apn
Radius Profile	The associated radius policy, with the user attached online, will have the appropriate message sent to the configured Radius server
Radius User Name	The username set when using radius, without Radius, defaults to null
Radius Password	The authentication password for radius
GaProfile	Associated ga port policy, user attached online, will have the appropriate message sent to the configured CG server

### 3.2.2.1.2.Check APN

**Path:** Configuration-->GW-->PGW-->APN-->APN

**Step:** Enter the name of the APN in the APN Name box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.2.1.3.Modify APN

**Path:** Configuration-->GW-->PGW-->APN-->APN

**Steps:** Click the name of the configuration you want to modify in the APN Name column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box to modify successfully.

### 3.2.2.1.4.Delete APN

**Path:** Configuration-->GW-->PGW-->APN-->APN

**Step:** Click the delete icon of the row of data you want to delete in the list in the APN page --> click the "OK" button in the pop-up box to delete successfully.

### 3.2.2.2. Access Profile

**Description:** Add, query, modify and delete Access Profile configurations

#### 3.2.2.2.1. Adding an Access Profile

**Path:** Configuration-->GW-->PGW-->APN-->Access Profile

**Steps:** Click the "Add" button on the Access Profile page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully. The Add button will be successfully added.

The screenshot shows the 'Create PGW Access Profile' dialog box in the IPLOOK interface. The dialog box has a title bar 'Create PGW Access Profile' and a close button. It contains several input fields and buttons. The fields are: 'AccessProfileName' (with value 'pgw\_access\_pf'), 'Radius Profile' (with value 'None'), 'Access Profile Session Timeout (Unit h)' (with value '0'), 'Access Profile Idle Timeout (unit min)' (with value '0'), 'NBNS Primary IPv4' (with value '192.168.50.150'), 'DNS Primary IPv4' (with value '192.168.50.150'), 'NBNS Secondary IPv4' (with value '192.168.50.150'), 'DNS Secondary IPv4' (with value '192.168.50.150'), and 'NB-lot Server IPv4' (with value '192.168.50.150'). There are 'Add' and 'Cancel' buttons at the bottom right. The 'Add' button is highlighted with a red box and the number 4. The background shows the 'PGW Access Profile' page with a table of existing profiles and a '+ Add' button highlighted with a red box and the number 2.

Figure 3.2.2.2-1 Access Profile Configuration Example  
Configuration items and descriptions

configuration item	instructions
AccessProfileName	Access-profile name
Radius Profile	The name of the referenced radiusProfile
Access Profile Session Timeout (Unit h)	Timeout for session activation, default value is 0, in hours, range 0-48
Access Profile Idle Timeout(unit min)	Timeout for session inactivity (IDLE state), default value is 0, in minutes, range 0-64800
NBNS Primary IPv4	NetBIOS server address
DNS Primary IPv4	Domain Name Server Address
NBNS Secondary IPv4	Alternative NetBIOS server address
DNS Secondary IPv4	Alternative Domain Name Server Address
NB-lot Server IPv4	Address of the NBiot server

#### 3.2.2.2.2.Query Access Profile

**Path:** Configuration-->GW-->PGW-->APN-->Access Profile

**Step:** Enter the name of the Access Profile under the AccessProfile Name box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

#### 3.2.2.2.3.Modify the Access Profile

**Path:** Configuration-->GW-->PGW-->APN-->Access Profile

**Steps:** Click the name of the configuration you want to modify in the AccessProfile Name column of the list --> modify the configuration information in the pop-up box --> click "Modify" --> click "OK" in the pop-up box ", the modification is successful.

#### 3.2.2.2.4.Delete Access Profile

**Path:** Configuration-->GW-->PGW-->APN-->Access Profile

**Step:** Click the delete icon of the row of data you want to delete under the list in the Access Profile page --> click the "OK" button in the pop-up box to delete successfully.

#### 3.2.2.3. Service Profile

**Description:** Add, query, modify and delete Service Profile configurations

##### 3.2.2.3.1.Adding a Service Profile

**Path:** Configuration-->GW-->PGW-->APN-->Service Profile

**Steps:** Click the "Add" button on the Service Profile page --> Fill in the configuration information in the pop-up box --> Click the "Add" button in the pop-up box --> Click OK in the pop-up box to add Success.

Configuration / GW / gw29220 / PGW / PGW Service Profile

APN | Access Profile | **Service Profile** | User Template

PGW Service Profile

ServiceProfile Name  Query + Add

ServiceProfileName	Operation
pgw_serviceprofile_1	

Total record, total 1 page 10 /page

Create PGW Service Profile

ServiceProfileName

CBB Service

Add Cancel

Figure 3.2.2.3-1 Service Profile Configuration Example  
Configuration items and descriptions.

configuration item	instructions
ServiceProfileName	Service profile name
CBB Service	The name of PGW's cbbService

### 3.2.2.3.2.Query Service Profile

**Path:** Configuration-->GW-->PGW-->APN-->Service Profile

**Step:** Enter the name of the Service Profile under the ServiceProfile Name box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.2.3.3.Modify Service Profile

**Path:** Configuration-->GW-->PGW-->APN-->Service Profile

**Steps:** Click the name of the configuration you want to modify in the AccessProfile Name column of the list --> modify the configuration information in the pop-up box --> click "Modify" --> click "OK" in the pop-up box ", the modification is successful.

### 3.2.2.3.4.Delete Service Profile

**Path:** Configuration-->GW-->PGW-->APN-->Service Profile

**Steps:** Click the delete icon of the row of data you want to delete under the list in the Service Profile page --> click the "OK" button in the pop-up box to delete successfully.



### 3.2.2.4. User Template

**Description:** Add and remove User Template configuration

#### 3.2.2.4.1. Add User Template

**Path:** Configuration-->GW-->PGW-->APN-->User Template

**Steps:** Click the "Add" button on the User Template page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully.

Figure 3.2.2.4-1 User Template Configuration Example  
Configuration items and descriptions.

configuration item	instructions
UserTemplateName	User Template Name
Authenticated Enable	Switch to enable Radius authentication, disabled is off, enable is on
Access Profile	The name of the referenced access profile
Service Profile	The name of the referenced service profile

#### 3.2.2.4.2. Query User Template

**Path:** Configuration-->GW-->PGW-->APN-->User Template

**Step:** Enter the name of the User Template under the UserTemplateName box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.2.4.3.Modify User Template

**Path:** Configuration-->GW-->PGW-->APN-->User Template

**Steps:** Click the name of the configuration you want to modify in the UserTemplateName column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box and the modification is successful.

### 3.2.2.4.4.Delete User Template

**Path:** Configuration-->GW-->PGW-->APN-->User Template

**Steps:** Click the delete icon of the row of data you want to delete under the list in the User Template page --> click the "OK" button in the pop-up box to add successfully.

## 3.2.3. Address Profile

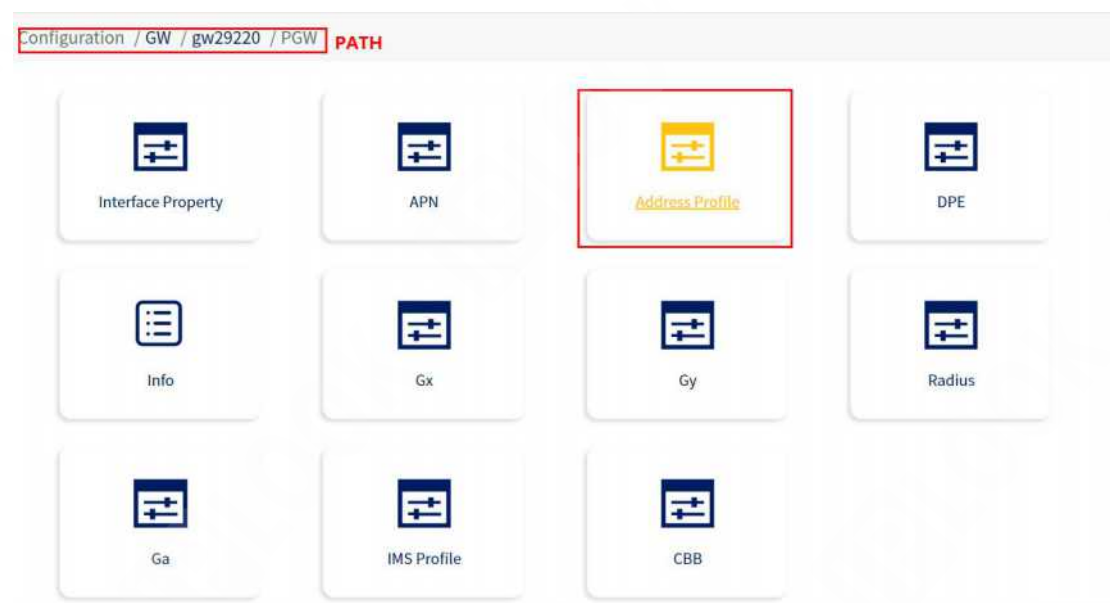


Figure 3.2.3-1 Address Profile Path

### 3.2.3.1. Address Profile

**Description:** Add and remove Address Profile configurations

#### 3.2.3.1.1.Add Address Profile

**Path:** Configuration-->GW-->PGW-->Address Profile-->Address Profile

**Steps:** Click the "Add" button on the Address Profile page --> Fill in the configuration information in the pop-up box --> Click the "Add" button in the pop-up box --> Click OK in the pop-up box to add Success.

The screenshot shows the 'PGW Address Profile' configuration page. At the top, there is a breadcrumb trail: 'Configuration / GW / gw29220 / PGW / PGW Address Profile'. Below this, there is a tab labeled 'Address Profile' (indicated by a red '1') and a sub-tab 'Address Range'. The main section is titled 'PGW Address Profile' and contains a search bar with 'AddressProfile Name' and two buttons: 'Query' and 'Add' (indicated by a red '2'). Below the search bar is a table with columns 'Address Profile Name', 'Alarm Threshold Set', and 'Operation'. The table contains one entry: 'pgwaddresspf' with an 'Alarm Threshold Set' of '95'. Below the table, it says 'Total record, total 1 page' and '10 /page'. A pop-up dialog titled 'Create PGW Address Profile' is open, showing fields for 'Address Profile Name' (filled with 'pgw\_address\_pf'), 'Alarm Threshold Set' (filled with '95'), and 'Alarm Threshold Clear' (filled with '90'). At the bottom of the dialog, there are 'Add' and 'Cancel' buttons, with the 'Add' button indicated by a red '4'.

Figure 3.2.3-1 Address Profile Configuration Example  
Configuration items and descriptions.

configuration item	instructions
Address Profile Name	Address profile name
Alarm Threshold Set	Threshold values for alarm generation for address pool usage
Alarm Threshold Clear	Threshold for address pool use to clear alarms

### 3.2.3.1.2.Query Address Profile

**Path:** Configuration-->GW-->PGW-->Address Profile-->Address Profile

**Step:** Enter the Address Profile name in the Address Profile Name box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.3.1.3.Modify Address Profile

**Path:** Configuration-->GW-->PGW-->Address Profile-->Address Profile

**Steps:** Click the Address Profile Name column in the list to modify the configuration name -> modify the configuration information in the pop-up box -> click "Modify" -> click "OK" in the pop-up box ", the modification is successful.

### 3.2.3.1.4.Delete Address Profile

**Path:** Configuration-->GW-->PGW-->Address Profile-->Address Profile

**Step:** Click the delete icon of the row of data you want to delete in the Address Profile page -> click the "OK" button in the pop-up box to delete successfully.

### 3.2.3.2. Address Range

**Description:** Add, query, modify and delete Address Range configurations

#### 3.2.3.2.1.Add Address Range

**Path:** Configuration-->GW-->PGW-->Address Profile-->Address Range

**Steps:** Click the "Add" button on the Address Range page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully.

Configuration / GW / gw29220 / PGW / PGW Address Range

Address Profile **Address Range**

PGW Address Range

AddressRange Name  Query + Add

AddressRangeName	Address Range SubNetMask	Address Profile	Address Range Number Of Address	Address Range Start Address
pgw_accessrange	255.255.0.0	pgwaddresspf	60	220.23.0.1

Total record, total 1 page 10 /page

Create PGW Address Range

AddressRangeName: pgw\_addr\_range

Address Range SubNetMask: 255.255.0.0

Address Profile: pgwaddresspf

Address Range Number Of Address: 60000

Address Range Start Address: 220.23.0.1

Add Cancel

Figure 3.2.3.2-1 Address Range Configuration Example  
Configuration items and descriptions.

configuration item	instructions
AddressRangeName	Give the configuration item a name
Address Range SubNetMask	Subnet mask used by the address pool
Address Profile	Associated address policy name
Address Range Number of Address	Number of addresses allocated by the address pool
Address Range Start Address	Starting address for address pool assignment

### 3.2.3.2.2.Query Address Range

**Path:** Configuration-->GW-->PGW-->Address Profile-->Address Range

**Step:** Enter the name of Address Range under AddressRange Name box --> click "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.3.2.3.Modify Address Range

**Path:** Configuration-->GW-->PGW-->Address Profile-->Address Range

**Step:** Click the name of the configuration you want to modify in the Address Range Name column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box and the modification is successful.

### 3.2.3.2.4.Delete Address Range

**Path:** Configuration-->GW-->PGW-->Address Profile-->Address Range

**Step:** Click the delete icon of the row of data you want to delete in the Address Range page -> click the "OK" button in the pop-up box to delete successfully.

## 3.2.4. DPE

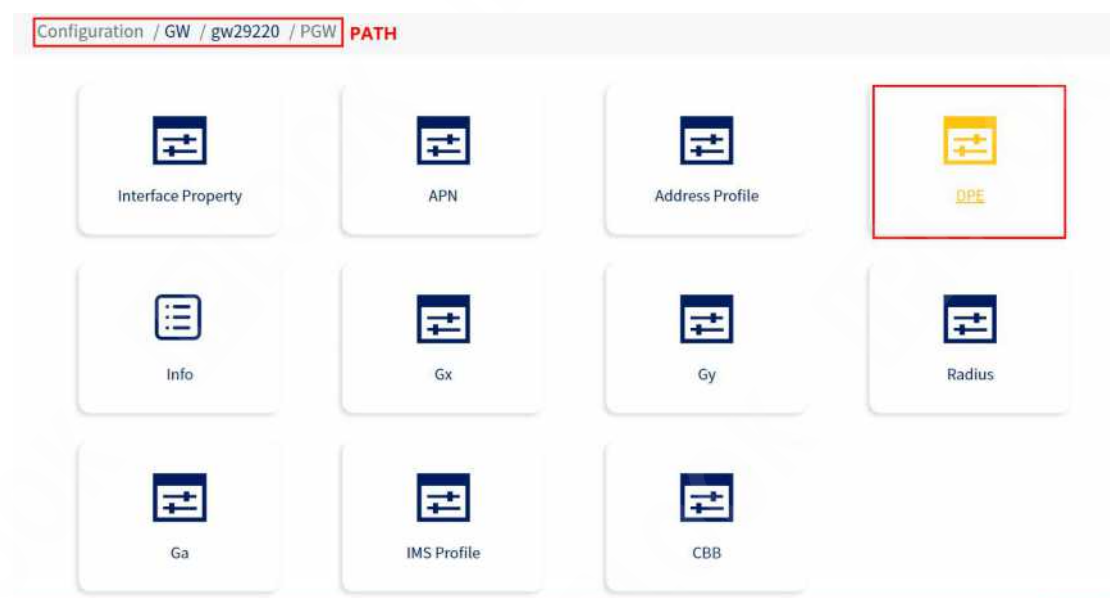


Figure 3.2.4-1 DPE path

### 3.2.4.1. PGW DPE

**Description:** Adding and modifying PGW DPE configuration

#### 3.2.4.1.1.Add PGW DPE

**Path:** Configuration-->GW-->PGW-->DPE-->PGW DP

**Steps:** Fill in the configuration information under the PGW DPE page --> Click the "Add" button --> Click "OK" in the pop-up box to add successfully.

Configuration / GW / gw29220 / PGW / PGW DPE **PATH**

PGW DPE

DPE Number 4	DPE BindCore Start 5
DPE S5 Address 172.30.29.222	DPE Sgi Address 172.30.29.222
DPE Accelerate enable	DPE S5 Eth Name p7p2
DPE SGi Eth Name p7p2	

Modify

Figure 3.2.4.1-1 PGW DPE Configuration Example

Configuration items and descriptions.

configuration item	instructions
DPE Number	Number of PGW Dpe's processes pulled up
DPE BindCore Start	Starting id of the cpu core bound by dpe
DPE S5 Address	PGW Dpe's S5 address
DPE Sgi Address	PGW Dpe's Sgi Address
DPE Accelerate	Switch to use DPDK acceleration or not, enable means start, diable means off
DPE S5 Eth Name	PGW Dpe's S5 port uses the name of the network port
DPE SGi Eth Name	PGW Dpe's Sgi port uses the net port name

#### 3.2.4.1.2.Modification of PGW DPE

**Path:** Configuration-->GW-->PGW-->DPE-->PGW DP

**Steps:** Select the configuration box you want to modify -> fill in the



configuration information -> click the "Modify" button -> click "OK" in the pop-up box to modify successfully.

### 3.2.5. FM Info

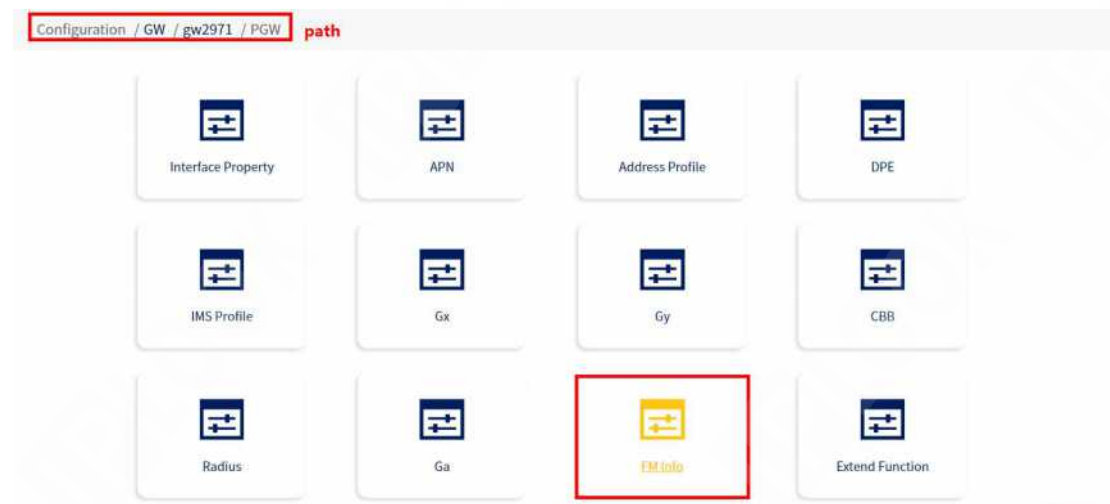


Figure 3.2.5-1 FM Info path

#### 3.2.5.1. PGW FM Info

**Description:** Add, modify and delete PGW FM Info configuration

##### 3.2.5.1.1. Add PGW FM Info

**Path:** Configuration-->GW-->PGW-->FM Info-->PGW FM Info

**Steps:** Fill in the configuration information under the PGW FM Info page --> Click the "Add" button --> Click "OK" in the pop-up box to add successfully.

The screenshot shows the 'PGW FM Info' configuration page. At the top, the breadcrumb trail is 'Configuration / GW / gw2971 / PGW / PGW FM Info' with a red box around the last part and a red arrow pointing to the right. Below this, there is a form titled 'PGW FM Info'. The form has four input fields: 'FmInfo Name' (containing 'pgwFmInfo'), 'DCC Request Timeout Threshold' (containing '0'), 'GTP Request Timeout Threshold' (containing '0'), and 'DPE Request Timeout Threshold' (containing '0'). The 'FmInfo Name' field is highlighted with a red rectangular box and a red arrow labeled '2'. Below the form, there are two buttons: 'Modify' and 'Delete'.

Figure 3.2.5.1-1 FM Info Configuration Example  
Configuration items and descriptions.

configuration item	instructions
FmInfo Name	Name this configuration item
DCC Request TimeOut Threshold	Time threshold for dcc request timeout

GTP Request TimeOut Threshold	Time threshold for gtp request timeout
DPE Request TimeOut Threshold	Time threshold for dpe message timeout

### 3.2.5.1.2.Modify PGW FM Info

**Path:** Configuration-->GW-->PGW-->FM Info-->PGW FM Info

**Steps:** Select the configuration box you want to modify -> fill in the configuration information -> click the "Modify" button -> click "OK" in the pop-up box to modify successfully.

### 3.2.5.1.3.Delete PGW FM Info

**Path:** Configuration-->GW-->PGW-->FM Info-->PGW FM Info

**Steps:** Click the "Delete" icon under the FM Info page --> click "OK" in the pop-up box to delete successfully.

## 3.2.6. Extend Function

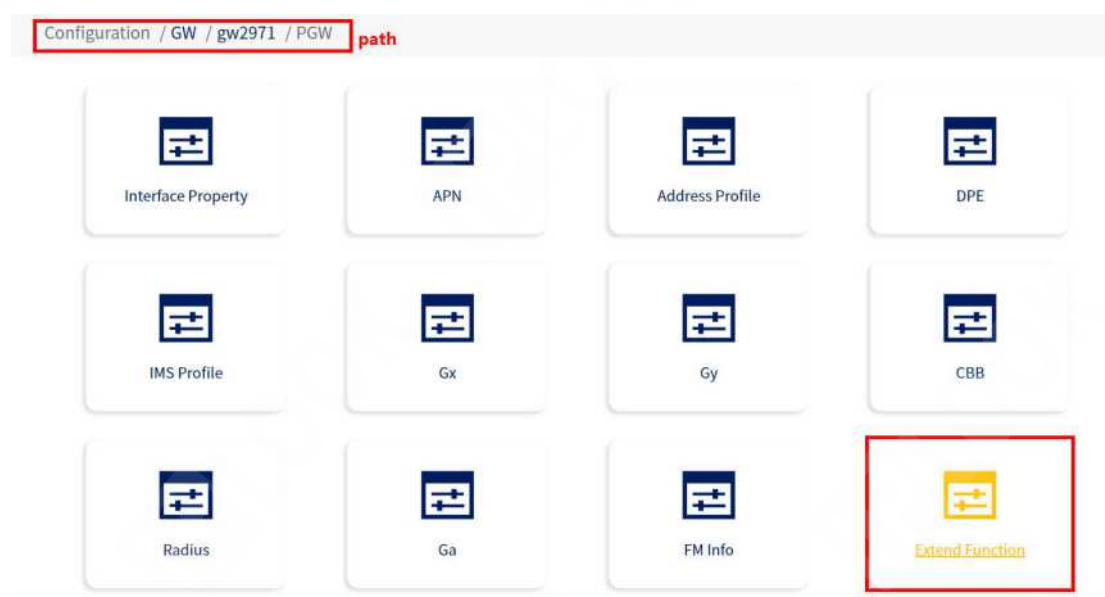


Figure 3.2.6-1 Extend Function path

**Description:** Add, modify and delete Extend Function configuration

### 3.2.6.1. Add Extend Function

**Path:** Configuration-->GW-->PGW-->Extend Function

**Steps:** Fill in the configuration information under Extend Function page --> Click "Add" button --> Click "OK" in the pop-up box to add successfully.

Configuration / GW / gw29220 / PGW / PGW Extend Function

FM Info **Extend Function**

PGW Extend Function

ExtendedFunctionName: pgwExtendedFunction      Function Muster: DataLoopback

Modify      Delete

Figure 3.2.6-1 Extend Function Configuration Example  
Configuration items and descriptions.

configuration item	instructions
ExtendedFunctionName	Functional entity name of extendedFunction
Function Muster	Feature set, mainly for VoLTE. data-loopback for data loopback, data-access-limit for data access limit

### 3.2.6.2. Modify Extend Function

**Path:** Configuration-->GW-->PGW-->Extend Function

**Steps:** Select the configuration box you want to modify -> fill in the configuration information -> click the "Modify" button -> click "OK" in the pop-up box to modify successfully.

### 3.2.6.3. Delete Extend Function

**Path:** Configuration-->GW-->PGW-->Extend Function

**Steps:** Click the "Delete" icon under the Extend Function page --> click "OK" in the pop-up box to delete successfully.

### 3.2.7. Gx

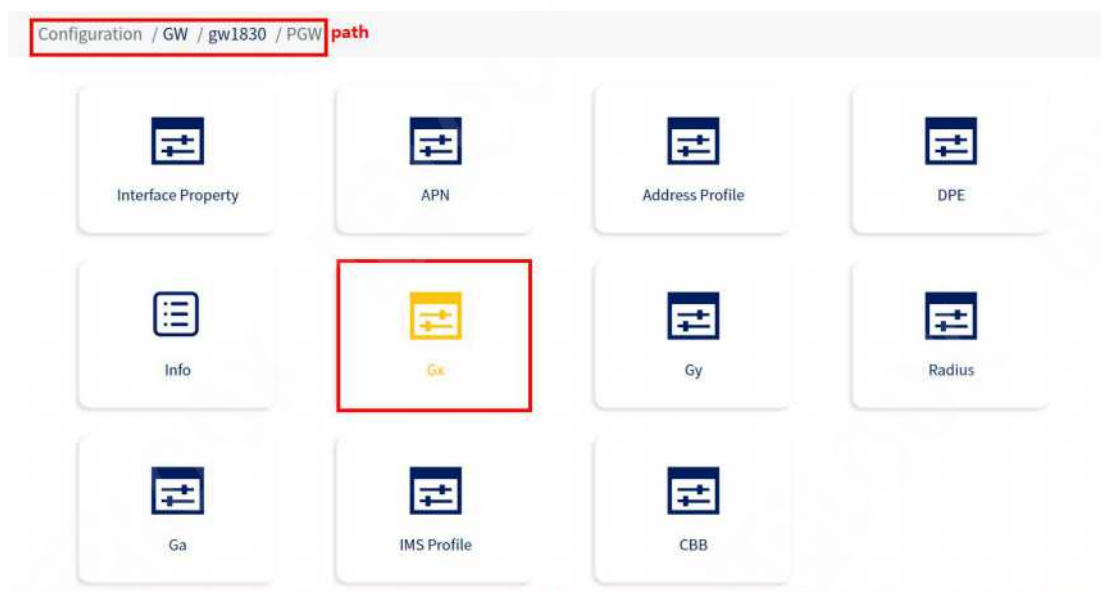


Figure 3.2.7-1 Gx path

#### 3.2.7.1. Gx Profile

**Description:** Add, query, modify and delete Gx Profile configurations

##### 3.2.7.1.1. Add Gx Profile

**Path:** Configuration-->GW-->PGW-->Gx-->Gx Profile

**Steps:** Click the "Add" button on the Gx Profile page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully.

Figure 3.2.7.1-1 Gx Profile Configuration Example  
Configuration items and descriptions.

configuration item	instructions
GxProfileName	Name this configuration
Custmos Service Context	Business context flag AVP, can be filled with email format string, default value is 3gpp_r7_default
Local Host Name	Customized local hostname
Local Realm Name	The domain name where the custom localhost is located
Peer Host Name	Customized hostname of the counterpart (pcrf)
Peer Realm Name	The domain name where the custom peer (pcrf) host is located
Watch Dog Timer (Unit s)	iameter's heartbeat time
Load Balacnce Flag	Flag bit for load mode, optional primary/secondary
Default Handling	Default failure handling, optionally terminate/continue/retry-and-terminat e, default value is terminate
Request Timeout	Timeout for diameter messages

### 3.2.7.1.2.Check Gx Profile

**Path:** Configuration-->GW-->PGW-->Gx-->Gx Profile

**Step:** Enter the name of the Gx Profile under the GxProfile Name box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.7.1.3.Modify Gx Profile

**Path:** Configuration-->GW-->PGW-->Gx-->Gx Profile

**Steps:** Click the name of the configuration you want to modify in the GxProfile Name column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box to modify Success.

### 3.2.7.1.4.Delete Gx Profile

**Path:** Configuration-->GW-->PGW-->Gx-->Gx Profile

**Step:** Click the delete icon of the row of data you want to delete in the list in the Gx Profile page --> click the "OK" button in the pop-up box to delete successfully.

### 3.2.7.2. Gx Peer

**Description:** Add and remove Gx Peer configuration

#### 3.2.7.2.1.Add Gx Peer

**Path:** Configuration-->GW-->PGW-->Gx-->Gx Peer

**Steps:** Click the "Add" button on the Gx Peer page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully.

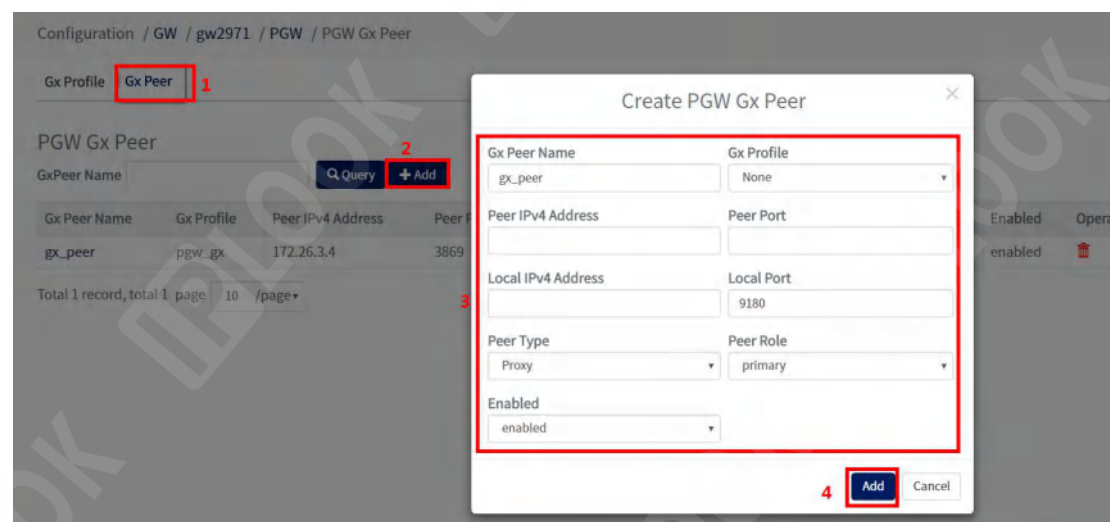


Figure 3.2.7.1-2 Gx Peer Configuration Example  
Configuration items and descriptions.

configuration item	instructions
gxPeerName	Gx profile name
Gx Profile	Business context flag AVP, can be



	filled with email format string, default value is 3gpp_r7_default
Peer IPV4 Address	Local hostname
Peer Port	The domain where the local host is located
Local IPV4 Address	Hostname of the opposite end (pcrf)
Local Port	The domain where the peer (pcrf) host is located
Peer Type	watch dog message sending interval
Peer Role	Flag bit for load mode, optional primary/secondary
Enabled	Default failure handling, optionally terminate/continue/retry-and-terminate, default value is terminate

#### 3.2.7.2.2.Query Gx Peer

**Path:** Configuration-->GW-->PGW-->Gx-->Gx Peer

**Step:** Enter the name of the Gx Peer under the GxPeer Name box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

#### 3.2.7.2.3.Modify Gx Peer

**Path:** Configuration-->GW-->PGW-->Gx-->Gx Peer

**Steps:** Click the name of the configuration you want to modify in the Gx Peer Name column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box to modify successfully.

#### 3.2.7.2.4.Delete Gx Peer

**Path:** Configuration-->GW-->PGW-->Gx-->Gx Peer

**Steps:** Click the delete icon of the row you want to delete in the list in the Gx Peer page --> click the "OK" button in the pop-up box to delete successfully.

### 3.2.8. Gy

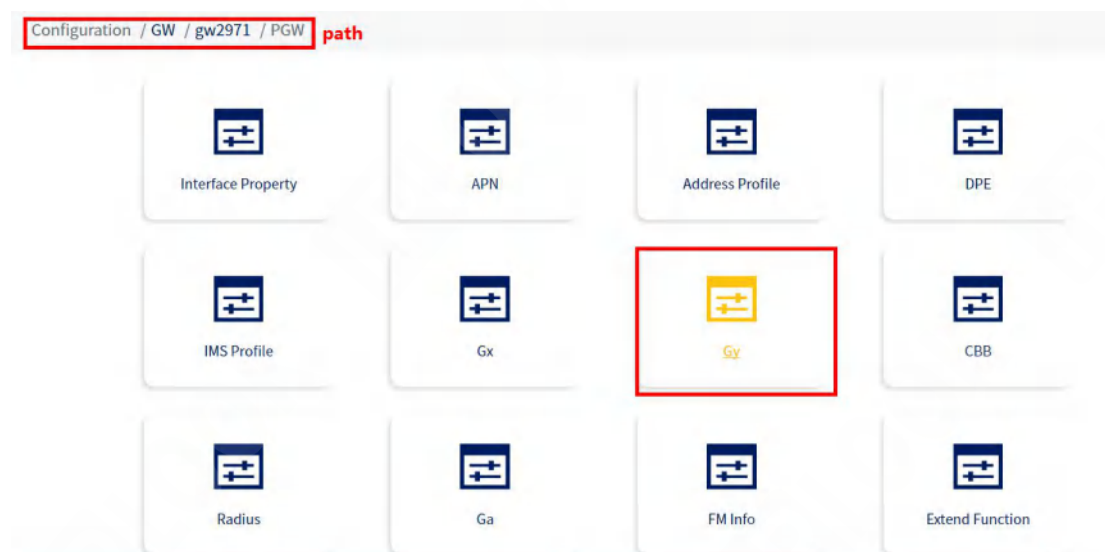


Figure 3.2.8-1 Gy path

#### 3.2.8.1. Gy Profile

Description: Add, query, modify and delete Gy Profile configurations

##### 3.2.8.1.1.Add Gy Profile

**Path:** Configuration-->GW-->PGW-->Gy-->Gy Profile

**Steps:** Click the "Add" button on the Gy Profile page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully.

Configuration / GW / gw1830 / PGW / PGW Gy Profile

Gy Profile 1 by Peer | DccRating GroupIds

PGW Gy Profile

GyProfile Name:  Query +Add 2

GyProfileName	Custmos Service Context	Local Host Name	Local Realm Name	Peer Host Name	Peer Realm Name	Watch Dog Timer	Load Balance Flag	Default Handling	Request Timeout	Denied Rating Group Action	Credit Usage Report
	3gpp_r7_default					6	Primary	Terminate	6	BlockData	disabled

Total record, total page 10 /page+

3

4 Add Cancel

Figure 3.2.8.1-1 Gy Profile page

Configuration items and descriptions.

configuration item	name
GyProfileName	Name this configuration item
Custmos Service Context	Business context flag AVP, fillable email format string
Local Host Name	Local hostname
Local Realm Name	The domain where the local host is located
Peer Host Name	Hostname on the other side
Peer Realm Name	Domain name on the other end
Watch Dog Timer	watch dog message sending interval
Load Balance Flag	Flag bit for load mode, optional primary/secondary
Default Handling	Default failure handling, optional terminate/continue/retry-and-terminate, default value is terminate
Request Timeout	Timeout for diameter messages
Denied Rating Group Action	Reject ratingGroup action, optionally delete-context/block-data, default value is block-data

### 3.2.8.1.2.Check Gy Profile

**Path:** Configuration-->GW-->PGW-->Gy-->Gy Profile

**Step:** Enter the name of Gy Profile under the GyProfile Name box --> click "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.8.1.3.Modify Gy Profile

**Path:** Configuration-->GW-->PGW-->Gy-->Gy Profile

**Steps:** Click the name of the configuration you want to modify in the GyProfileName column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box to modify Success.

### 3.2.8.1.4.Delete Gy Profile

**Path:** Configuration-->GW-->PGW-->Gy-->Gy Profile

**Step:** Click the delete icon of the row of data you want to delete in the list on the Gy Profile page --> click the "OK" button in the pop-up box to delete it successfully.

## 3.2.8.2. Gy Peer

Description: Add, query, modify and delete Gy Peer configuration

### 3.2.8.2.1.Add Gy Peer

**Path:** Configuration-->GW-->PGW-->Gy-->Gy Peer

**Steps:** Click the "Add" button on the Gy Peer page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully.

Figure 3.2.8.2-1 Gy Peer page

Configuration items and descriptions.

configuration item	instructions
Gy Peer Name	Hostname of the gy port

Gy Profile	Associated gy profile strategy
Peer IPv4 Address	ipv4 address of the host on the other side
Peer Port	The port number the host on the other side is listening on
Local IPV4 Address	The ipv4 address of the local host
Local Port	The port number the local host is listening on
Peer Type	Peer type, optional proxy/Relay/Direct
Peer Role	Identity of the opposite end of the role
Enabled	Switch to establish connection, enabled is on, disabled is off

### 3.2.8.2.2.Inquire about Gy Peer

**Path:** Configuration-->GW-->PGW-->Gy-->Gy Peer

**Step:** Under GyPeer Name box, enter the name of Gy Peer --> click "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.8.2.3.Modification of Gy Peer

**Path:** Configuration-->GW-->PGW-->Gy-->Gy Peer

**Steps:** Click the name of the configuration you want to modify in the Gy Peer Name column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box to modify successfully.

### 3.2.8.2.4.Delete Gy Peer

**Path:** Configuration-->GW-->PGW-->Gy-->Gy Peer

**Steps:** Click the delete icon of the row you want to delete in the list on the Gy Peer page --> click the "OK" button in the pop-up box to delete successfully.

### 3.2.8.3. DccRating GroupIds

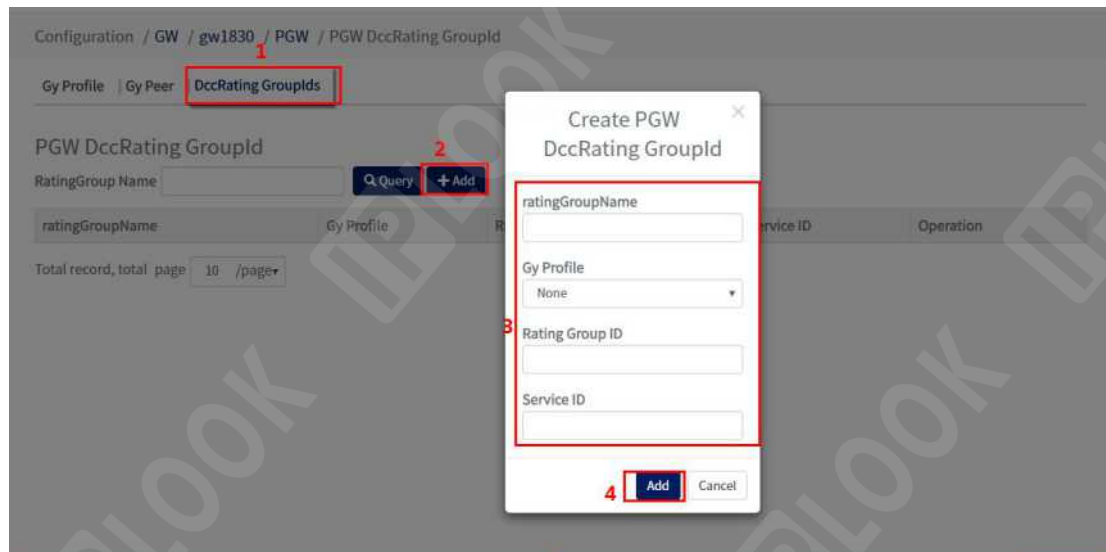
**Description:** Add, query, modify and delete DccRating GroupIds configurations

#### 3.2.8.3.1.Add DccRating GroupIds

**Path:** Configuration-->GW-->PGW-->Gy-->DccRating GroupIds

**Steps:** Click the "Add" button on the DccRating GroupIds page --> fill in the

configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box. Adding is successful.



### 3.2.8.3-1 DccRating GroupIds page

Configuration items and descriptions.

configuration item	instructions
ratingGroupName	Give the configuration item a name
Gy Profile	Associated gy profile name
Rating Group ID	Id of rate group
Service ID	Service Id

### 3.2.8.3.2.Query DccRating GroupIds

**Path:** Configuration-->GW-->PGW-->Gy-->DccRating GroupIds

**Step:** Enter the name of DccRating GroupIds under the DccRating Group Name box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.8.3.3.Modify DccRating GroupIds

**Path:** Configuration-->GW-->PGW-->Gy-->DccRating GroupIds

**Steps:** Click the name of the configuration you want to modify in the DccRatingGroupName column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box ", the modification is successful.

### 3.2.8.3.4.Delete DccRating GroupIds

**Path:** Configuration-->GW-->PGW-->Gy-->DccRating GroupIds

**Steps:** Click the delete icon of the row of data you want to delete under the list



in the DccRating GroupIds page --> click the "OK" button in the pop-up box to delete successfully.

### 3.2.9. Radius

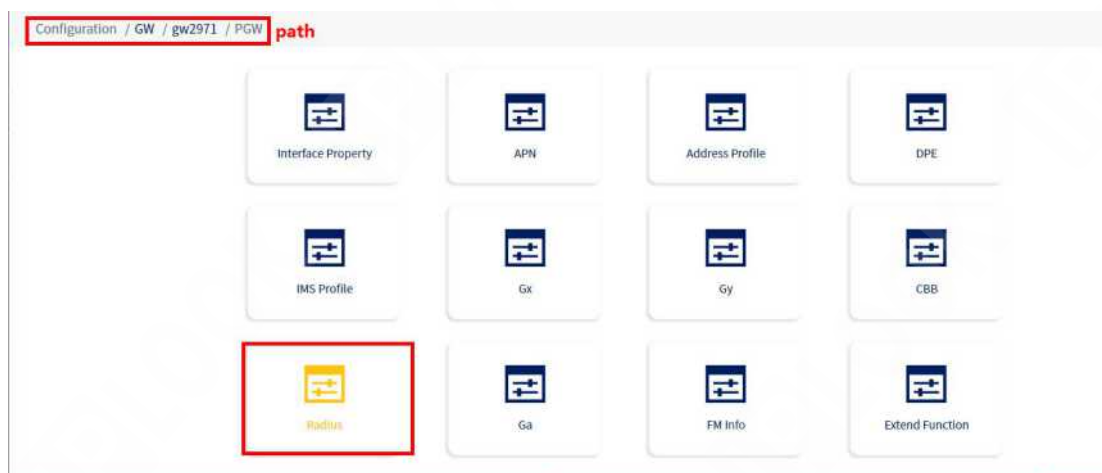


Figure 3.2.9-1 Radius path

#### 3.2.9.1. Radius Profile

**Description:** Add, query, modify and delete Radius Profile configurations

##### 3.2.9.1.1. Adding a Radius Profile

**Path:** Configuration-->GW-->PGW-->Radius-->Radius Profile

**Steps:** Click the "Add" button on the Radius Profile page --> Fill in the configuration information in the pop-up box --> Click the "Add" button in the pop-up box --> Click OK in the pop-up box to add successfully. Click the "Add" button in the pop-up box --> click "OK" in the pop-up box to add successfully.

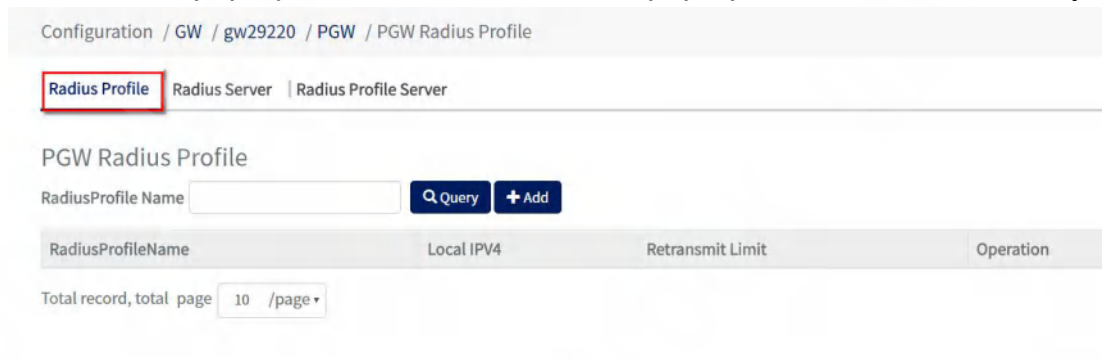


Figure 3.2.9.1-1 Radius Profile page

Configuration items and descriptions.

configuration item	instructions
RadiusProfileName	Give the configuration item a name

Local IPV4	The ipv4 address used by PGW local docking radius
Retransmit limit	Number of message retransmissions between PGW and radius

#### 3.2.9.1.2.Query Radius Profile

**Path:** Configuration-->GW-->PGW-->Radius-->Radius Profile

**Step:** Enter the name of Radius Profile under the RadiusProfile Name box --> click "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

#### 3.2.9.1.3.Modify the Radius Profile

**Path:** Configuration-->GW-->PGW-->Radius-->Radius Profile

**Steps:** Click the name of the configuration you want to modify in the RadiusProfileName column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box ", the modification is successful.

#### 3.2.9.1.4.Delete Radius Profile

**Path:** Configuration-->GW-->PGW-->Radius-->Radius Profile

**Steps:** Click the delete icon of the row you want to delete in the list on the Radius Profile page --> click the "OK" button in the pop-up box to delete successfully.

### 3.2.9.2. Radius Server

Description: Add, query, modify and delete Radius Server configurations

#### 3.2.9.2.1.Adding Radius Server

**Path:** Configuration-->GW-->PGW-->Radius-->Radius Server

**Steps:** Click the "Add" button on the Radius Server page --> Fill in the configuration information in the pop-up box --> Click the "Add" button in the pop-up box --> Click OK in the pop-up box to add successfully.

Configuration / GW / gw29220 / PGW / PGW Radius Server

Radius Profile **Radius Server** Radius Profile Server

PGW Radius Server

RadiusServer Name

RadiusServerName	Local IPV4	RadiusServerIPV4	Auth Port	Acct Port	Secret	Req Timeout(Unit s)	Operation
Total record, total page 10 /page ▾							

Figure 3.2.9.2-1 Radius Server page

Configuration items and descriptions.

configuration item	instructions
RadiusServerName	Give the configuration item a name
Local IPV4	PGW docking radius local address
RadiusServerIPV4	The radius docking PGW address
Auth Port	Authentication Port
Acct Port	billing port
Secret	PGW connects to the radius secret key
Req Timeout(Unit s)	Timeout for Radius requests

### 3.2.9.2.2.Querying Radius Server

**Path:** Configuration-->GW-->PGW-->Radius-->Radius Server

**Step:** Enter the name of Radius Server under the RadiusServer Name box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.9.2.3.Modifying Radius Server

**Path:** Configuration-->GW-->PGW-->Radius-->Radius Server

**Steps:** Click the RadiusServerName column in the list to modify the configuration name -> modify the configuration information in the pop-up box -> click "Modify" -> click "OK" in the pop-up box and the modification is successful.

### 3.2.9.2.4.Deleting Radius Server

**Path:** Configuration-->GW-->PGW-->Radius-->Radius Server

**Steps:** Click the delete icon of the row you want to delete in the Radius Server page -> click the "OK" button in the pop-up box to delete successfully.

### 3.2.9.3. Radius Profile Server

Description: Add, query, modify and delete Radius Profile Server configurations

#### 3.2.9.3.1.Adding a Radius Profile Server

**Path:** Configuration-->GW-->PGW-->Radius-->Radius Profile Server

**Steps:** Click the "Add" button on the Radius Profile Server page --> Fill in the configuration information in the pop-up box --> Click the "Add" button in the pop-up box --> Click the OK, add successfully.

Configuration / GW / gw29220 / PGW / PGW Radius Profile Server

Radius Profile | Radius Server | **Radius Profile Server**

PGW Radius Profile Server

RadiusProfileServer Name

RadiusProfileServer Name	Radius Server	Radius Profile	Auth Type	Acct Type	Operation
--------------------------	---------------	----------------	-----------	-----------	-----------

Total record, total page 10 /page

Figure 3.2.9.3-1 Radius Profile Server page  
Configuration items and descriptions.

configuration item	instructions
RadiusProfileServer Name	Give the configuration item a name
Radius Server	The name of the associated radiusServer
Radius Profile	Name of the associated radius profile
Auth Type	The authentication method of radius, optionally filled with primary/secondary
Acc Type	The billing method for radius, optionally filled in with primary/secondary

#### 3.2.9.3.2.Querying Radius Profile Server

**Path:** Configuration-->GW-->PGW-->Radius-->Radius Profile Server

**Step:** Enter the name of Radius Profile Server under the RadiusProfileServer Name box --> click "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.9.3.3.Modifying Radius Profile Server

**Path:** Configuration-->GW-->PGW-->Radius-->Radius Profile Server

**Steps:** Click the name of the configuration you want to modify in the RadiusProfileServer Name column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box. ", the modification is successful.

### 3.2.9.3.4.Deleting a Radius Profile Server

**Path:** Configuration-->GW-->PGW-->Radius-->Radius Profile Server

**Steps:** Click the delete icon of the row you want to delete in the list on the Radius Profile Server page --> click the "OK" button in the pop-up box to delete successfully.

## 3.2.10. Ga

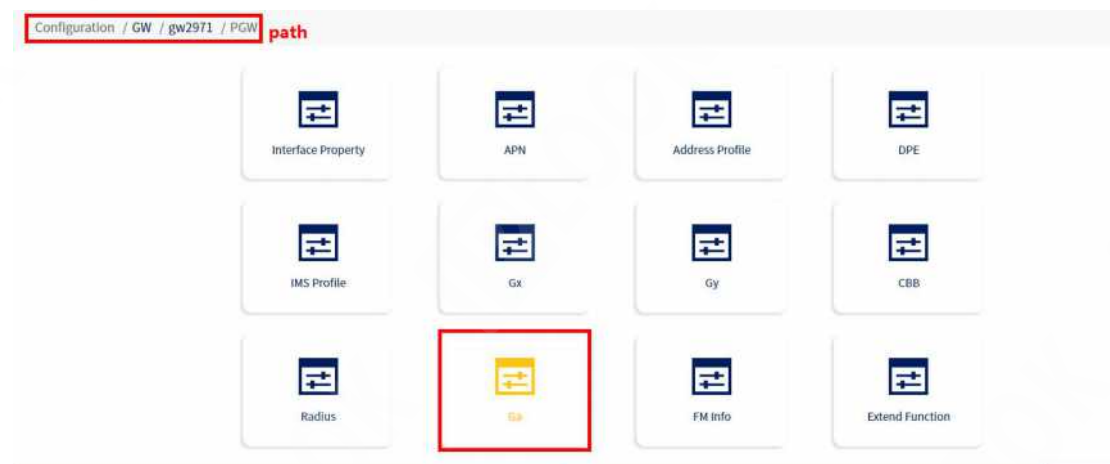


Figure 3.2.10-1 Ga path

### 3.2.10.1. PGW GaProfile

Description: Add, query, modify and delete PGW GaProfile configurations

#### 3.2.10.1.1. Add PGW GaProfile

**Path:** Configuration-->GW-->PGW-->Ga-->PGW GaProfile

**Steps:** Click the "Add" button on the PGW GaProfile page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully.

Configuration / GW / gw29220 / PGW / PGW GaProfile

**PGW GaProfile** PGW Ga ChargingProfile PGW Ga ServerProfile

PGW GaProfile

GaProfile Name  Query + Add

GaProfileName	hotBilli	Operation
Total record, total page 10 /page		

Figure 3.2.10.1-1 PGW GaProfile page

Configuration items and descriptions.

configuration item	instructions
GaProfileName	Give the configuration item a name
hotBill	Switch for thermal billing, disabled is off, enabled is on

### 3.2.10.1.2. Check PGW GaProfile

**Path:** Configuration-->GW-->PGW-->Ga-->PGW GaProfile

**Step:** Enter the name of PGW GaProfile under the GaProfile Name box --> click "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.10.1.3. Modify the PGW GaProfile

**Path:** Configuration-->GW-->PGW-->Ga-->PGW GaProfile

**Steps:** Click the name of the configuration you want to modify in the GaProfileName column of the list --> modify the configuration information in the pop-up box --> click "Modify" --> click "OK" in the pop-up box to modify Success.

### 3.2.10.1.4. Delete PGW GaProfile

**Path:** Configuration-->GW-->PGW-->Ga-->PGW GaProfile

**Step:** Click the delete icon of the row of data you want to delete under the list in the PGW GaProfile page --> click the "OK" button in the pop-up box to delete successfully.

## 3.2.10.2. PGW ChargingProfile

**Description:** Configures the gaChargingProfile interface parameter of the PGW.



### 3.2.10.2.1. Add PGW Ga ChargingProfile

**Path:** Configuration-->GW-->PGW-->Ga-->PGW Ga ChargingProfile

**Steps:** Click the "Add" button on the PGW ChargingProfile page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box The file will be added successfully.

The screenshot shows the 'PGW Ga ChargingProfile' configuration page. A modal dialog titled 'Create PGW Ga ChargingProfile' is open, allowing the user to add a new profile. The dialog contains the following fields:

- GaChargingProfileName:** Text input field.
- Cdr FileSizeLimit:** Text input field with value '100'.
- Cdr OpenFileTimeLimit:** Text input field with value '10'.
- Cbb ManagementExtension:** Dropdown menu with value 'version-2'.
- EncodingScheme:** Dropdown menu with value 'asn1-ber'.
- Gcdr RecordVersion:** Dropdown menu with value 'v3-6'.
- Ram BuffSize:** Text input field with value '0-5000'.
- Ram DiskSize:** Text input field with value '102400-1024000'.
- Max Retries:** Text input field with value '0-5'.
- Local IPv4 Address:** Text input field.

At the bottom right of the dialog are 'Add' and 'Cancel' buttons.

Figure 3.2.10.2-1 PGW Ga ChargingProfile page Configuration items and descriptions.

configuration item	instructions
GaChargingProfileName	Ga charging profile name
Cdr FileSizeLimit	Maximum save size of cdr files
Cdr OpenFileTimeLimit	Timeout for cdr file opening
Cbb ManagementExtension	cbb management extensions, optionally version-2 to version-6
encodingScheme	Encoding method, optionally asn1-ber/asn1-per
Gcdr RecordVerion	Versions of gcdr content, optionally v3-6/v4-8/v7-5/v9-7
Ram BuffSize	Cache size of memory
Ram DiskSize	Size of allocated memory
Max Retries	Maximum number of retransmissions
LocalIPv4Addr	Address of ga port

### 3.2.10.2.2. Check PGW ChargingProfile

**Path:** Configuration-->GW-->PGW-->Ga-->PGW ChargingProfile

**Step:** Under GaChargingProfile Name box, enter the name of PGW ChargingProfile --> click "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.10.2.3. Modify PGW ChargingProfile

**Path:** Configuration-->GW-->PGW-->Ga-->PGW ChargingProfile

**Steps:** Click the name of the configuration you want to modify in the GaChargingProfileName column of the list --> modify the configuration information in the pop-up box --> click "Modify" --> click "OK" in the pop-up box ", the modification is successful.

### 3.2.10.2.4. Delete PGW ChargingProfile

**Path:** Configuration-->GW-->PGW-->Ga-->PGW ChargingProfile

**Steps:** Click the delete icon of the row of data you want to delete under the list in the PGW ChargingProfile page --> click the "OK" button in the pop-up box to delete successfully.

### 3.2.10.3. PGW Ga ServerProfile

**Description:** Add, query, modify and delete GW Ga ServerProfile configurations

#### 3.2.10.3.1. Adding a PGW Ga ServerProfile

**Path:** Configuration-->GW-->PGW-->Ga-->PGW Ga ServerProfile

**Steps:** Click the "Add" button on the PGW Ga ServerProfile page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box The configuration will be added successfully.

Figure 3.2.10.3-1 PGW Ga Server Profile page  
Configuration items and descriptions.

configuration item	instructions
GaServerProfileName	Ga server profile name
GaChargingProfile	Associated ga billing policy name
serverIPv4Addr	Address of the server on the other side

udp Port	Port of the server on the other side
echoInterval(unit:s)	The interval between sending echo
responseTime(unit:s)	Timeout time for ga port messages

### 3.2.10.3.2. Query PGW Ga ServerProfile

**Path:** Configuration-->GW-->PGW-->Ga-->PGW Ga ServerProfile

**Step:** Enter the name of PGW Ga ServerProfile under GaServerProfile Name box --> click "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.10.3.3. Modify PGW Ga ServerProfile

**Path:** Configuration-->GW-->PGW-->Ga-->PGW Ga ServerProfile

**Steps:** Click the name of the configuration you want to modify in the PGW Ga ServerProfile Name column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box ", the modification is successful.

### 3.2.10.3.4. Delete PGW Ga ServerProfile

**Path:** Configuration-->GW-->PGW-->Ga-->PGW Ga ServerProfile

**Step:** Click the delete icon of the row of data you want to delete under the list in the PGW Ga ServerProfile page --> click the "OK" button in the pop-up box to delete successfully.

## 3.2.11. IMS Profile

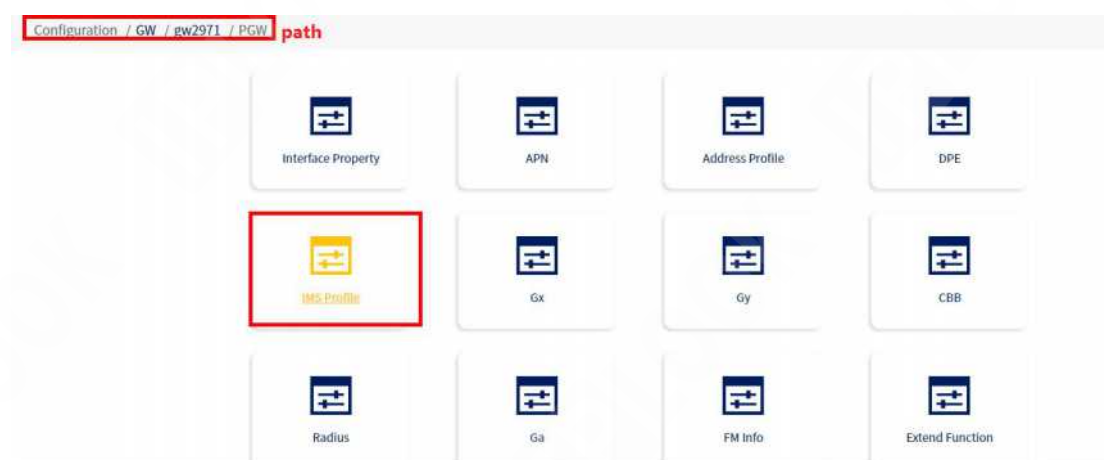


Figure 3.2.11-1 IMS Profile path

### 3.2.11.1. IP Farm

**Description:** Add, query, modify and delete IP Farm configuration

#### 3.2.11.1.1. Add IP Farm

**Path:** Configuration-->GW-->PGW-->IMS Profile-->IP Farm

**Steps:** Click the "Add" button on the IP Farm page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully.

The screenshot shows the 'PGW IP Farm' configuration page. At the top, there is a breadcrumb trail: Configuration / GW / gw29220 / PGW / PGW IP Farm. Below this, there are tabs: IP Farm (highlighted with a red box and labeled '1'), IP Farm Address, Port Farm, Port Farm Member, and IMS Profile. The main section is titled 'PGW IP Farm' and contains a text input field for 'IpFarm Name', a 'Query' button, and an 'Add' button (highlighted with a red box and labeled '2'). Below the input field is a table with columns 'IpFarmName' and 'Operation'. The table contains two rows: 'ip\_farm\_ims' and 'ip\_farm\_redirect'. At the bottom of the table, it says 'Total 2 records total 1 page 10 /page'. A pop-up box titled 'Create PGW IP Farm' is open, showing an 'IpFarmName' input field (labeled '3') and 'Add' and 'Cancel' buttons (the 'Add' button is highlighted with a red box and labeled '4').

Figure 3.2.11.1-1 IP Farm Configuration Example

Configuration items and descriptions.

configuration item	instructions
IpFarmName	Ip farm name

#### 3.2.11.1.2. Check IP Farm

**Path:** Configuration-->GW-->PGW-->IMS Profile-->IP Farm

**Step:** Enter the name of the IP Farm under the IpFarm Name box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

#### 3.2.11.1.3. Modify IP Farm

**Path:** Configuration-->GW-->PGW-->IMS Profile-->IP Farm

**Steps:** Click the name of the configuration you want to modify in the IpFarm Name column of the list --> modify the configuration information in the pop-up box --> click "Modify" --> click "OK" in the pop-up box, the modification is successful.

#### 3.2.11.1.4. Delete IP Farm

**Path:** Configuration-->GW-->PGW-->IMS Profile-->IP Farm

**Step:** Click the delete icon of the row of data you want to delete under the list in the IP Farm page --> click the "OK" button in the pop-up box to delete successfully.

#### 3.2.11.2. IP Farm Address

**Description:** Add and remove IP Farm Address configuration

##### 3.2.11.2.1. Add IP Farm Address

**Path:** Configuration-->GW-->PGW-->IMS Profile-->IP Farm Address

**Steps:** Click the "Add" button on the IP Farm Address page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully. The IP Farm Address is added successfully.

Figure 3.2.11.2-1 IP Farm Address Configuration Example  
Configuration items and descriptions.

configuration item	instructions
IpFarmAddressName	Ip farm address name
IP Farm	Associated IP Farm Name
IP Address	Ip address

##### 3.2.11.2.2. Query IP Farm Address

**Path:** Configuration-->GW-->PGW-->IMS Profile-->IP Farm Address

**Step:** Enter the name of the IP Farm Address under the IpFarmAddress Name box --> click the "Query" button, if it exists, the result will be displayed under

the list, if not, the list will be empty.

### 3.2.11.2.3. Modify IP Farm Address

**Path:** Configuration-->GW-->PGW-->IMS Profile-->IP Farm Address

**Steps:** Click the name of the configuration you want to modify in the IpFarmAddressName column of the list --> modify the configuration information in the pop-up box --> click "Modify" --> click "OK" in the pop-up box ", the modification is successful.

### 3.2.11.2.4. Delete IP Farm Address

**Path:** Configuration-->GW-->PGW-->IMS Profile-->IP Farm Address

**Step:** Click the delete icon of the row of data you want to delete in the list in the IP Farm Address page --> click the "OK" button in the pop-up box to delete successfully.

### 3.2.11.3. Port Farm

**Description:** Add, query, modify and delete Port Farm configurations

#### 3.2.11.3.1. Add Port Farm

**Path:** Configuration-->GW-->PGW-->IMS Profile-->Port Farm

**Steps:** Click the "Add" button on the Port Farm page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box -->

The screenshot shows the 'Port Farm' configuration page in the IPLOOK system. The breadcrumb navigation is 'Configuration / GW / gw29220 / PGW / PGW Port Farm'. The main menu includes 'IP Farm', 'IP Farm Address', 'Port Farm' (highlighted with a red box and labeled '1'), 'Port Farm Member', and 'IMS Profile'. The 'PGW Port Farm' section has a 'Port Farm Name' input field, a 'Query' button, and an 'Add' button (highlighted with a red box and labeled '2'). Below this is a table with columns 'PortFarmName' and 'Operation'. The table contains two rows: 'port\_farm\_free' and 'port\_farm\_redirect', each with a delete icon. A 'Total 2 records total 1 page 10 /page' summary is shown. A 'Create PGW Port Farm' pop-up box is open, showing a 'PortFarmName' input field with 'port\_farm\_ori' (highlighted with a red box and labeled '3') and 'Add' (labeled '4') and 'Cancel' buttons.

click OK in the pop-up box to add successfully.

Figure 3.2.11.3-1 Port Farm Configuration Example  
Configuration items and descriptions.



configuration item	instructions
PortFarmName	Port farm name

### 3.2.11.3.2. Enquiry about Port Farm

**Path:** Configuration-->GW-->PGW-->IMS Profile-->Port Farm

**Step:** Enter the name of the Port Farm in the Port Farm Name box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.11.3.3. Modifications to Port Farm

**Path:** Configuration-->GW-->PGW-->IMS Profile-->Port Farm

**Steps:** Click the name of the configuration you want to modify in the PortFarmName column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box to modify Success.

### 3.2.11.3.4. Delete Port Farm

**Path:** Configuration-->GW-->PGW-->IMS Profile-->Port Farm

**Step:** Click the delete icon of the row of data you want to delete in the list in the Port Farm page --> click the "OK" button in the pop-up box to delete successfully.

### 3.2.11.4. Port Farm Member

**Description:** Adding and removing Port Farm Member configurations

#### 3.2.11.4.1. Add Port Farm Member

**Path:** Configuration-->GW-->PGW-->IMS Profile-->Port Farm Member

**Steps:** Click the "Add" button on the Port Farm Member page --> Fill in the configuration information in the pop-up box --> Click the "Add" button in the pop-up box --> Click OK in the pop-up box to add Success.

Configuration / GW / gw29220 / PGW / PGW Port Farm Member

IP Farm | IP Farm Address | Port Farm | **Port Farm Member** | IMS Profile

PGW Port Farm Member

Port Farm Member Name

PortFarmMemberName	Port Farm	Proto Type	Port	Operation
https_free	port_farm_free	tcp	443	
http_free	port_farm_free	tcp	80	
http_redirect	port_farm_free	tcp	80	
tcp_dns_free	port_farm_free	tcp	53	
udp_dns_free	port_farm_free	udp	53	

Total 5 records total 1 page 10 /page 1

Figure 3.2.11.4-1 Port Farm Member Page

Configuration items and descriptions.

configuration item	instructions
PortFarmMemberName	Port farm member name
Port Farm	The name of the associated portFarm
Proto Type	Protocol Type
Port	port

#### 3.2.11.4.2. Enquire about Port Farm Member

**Path:** Configuration-->GW-->PGW-->IMS Profile-->Port Farm Member

**Step:** Enter the name of the Port Farm Member in the Port Farm Member Name box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

#### 3.2.11.4.3. Modification of Port Farm Member

**Path:** Configuration-->GW-->PGW-->IMS Profile-->Port Farm Member

**Steps:** Click the name of the configuration you want to modify in the PortFarmMemberName column of the list --> modify the configuration information in the pop-up box --> click "Modify" --> click "OK" in the pop-up box, the modification is successful.

#### 3.2.11.4.4. Delete Port Farm Member

**Path:** Configuration-->GW-->PGW-->IMS Profile-->Port Farm Member

**Step:** Click the delete icon of the row of data you want to delete in the list in the Port Farm Member page --> click the "OK" button in the pop-up box to delete successfully.

### 3.2.11.5. IMS Profile

**Description:** Add, query, modify and delete IMS Profile configurations

#### 3.2.11.5.1. Add IMS Profile

**Path:** Configuration-->GW-->PGW-->IMS Profile-->IMS Profile

**Steps:** Click the "Add" button on the IMS Profile page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully.

Configuration / GW / gw29220 / PGW / PGW IMS Profile

IP Farm | IP Farm Address | Port Farm | Port Farm Member | **IMS Profile**

PGW IMS Profile

ImsProfile Name  Query Add

ImsProfileName	IP Farm	Number of PCSCF Address	Operation
----------------	---------	-------------------------	-----------

Total record, total page 10 /page

Figure 3.2.11.5-1 IMS Profile page

Configuration items and descriptions.

configuration item	instructions
ImsProfileName	Ims profile name
IP Farm	The name of the associated ipFarm
Number of PCSCF Address	The number of addresses in the P-CSCF address list configured in the IMS policy

#### 3.2.11.5.2. Query IMS Profile

**Path:** Configuration-->GW-->PGW-->IMS Profile-->IMS Profile

**Step:** Enter the name of the IMS Profile under the ImsProfile Name box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

#### 3.2.11.5.3. Modify IMS Profile

**Path:** Configuration-->GW-->PGW-->IMS Profile-->IMS Profile

**Steps:** Click the name of the configuration you want to modify in the ImsProfileName column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box. The modification is successful.

### 3.2.11.5.4. Delete IMS Profile

**Path:** Configuration-->GW-->PGW-->IMS Profile-->IMS Profile

**Step:** Click the delete icon of the row you want to delete in the list on the IMS Profile page --> click the "OK" button in the pop-up box to delete successfully.

### 3.2.12. CBB

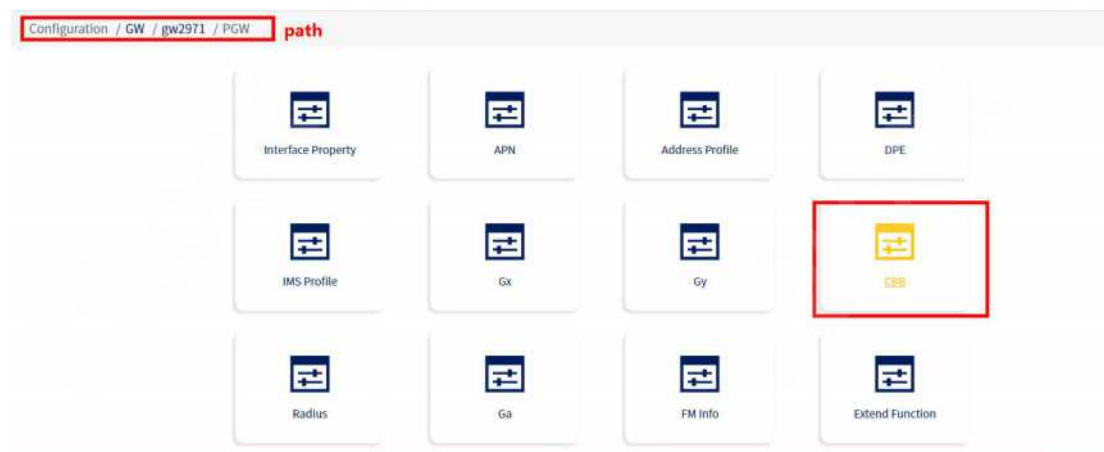


Figure 3.2.12-1 CBB path

#### 3.2.12.1. CBB Service

**Description:** Add, query, modify and delete CBB Service configurations

##### 3.2.12.1.1. Add CBB Service

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Service

**Steps:** Click the "Add" button on the CBB Service page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully.

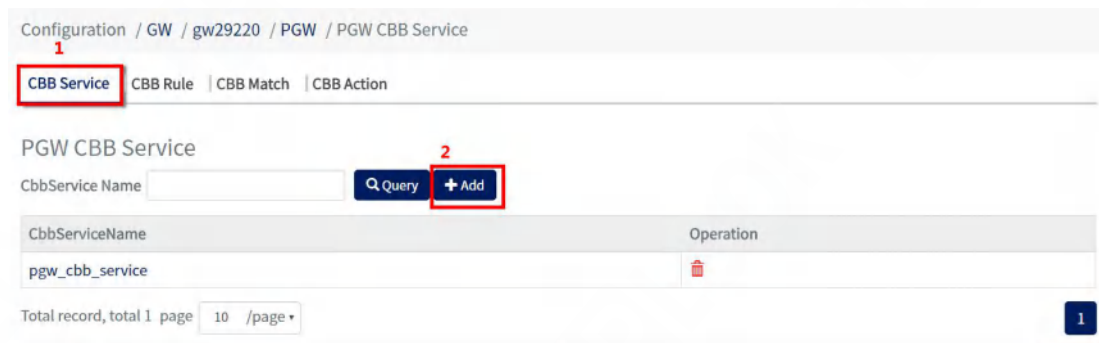


Figure 1.3-42 CBB Service Page

Configuration items and descriptions.

configuration item	instructions
--------------------	--------------

CbbServiceName	Cbb service name
----------------	------------------

#### 3.2.12.1.2. Enquiry on CBB Service

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Service

**Step:** Enter the name of CBB Service in the CbbService Name box --> click "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

#### 3.2.12.1.3. Modify CBB Service

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Service

**Steps:** Click the name of the configuration you want to modify in the CbbServiceName column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box. The modification is successful.

#### 3.2.12.1.4. Delete CBB Service

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Service

**Steps:** Click the delete icon of the row of data you want to delete under the list in the CBB Service page --> click the "OK" button in the pop-up box to delete successfully.

### 3.2.12.2. CBB Rule

**Description:** Add, query, modify and delete CBB Rule configurations

#### 3.2.12.2.1. Add CBB Rule

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Rule

**Steps:** Click the "Add" button on the CBB Rule page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box -->

Configuration / GW / gw29220 / PGW / PGW CBB Rule

CBB Service **CBB Rule** CBB Match CBB Action

PGW CBB Rule

CbbRule Name  Query Add

CbbRule Name	CBB Service	ID Of Position	Monitoring Key	Operation
http_free_rule	pgw_cbb_service	1	1	
http_other_rule	pgw_cbb_service	2	2	
pgw_cbb_rule_any	pgw_cbb_service	3	3	

Total 3 records total 1 page 10 /page 1

click OK in the pop-up box to add successfully.

Figure 3.2.12.2-1 CBB Rule page

Configuration items and descriptions.

configuration item	instructions
CbbRule Name	Cbb rule name
CBB Service	cbb services associated with cbbRule
ID Of Position	The cbbRule matching rule is to match in order of ID from smallest to largest
Monitoring Key	Monitor Key

### 3.2.12.2.2. Query CBB Rule

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Rule

**Step:** Enter the name of the CBB Rule under the CbbRule Name box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.12.2.3. Modification of CBB Rule

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Rule

**Steps:** Click the name of the configuration you want to modify in the CbbRule Name column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box, the modification is successful. The modification is successful.

### 3.2.12.2.4. Delete CBB Rule

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Rule

**Steps:** Click the delete icon of the row of data you want to delete in the list in the CBB Rule page --> click the "OK" button in the pop-up box to delete successfully.

## 3.2.12.3. CBB Match

**Functions:** Add, query, modify and delete CBB Match configurations

### 3.2.12.3.1. Add CBB Match

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Match

**Steps:** Click the "Add" button on the CBB Match page --> fill in the configuration information in the pop-up box --> click the "Add" button in the



pop-up box --> click OK in the pop-up box to add successfully.

Configuration / GW / gw29220 / PGW / PGW CBB Match

CBB Service | CBB Rule | **CBB Match** | CBB Action

PGW CBB Match

CbbMatch Name  Query + Add

CbbMatchName	CBB Rule	SRC Address Type	Port Type	DST Address Type	Operation
http_free_match	http_free_rule	any	port_farm_free	ip_farm_redirect	
http_other_match	http_other_rule	any	port_farm_redirect	any	
pgw_match_any	pgw_cbb_rule_any	any	any	any	

Total 3 records total 1 page 10 /page 1

Figure 3.2.12.3-1 CBB Match page

Configuration items and descriptions.

configuration item	instructions
CbbMatchName	Cbb match name
CBB Rule	The name of the associated cbbRule
SRC Address Type	Source address type, defaults to any if no special requirements
Port Type	Port type, defaults to any if no special requirements
DST Address Type	Destination address type, defaults to any if no special requirements

### 3.2.12.3.2. Query CBB Match

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Match

**Step:** Enter the name of CBB Match under CbbMatch Name box --> click "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.2.12.3.3. Modify CBB Match

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Match

**Steps:** Click the name of the configuration you want to modify in the CbbMatchName column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box to modify Success.

### 3.2.12.3.4. Delete CBB Match

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Match

**Steps:** Click the delete icon of the row of data you want to delete in the list in

the CBB Match page --> click the "OK" button in the pop-up box to delete successfully.

### 3.2.12.4. CBB Action

**Description:** Add, query, modify and delete CBB Action configurations

#### 3.2.12.4.1. Add CBB Action

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Action

**Steps:** Click the "Add" button on the CBB Action page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully.

Configuration / GW / gw29220 / PGW / PGW CBB Action

CBB Service | CBB Rule | CBB Match | **CBB Action**

PGW CBB Action

CbbActionName  Query + Add

CbbActionName	CBB Rule	Forbidden Rating Group ID	Filter Type	Service ID Uplink	Service ID Downlink	Rating Group Id Downlink	Rating Group ID Uplink	Redirect Url String	Url String	Operation
http_free_action	http_free_rule	134	filter-http	0	0	0	0	null	null	
http_other_action	http_other_rule	134	filter-http	0	0	133	133	null	*	
pgw_cbb_act_any	pgw_cbb_rule_any	0	filter-other	0	0	133	133	null	null	

Total 3 records total 1 page 10 /page 1

Figure 3.2.12.4-1 CBB Action page

Configuration items and descriptions.

configuration item	instructions
CbbActionName	Cbb action name
CBB Rule	Name of the associated cbbRule
Forbidden Rating Group ID	Rate group for uniform billing of all types of packets in case of insufficient billing balance Id
Filter Type	Rule types for billing rules matching packets
Service ID Uplink	upstream packet count for sericld
Service ID Downlink	downstream packet count for sericld
Rating Group Id Downlink	RatingGroupld of the uplink packet count
Rating Group ID Uplink	RatingGroupld for downlink packet count
Redirect Url String	The URL to which the redirect points

Url String	URL for matching
------------	------------------

#### 3.2.12.4.2. Enquiry on CBB Action

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Action

**Step:** Enter the name of the CBB Action under the CbbAction Name box --> click the "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

#### 3.2.12.4.3. Modify CBB Action

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Action

**Steps:** Click the name of the configuration you want to modify in the CbbAction Name column of the list --> Modify the configuration information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box to modify Success.

#### 3.2.12.4.4. Delete CBB Action

**Path:** Configuration-->GW-->PGW--> CBB-->CBB Action

**Steps:** Click the delete icon of the row of data you want to delete under the list in the CBB Action page --> click the "OK" button in the pop-up box to delete successfully.

### 3.3. SGW



Figure 3.3-1 SGW path



Figure 3.3-2 SGW page

### 3.3.1. FM Info

**Description:** Add, modify and delete FM Info interface configuration

**Path:** Configuration-->GW-->SGW-->FM Info



Figure 3.3.1-1 FM info path

#### 3.3.1.1. Modify FM Info

**Path:** Configuration-->GW-->SGW-->FM Info-->FM Info

**Steps:** Select the configuration box you want to modify -> fill in the configuration information -> click the "Modify" button -> click "OK" in the pop-up box to modify successfully.

#### 3.3.1.2. Delete FM Info

**Path:** Configuration-->GW-->SGW-->FM Info-->FM Info

**Steps:** Click the "Delete" icon under the FM Info page --> click "OK" in the

pop-up box to delete successfully.

### 3.3.1.3. Add FM Info

**Path:** Configuration-->GW-->SGW-->FM Info-->FM Info

**Steps:** Fill in the configuration information under FM Info page --> Click "Add" button --> Click "OK" in the pop-up box.

Configuration / GW / gw29220 / SGW / FM Info

### FM Info

FmInfoName

GTP Request TimeOut Threshold

DPE Request TimeOut Threshold

Modify

Delete

Figure 3.3.1-1 FM info page

Configuration items and descriptions.

configuration item	instructions
FmInfoName	Give the configuration item a name
GTP Request TimeOut Threshold	Threshold for the number of gtp request timeouts
DPE Request TimeOut Threshold	Threshold for the number of dpe request timeouts

### 3.3.2. GTP

**Description:** Used to add, query, modify and delete GTP configurations

**Path:** Configuration-->GW-->SGW-->GTP



Figure 3.3.2-1 GTP path

### 3.3.2.1. Add GTP

**Path:** Configuration-->GW-->SGW-->GTP-->GTP

**Steps:** Click the "Add" button on the GTP surface --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box to add successfully.

Figure 1.4-6 GTP page

Configuration items and descriptions.

configuration item	instructions
GtpTunnelProfileName	Gtp tunnel profile name
T3 Timer	The timeout retransmission time of the GTP signaling packet of SGW, one of the message retransmission parameters
N3 Counter	Timeout retransmission count of GTP signaling packets for SGW, one of the message retransmission parameters
Monitoring	Flag bit to determine if monitoring is performed
Echo Time	echo request timeout time
GTP ProfileCtrlPktDscp	The DSCP value filled in the signaling packet of SGW

### 3.3.2.2. Check GTP

**Path:** Configuration-->GW-->SGW-->GTP-->GTP

**Step:** Enter the name of GTP in the GtpTunnelProfile Name box --> click "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

### 3.3.2.3. Modify GTP

**Path:** Configuration-->GW-->SGW-->GTP-->GTP

**Steps:** Click the name of the configuration you want to modify in the GtpTunnelProfileName column of the list --> Modify the configuration



information in the pop-up box --> Click "Modify" --> Click "OK" in the pop-up box ", the modification is successful.

#### 3.3.2.4. Delete GTP

**Path:** Configuration-->GW-->SGW-->GTP-->GTP

**Steps:** Click the delete icon of the row of data you want to delete under the list in the GTP page --> click the "OK" button in the pop-up box to delete successfully.

#### 3.3.3. S11

**Description:** Add, modify and delete S11 configurations

**Path:** Configuration-->GW--SGW-->S11

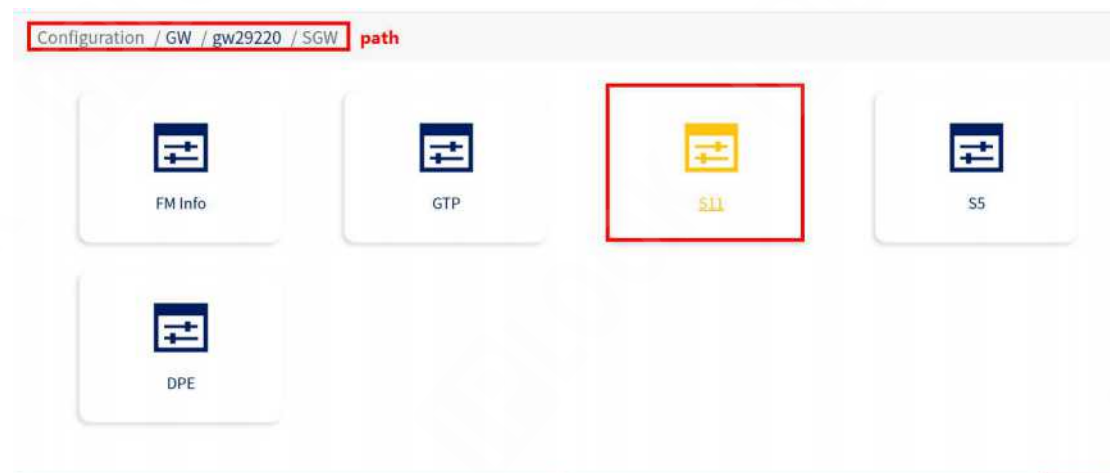


Figure 3.3.3-1 S11 path

##### 3.3.3.1. Add S11

**Path:** Configuration-->GW---SGW-->S11-->S11

**Steps:** Fill in the configuration information under the S11 page --> Click "Add" button --> Click "OK" in the pop-up box to add successfully.

Configuration / GW / gw29220 / SGW / S11

S11

S11 Name

sgws11

GTP Tunnel Profile

sgwgtptunelpf

Roamer Radius Time Limit

0

Roamer Time Limit

0

Roamer Volume Limit

0

Partial Billing Enabled

enable

Flt Bill Time Limit

0

Flt Bill Volume Limit

0

Hysteresis Timer

0

PdpContext CreationAllowed

enable

GTP ChargingCharacteristics Enabled

enable

User Data Allowed

enable

Service IPV4

172.26.2.1

Modify

Delete

Figure 3.3.3-1 S11 page

Configuration items and descriptions.

configuration item	instructions
S11 Name	S11 Naming
GTP Tunnel Profile	Associated gtp tunnel profile
Roamer Radius Time Limit	Time interval for roaming user radius call reporting
Roamer Time Limit	Time interval for roaming user call report
Roamer Volume Limit	Traffic interval reported on the roaming user's phone bill
Partial Billing Enabled	Whether to turn on roaming segmentation billing, disable is off, enable is on
Flt Bill Time Limit	Billing interval, the default value is 0, the unit is minutes, the range is 0-60
Flt Bill Volume Limit	Billing traffic limit, the default value is 0, in Byte
Hysteresis Timer	Timer to start SAQ Qos degradation case, default value is 0 in seconds
PdpContext CreationAllowed	Whether to allow new PDP sessions to be created on this channel, disabled is off, enabled is on
GTP ChargingCharacteristics Enabled	Whether GTP messages on the GTP channel can modify the billing attributes, disabled is not allowed, enabled is allowed
User Data Allowed	Whether to enable the NBiot S11-U

	interface function, disabled is not allowed, enabled is allowed
Service IPv4	IP address of the S11 port

### 3.3.3.2. Modification of S11

**Path:** Configuration-->GW---SGW-->S11-->S11

**Steps:** Select the configuration box you want to modify -> fill in the configuration information -> click the "Modify" button -> click "OK" in the pop-up box to modify successfully.

### 3.3.3.3. Delete S11

**Path:** Configuration-->GW---SGW-->S11-->S11

**Step:** Click the "Delete" icon in the S11 page --> click "OK" in the pop-up box to delete successfully.

### 3.3.4. S5

**Description:** Add, modify and delete S5 configurations

**Path:** Configuration-->GW---SGW-->S5



Figure 3.3.4-1 S5 path

#### 3.3.4.1. Add S5

**Path:** Configuration-->GW---SGW-->S5-->S5

**Steps:** Fill in the configuration information under the S5 page --> Click "Add" button --> Click "OK" in the pop-up box to add successfully.

Configuration / GW / gw29220 / SGW / S5

S5

S5 Name sgws5	GTP Tunnel Profile sgwgtptunelpf
Roamer Radius Time Limit 0	Roamer Volume Limit 0
Roamer Time Limit 0	Partial Billing Enabled enable
Flt Bill Time Limit 0	Flt Bill Volume Limit 0
Hysteresis Timer 0	PdpContext CreationAllowed enable
GTP ChargingCharacteristics Enabled enable	Service IPv4 172.26.2.3

Modify Delete

Figure 3.3.4-1 S5 page

Configuration items and descriptions.

configuration item	instructions
S5 Name	S5 Naming
GTP Tunnel Profile	Associated gtp tunnel profile
Roamer Radius Time Limit	Time interval for roaming user radius call reporting
Roamer Volume Limit	Traffic interval reported on the roaming user's phone bill
Roamer Time Limit	Time interval for roaming user call report
Partial Billing Enabled	Whether to turn on roaming segmentation billing, disable is off, enable is on
Flt Bill Time Limit	Billing interval, the default value is 0, the unit is minutes, the range is 0-60
Flt Bill Volume Limit	Billing traffic limit, the default value is 0, in Byte
Hysteresis Timer	Timer to start SAQ Qos degradation case, default value is 0 in seconds
PdpContext CreationAllowed	Whether to allow new PDP sessions to be created on this channel, disabled is off, enabled is on
GTP ChargingCharacteristics Enabled	Whether GTP messages on the GTP channel can modify the billing attributes, disabled is not allowed, enabled is allowed

Service IPv4	IP address of s5 port
--------------	-----------------------

### 3.3.4.2. Modification of S5

**Path:** Configuration-->GW---SGW-->S5-->S5

**Steps:** Select the configuration box you want to modify -> fill in the configuration information -> click the "Modify" button -> click "OK" in the pop-up box to modify successfully.

### 3.3.4.3. Delete S5

**Path:** Configuration-->GW---SGW-->S5-->S5

**Step:** Click the "Delete" icon in the S5 page --> click "OK" in the pop-up box to delete successfully.

### 3.3.5. DPE

**Description:** Add, modify and delete DPE configurations

**Path:** Configuration-->GW--SGW-->DPE



Figure 3.3.5-1 DPE path

#### 3.3.5.1. Add DPE

**Path:** Configuration-->GW---SGW-->DPE--DPE

**Steps:** Fill in the configuration information under the DPE page --> Click "Add" button --> Click "OK" in the pop-up box to add successfully.

Configuration / GW / gw29220 / SGW / DPE

DPE

DPE Number	DPE BindCore Start
<input type="text" value="1"/>	<input type="text" value="1"/>
DPE S1U Address	DPE S5 Address
<input type="text" value="172.30.29.223"/>	<input type="text" value="172.30.29.221"/>
DPE Accelerate	DPE S5 Eth Name
<input type="text" value="off"/>	<input type="text" value="p7p1"/>
DPE S1U Eth Name	
<input type="text" value="p7p1"/>	

Modify

Figure 1.4-12 DPE page

Configuration items and descriptions:

configuration item	instructions
DPE Number	Number of processes pulled up SGW Dpe
DPE BindCoreStart	The id of the starting cpu
DPE S1U Address	SGW Dpe's S1U address
DPE S5 Address	SGW Dpe's S5 address
DPE Accelerate	Whether to enable dpe acceleration, off is off, on is on
DPE S5 Eth Name	SGW Dpe's S5 port uses the name of the network port
DPE S1U Eth Name	SGW Dpe's S1U port uses the network port name

### 3.3.5.2. Modification of DPE

**Path:** Configuration-->GW---SGW-->DPE--DPE

**Steps:** Select the configuration box you want to modify -> fill in the configuration information -> click the "Modify" button -> click "OK" in the pop-up box to modify successfully.

### 3.3.5.3. Delete DPE

**Path:** Configuration-->GW---SGW-->DPE--DPE

**Step:** Click the "Delete" icon in the S5 page --> click "OK" in the pop-up box to delete successfully.



### 3.4. UDM

#### 3.4.1. HSS standalone network management operations section

##### 3.4.1.1. Webmaster Login

Login at <http://172.30.29.220:8403>, the specific URL needs to be modified according to the actual configuration.



Figure 3.4.1-1 HSS Standalone Network Manager Login Page

##### 3.4.1.2. Modify S6a Interface

**Description:** Used to modify the S6a Interface

**Path:** Configuration-->Networking-->S6a--> S6a Interface

**Steps:** Mouse click the configuration you need to modify --> enter the configuration information --> click the "modify" button --> click the "OK" button in the pop-up box --> click the "restart" button in the jump page. hssS6aProcess column of the "restart" button, the modification is successful.

IPLOOK

admin Logou

Configuration
Maintenance
System
Statistics
Alarm

S6a Interface

EPC Peer

S6a Realm Route

S6a Interface Configuration

HSS S6a Name

myS6aIf

HSS S6a IP

172.26.1.3

HSS S6a Port

3868

[3000,65534]

HSS S6a Realm Name

hss.com

HSS S6a Host ID

3.hss.com

Transmit Queue Congestion Start Limit

15000

Transmit Queue Congestion Drop Limit

2000

Transmit Queue Congestion Stop Limit

1000

Trillium Number Threads

0

Trillium Trace Option

1

Watch Dog Timer

5

[1,300](s)

Peer State Timer

30

Max Connection Retry

2

[0,3]

Out Streams Number

1

[0,10]

Max Retransmit For Assoc

5

[0,10]

Max Retransmit For Dest Address

5

Max Assoc Init Transmit

5

[0,10]

Default Heartbeat Interval

30

[0,120](s)

RTO Initial

1000

[1,5000](ms)

RTO Min

500

[1,5000](ms)

RTO Max

5000

[1,60000](ms)

modify

Figure 3.4.1.2-1 S6a Interface Configuration Example  
Configuration items and descriptions.

configuration item	instructions
HSS S6a Name	s6a interface name for hss
HSS S6a IP	IP address of s6a interface of hss
HSS S6a Port	The listening port for the s6a interface of hss, default is 3868
HSS S6a Realm Name	Domain name of the s6a interface of hss
HSS S6a Host ID	Hostname of the s6a interface of hss
Transmit Queue Congestion Start	Diameter Message Transfer Queue

Limit	Congestion Start Threshold
Transmit Queue Congestion Drop Limit	Diameter message transmission queue congestion reduction threshold
Transmit Queue Congestion Stop Limit	Diameter Message Transfer Queue Congestion Stop Threshold
Trillium Number Threads	Number of threads
Trillium Trace Option	Logging Options
Watch Dog Timer	Diameter heartbeat timer
Peer State Timer	Listening to mme's s6 interface status timer
Max Connection Retry	Maximum number of SCTP reconnections
Out Streams Number	Number of SCTP output streams
Max Retransmit For Assoc	SCTP joint maximum number of retransmissions
Max Retransmit For Dest Address	Maximum number of retransmissions for SCTP destination addresses
Max Assoc Init Transmit	SCTP maximum joint INIT retransmission number
Default Heartbeat Interval	SCTP default heartbeat interval
RTO Initial	SCTP timeout retransmission of initial values
RTO Min	SCTP timeout retransmission minimum
RTO Max	SCTP timeout retransmission maximum

### 3.4.1.3. EPC Peer

**Description:** Add, query and delete information about mme's S6a interface

**Path:** Configuration-->Networking -->S6a-->EPC Peer

#### 3.4.1.3.1.Add EPC Peer

**Description:** Add information about the S6a interface of mme

**Path:** Configuration-->Networking -->S6a-->EPC Peer

**Steps:** Fill in the information in the EPC Peer configuration box --> click the "Add" button --> click the "OK" button in the pop-up box to add successfully.

The screenshot shows the IPLOOK web interface. At the top, there's a header with the IPLOOK logo and a user profile 'admin' with a 'Logout' button. Below the header is a navigation bar with icons and labels for 'Configuration', 'Maintenance', 'System', 'Statistics', and 'Alarm'. Underneath is a sub-navigation bar with three tabs: 'S6a Interface', 'EPC Peer' (which is selected), and 'S6a Realm Route'. The main content area is titled 'EPC Peer' and contains a table with five columns: 'Name', 'IP Address', 'Port', 'Realm Name', and 'Host ID'. The table has one data row with the following values: 'epc\_peer', '172.26.1.2', '3868', 'mme.com', and '2.mme.com'. Below the table, there are two buttons: 'Add' and 'Delete'.

Figure 1.5-3 EPC Peer Configuration Example

Configuration items and descriptions.

configuration item	instructions
Name	Naming of epc peer configuration
IP Address	mme's s6 interface ip
Port	The port that mme's s6 interface listens on
Realm Name	Domain name of mme
Host ID	Hostname of mme

#### 3.4.1.3.2.Delete EPC Peer

**Description:** Delete the S6a interface information of mme

**Path:** Configuration-->Networking -->S6a-->EPC Peer

**Steps:** Click the epc peer item you want to delete in the EPC Peer page --> click the "Delete" button --> click the "OK" button in the pop-up box to delete it successfully.

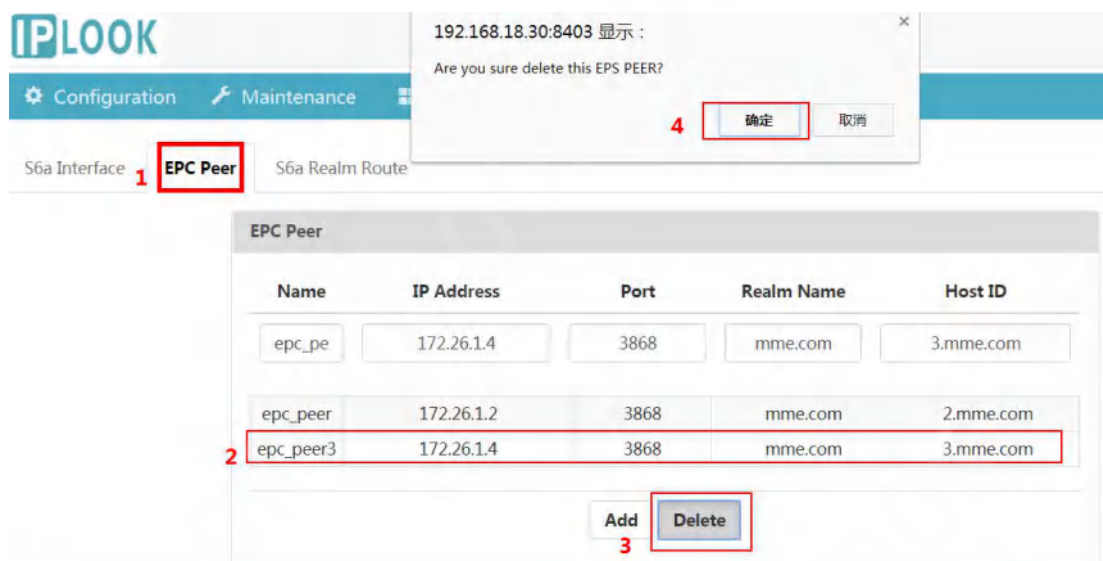


Figure 3.4.1.4-2 Example of Deleting an EPC Peer Configuration

### 3.4.1.3.3. Querying EPC Peer Connection Status

**Description:** Query the connection status of the S6a interface of hss and mme

**Path:** Configuration-->Networking -->S6a-->EPC Peer

**Step:** Click the "Query" button on the EPC Peer page and the query results will be displayed in the list below.

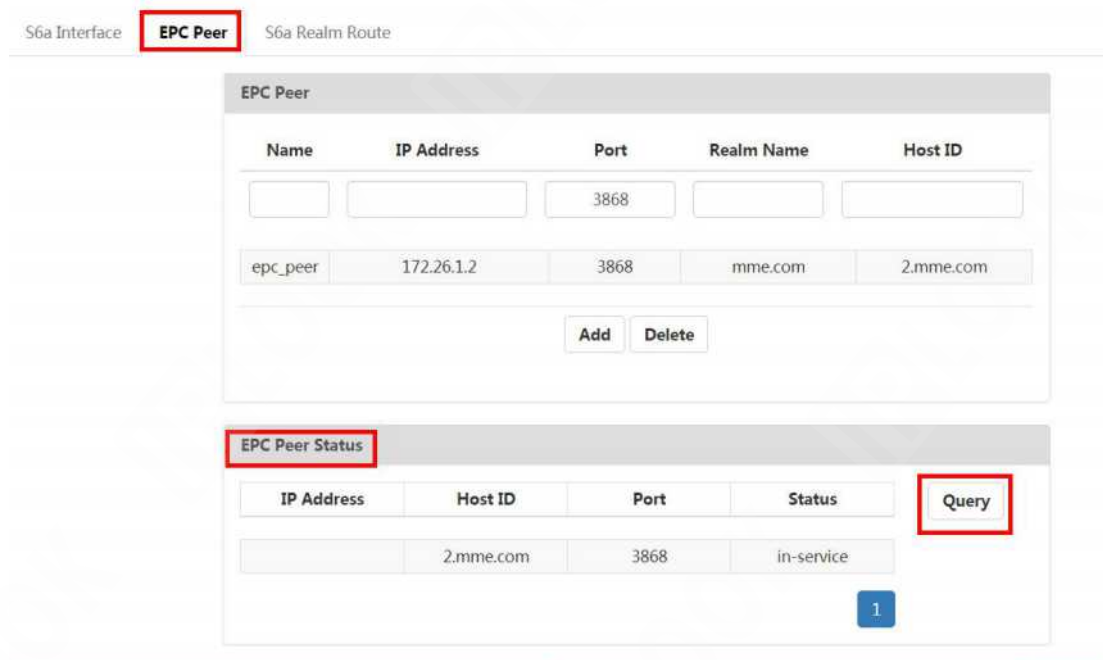


Figure 3.4.1.4-3 Example of querying EPC Peer configuration

### 3.4.2. UDM Unified Network Management Operations Section

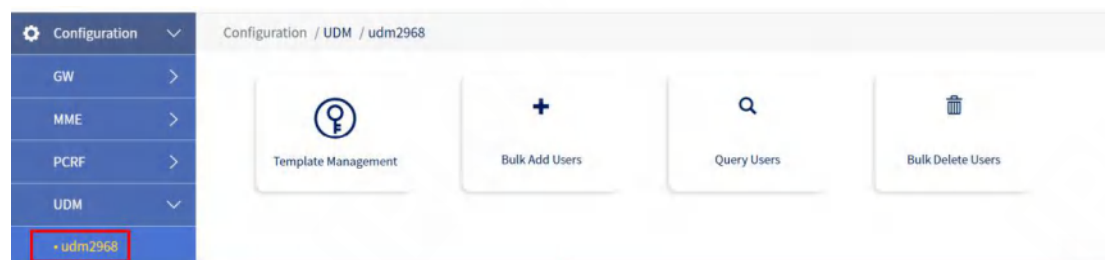


Figure 3.4.2-1 UDM path

#### 3.4.2.1. Authentication Data Configuration

##### 3.4.2.1.1. Add OP

**Description:** Used for authentication of user identity, stored in the USIM card.

**Path:** Configuration--> UDM-->Template Management--> Auth Tpl

**Steps:** Fill in the configuration information in the Create Auc Data box --> click "Add" --> click the "OK" button in the pop-up box to add successfully.

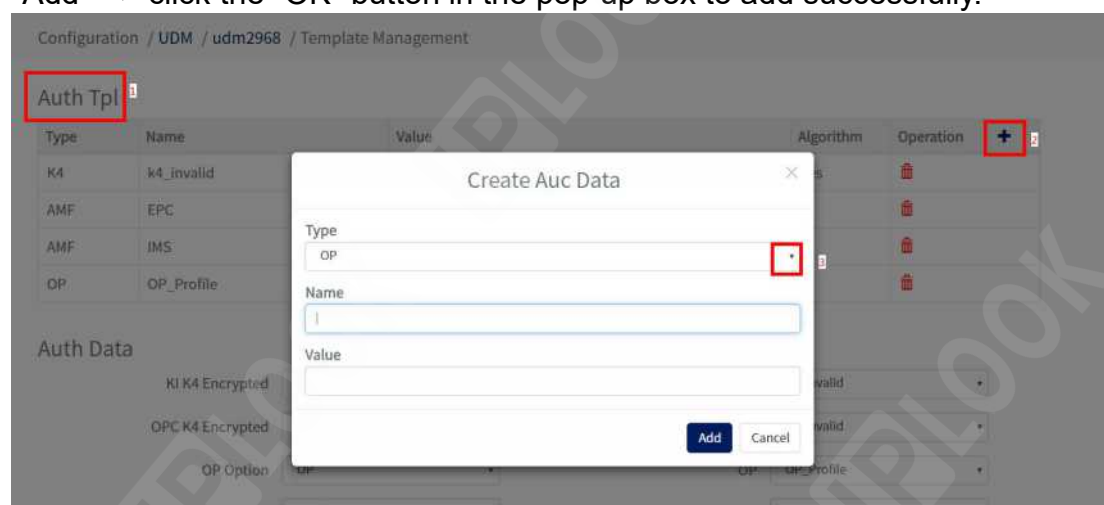


Figure 3.4.2.1-1 Example of OP Configuration Page

Configuration items and descriptions.

configure	instructions
Type	Drop down and select "OP"
Name	Naming of OP settings
Value	The value of the set OP, refer to the configuration: 12345678901234561234567890123456



### 3.4.2.1.2.Delete OP

**Path:** Configuration--> UDM-->Template Management--> Auth Tpl

**Steps:** Click the configuration item you want to delete in the OP row of Auth Tpl list --> click the Delete icon button --> click the OK button in the pop-up box to delete successfully.

### 3.4.2.1.3.Add AMF

**Description:** Authentication Management Field, which can be used with SQN, RAND, and KI to calculate MAC values for the UE to authenticate the network.

**Path:** Configuration--> UDM-->Template Management--> Auth Tpl

**Step:** Fill in the configuration information in the Create Auc Data box, refer to Figure 3.4.2.1-2 --> Click the "Add" button --> Click the "OK" button in the pop-up box to add successfully.

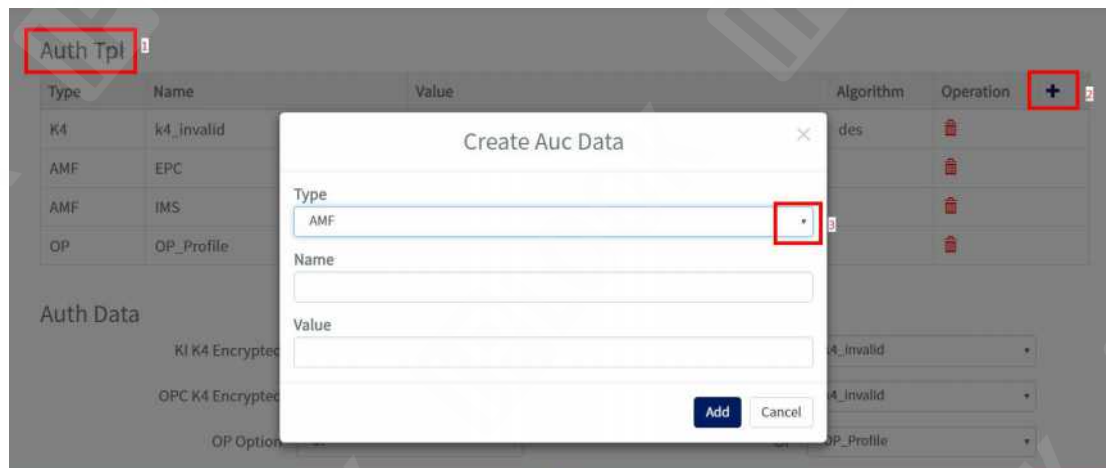


Figure 3.4.2.1-2 AMF Configuration Example

Configuration items and descriptions.

configuration item	instructions
Type	Drop down to select AMF
Name	Setting up EPC and IMS
Value	EPC has a value of 8000 and IMS has a value of 0000

### 3.4.2.1.4.Delete AMF

**Path:** Configuration--> UDM-->Template Management--> Auth Tpl

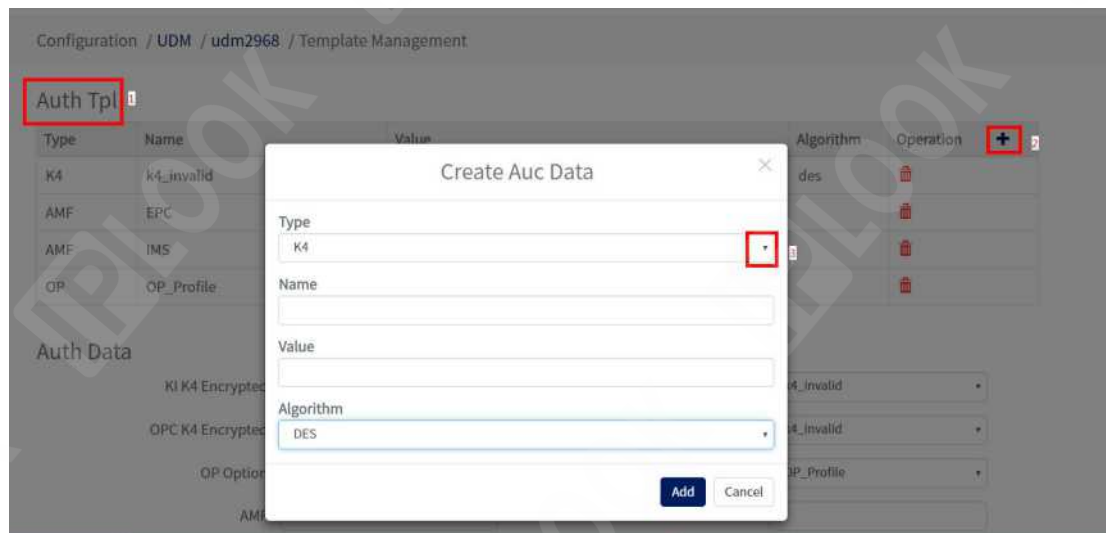
**Steps:** Click the configuration item you want to delete in the AMF row of Auth Tpl list --> click the delete icon --> click the "OK" button in the pop-up box to delete successfully.

#### 3.4.2.1.5.Add K4

**Description:** K4 is the key of the forensic key KI, which is used to encrypt and decrypt KI

**Path:** Configuration--> UDM-->Template Management--> Auth Tpl

**Steps:** Fill in the configuration information in the Create Auc Data box, drop down and select the encryption algorithm Algorithm --> click the "Add" button --> click the "OK" button in the pop-up box to add successfully.



### Figure 3.4.2.1-3 K4 Configuration Example

### Configuration items and descriptions.

configuration item	instructions
Type	Drop down to select K4
Name	Naming of K4 settings
Value	The value of K4, which can be referenced to the value 00000000000000000000000000000000 0000
Algorithm	Encryption algorithm, choose des or aes

#### 3.4.2.1.6.Delete K4

**Path:** Configuration--> UDM-->Template Management--> Auth Tpl

**Steps:** Click the configuration item you want to delete in the K4 row of Auth Tpl list --> click the delete icon --> click the "OK" button in the pop-up box to delete it successfully.

### 3.4.2.1.7.Add Subscriber Tpl

**Description:** Add epc user template

**Path:** Configuration--> UDM-->Template Management-->Subscriber Tpl

**Steps:** Click the plus button in the Subscriber Tpl list --> fill in the configuration information --> click the "add" button --> click the "OK" button in the pop-up box to add successfully.

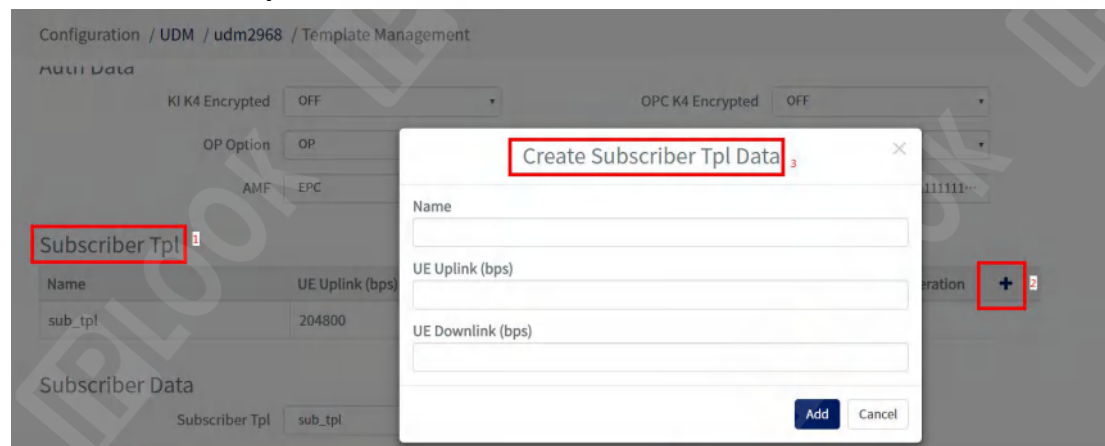


Figure 3.4.2.1.7-1 Example of Adding a Subscriber Template Configuration

Configuration items and descriptions.

configuration item	instructions
Name	Template naming
UE Uplink (bps)	User uplink rate
UE Downlink (bps)	User downlink rate

### 3.4.2.1.8.Delete Subscriber Tpl

**Path:** Configuration--> UDM-->Template Management-->Subscriber Tpl

**Step:** Click the delete icon in the row corresponding to the configuration item you want to delete in the Subscriber Tpl list -> click the "OK" button in the pop-up box to delete it successfully.

### 3.4.2.1.9.Add APN Tpl

**Description:** Add the APN template used by epc users

**Path:** Configuration--> UDM-->Template Management--> APN Tpl

**Steps:** Click the "add" button on the EPC Qos Template page --> fill in the configuration information --> click the "add" button --> click the "OK" button in the pop-up box to add successfully.

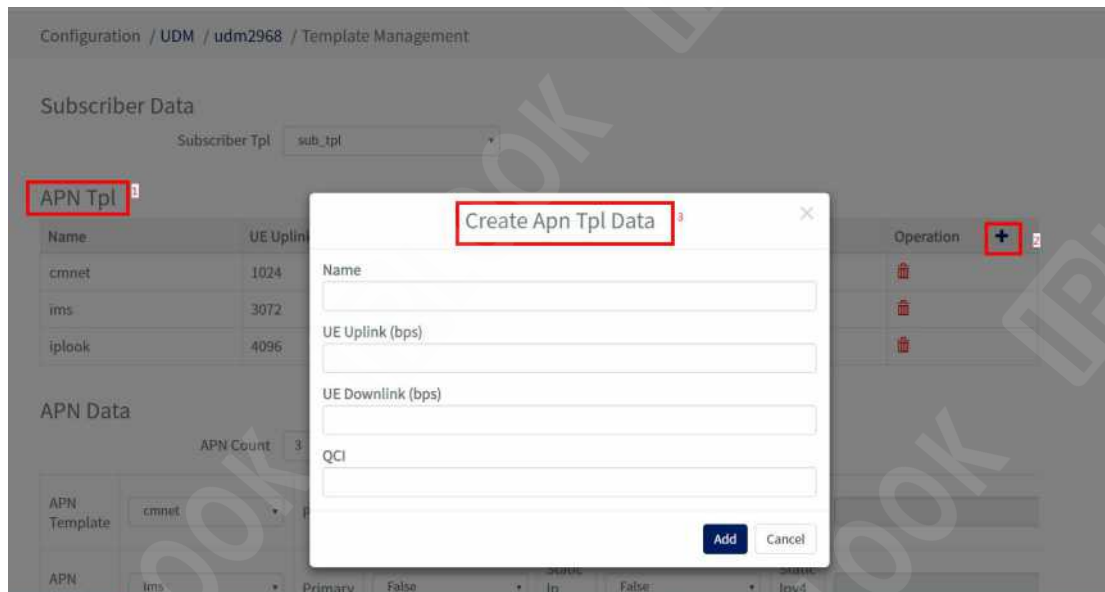


Figure 3.4.1.9-1 APN Tpl Page Configuration

Configuration items and descriptions:

configuration item	instructions
Name	Naming of APN
UE Uplink (bps)	User uplink rate
UE Downlink (bps)	User downlink rate
QCI	Fill in 9 for normal apn, 5 for ims

### 3.4.2.1.10. Delete APN Tpl

**Path:** Configuration--> UDM-->Template Management--> APN Tpl

**Step:** Click the delete icon of the corresponding row of the configuration item you want to delete in the APN Tpl list --> --> Click the "OK" button in the pop-up box to delete successfully.

### 3.4.2.2. Template Management

**Description:** Add, modify and delete Template Management configuration

**Path:** Configuration--> UDM-->Template Management

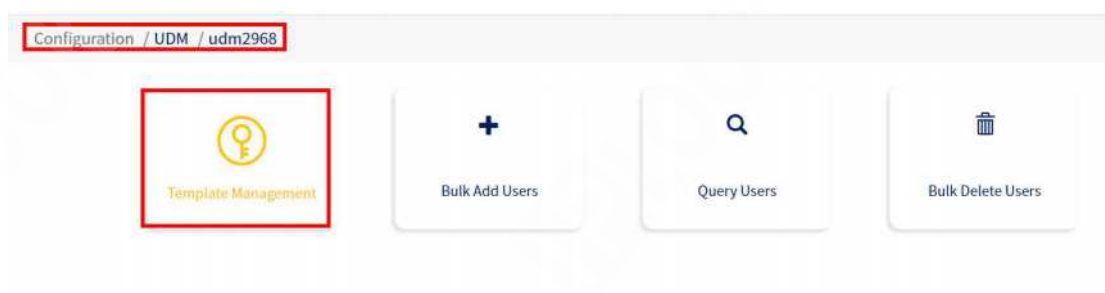


Figure 3.4.2.2-1 Template Management path

### 3.4.2.2.1.Add Template Management

**Path:** Configuration--> UDM-->Template Management

**Steps:** Click the "Add" button on the Template Management page --> fill in the configuration information in the pop-up box --> click the "Add" button in the pop-up box --> click OK in the pop-up box The application will be added successfully.

Configuration / UDM / udm2968 / Template Management

Template Name  Query Add

Template Name	Operation
tpl	

Total 1 record/s, total 1 page/s 10 /page 1

Figure 3.4.2.2-1 Template Management page

Configuration / UDM / udm2968 / Template Management

Auth Tpl

Type	Name	Value	Algorithm	Operation	
K4	k4_invalid	00000000000000000000000000000000	des		
AMF	EPC	8000			
AMF	IMS	0000			
OP	OP_Profile	12345678901234561234561234567890123456			

Auth Data

KI K4 Encrypted OFF OPC K4 Encrypted OFF

OP Option OP OP OP\_Profile

AMF EPC KI 1234567890abcdef111111111111111111111

Subscriber Tpl

Name	UE Uplink (bps)	UE Downlink (bps)	Operation	
sub_tpl	204800	204800		

Subscriber Data

Subscriber Tpl sub\_tpl

Figure 3.4.2.2-2 Example of adding a Template Management configuration section

Configuration / UDM / udm2968 / Template Management

APN Tpl

Name	UE Uplink (bps)	UE Downlink (bps)	QCI	Operation
cmnet	1024	1024	9	
ims	3072	3072	5	
iplook	4096	4096	9	

APN Data

APN Count

APN Template	Primary	Static ip Status	Static ipv4 Addr	Static ipv6 Addr
cmnet	True	False	<input type="text"/>	<input type="text"/>
ims	False	False	<input type="text"/>	<input type="text"/>
iplook	False	False	<input type="text"/>	<input type="text"/>

[Modify](#) [Delete](#) [Back](#)

Figure 3.4.2.2-3 Adding Template Management Configuration Remaining Example

Configuration items and descriptions.

configuration box	instructions
Tpl Name	Template naming
Configuration data for the Auth Tpl section	Adding and deleting configuration of authentication information templates
Configuration data for the Auth Data section	Use of forensic information configuration
Configuration data for Subscriber Tpl section	Adding and deleting configuration of eps user templates
Subscriber Data	Use of eps user configuration
APN Tpl	APN template addition and deletion configuration
APN Data	
APN Count	Number of apn used
APN Template	The apn template used
Primary	Select if it is the primary apn to use True:Select as the primary apn to use False:Do not select the apn as the primary use
Static ip Status	Whether to use static addresses True:Select to use False:Do not choose to use
Static ipv4 Addr	If you select True for Static ip Status, and the ip address used is an ipv4 address type, then you need to fill in the ipv4 address used here
Static ipv6 Addr	If you select True for Static ip Status, and the ip address used is of the ipv6



	address type, you need to fill in the ipv6 address used here
--	--

#### 3.4.2.2.2.Modify Template Management

**Path:** Configuration--> UDM-->Template Management

**Steps:** Click the Template Name in the Template Name column of the list corresponding to the configuration item you want to modify --> fill in the modified configuration information --> click the "Modify" button --> click "OK" in the pop-up box ", the modification is successful.

#### 3.4.2.2.3.Delete Template Management

**Path:** Configuration--> UDM-->Template Management

**Steps:** Click the delete icon of the row you want to delete in the list in Template Management page --> click the "OK" button in the pop-up box to delete successfully.

#### 3.4.2.3. Bulk Add Users

**Description:** Add authentication user information

**Path:** Configuration--> UDM-->Bulk Add Users

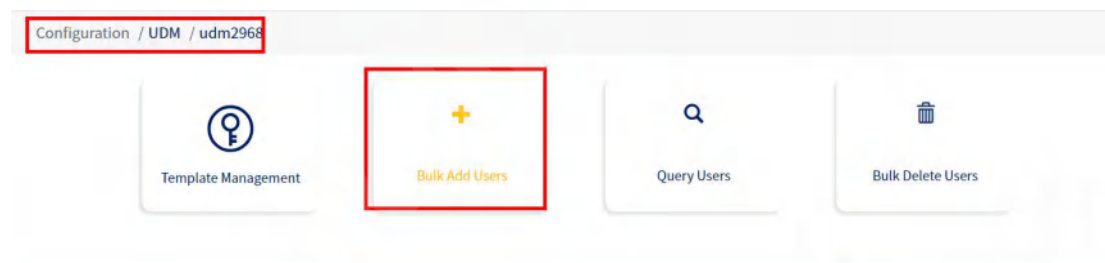


Figure 3.4.2.2-1 Bulk Add Users path

##### 3.4.2.3.1.1. Adding Authenticated Users via Executive Users

**Description:** Bulk add forensic users based on IMSI

**Path:** Configuration--> UDM-->Bulk Add Users-->Consecutive Users

**Steps:** Fill in the configuration information --> click "Add" button --> click "Add" button --> click "OK" button in the pop-up box. Add successfully.

Figure 3.4.2.3-1 Consecutive Users Add User Page  
Configuration items and descriptions.

configuration item	instructions
Add Consecutive Users (bulk add users)	
IMSI	IMSI Number
Telephone Number	mobile number
Template Name	Template Name
Count	Number of users added in bulk
Template Preview	
UE AMBR_UL(bps)	UE uplink rate
UE AMBF_DL(bps)	UE downlink rate
APN Name	The apn used
IP	IP address used
UE Uplink (bps)	UE on-line rate
UE Downlink (bps)	UE downlink rate
Add Data Preview (information is not displayed until after the "Add" button is pressed)	
IMSI	IMSI Number
Tel phone Number	mobile number
APN	The apn used
IP	IP address used

#### 3.4.2.3.1.2. Adding Authenticated Users via Discrete Users

**Description:** Add forensic users in bulk based on files

**Path:** Configuration--> UDM-->Bulk Add Users-->Discrete Users

**Steps:** Select the file storage path in the File Name box --> click the "Add" button --> click the "Add" button --> click the "OK" button in the pop-up box " button in the pop-up box, add successfully.

Figure 3.4.2.3-2 Discrete Users page

Configuration items and descriptions.

configuration item	instructions
File Name	File name with added user information
IMSI	Starting imsi number
Tel Phone Number	Starting mobile number
APN	The apn used
IP	IP address used

### 3.4.2.4. Query Users

**Description:** View authenticated user information

**Path:** Configuration--> UDM-->Query Users

Figure 3.4.2.4-1 Query Users path

#### 3.4.2.4.1.View authenticated users via Query Users

**Description:** Query user information

**Path:** Configuration--> UDM-->Query Users-->Query Users

**Steps:** Enter the IMSI number of the user you want to query in the IMSI fill box under the Query Users page --> click "Query" button, if it exists, the result will be displayed under the list, if not, the list will be empty.

Configuration / UDM / udm2968 / Query Users

IMSI

IMSI	Tel Phone Number	UE AMBR-UL(bps)	UE AMBR-DL(bps)	APN Name	IP	UE Uplink (bps)	UE Downlink (bps)	Operation
460002200000001	8618022000001	204800	204800	cmnet	10.10.0.1	1024	1024	
460002200000002	8618022000002	204800	204800	cmnet	10.10.0.2	1024	1024	
460002200000003	8618022000003	204800	204800	cmnet	10.10.0.3	1024	1024	
460002200000004	8618022000004	204800	204800	cmnet	10.10.0.4	1024	1024	
460002200000005	8618022000005	204800	204800	cmnet	10.10.0.5	1024	1024	
460002200000006	8618022000006	204800	204800	cmnet	10.10.0.6	1024	1024	
460002200000007	8618022000007	204800	204800	cmnet	10.10.0.7	1024	1024	
460002200000008	8618022000008	204800	204800	cmnet	10.10.0.8	1024	1024	
460002200000009	8618022000009	204800	204800	cmnet	10.10.0.9	1024	1024	
460002200000010	8618022000010	204800	204800	cmnet	10.10.0.10	1024	1024	

Total 10000 record, total 1000 page  /page

Figure 3.4.2.4-2 Query Users page

### 3.4.2.4.2.Delete a single authenticated user via Query Users

**Description:** Delete individual user authentication information

**Path:** Configuration--> UDM-->Query Users-->Query Users

**Step:** Click the delete icon corresponding to the row you want to delete in the Query Users page -> click "OK" in the pop-up box to delete successfully.

### 3.4.2.5. Bulk Delete Users

**Description:** Bulk delete forensic user information

**Path:** Configuration-->Bulk Delete Users

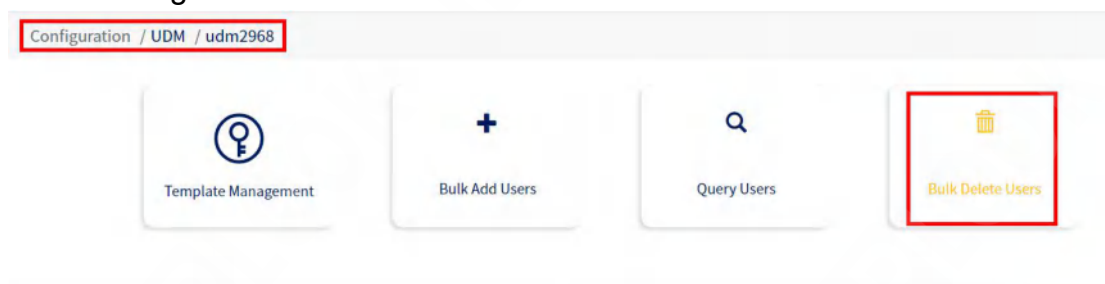


Figure 3.4.2.5-1 Bulk Delete Users path

#### 3.4.2.5.1.Bulk delete forensic users via Executive Users

**Description:** Bulk delete forensic users via IMSI

**Path:** Configuration--> UDM--> Bulk Delete Users-->Consecutive Users

**Steps:** Enter the starting IMSI number you want to delete --> enter the number of users you want to delete --> click the "Delete" button --> click the "OK" button in the pop-up box to delete successfully.

Configuration / UDM / udm2968 / Bulk Delete Users

☒ Consecutive Users ☐ Discrete Users ☐ All Users

IMSI

Count

Delete Data Preview

IMSI	Tel Phone Number	APN	IP
------	------------------	-----	----

Figure 3.4.2.5-2 Consecutive Users page

Configuration items and descriptions.

configuration item	instructions
IMSI	The starting IMSI number to be deleted
Count	Number of users deleted

### 3.4.2.5.1.1. Bulk delete forensic users via Discrete Users

**Description:** Bulk delete forensic users by file

**Path:** Configuration--> UDM--> Bulk Delete Users-->Discrete Users

**Steps:** Select the path where the file is located in the File Name box --> click the "Delete" button --> click the "OK" button in the pop-up box to delete successfully.

Configuration / UDM / udm2968 / Bulk Delete Users

☐ Consecutive Users ☒ Discrete Users ☐ All Users

File Name  File upload path: System --> File Management

Delete Data Preview

IMSI	Tel Phone Number	APN	IP
460000123456001	8613800138000	cmnet	3.3.3.3
460000123456002	8613800138001	cmnet	3.3.3.3
460000123456019	8613800138018	cmnet	3.3.3.3
460000123456020	8613800138019	cmnet	3.3.3.3

Figure 3.4.2.5-3 Discrete Users page

Configuration items and descriptions.

configuration item	instructions
File Name	The name of the file that has the information about the user to be deleted

### 3.4.2.5.1.2. Bulk delete forensic users via All Users

**Description:** Delete all forensic users, or delete some of them by fuzzy query

**Path:** Configuration--> UDM--> Bulk Delete Users-->All Users

**Steps:** Fill in the IMSI information --> Click "Delete" button --> Fill in the

password --> Click "Delete" to delete successfully.

Figure 3.4.2.5-4 All Users page

Configuration items and descriptions.

configuration item	instructions
IMSI	IMSI number to be deleted, to delete all users fill in *, to fuzzy query to delete the user fillable part of the IMSI number
Backup Path	Path to backup of deleted user information

## 3.5. PCRF

### 3.5.1. PCRF standalone webmaster operating section

#### 3.5.1.1. Webmaster Login

Using Firefox or Google Chrome, enter the IP format of the PCRF system: IP:8000. the default username and password are admin/123456

Figure 3.5.1.1 PCRF standalone network administrator login screen



### 3.5.1.2. Gx Config

**Description:** Used to manage the Gx interface configuration

**Path:** Configuration-->Gx Config

#### 3.5.1.2.1.Modify PCRF Gx Configuration

**Path:** Configuration-->Gx Config

**Steps:** Mouse click the configuration box you need to modify --> enter the configuration information --> click the "Submit" button --> click the "OK" button in the pop-up box to modify successfully.

The screenshot displays the IPLOOK web interface. At the top, there's a navigation bar with 'IPLOOK' logo, user 'admin', 'Logout', and 'English' language selector. Below is a menu bar with 'Configuration', 'Maintenance', 'System', 'Alarm', and 'Statistics'. The main content area is divided into two sections. The first section, 'PCRF Gx Configuration', is highlighted with a red border and contains three input fields: 'FQDN' with value 'pcrf.mnc000.mcc460.3gppnetwork.org', 'Realm' with value 'mnc000.mcc460.3gppnetwork.org', and 'IP&Port' with value '172.26.3.4:3869'. A 'Submit' button is located below these fields. The second section, 'PGW PCEF Configuration', is below the first and contains a table with columns: 'FQDN', 'Realm', 'IP&Port', 'Metric', and 'Operation'. The table has one row with values: 'pgw\_gx.pcef', 'pcef', '172.26.3.3:20000', '10', and a 'Delete' button.

Figure 3.5.1.2.1 Gx Basic Configuration

Configuration items and descriptions.

configuration item	instructions
FQDN	Hostname of the Gx port
Realm	Domain name of Gx port
IP&Port	The ip address of the Gx port and the port number used, the default is 3869

#### 3.5.1.2.2.Add PGW PCEF Configuration

**Path:** Configuration-->Gx Config

**Steps:** Mouse click the configuration box under PGW PCEF Configuration --> enter the configuration information --> click the "Submit" button --> click the

"OK" button in the pop-up box. Add successfully.

The screenshot shows the IPLOOK web interface. At the top, there's a navigation bar with 'Configuration' and 'Maintenance' tabs. A success pop-up box is displayed, showing '192.168.18.30:8000 显示 : Success' and a '确定' (OK) button labeled '3'. Below the pop-up, the 'PCRF Gx Configuration' section is visible. The 'PGW PCEF Configuration' section is highlighted with a red box labeled '1'. It contains a table with columns: FQDN, Realm, IP&Port, and Metric. The table has one row with values: 'pgw\_gx.pcef', 'pcef', '172.26.3.3:20000', and '10'. A 'Submit' button labeled '2' is located below the table. At the bottom, there's another table with columns: FQDN, Realm, IP, Metric, and Operation.

Figure 3.5.1.2.2 Example of adding a PGW PCEF Configuration Configuration items and descriptions.

configuration item	instructions
FQDN	Hostname of the gx port counterpart
Realm	gx port-to-port domain name
IP&Port	ip address and port number used on the other side of the gx port
Metric	Set priority

### 3.5.1.2.3.Delete PGW PCEF Configuration

**Path:** Configuration-->Gx Config

**Step:** Mouse click the "Delete" button under PGW PCEF Configuration to delete successfully.

PCRF Gx Configuration

FQDN	Realm	IP&Port
pcrf.mnc000.mcc460.3gppnetwork.org	mnc000.mcc460.3gppnetwork.org	172.26.3.4:3869

Submit

PGW PCEF Configuration

FQDN	Realm	IP&Port	Metric
			0

Submit

FQDN	Realm	IP	Metric	Operation
pgw_gx.pcef	pcef	172.26.3.3:20000	10	Delete

Figure 3.5.1.2.3 Example of Deleting PGW PCEF Configuration

### 3.5.1.3. Quota Model

**Description:** Used to set quota configuration for traffic or time control

**Path:** Configuration-->Quota

#### 3.5.1.3.1. Add Quota Model Mgmt

**Path:** Configuration-->Quota-->Quota Model Mgmt

**Steps:** Click the "Add" button --> fill in the configuration information in the pop-up box --> click the "Add" button --> click the "OK" button. Add successfully.

192.168.18.30:8000/quotaModelDetail.html

IPLOOK

Configuration Maintenance

Quota Model Mgmt Quota Instance

192.168.18.30:8000 显示 : Success

3 确定

Quota Model Detailed

1

Name	quota_demo
Type	volume
Monitor Key	101
Reset Date	26
Level1	70
Slice Type	percent

2 Add Back

Figure 3.5.1.3.1 Example of adding a Quota Model Mgmt configuration  
Configuration items and descriptions.

configuration item	instructions
Name	Name this configuration item
Type	Type of quota used, volume/time volume:flow control time:Time control
Monitor Key	The monitoring key, used here for the Usage Service under Service, is used to distinguish the three levels under the Usage Service belonging to the same Usage Service
Reset Date	Reset date
Level1	Amount when the first level is reached
Slice Type	Select unit, optionally per cent/value, if Type is Volume, then per cent

### 3.5.1.3.2.Modify Quota Model Mgmt

**Path:** Configuration-->Quota-->Quota Model Mgmt

**Steps:**Mouse click the configuration box you need to modify --> enter the configuration information --> click "Modify" button --> click the "OK" button in the pop-up box to modify successfully.

The screenshot shows a web-based configuration interface for 'Quota Model Mgmt'. It features a tabbed interface with 'Quota Model Mgmt' selected. Below the tabs is a 'Quota Model Detailed' form. The form contains the following fields and values:

- Name: quota\_demo
- Type: volume (dropdown)
- Quota Octets (KB): 12000000
- Quota Times (Seconds): (empty)
- Monitor Key: 101
- Reset Period Type: month (dropdown)
- Reset Date: 26
- Level1: 70
- Slice Type: percent (dropdown)
- Slice Percent: 0
- Slice Octets (KB): 0
- Slice Times (Seconds): 0
- Remain BalanceDeal: add (dropdown)

At the bottom of the form are three buttons: 'Modify', 'Delete', and 'Back'.

Figure 3.5.1.3.2 Quota Model Mgmt  
Configuration items and descriptions.

configuration item	instructions
Name	Configuration item name
Type	Quota type, optional Volume/time

	volume:flow time: time
Quota Octets (KB)	Quota's traffic quota (effective when the quota type is Volume)
Quota Times (Seconds)	Time quota
Monitor Key	The monitoring key, used here for the Usage Service under Service, is used to distinguish the three levels under the Usage Service belonging to the same Usage Service
Reset Period Type	Reset type, optional day/week/month
Reset Date	Traffic reset date (effective when reset on a monthly basis)
Level1	Percentage of amount reaching first level
Slice Type	The type of reporting, optionally value/percent
Slice Percent	The percentage of traffic reported, which is reported once when so much traffic is used, can be filled in when Slice Type selects per cent
Slice Octets (KB)	Used traffic usage, reported once when so much traffic is used, fillable when Slice Type selects value
Slice Times (Second)	Time of call, fillable when Slice Type selects value
Remain BalanceDeal	Flow balance setting, optional add/reset add:Add the remaining traffic to the available traffic for the month reset:Zero out the remaining traffic

### 3.5.1.3.3.Delete Quota Model Mgmt

**Path:** Configuration-->Quota-->Quota Model Mgmt

**Steps:**Mouse click the configuration item you want to delete under the Quota Model Management list --> click the "Delete" button --> --> click the "OK" button in the pop-up box. The deletion is successful.

### 3.5.1.4. Template Wizard

**Path:** Configuration →Template Wizard -> Select any template

**Description:** Used to add a subscription service template

### 3.5.1.4.1. Adding a Usage Service

**Description:** Used to configure dynamic traffic-based policies

**Path:** Configuration--> Template Wizard--> Usage Service

**Steps:** Enter the service name in the Name box of the Service Basic Information box --> select the item configured in Quota in the Quota box --> fill in cmnet or other used Apn in the Apn box --> click "check " --> click "save&continue" --> click the configuration items you need to modify, fill in the modified information --> scroll down to the end, click "save& Complete", after adding successfully, it will automatically jump to the Service page.

The screenshot shows the 'Service Basic Information' configuration page. The page has a blue header bar with navigation tabs: Configuration, Maintenance, System, Alarm, and Statistics. The main content area is titled 'Service Basic Information' and contains several input fields and buttons. Red boxes and numbers indicate the following steps:

1. Click the 'check' button.
2. Select 'quota1' from the 'Quota' dropdown menu.
3. Enter 'cmnet' in the 'Apn' field.
4. Click the 'save & continue' button.

Service Basic Information	
Name	Usage Service
Quota	quota1
Apn	cmnet
QosMod	replace
ActivateMod	PCEF
Priority	10
<input type="button" value="save &amp; continue"/>	

Figure 3.5.1.4.1-1 Adding a Usage Service Configuration Example Step 1



us\_level1\_rule

Rule Basic Info

ConditionOp

Type

Conditions

Condition Group	Condition	Group Relation	Group Desc	
us_level1_cg	us_level1_cond	and	usage level1 condition group.	Save

Actions

Action Group	Action
us_level1_ag	UsageReport
	QosAction
	DefaultBearerQos

Action

AMBRDL	1000000 1 Mbit/s
AMBRUL	1000000 1 Mbit/s
PreemptionCapability	DISABLED
ARPLLevel	1
QCI	9
PreemptionVulnerability	ENABLED

closed save

Figure 3.5.1.4.1-2 Adding a Usage Service Configuration Example Step 2

Actions

us\_exhaust\_rule

Rule Basic Information

ConditionOp

Type

Conditions

Condition Group	Condition	Group Relation	Group Desc	
us_exhaust_cg	us_exhaust_cond	and	usage exhaust condition group.	Save

Actions

Action Group	Action
us_exhaust_ag	UsageReport
	QosAction
	DefaultBearerQos

Action

AMBRDL	128000	128 kbit/s
AMBRUL	128000	128 kbit/s
PreemptionCapability	DISABLED	
ARPLLevel	1	
QCI	9	
PreemptionVulnerability	ENABLED	

closed save

save

Figure 3.5.1.4.1-3 Adding a Usage Service Configuration Example Step 3

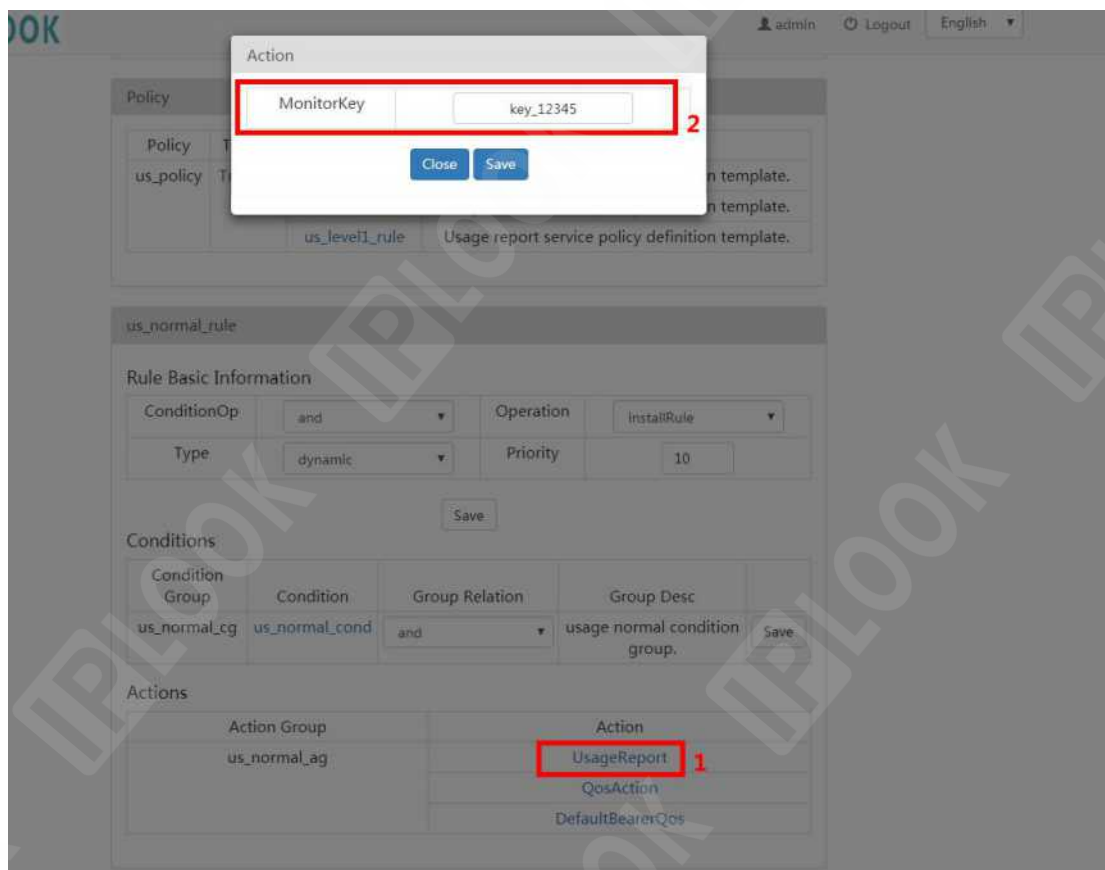


Figure 3.5.1.4.1-4 Adding a Usage Service Configuration Example Step 4

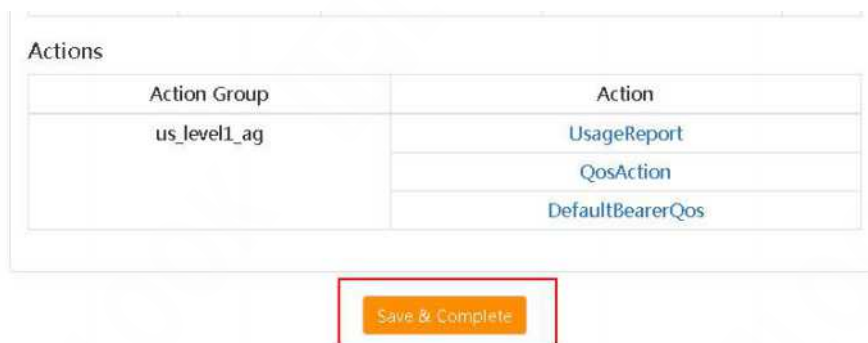


Figure 3.5.1.4.1-5 Adding a Usage Service Configuration Example Step 5



Figure 3.5.1.4.1-6 Adding a Usage Service Configuration Example Step 6  
Example illustration.

ration	threshold	thresho	Available	QoS Policy	gatekeep	Quota	reset
--------	-----------	---------	-----------	------------	----------	-------	-------

	level	ld value	interval		er strategy	cycle
5G	Normal	not	0 ~ 70%	MBRUL: 1 Mbit/s MBRDL: 4 Mbit/s	Enabled	Reset by month
	Level1	70%	70% ~ 100%	MBRUL: 1 Mbit/s MBRDL: 1 Mbit/s	Enabled	
	Exhaust	100%	100 %	MBRUL: 128 kbit/s MBRDL: 128 kbit/s	Enabled	

### Configuration items and descriptions.

configuration item	instructions
Service Basic Information	
Name	Name the service item
Quota	Select the quota template to be associated with, and set it under quota
Apn	Match whether there is an initial rule installation based on the name of the APN
ActivateMod	PCEF is selected by default
QosMod	The default selection is replace Optional replace, mergePriority, rax, restrict
Priority	priority
Action	
AMBRDL	downlink speed
AMBUDL	uplink speed
PreemptionCapability	Set whether to have preemption capability when creating or modifying a bearer and there are not enough resources, optionally enable/disable
ARPLlevel	Ability to obtain empty slots
QCI	QCI used, usually 9 for APN, 5 for IMS
PreemptionVulnerability	Whether the bearer can be preempted by other new or modified bearers of higher priority when resources are insufficient, optionally enable/disable
UsageReport	
MonitorKey	The MonitorKey for all three levels needs to be changed to match the one in the quota, which is the monitor key value reported by the traffic usage

### 3.5.1.4.2.Adding Apn Service

**Description:** Used to configure dynamic APN-based policies

**Path:** Configuration--> Template Wizard--> Apn Service

**Steps:** Enter the service name in the Name box of Service Basic Information box --> fill in cmnet or other Apn used in the Apn box --> click "check" --> click "save&continue"-->click the configuration items you need to modify, fill in the modified information-->drop down to the end, click "save&Complete", and you will be automatically redirected to Service page.

Configuration Maintenance System Alarm Statistics

Service Basic Information

Name	Apn Service	1.	check		
Apn	cmnet		ActivateMod	PCEF	
QosMod	replace		Priority	100	

2. save & continue

Figure 3.5.1.4.2-1 Adding Apn Service Configuration Example I

Policy

as\_policy

Condition

Attribute: IPSession.APN

Operation: equal

RightValue: cmnet

RightType: value

closed save

Rule Basic Information

ConditionOp: and

Operation: installRule

Type: dynamic

Priority: 100

save

Conditions

Condition Group	Condition	Group Relation	Group Desc
as_cg	as_cg_cond	and	APN service condition group.

Save

Actions

Action Group	Action
as_ag	DefaultBearerQos

Save & Complete

Figure 3.5.1.4.2-2 Adding Apn Service Configuration Example II

Configuration Maintenance System Alarm Statistics

Service Basic Information

AF Service	delete
Apn Service	delete
Usage Service	delete
VoLTE Service	delete

Figure 3.5.1.4.2-3 Adding Apn Service Configuration Example III  
Configuration items and descriptions.

configuration item	instructions
Service Basic Information	

Name	Name the service item
Apn	Name of the Apn using the service
ActivateMod	PCEF is selected by default
QosMod	The default selection is replace Optional replace, mergePriority, rax, restrict
Priority	priority
Condition	
Attribute	property name
Operation	operation, optional equal/lessThan/notEqual/notlessThan /notMoreThan/like/notlike
RightValue	Matching apn
RightType	Select the type of value to match, default is value

### 3.5.1.4.3.Add Service Zone Service

**Description:** Used to configure dynamic policies based on location zones

**Path:** Configuration--> Template Wizard--> Service Zone Service

**Steps:** Enter the service name in the Name box of Service Basic Information box --> fill in cmnet or other Apn used in the Apn box --> click "check" --> click "save&continue"-->click the configuration items you need to modify, fill in the modified information-->drop down to the end, click "save&Complete", and you will be automatically redirected to Service The page will be automatically redirected to the Service page.

Service Basic Information

Name	Service Zone Service	check	
Apn	cmnet	ActivateMod	PCEF
QosMod	replace	Priority	60

save & continue

Figure 3.5.1.4.3-1 Adding a Service Zone Service Configuration Example Step



**Condition**

Attribute	IPSession.MCCMNC
Operation	equal
RightValue	46000
RightType	value

closed save

**Conditions**

Condition Group	Condition	Group Relation	Group Desc
szs_cg	szs_cg_cond	and	service zone condition group.

**Actions**

Action Group	Action
szs_ag	QosAction
	DefaultBearerQos

Save & Complete

Figure 3.5.1.4.3-2 Adding a Service Zone Service Configuration Example Step 2

**Service Basic Information**

Service	delete
AF Service	delete
Apn Service	delete
Service Zone Service	delete
Usage Service	delete
VoLTE Service	delete

Figure 3.5.1.4.3-3 Adding a Service Zone Service Configuration Example Step 3  
Configuration items and descriptions.

configuration item	instructions
Service Basic Information	
Name	Name the service item
Apn	Name of the Apn using the service
ActivateMod	PCEF is selected by default
QosMod	The default selection is replace Optional replace, mergePriority, rax, restrict
Priority	priority
Condition	
Attribute	property name
Operation	operation, optionally equal/lessThan/notEqual/notlessThan /notMoreThan/like/notlike
RightValue	Matching plmn
RightType	Select the type of value to match, default is value

#### 3.5.1.4.4.Add Time Range Service

**Description:** Used to configure dynamic policies based on time periods

**Path:** Configuration--> Template Wizard-->Time Range Service

**Steps:** Enter the service name in the Name box of Service Basic Information box --> fill in cmnet or other Apn used in the Apn box --> click "check" --> click "save&continue"-->click the configuration items you need to modify, fill in the modified information-->drop down to the end, click "save&Complete", and you will be automatically redirected to Service page.

Configuration Maintenance System Alarm Statistics

Service Basic Information

Name

Time Range Service

check

Apn

cmnet

ActivateMod

PCEF

QosMod

replace

Priority

30

save & continue

Figure 3.5.1.4.4-1 Adding Time Range Service Configuration Example Step 1

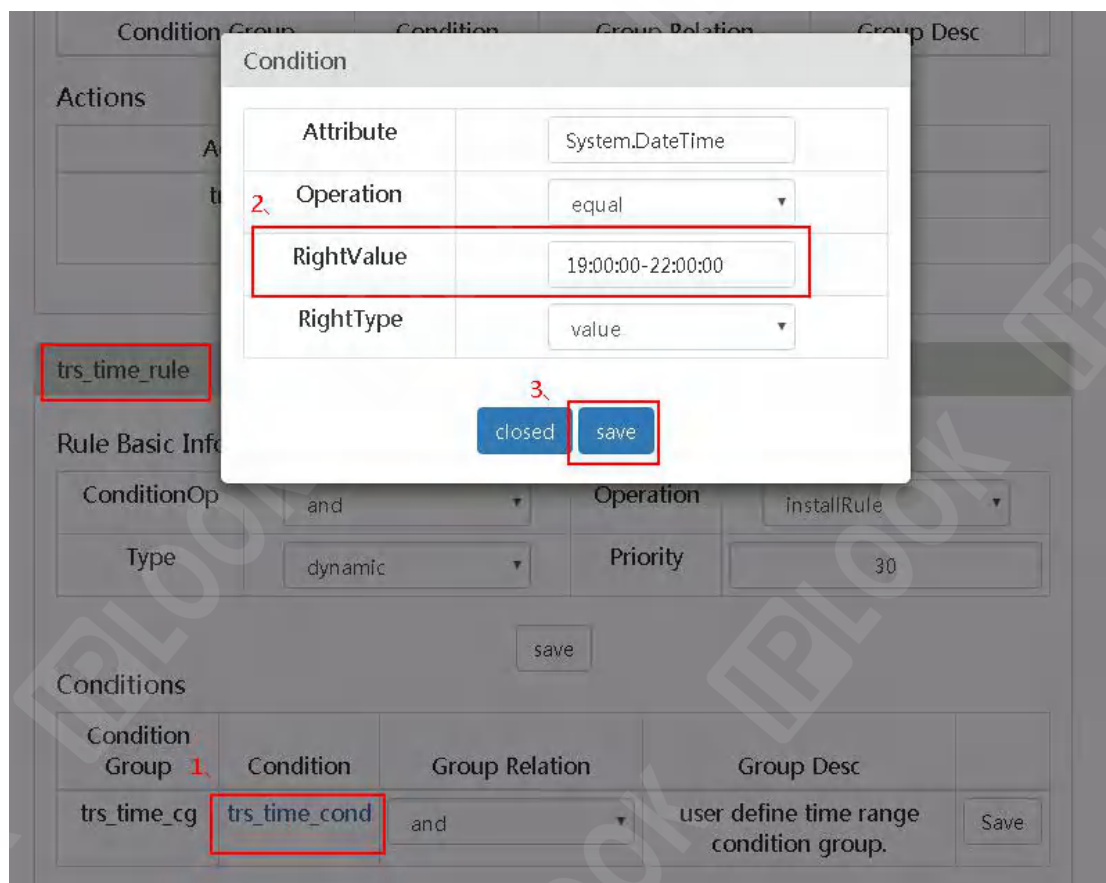


Figure 3.5.1.4.4-2 Adding Time Range Service Configuration Example Step 2 Configuration items and descriptions.

configuration item	instructions
Service Basic Information	
Name	Name the service item
Apn	Name of the Apn using the service
ActivateMod	PCEF is selected by default
QosMod	The default selection is replace Optional replace, mergePriority, rax, restrict
Priority	priority
Condition	
Attribute	property name
Operation	operation, optionally equal/lessThan/notEqual/notlessThan /notMoreThan/like/notlike
RightValue	Time period used
RightType	Select the type of value to match, default is value

### 3.5.1.4.5.Add Category Service

**Description:** Used to configure dynamic policies based on user attributes

**Path:** Configuration--> Template Wizard--> Category Service

**Steps:** Enter the service name in the Name box of Service Basic Information box --> fill in cmnet or other Apn used in the Apn box --> click "check" --> click "save&continue"-->click the configuration items you need to modify, fill in the modified information-->drop down to the end, click "save&Complete", and you will be automatically redirected to Service The page will be automatically redirected to the Service page.

Figure 3.5.1.4.5-1 Adding Category Service Configuration Example Step 1

Figure 3.5.1.4.5-2 Adding Category Service Configuration Example Step 2

Figure 3.5.1.4.5-3 Adding Category Service Configuration Example Step 3

The image shows a screenshot of a network configuration interface. A modal window titled "Action" is open, displaying configuration parameters for a rule. The background interface includes sections for "Rule Basic Info", "Conditions", and "Actions".

**Modal Window: Action**

Parameter	Value
AMBRDL	512000 512 kbit/s
AMBRUL	512000 512 kbit/s
PreemptionCapability	ENABLED
ARPLLevel	1
QCI	9
PreemptionVulnerability	ENABLED

Buttons: closed, save

**Background Interface:**

**Rule Basic Info:**

- cs\_normal\_rule
- ConditionOp
- Type

**Conditions:**

Condition Group	Condition	Group Relation	Group Desc
cs_normal_cg	cs_normal_cond	and	normal condition group.

**Actions:**

Action Group	Action
cs_normal_ag	QosAction
	DefaultBearerQos

Figure 3.5.1.4.5-3 Adding Category Service Configuration Example Step 3



The screenshot shows the IPLOOK configuration interface. A modal dialog box titled "Action" is open, allowing configuration for a rule. The dialog contains the following fields:

- AMBRDL**: 1000000 **1 Mbit/s**
- AMBRUL**: 1000000 **1 Mbit/s**
- PreemptionCapability**: DISABLED
- ARPLLevel**: 1
- QCI**: 9
- PreemptionVulnerability**: ENABLED

At the bottom of the dialog are "closed" and "save" buttons. In the background, the "cs\_silver\_rule" is selected in the "Rule Basic Information" section. The "Conditions" section shows a condition group "cs\_silver\_cg" with condition "cs\_silver\_cond" and relation "and". The "Actions" section shows an action group "cs\_silver\_ag" with action "QosAction" and "DefaultBearerQos". A "Save & Complete" button is visible at the bottom of the main configuration area.

Figure 3.5.1.4.5-4 Adding Category Service Configuration Example Step 4

Service Basic Information	
AF Service	delete
Apn Service	delete
Category Service	delete
Service Zone Service	delete
Usage Service	delete
VoLTE Service	delete

Figure 3.5.1.4.5-5 Adding Category Service Configuration Example Step 5  
Example configuration description.

User Properties	QoS Policy
gold	MBRUL: 2 Mbit/s MBRDL: 2 Mbit/s
silver	MBRUL: 1 Mbit/s MBRDL: 1 Mbit/s
normal	MBRUL: 512 kbit/s MBRDL: 512 kbit/s

Configuration items and descriptions.

configuration item	instructions
Service Basic Information	
Name	Name the service item
ActivateMod	PCEF is selected by default
QosMod	The default selection is replace Optional replace, mergePriority, rax, restrict
Priority	priority
Action	
AMBRDL	downlink speed
AMBUDL	uplink speed
PreemptionCapability	Set whether to have preemption capability when creating or modifying a bearer and there are not enough resources, optionally enable/disable
ARPLlevel	Ability to obtain empty slots
QCI	QCI used, usually 9 for APN, 5 for IMS
PreemptionVulnerability	Whether the bearer can be preempted by other new or modified bearers of higher priority when resources are insufficient, optionally enable/disable

### 3.5.1.4.6.Add Special Usage Service

**Description:** Used to configure dynamic policies based on traffic overlay packets

**Path:** Configuration--> Template Wizard-->Special Usage Service Template

**Steps:** Enter the service name in the Name box of Service Basic Information box --> fill in cmnet or other Apn used in the Apn box --> click "check" --> click "save&continue"-->click the configuration items you need to modify, fill in the modified information-->drop down to the end, click "save&Complete", and you will be automatically redirected to Service page.



Service Basic Information

Name	Special Usage Service	Check <sup>1</sup>	Quota	quota
APN	cmnet	<sup>2</sup>	ActivateMod	PCEF
QoSMod	replace		Priority	10

Save & Continue <sup>3</sup>

Figure 3.5.1.4.6-1 Adding Special Usage Service Configuration Example Step 1

admin Logo

Action

AMBRDL	120000000 bps	<sup>3</sup>
AMBRUL	120000000 bps	
PreemptionCapability	DISABLED	
ARPLLevel	1	
QCI	9	
PreemptionVulnerability	ENABLED	

Close Save <sup>4</sup>

Rule Basic Information

Condition Group

Condition Group	Condition	Group Relation	Group Desc	
us_level1_cg	us_level1_cond <sup>1</sup>	and	usage level1 condition group.	Save

Actions

Action Group	Action
us_level1_ag	UsageReport
	QoSAction
	DefaultBearerQos <sup>2</sup>

Save & Complete

Figure 3.5.1.4.6-2 Adding Special Usage Service Configuration Example Step 2

admin Logout

Action

AMBRDL	10000000	bps
AMBRUL	1000000	bps
PreemptionCapability	DISABLED	
ARPLLevel	1	
QCI	9	
PreemptionVulnerability	ENABLED	

Close Save

us\_normal\_rule

Rule Basic Info

ConditionOp

Type

Conditions

Condition Group

us\_normal\_cg

us\_normal\_cond

and

usage normal condition group.

Save

Actions

Action Group	Action
us_normal_ag	UsageReport
	QosAction
	DefaultBearerQos

Figure 3.5.1.4.6-3 Adding Special Usage Service Configuration Example Step 3

us\_level1\_rule

Rule Basic Information

ConditionOp	and	Operation	installRule
Type	dynamic	Priority	10

Save

Conditions

Condition Group	Condition	Group Relation	Group Desc
us_level1_cg	us_level1_cond	and	usage level1 condition group.

Save

Actions

Action Group	Action
us_level1_ag	UsageReport
	QosAction
	DefaultBearerQos

Save & Complete

Figure 3.5.1.4.6-4 Adding Special Usage Service Configuration Example Step

Configuration items and descriptions.

configuration item	instructions
Service Basic Information	
Name	Name the service item
ActivateMod	PCEF is selected by default
QosMod	The default selection is replace Optional replace, mergePriority, rax, restrict
Priority	priority
Action	
AMBRDL	downlink speed
AMBUDL	uplink speed
PreemptionCapability	Set whether to have preemption capability when creating or modifying a bearer and there are not enough resources, optionally enable/disable
ARPLLevel	Ability to obtain empty slots
QCI	QCI used, usually 9 for APN, 5 for IMS
PreemptionVulnerability	Whether the bearer can be preempted by other new or modified bearers of higher priority when resources are insufficient, optionally enable/disable

### 3.5.2. PCRF Unified Network Management Operations Section

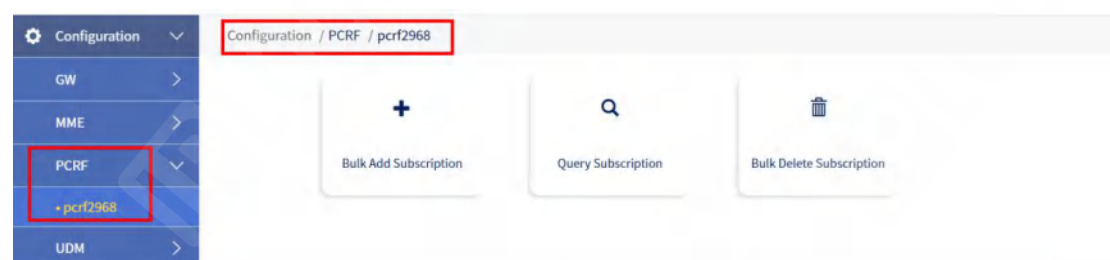


Figure 3.5.2-1 PCRF path

#### 3.5.2.1. Add Subscription

**Description:** Add a subscription service for bulk users

**Path:** Configuration-->PCRF-->Add Subscription

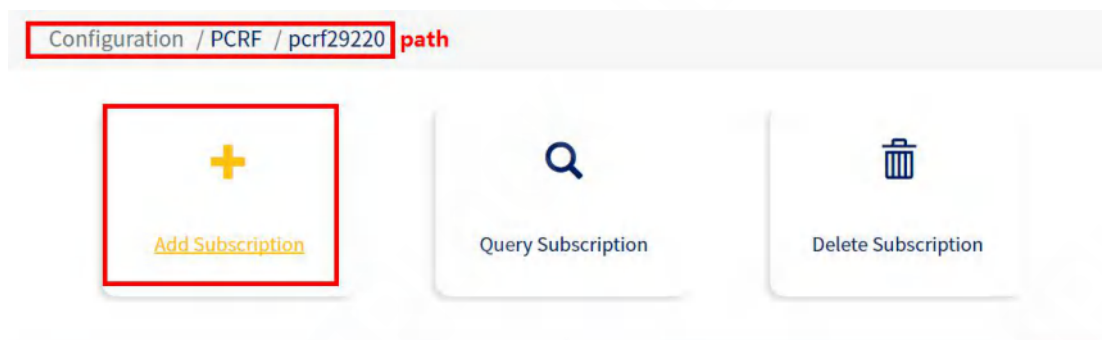


Figure 3.5.2.1 Add Subscription path

### 3.5.2.1.1. Adding subscription services for bulk users via Executive IMSI

**Description:** To add subscription service for bulk users through IMSI, the user's IMSI number should be consecutive

**Path:** Configuration-->PCRF-->Add Subscription-->Consecutive IMSI

**Steps:** Fill in the starting IMSI number and other information --> click "Add" button --> click "OK" button, add successfully.

Figure 3.5.2.1.1 Consecutive IMSI page

Configuration items and descriptions:

IMSI	The starting IMSI number of the user who needs a bulk subscription
MSISDN	MSISDN number, the starting mobile phone number of the user who needs a bulk subscription
State	User Status normal:normal state Freezing state closed:closed state
Home PLMN	PLMNs attributed to end users
Category	Subscriber category of subscription, optionally normal/gold/silver
Station	Identity, select master
Service	Select a service to subscribe to
Start Time	Start time of service usage
End Time	Time of termination of service use

counter	Number of subscribers added to the subscription
---------	---

### 3.5.2.1.2. Adding subscription services for bulk users via Discrete IMSI

**Description:** Add subscription service for bulk users through template file, user's IMSI number can be discontinuous

**Path:** Configuration-->PCRF-->Add Subscription-->Discrete IMSI

**Steps:** Select Template in the Template drop-down box --> select/fill in other configuration information --> click "Add" --> click "OK" button in the pop-up box, add successfully.

Configuration: / PCRF / pcrf2971 / Add Subscriptions

☐ Consecutive IMSI ☒ Discrete IMSI

Template:

Home PLMN:

Station:

State:

Category:

Service:

Start Time:

End Time:

Preview

No.	IMSI	MSISDN	State	Home PLMN	Category	Station	Service	Start Time	End Time
-----	------	--------	-------	-----------	----------	---------	---------	------------	----------

Figure 3.5.2.1.2 Discrete IMSI page

Configuration items and descriptions:

configuration item	instructions
Template	The user template used, added to the Template configuration under System
State	User Status normal:normal state Freezing state closed:closed state
Home PLMN	PLMNs attributed to end users
Category	Subscriber category of subscription, optionally normal/gold/silver
Station	Identity, select master
Service	Select a service to subscribe to
Start Time	Start time of service usage
End Time	Time of termination of service use

### 3.5.2.2. Query Subscription

**Description:** Query and delete subscription services for a single user

**Path:** Configuration-->PCRF-->Query Subscription

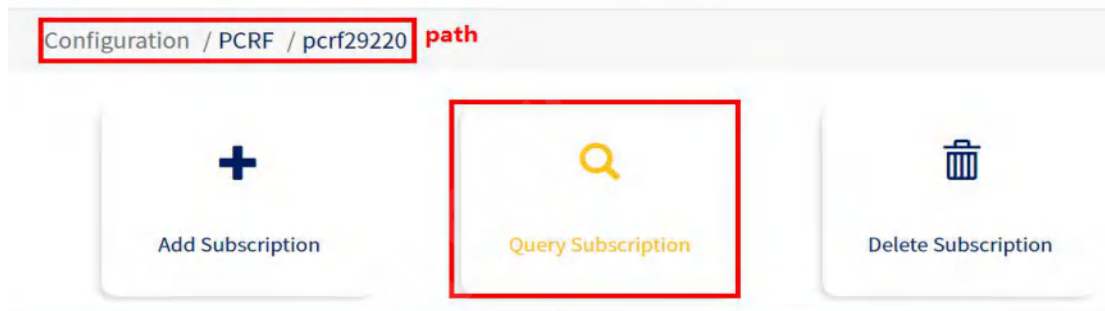


Figure 3.5.2.2 Query Subscription page

### 3.5.2.2.1. Querying subscription information via Query Subscription

**Description:** Query the user's subscription information

**Path:** Configuration-->PCRF-->Query Subscription

**Step:** Enter the IMSI number of the user you want to query in the IMSI fill box under the Query Subscription page --> click the "Query" button, if it exists, the result will be displayed under the list; if it does not exist, the list will be empty.

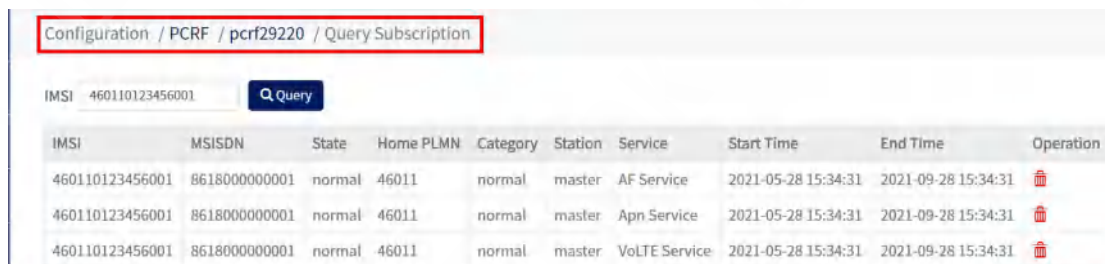


Figure 3.5.2.2.1 Query Subscription page

### 3.5.2.2.2. Deleting subscription information for a single user via Query Subscription

**Description:** Deletes the subscription information of a single user

**Path:** Configuration-->PCRF-->Query Subscription

**Step:** Click the delete icon corresponding to the row you want to delete in the Query Subscription page -> click "OK" in the pop-up box to delete successfully.

### 3.5.2.3. Delete Subscription

**Description:** Delete subscription service for bulk users

**Path:** Configuration-->PCRF-->Delete Subscription





Figure 3.5.2.3 Delete Subscription path

### 3.5.2.3.1. Deleting subscriptions for bulk users via Executive IMSI

**Description:** Remove subscription services for consecutive IMSI users

**Path:** Configuration-->PCRF-->Delete Subscription-->Consecutive IMSI

**Steps:** Enter the starting IMSI you want to delete in the IMSI box --> enter the number of users you want to delete in the counter box --> click the "Delete" button --> click "OK" in the pop-up box " --> Click "OK" in the pop-up box, the deletion is successful.



Figure 3.5.2.3-2 Consecutive IMSI page

Configuration items and descriptions.

configuration item	instructions
IMSI	The starting imsi number of the user to be bulk deleted
counter	Fill in the number of deleted users

### 3.5.2.3.2. Removing subscriptions for bulk users via Discrete IMSI

**Description:** Remove subscription services for users via template files

**Path:** Configuration-->PCRF-->Delete Subscription-->Discrete IMSI

**Steps:** Select the template file in the Template drop-down box --> click the "Delete" button --> click the "OK" button in the pop-up box to delete successfully.

Figure 3.5.2.3-3 Discrete IMSI page

Configuration items and descriptions.

configuration item	instructions
Template	Drop down to select the file added in the Template module under System

### 3.5.2.3.3.Remove subscription services for users via Fuzzy IMSI

**Description:** Delete subscription services based on fuzzy query to users

**Path:** Configuration-->PCRF-->Delete Subscription-->Fuzzy IMSI

**Steps:** Enter the IMSI prefix in the IMSI box and add "\*" at the end --> click the "Delete" button --> enter the password --> click the "OK" button in the pop-up box "button --> click "OK" button in the pop-up box, delete successfully.

Figure 3.5.2.3-4 Fuzzy IMSI page

Configuration items and descriptions.

configuration item	instructions
IMSI	You can fill in the incomplete imsi number and add "*" at the end to delete all users based on fuzzy query
Backup Path	Backup path for deleted users

## 4. Security Management

This chapter mainly configures the EPC core network management user access security configuration parameters, including User Management ,User Group Management, Permission Management three big functional modules. User Management module, to add, delete, lock and unlock access users, User Group Management module, to add, delete and manage permissions for user

groups, Permission Management module, to add and delete permissions list management functions.

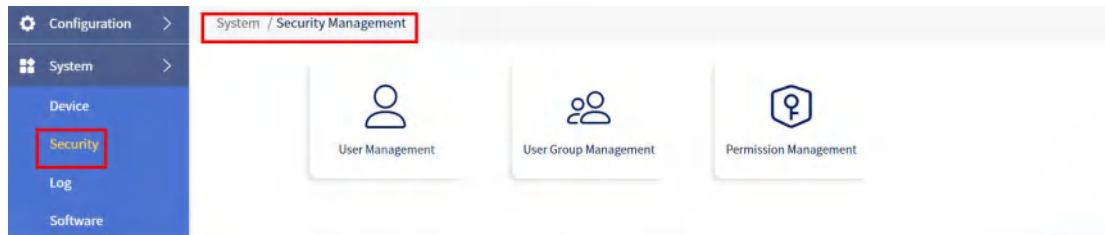


Figure 4-1 Security Management path

#### 4.1. user management

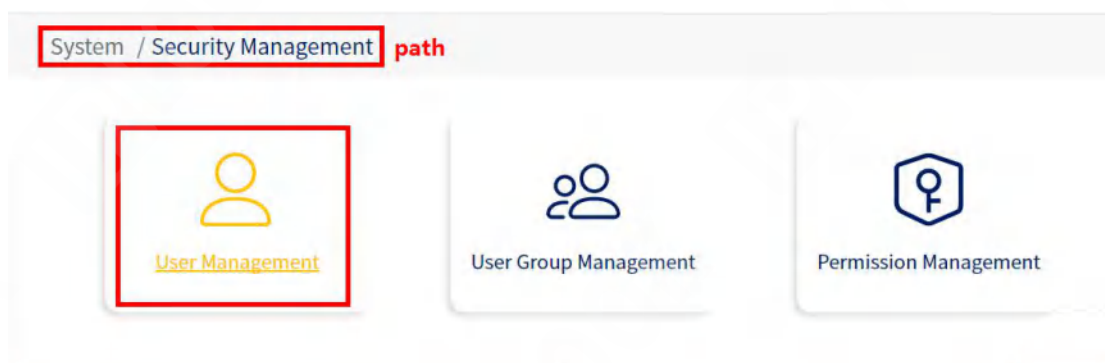


Figure 4-2 User Management path

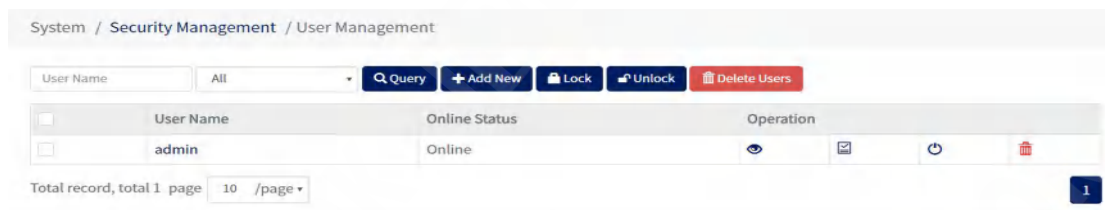


Figure 4-3 Security Management page

##### 4.1.1. Add User

**Path:** System--> Security--> User Management --> Add New

**Step:** Click the "Add New" button to bring up the Add User pop-up window, fill in the user parameters in the pop-up window and click the "Save" button to save the user.

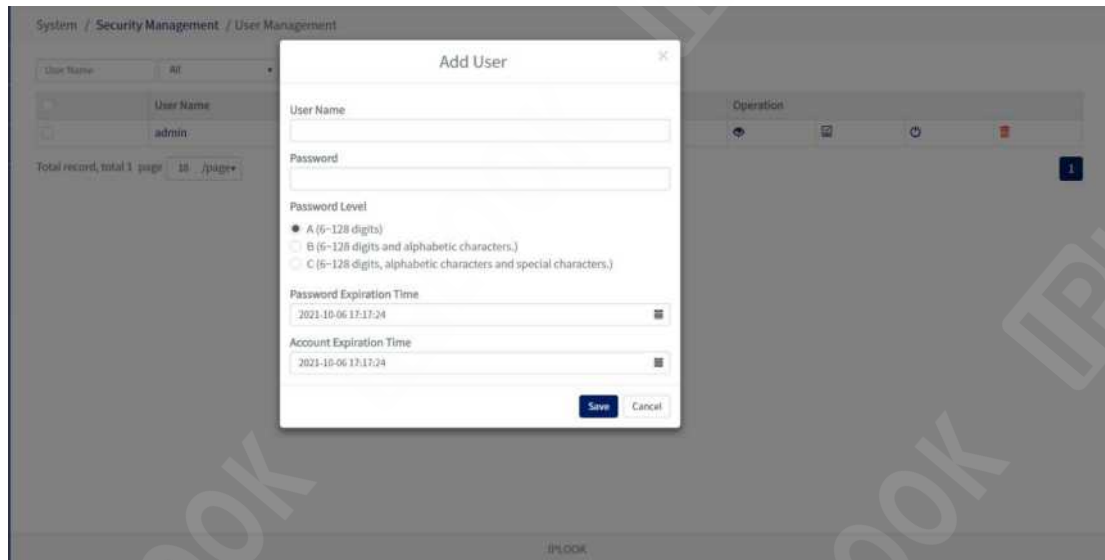


Figure 4-4 Adding a User

Configuration items and descriptions.

configuration item	Configuration item description
User Name	user ID
Password	pin number
Password Level	Password level, A (6 to 128 digits) B (6 to 128 digits, characters) C (6 to 128 digits, characters, special characters)
Password Expiration Time	Password expiration time
Account Expiration Time	Account Expiration Time

#### 4.1.2. Modify user

**Path:** System--> Security--> User Management

**Step:** Click the User Name you want to modify to bring up the detail page, after you finish modifying, click the "Save" button to finish modifying.

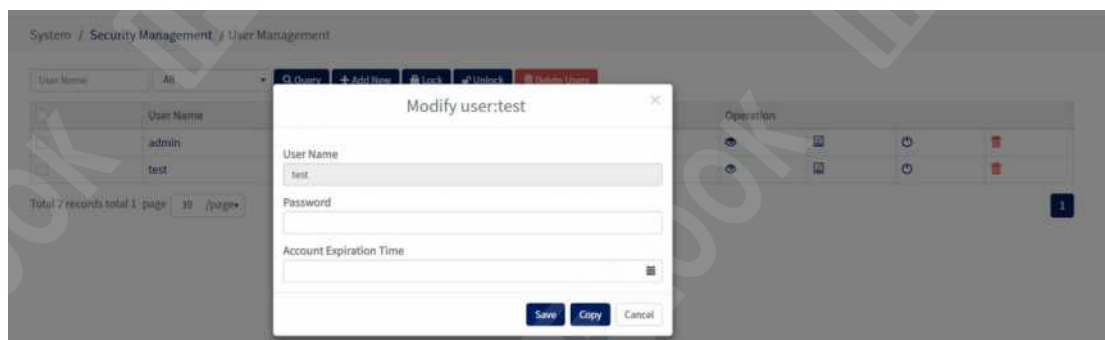


Figure 4-5 Changing the User Password

### 4.1.3. Copy User

**Description:** This function serves to copy the user with the same permission, avoiding a series of complicated operations to add the permission subsequently.

**Path:** System--> Security--> User Management

**Step:** Click the User Name of the user you need to copy to bring up the details page (see Figure 4-6), then click the "Copy" button to bring up the copy user details page, fill in the new user name and password in the pop-up window, after finishing, click the "Save" button to complete the user copy.

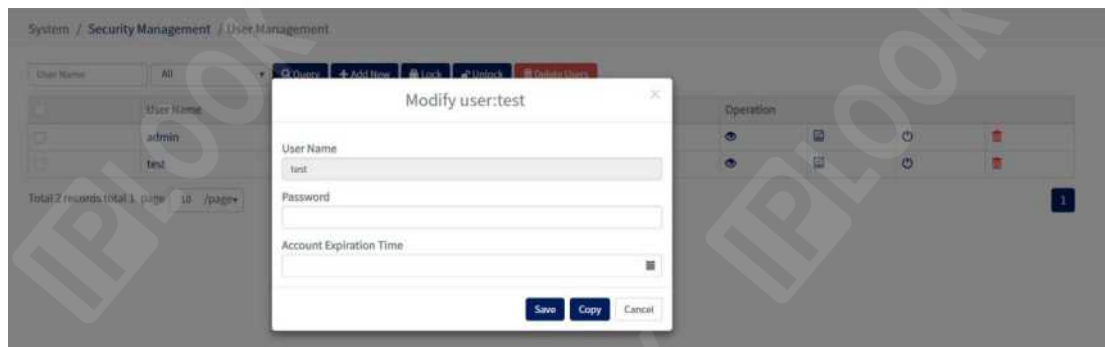


Figure 4-6 Copy User

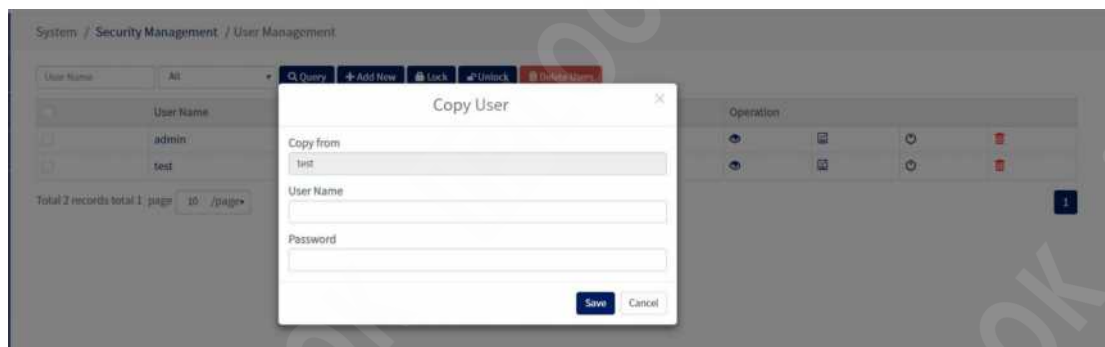


Figure 4-7 Copying a User Account Password

### 4.1.4. Delete user

**Path:** System--> Security--> User Management

**Steps.**

Method 1: Select the record to be deleted, click the red Delete button, and select "OK" in the next pop-up box, see Figure 6.1.4-1.

Method 2: Click the checkbox of the user to be deleted to check, and then click the red "Delete Users" button, the next pop-up box to select "OK", see Figure 4-8.

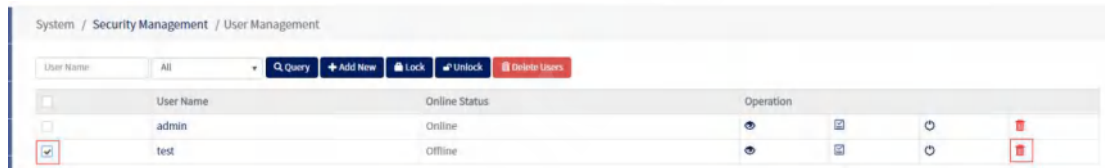


Figure 4-8 Deleting a User

#### 4.1.5. Query and view users

**Path:** System--> Security--> User Management

**Step:** Fill in the User Name box and online Status box with the user name to be queried, then click the "Query" button or press Enter, and click the "View" button in the Operation after the user is queried. (eye shape) view button in Operation to view user details.

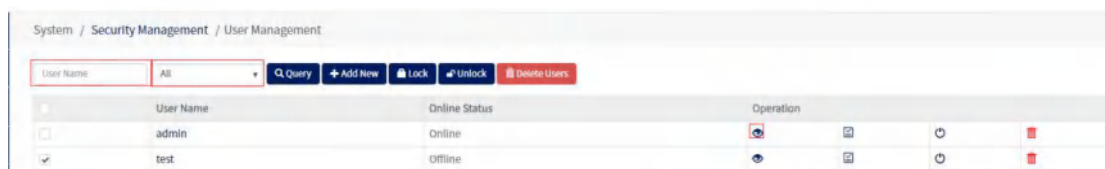


Figure 4-9 User Queries

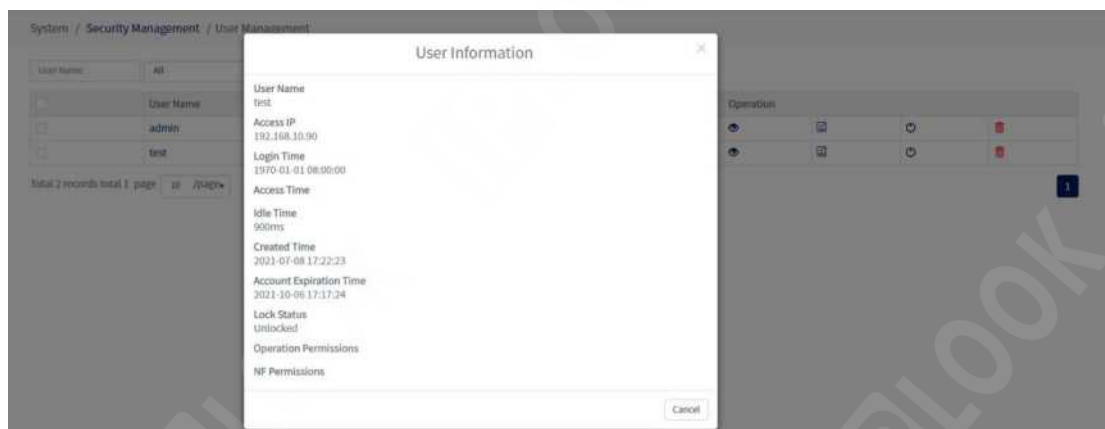


Figure 4-10 User Details

#### 4.1.6. Locking and unlocking users

**Description:** When a user is locked out, the user will not be able to log in and will have no access to perform a series of subsequent operations.

**Path:** System--> Security--> User Management

**Steps.**

**Lock:** Click the checkbox of the User Name you want to lock, and click the "Lock" button to finish locking the user.

**Unlock:** Click the checkbox of the User Name you want to lock, and click the "Unlock" button to finish unlocking the user.



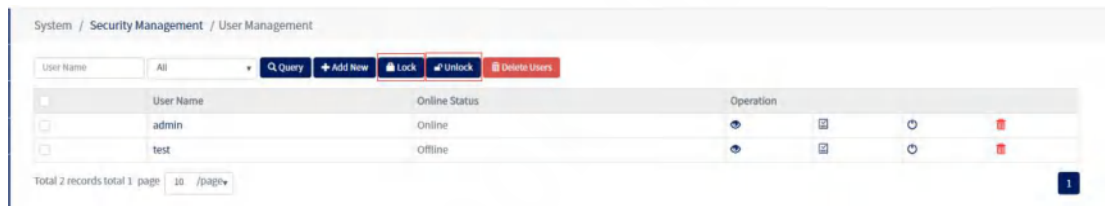


Figure 4-11 Locking and unlocking users

#### 4.1.7. Add user IP whitelist

**Description:** Users who add IP whitelist will not be able to login and access IPs that are not in the list.

**Path:** System--> Security--> User Management

**Step:** Select the users who need to add IP white list, click the "IP WhiteList" button to bring up a pop-up window, fill in the IP value in the pop-up window, click "Save" to save.

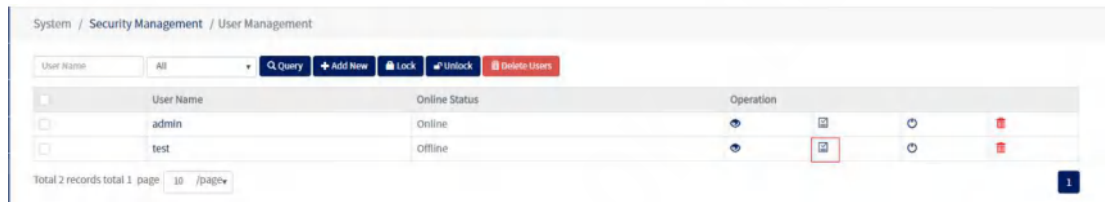


Figure 4-12 User List

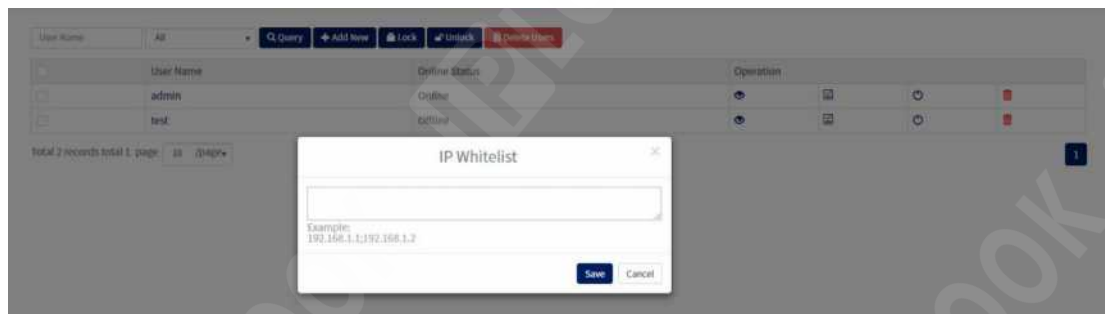


Figure 4-13 User IP Whitelist List

#### 4.1.8. Subscribers offline

**Path:** System--> Security--> User Management

**Step:** Select the user who needs to be taken offline, click the "Logout" button in Operation, the status of the user will change from "Online" to "Offline". The user's status will change from "Online" to "Offline".

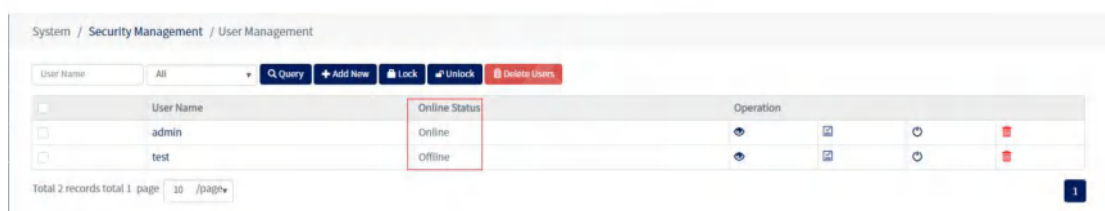


Figure 4-14 Users offline

## 4.2. User Group Management

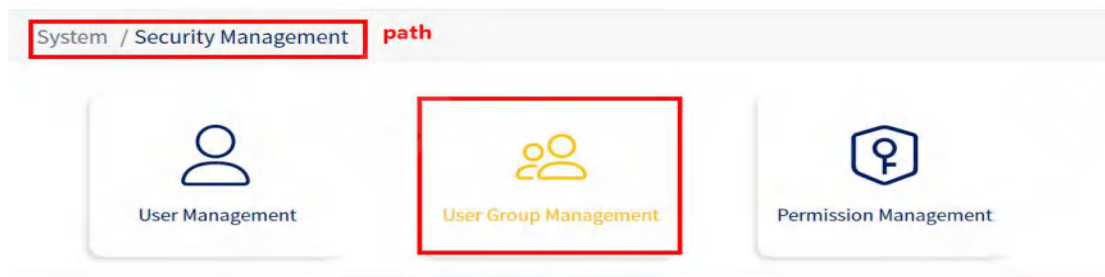


Figure 4-15 User Group Management Path

**Description:** There are 11 user groups in the user group management by default. The SuperOperator group is the most privileged group, which cannot be deleted and the superuser admin page of this group cannot be removed.

**Path:** System--> Security--> User Group Management

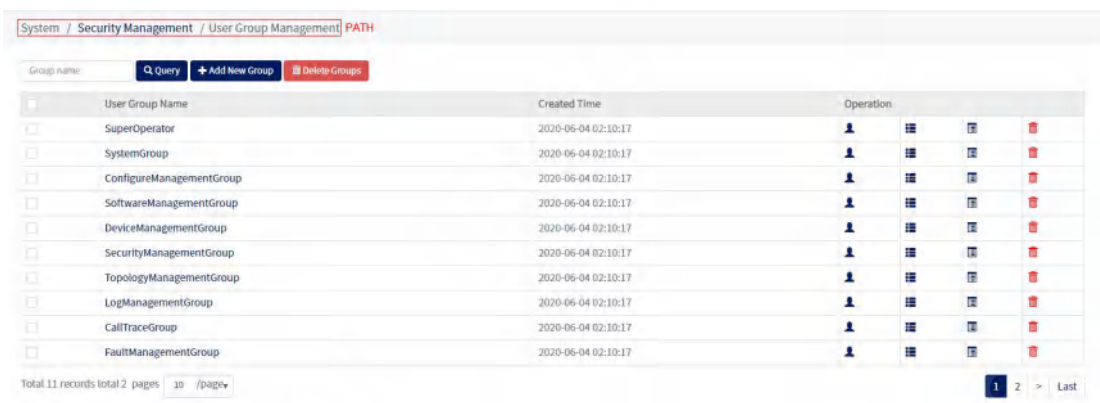
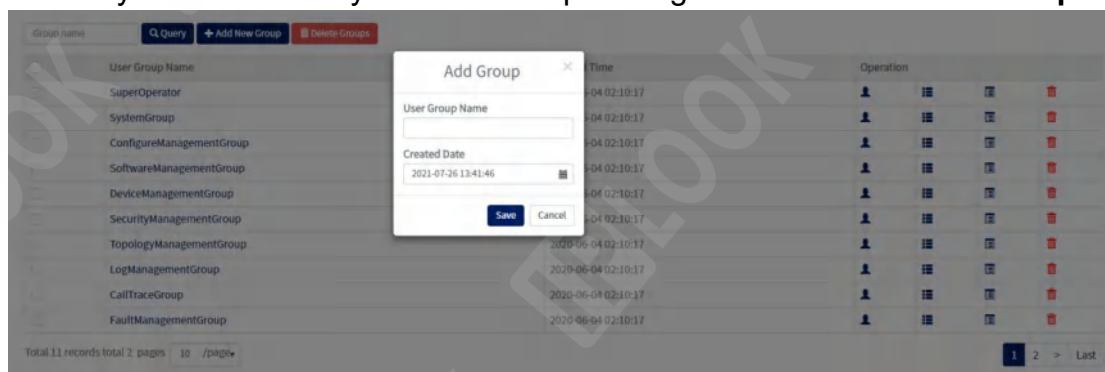


Figure 4-16 User Group Management page

### 4.2.1. Adding User Groups

**Path:** System--> Security--> User Group Management --> Add New Group



**Step:** Click the "Add New Group" button to bring up the Add User pop-up

window, fill in the user parameters in the pop-up window and click the "Save" button to save the user.

Figure 4-17 Adding a User Group

Configuration items and descriptions.

configuration item	Configuration item description
User Group Name	user group name
Create Time	Creation time

#### 4.2.2. Modify user group

**Path:** System--> Security--> User Group Management

**Step:** Click the User Group Name you want to modify to bring up the details page, and click the "Save" button to complete the modification.

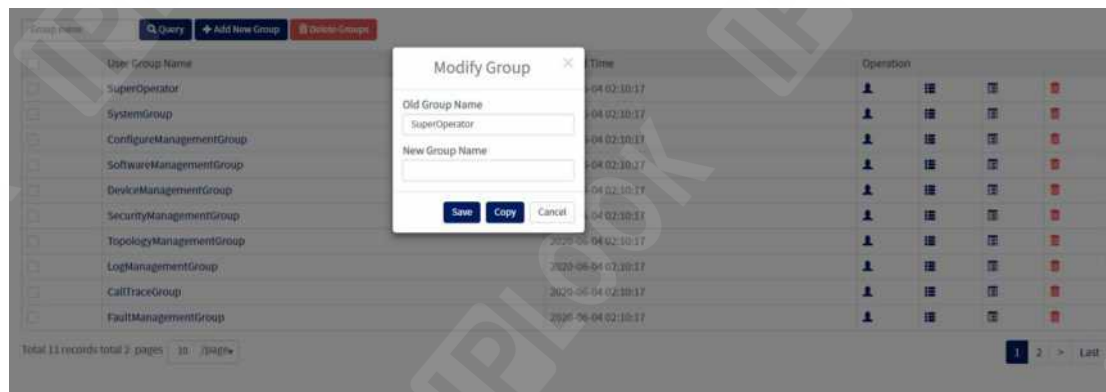


Figure 4-18 Modifying User Group Names

#### 4.2.3. Copy user group

**Description:** This function serves to copy the user group with the same permission, avoiding a series of complicated operation work of adding the permission afterwards.

**Path:** System--> Security--> User Group Management

**Step:** Click the User Group Name of the user you need to copy to bring up the details page (see Figure 4-19), then click the "Copy" button to bring up the copy user details page, fill in the new user group name in the pop-up window, after finishing, click the "Save" button to finish copying the user group.

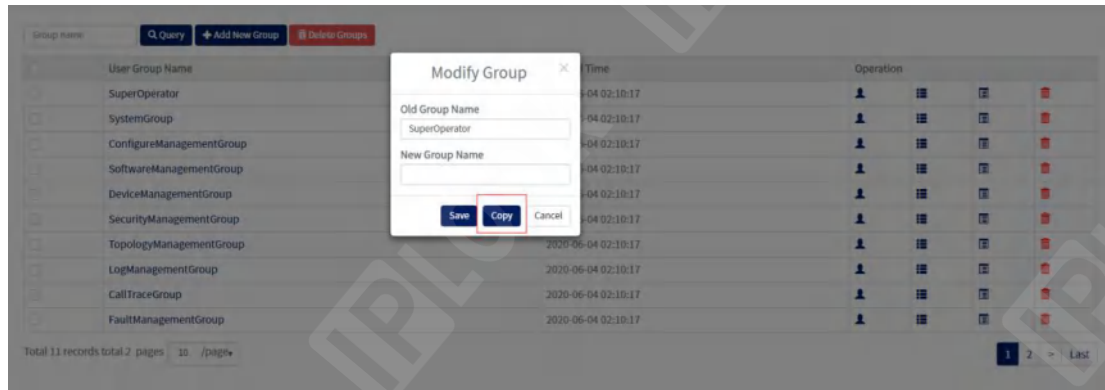


Figure 4-19 Copy User Group

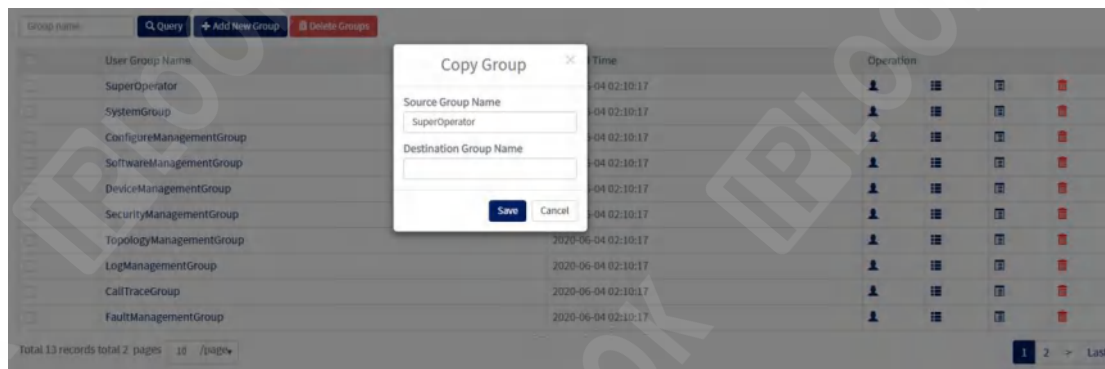


Figure 4-20 Copying a User Account Password

#### 4.2.4. Delete user group

**Path:** System--> Security--> User Group Management

##### **Steps.**

Method 1: Select the record to be deleted, click the red Delete button, and select "OK" for the next pop-up box, see Figure 6.2.4-1.

Method 2: Click the checkbox of the user to be deleted to check, and then click the red "Delete Group" button, the next pop-up box to select "OK", see Figure 4-21.

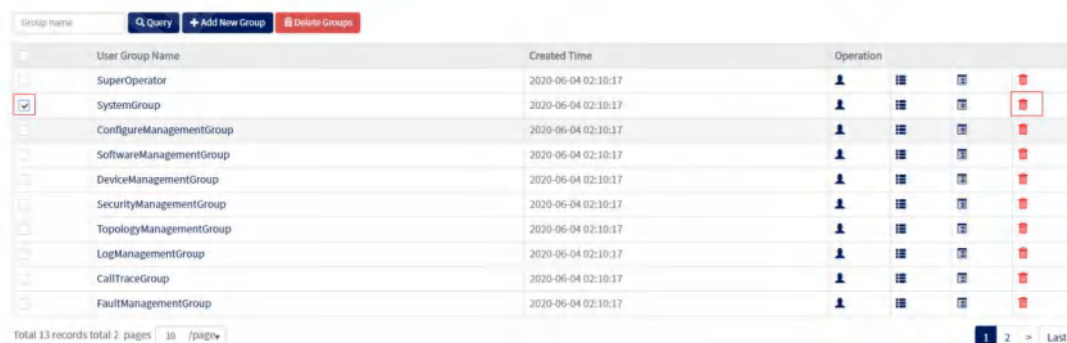


Figure 4-21 Deleting a User Group

### 4.2.5. Query User Group

**Path:** System--> Security--> User Group Management

**Step:** Fill in the Group Name box with the name of the user group you want to query, then click the "Query" button or press Enter

<input type="checkbox"/>	User Group Name	Created Time	Operation
<input type="checkbox"/>	SuperOperator	2020-06-04 02:10:17	
<input type="checkbox"/>	SystemGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	ConfigureManagementGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	SoftwareManagementGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	DeviceManagementGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	SecurityManagementGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	TopologyManagementGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	LogManagementGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	CallTraceGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	FaultManagementGroup	2020-06-04 02:10:17	

Total 13 records total 2 pages 10 /page

Figure 4-22 User Group Query

### 4.2.6. Group User Management

**Path:** System--> Security--> User Group Management

**Step:** Select the user group you need to modify, click the "Group Users Management" (human-shaped) button in Operation (see Figure 4-23 red check box), a pop-up window will appear, the left side of the pop-up window is the users that have been added to the current group, the right side is the candidate Users, through the middle of the single arrow you can move the selected users to the specified area, or use the double arrow to move all of them, when finished, click the "Save" button to save (see Figure 4-24).

<input type="checkbox"/>	User Group Name	Created Time	Operation
<input type="checkbox"/>	SuperOperator	2020-06-04 02:10:17	
<input type="checkbox"/>	SystemGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	ConfigureManagementGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	SoftwareManagementGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	DeviceManagementGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	SecurityManagementGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	TopologyManagementGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	LogManagementGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	CallTraceGroup	2020-06-04 02:10:17	
<input type="checkbox"/>	FaultManagementGroup	2020-06-04 02:10:17	

Total 13 records total 2 pages 10 /page

Figure 4-23 List of User Groups



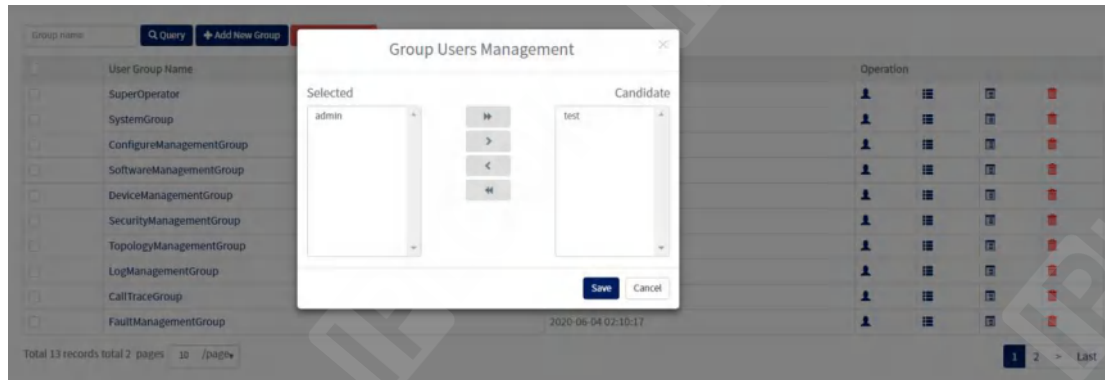


Figure 4-24 Group User Selection

#### 4.2.7. Group Node Management

**Path:** System--> Security--> User Group Management

**Step:** Select the user group you need to modify, click the "Group NFs Management" button in Operation (see Figure 4-25 red check box), a pop-up window will appear, the left side of the pop-up window is the users added in the current group, the right side is the candidate users, through the The single arrow in the middle can move the selected users to the specified area, or use the double arrow to move all of them, click the "Save" button to save when finished (see Figure 4-26).



Figure 4-25 List of User Groups

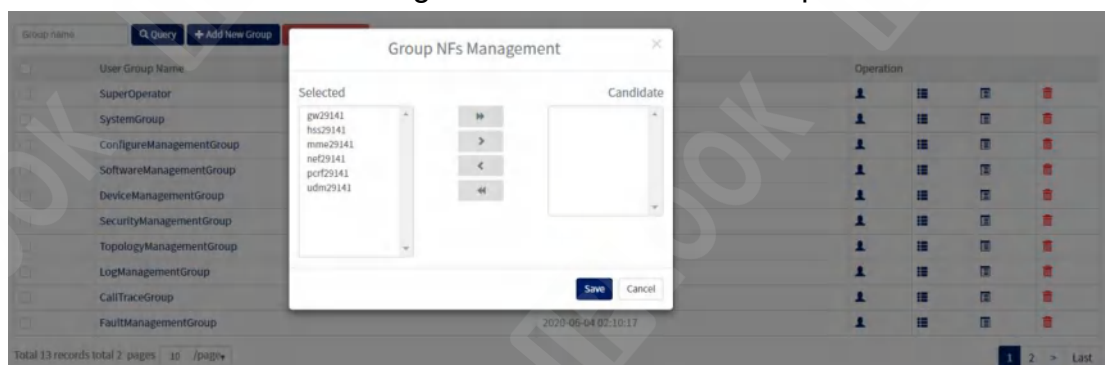


Figure 4-26 Group Node Selection



## 4.2.8. Group Rights Management

**Description:** The group permission management is to add, delete and query the permission functions in the already existing permission types.

**Path:** System--> Security--> User Group Management --> User Group Permission Management

Group Name	Created Time	Operation
SuperOperator	2020-06-04 02:10:17	[Add] [Edit] [Delete]
SystemGroup	2020-06-04 02:10:17	[Add] [Edit] [Delete]
ConfigureManagementGroup	2020-06-04 02:10:17	[Add] [Edit] [Delete]
SoftwareManagementGroup	2020-06-04 02:10:17	[Add] [Edit] [Delete]
DeviceManagementGroup	2020-06-04 02:10:17	[Add] [Edit] [Delete]
SecurityManagementGroup	2020-06-04 02:10:17	[Add] [Edit] [Delete]
TopologyManagementGroup	2020-06-04 02:10:17	[Add] [Edit] [Delete]
LogManagementGroup	2020-06-04 02:10:17	[Add] [Edit] [Delete]
CallTraceGroup	2020-06-04 02:10:17	[Add] [Edit] [Delete]
FaultManagementGroup	2020-06-04 02:10:17	[Add] [Edit] [Delete]

Figure 4-27 Group Permissions Management

### 4.2.8.1. Add Group Permissions

**Path:** System--> Security--> User Group Management --> User Group Permission Management

**Step:** Click the "Add New" button to bring up the Add Group Permissions pop-up window, select the permission type and permission name in the pop-up window and then click the "Save" button to save the group permissions.

Permission Type	Permission Name	Operation
system	Get Mobile Context	[Delete]
system	SMF Node Register	[Delete]
system	SMF Node Deregister	[Delete]
system	Statistical Registered NF Instance	[Delete]
system	Node Register	[Delete]
system	Registered User Information	[Delete]
system	Node Deregister	[Delete]
system	Node Update	[Delete]
system	Import Dev License Information	[Delete]
system	Create System	[Delete]

Figure 4-28 List of Group Permissions

System / Security Management / User Group Management / User Group Permission Management: SuperOperator

**Add Permission**

Permission Type: 系统

Permission Name: 获取amf用户上下文信息, smf网元节点注册, smf网元节点注销, nrf统计注册网元信息, 网元节点注册, 网元节点去注册, 网元节点更新, PM获取所有UPF节点属性, PM获取UPF节点属性, 获取UPF平均流量

Save Cancel

Figure 4-29 Adding Group Permissions

Configuration items and descriptions.

configuration item	Configuration item description
Permission Type	Permission type
Permission Name	authority name

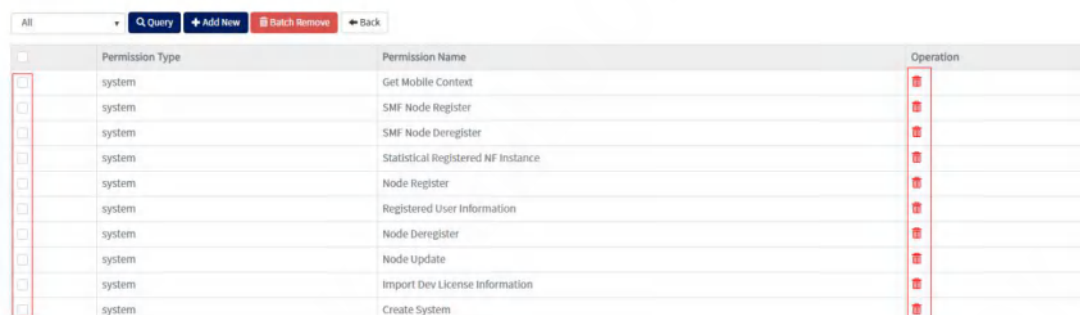
#### 4.2.8.2. Delete group permissions

**Path:** System--> Security--> User Group Management --> User Group Permission Management

**Steps.**

Method 1: Select the record to be deleted, click the red Delete button, and select "OK" for the next pop-up box, see Figure 6.2.8.1-1.

Method 2: Click the checkbox of the permission name you need to remove to check it, then click the red "Batch Remove" button, the next pop-up box select "OK", see Figure 4-30



The screenshot shows a web interface for managing permissions. At the top, there are buttons for 'Query', 'Add New', 'Batch Remove', and 'Back'. Below these is a table with four columns: 'Permission Type', 'Permission Name', and 'Operation'. The 'Permission Type' column contains the word 'system' for all rows. The 'Permission Name' column lists various system operations. The 'Operation' column contains red icons for deleting or removing permissions. A red box highlights the checkboxes in the first column and the 'Batch Remove' button.

Permission Type	Permission Name	Operation
system	Get Mobile Context	
system	SMF Node Register	
system	SMF Node Deregister	
system	Statistical Registered NF Instance	
system	Node Register	
system	Registered User Information	
system	Node Deregister	
system	Node Update	
system	Import Dev License Information	
system	Create System	

Figure 4-30 Deleting Group Permissions

#### 4.2.8.3. Query Group Permissions

**Path:** System--> Security--> User Group Management --> User Group Permission Management

**Step:** Select the type of permission to be queried in the Query radio box, then click the Query button or press Enter

System / Security Management / User Group Management / User Group Permission Management: SuperOperator

All

<input type="checkbox"/>	Permission Type	Permission Name	Operation
<input type="checkbox"/>	system	Get Mobile Context	<input type="button" value=""/>
<input type="checkbox"/>	system	SMF Node Register	<input type="button" value=""/>
<input type="checkbox"/>	system	SMF Node Deregister	<input type="button" value=""/>
<input type="checkbox"/>	system	Statistical Registered NF Instance	<input type="button" value=""/>
<input type="checkbox"/>	system	Node Register	<input type="button" value=""/>
<input type="checkbox"/>	system	Registered User Information	<input type="button" value=""/>
<input type="checkbox"/>	system	Node Deregister	<input type="button" value=""/>
<input type="checkbox"/>	system	Node Update	<input type="button" value=""/>
<input type="checkbox"/>	system	Import Dev License Information	<input type="button" value=""/>
<input type="checkbox"/>	system	Create System	<input type="button" value=""/>

Total 620 records total 62 pages 10 /page

1 2 3 4 5 6 7 8 9 10 > > Last

Figure 4-31 Querying Group Permissions

### 4.3. Permissions management

**Description:** Permission management is mainly to add, modify, delete and query functions for each permission type and its permission name and interface name.

**Path:** System--> Security--> Permission Management

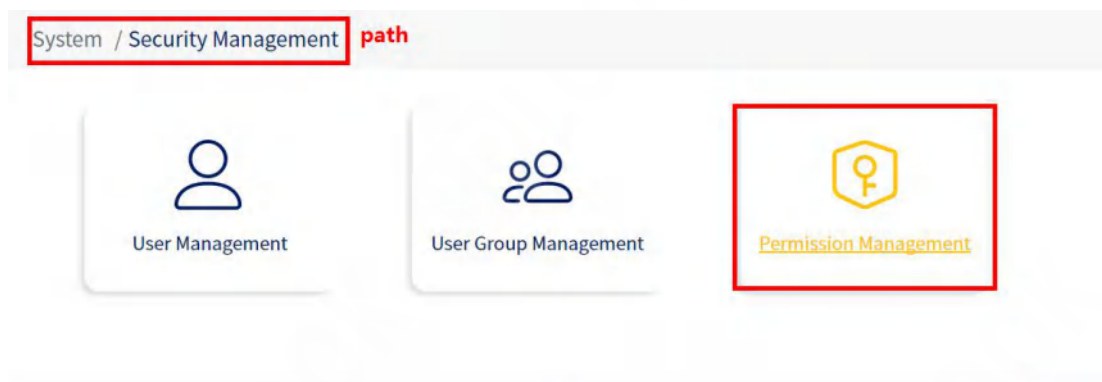


Figure 4-32 Permission Management Path

#### 4.3.1. List of Permissions

**Description:** Permission list management is to add, delete and query the permission name and interface name of the existing permission type.

**Path:** System--> Security--> Permission Management--> Permission List

The screenshot shows the 'Permission List' management interface. It features a table with columns: Permission Name, Permission Type, Interface Name, and Operation. The table lists various permissions such as 'Create Permission', 'Edit Permission', 'Get Permission List', etc., all under the 'SecurityManagement' type. A modal window titled 'Add Permissions' is open, allowing users to input a new 'Permission Name', select a 'Permission Type' (currently 'CallTrace'), and enter an 'Interface Name'. The modal has 'Save' and 'Cancel' buttons. The background table has a pagination bar at the bottom indicating 'Total 620 records total 62 pages 10 /page'.

Permission Name	Permission Type	Interface Name	Operation
Create Permission	SecurityManagement	CreatePermission	[icon]
Create Permission Type	SecurityManagement	CreatePermissionType	[icon]
Edit Permission	SecurityManagement	EditPermission	[icon]
Edit Permission Type	SecurityManagement	EditPermissionType	[icon]
Get Permission List	SecurityManagement	GetPermissions	[icon]
Get Permission Type List	SecurityManagement	GetPermissionTypes	[icon]
Get Element Instance	SecurityManagement	GetElementInstances	[icon]
Get Element Instance Type	SecurityManagement	GetElementInstanceTypes	[icon]
Delete Permission	SecurityManagement	DeletePermissions	[icon]
Delete Permission Type	SecurityManagement	DeletePermissionTypes	[icon]

Figure 4-33 Permission List Management

#### 4.3.1.1. Adding Permissions

**Path:** System--> Security--> Permission Management --> Permission List

**Step:** Click the "Add New" button to bring up the Add User pop-up window, fill in the user parameters in the pop-up window and click the "Save" button to save the user.

This screenshot shows the 'Add Permissions' modal window. It contains three input fields: 'Permission Name', 'Permission Type' (a dropdown menu currently showing 'CallTrace'), and 'Interface Name'. Below these fields are 'Save' and 'Cancel' buttons. The modal is positioned over the same permission list table seen in Figure 4-33. The background interface shows the 'Permission List' tab is active.

Figure 4-34 Adding Permissions

Configuration items and descriptions.

configuration item	Configuration item description
Permission Name	authority name
Permission Type	Permission type
Interface Name	interface name

#### 4.3.1.2. Modify Permissions

**Path :**System--> Security--> Permission Management --> Permission List

**Step:** Click the Permission Name you want to modify to bring up the detail page, after you finish modifying, click the "Save" button to finish modifying.

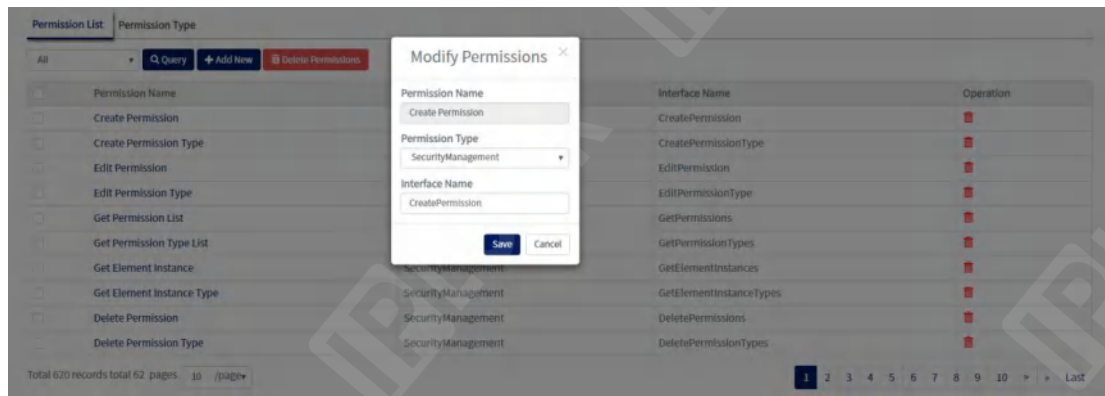


Figure 4-35 Modifying Permissions

#### 4.3.1.3. Delete user group

**Path:** System--> Security--> Permission Management --> Permission List  
**Steps.**

Method 1: Select the record to be deleted, click the red Delete button, and select "OK" in the next pop-up box, see Figure6.3.1.3-1.

Method 2: Click the checkbox of the user to be deleted to check, and then click the red "Delete Permission" button, the next pop-up box to select "OK", see Figure 4-36.

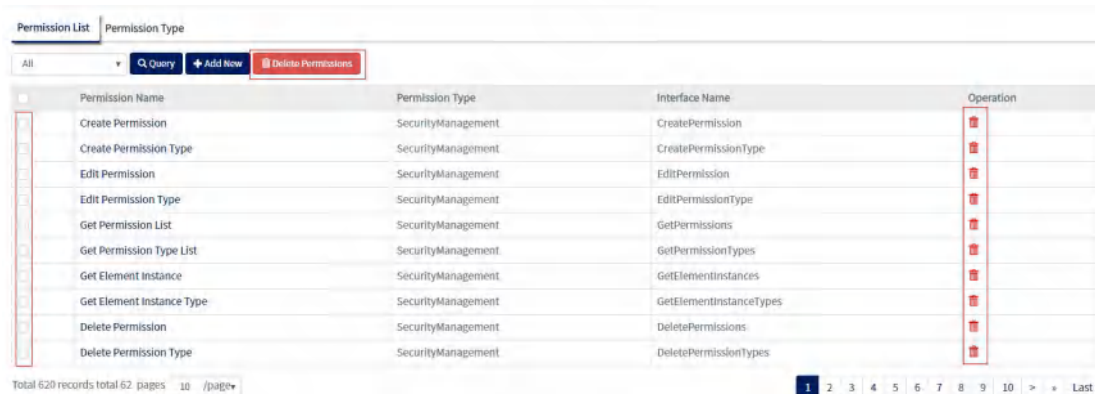


Figure 4-36 Delete Permissions

#### 4.3.1.4. Query User Group

**Path:** System--> Security--> Permission Management --> Permission List

**Step:** Select the type of permission to be queried in the query radio box, then click the "Query" button or press Enter

Permission List | Permission Type

All

<input type="checkbox"/>	Permission Name	Permission Type	Interface Name	Operation
<input type="checkbox"/>	Create Permission	SecurityManagement	CreatePermission	<input type="button" value="Delete"/>
<input type="checkbox"/>	Create Permission Type	SecurityManagement	CreatePermissionType	<input type="button" value="Delete"/>
<input type="checkbox"/>	Edit Permission	SecurityManagement	EditPermission	<input type="button" value="Delete"/>
<input type="checkbox"/>	Edit Permission Type	SecurityManagement	EditPermissionType	<input type="button" value="Delete"/>
<input type="checkbox"/>	Get Permission List	SecurityManagement	GetPermissions	<input type="button" value="Delete"/>
<input type="checkbox"/>	Get Permission Type List	SecurityManagement	GetPermissionTypes	<input type="button" value="Delete"/>
<input type="checkbox"/>	Get Element Instance	SecurityManagement	GetElementInstances	<input type="button" value="Delete"/>
<input type="checkbox"/>	Get Element Instance Type	SecurityManagement	GetElementInstanceTypes	<input type="button" value="Delete"/>
<input type="checkbox"/>	Delete Permission	SecurityManagement	DeletePermissions	<input type="button" value="Delete"/>
<input type="checkbox"/>	Delete Permission Type	SecurityManagement	DeletePermissionTypes	<input type="button" value="Delete"/>

Total 620 records total 62 pages 10 /page

1 2 3 4 5 6 7 8 9 10 » Last

Figure 4-37 Permission Search

### 4.3.2. Permission type

**Description:** Permission type management is to add, delete and query the existing permission types.

**Path:** System--> Security--> Permission Management --> Permission Type

Permission List | Permission Type

Permission Type Name

<input type="checkbox"/>	Permission Type Name	Operation
<input type="checkbox"/>	CallTrace	<input type="button" value="Delete"/>
<input type="checkbox"/>	ConfigureManagement	<input type="button" value="Delete"/>
<input type="checkbox"/>	DeviceManagement	<input type="button" value="Delete"/>
<input type="checkbox"/>	FaultManagement	<input type="button" value="Delete"/>
<input type="checkbox"/>	LogManagement	<input type="button" value="Delete"/>
<input type="checkbox"/>	PerformanceManagement	<input type="button" value="Delete"/>
<input type="checkbox"/>	SecurityManagement	<input type="button" value="Delete"/>
<input type="checkbox"/>	SoftwareManagement	<input type="button" value="Delete"/>
<input type="checkbox"/>	system	<input type="button" value="Delete"/>
<input type="checkbox"/>	TopologyManagement	<input type="button" value="Delete"/>

Total 10 records total 1 page 10 /page

1

Figure 4-38 Permission Types

#### 4.3.2.1. Add permission type

**Path:** System--> Security--> Permission Management --> Permission Type

**Step:** Click the "Add New" button to bring up the Add User pop-up window, fill in the user parameters in the pop-up window and click the "Save" button to save the user.



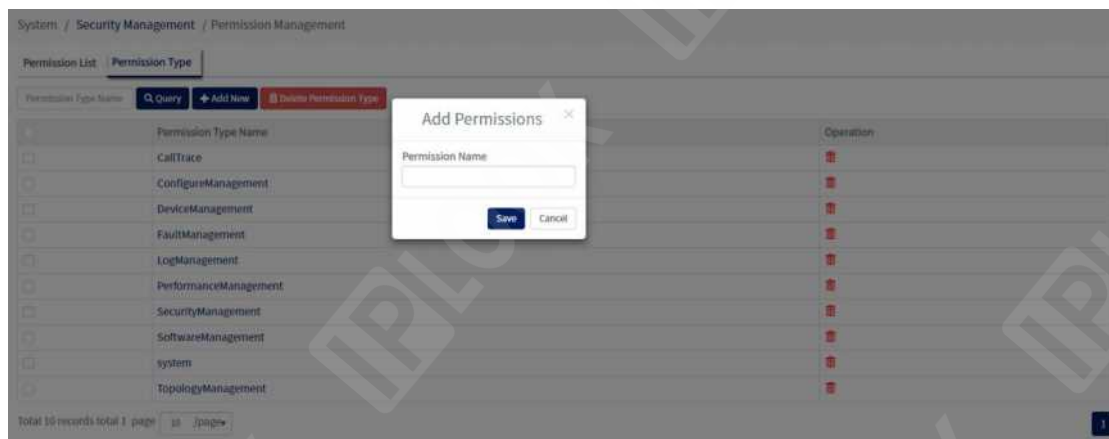


Figure 4-39 Adding Permission Types

## 5. Log Management

### 5.1. Operation Log

**Description:** The operation log mainly records the user, network element, time, IP, operation content and some other user behavior actions for the web administrator, which is convenient for operation and maintenance personnel to quickly and accurately locate the operator's problems in using the web administrator.

**Path:** System--> Log Management --> Operation Log

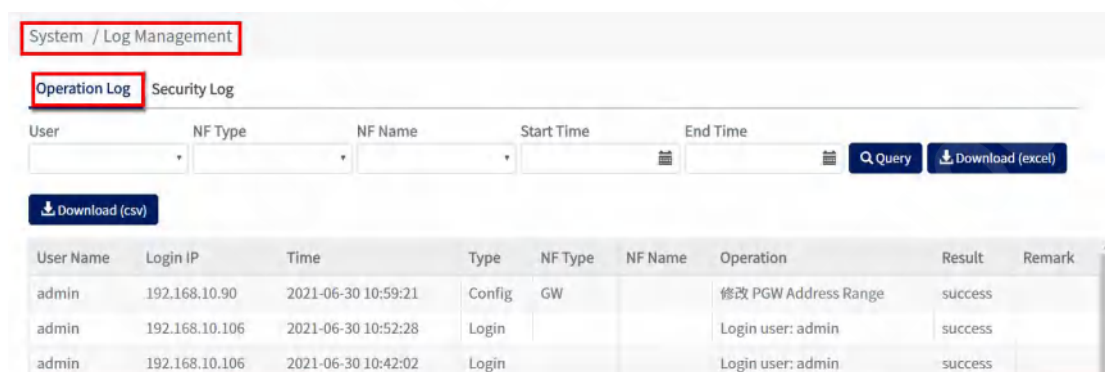


Figure 5-1 Operation Log page

#### 5.1.1. Query Operation Log

**Path:** System--> Log Management --> Operation Log

**Step:** Select the type of query in the query box, then click the "Query" button or press Enter

System / Log Management

Operation Log Security Log

User NF Type NF Name Start Time End Time

Q Query Download (excel) Download (csv)

User Name	Login IP	Time	Type	NF Type	NF Name	Operation	Result	Remark
admin	192.168.10.94	2021-07-08 17:59:43	Login			Login user: admin	success	
admin	192.168.10.90	2021-07-08 17:31:23	Config	PCRF		Add subscription, category: normalcount: 800service: [u'Usage Service', u'VoLTE Service', u'Category Service', u'Apn Service', u'AF Service', u'Time Range Service', u'Service Zone Service']msisdn: 861234561111state: normalhmeSrvZon: 4601actionType: add_su	success	
admin	192.168.10.90	2021-07-08 17:35:33	Config	PCRF		Add subscription, category: normalcount: 800service: [u'Usage Service', u'VoLTE Service', u'Category Service', u'Apn Service', u'AF Service', u'Time Range Service']msisdn: 8612345678901state: normalhmeSrvZon: 4601actionType: add_subscriber_subscriptionsta	success	
admin	192.168.10.90	2021-07-08 17:22:23	System			Create user: test	success	
admin	192.168.10.90	2021-07-08 17:17:49	System			Delete users: test	success	
admin	192.168.10.90	2021-07-08 13:53:32	Config	PCRF		Add subscription, category: normalcount: 799service: [u'Usage Service', u'VoLTE Service', u'Category Service', u'Apn Service', u'AF Service', u'Time Range Service', u'Service Zone Service']msisdn: 11111111111111state: normalhmeSrvZon: 4600actionType: add	success	
admin	192.168.10.90	2021-07-08 13:53:17	Config	PCRF		Add subscription, category: normalcount: 750service: [u'Usage Service', u'VoLTE Service', u'Category Service', u'Apn Service', u'AF Service', u'Time Range Service', u'Service Zone Service']msisdn: 11111111111111state: normalhmeSrvZon: 4600actionType: add	success	
admin	192.168.10.90	2021-07-08 13:52:59	Config	PCRF		Add subscription, category: normalcount: 800service: [u'Usage Service', u'VoLTE Service', u'Category Service', u'Apn Service', u'AF Service', u'Time Range Service', u'Service Zone Service']msisdn: 11111111111111state: normalhmeSrvZon: 4600actionType: add	success	

IPLOOK

Figure 5-2 Query Operation Log

Configuration items and descriptions.

configuration item	Configuration item description
User	user ID
NF Name	node name
NF Type	Node Type
Start Time	Start time
End Time	Closing time

### 5.1.2. Download Operation Log

**Path:** System--> Log Management --> Operation Log

**Steps:** Click the "Download" button in the upper right corner of the page to download the files in Excel and CSV formats provided on the page.

System / Log Management

Operation Log Security Log

User NF Type NF Name Start Time End Time

admin 2021-07-01 05:00:57 2021-07-31 23:55:57 Q Query Download (excel) Download (csv)

User Name	Login IP	Time	Type	NF Type	NF Name	Operation	Result	Remark
admin	192.168.10.94	2021-07-08 17:59:43	Login			Login user: admin	success	
admin	192.168.10.90	2021-07-08 17:31:23	Config	PCRF		Add subscription, category: normalcount: 800service: [u'Usage Service', u'VoLTE Service', u'Category Service', u'Apn Service', u'AF Service', u'Time Range Service', u'Service Zone Service']msisdn: 861234561111state: normalhmeSrvZon: 4601actionType: add_su	success	
admin	192.168.10.90	2021-07-08 17:35:33	Config	PCRF		Add subscription, category: normalcount: 800service: [u'Usage Service', u'VoLTE Service', u'Category Service', u'Apn Service', u'AF Service', u'Time Range Service']msisdn: 8612345678901state: normalhmeSrvZon: 4601actionType: add_subscriber_subscriptionsta	success	
admin	192.168.10.90	2021-07-08 17:22:23	System			Create user: test	success	

Figure 5-3 Download Operation Log

## 5.2. Security log

**Description:** Security logs for various types of users with login IP, time, type, and status.

**Path:** System--> Log Management --> Security Log

System / Log Management

Operation Log Security Log

User Name	IP	Time	Type	Result
admin	192.168.10.106	2021-06-30 10:52:28	Login	success
admin	192.168.10.106	2021-06-30 10:42:02	Login	success
admin	192.168.10.106	2021-06-30 10:36:45	Login	success
admin	192.168.10.106	2021-06-30 10:21:16	Login	success
admin	192.168.10.106	2021-06-30 10:16:32	Login	success
admin	192.168.10.106	2021-06-30 10:13:39	Login	success
admin	192.168.10.106	2021-06-30 10:09:23	Login	success
admin	192.168.10.106	2021-06-29 19:04:49	Login	success
admin	192.168.10.51	2021-06-29 17:56:54	Login	success
admin	192.168.10.68	2021-06-29 16:45:00	Login	success

Total 48 records total 5 pages 10 /page

1 2 3 4 5 > Last

Figure 5-4 Security Log page

## 6. Equipment Management

**Description:** Provides functions of network element management, system service management, network card management, routing management and system management

**Path:** System-->Device Management

Configuration >

System >

Device

Security

Log

Software

License

Web Info

Template

Status Query

System / Device Management / System Service Management

NF Management System Service Management NIC Management Route Management System Management

epc Query Add Service IP

CM IP	PM IP	FM IP	OMC IP	OAM IP	System IP
192.168.18.30:8501	192.168.18.30:8502	192.168.18.30:8503	192.168.18.30:8500	192.168.18.30	192.168.18.30

Total 1 record, total 1 page 10 /page

Figure 6-1 Device Management Path

### 6.1. network element management (computing)

**Description:** Add, manage and delete network element node configurations

**Path:** System-->NF Management-->NF Management

### 6.1.1. Adding network elements

**Path:** System-->NF Management-->NF Management

**Steps:** Click the "Add NF" button under the NF Management page --> fill in the configuration information in the pop-up box --> click the "Save" button to add successfully.

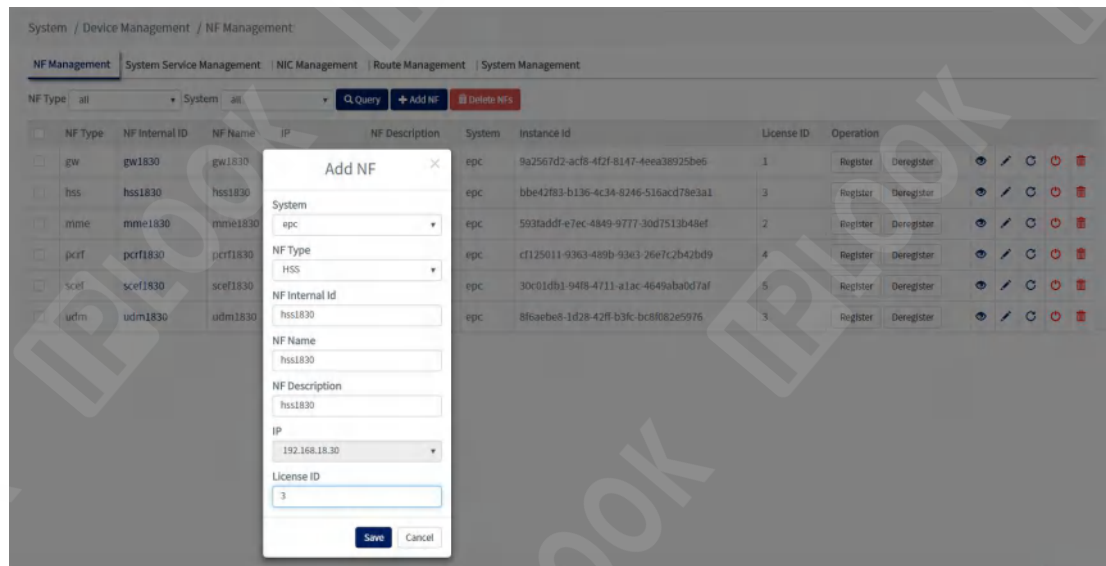


Figure 6.1-1 Example of adding an NF Management node Configuration items and descriptions.

configuration item	instructions
System	Select the system to which the network element belongs in the drop-down box, the default epc
NF Type	Network element type, optional mme/hss/gw/PCRF/IMS/SCEF/UDM
NF Internal Id	Give the net element a name, which is displayed under Configuration
NF Name	Give this configuration item a name that identifies this configuration item
NF Description	network element description item
IP	The ip address used by the network element
License ID	Its value is derived from the ID of the corresponding network element in the License Management page under System.

### 6.1.2. Query network elements

**Path:** System-->NF Management-->NF Management

**Steps:** Select the network element type in the NF Type drop-down box --> select all/epc in System --> click "Query" button, the query result will be displayed under the list.

### 6.1.3. remove network element

**Path:** System-->NF Management

**Steps to delete multiple NFs:** Check the NF Management page and select the multiple NFs you want to delete under the list --> click the "Delete NFs" button --> click "OK" in the pop-up box to delete them. Success.

**To delete a single element, check the NF Management page and select the NF you want to delete -> click the "Delete" icon on the right of the corresponding row -> click "OK" in the pop-up box to delete successfully.**

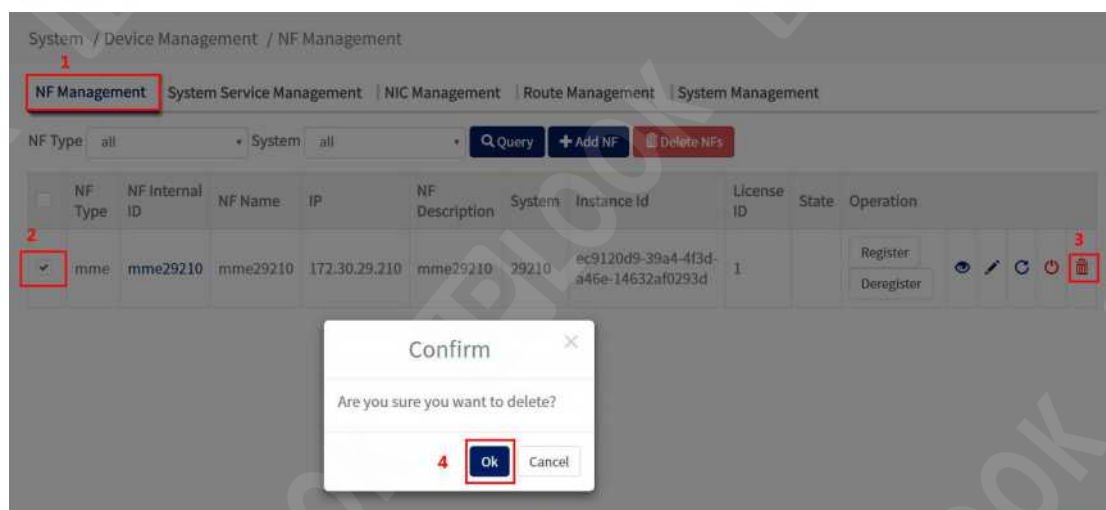


Figure 6.1-2 Example of deleting a single network element node

### 6.1.4. Other configurations

**Path:** System-->NF Management-->NF Management

**Description:** Register/Deregister: register/de-register network elements to the NRF, not used at this time.

: View the performance parameters of the network element system, involving hard disk usage, CPU usage, network element management IP address, and memory usage.

: Editing of web meta information

: Rebooting of network element devices

: Shutdown network element equipment



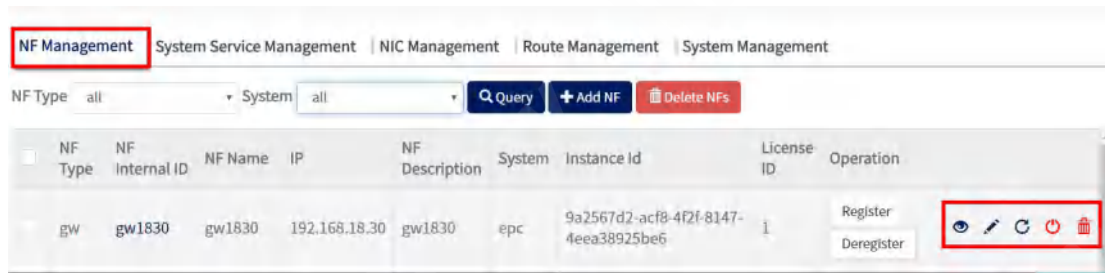


Figure 6.1-3 Other configuration paths

## 6.2. System Service Management

**Description:** Provides management of related service node configurations

**Path:** System-->Device Management-->System Service Management

### 6.2.1. Adding System Services

**Path:** System-->Device Management-->System Service Management

**Step:** Click the "Add Service IP" button on the System Service Management page --> fill in the configuration information in the pop-up box --> click the "Save" button, Add successfully.

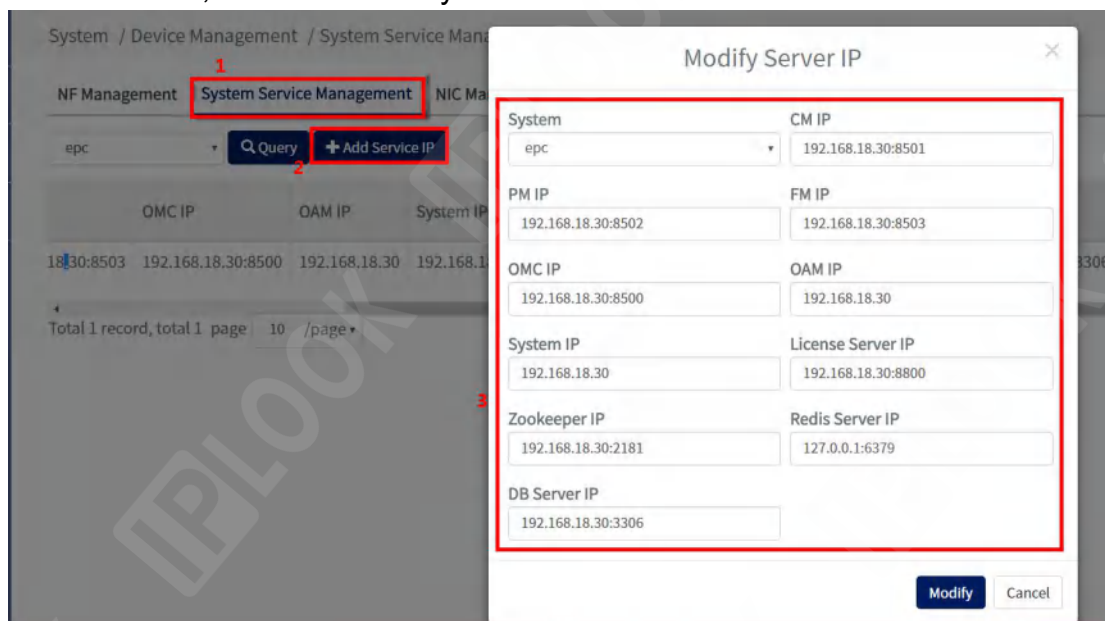


Figure 6.2-1 System Service Management Configuration Example  
Configuration items and descriptions.

configuration item	instructions
System	The affiliated core network system, with epc selected by default
CM IP	IP address of the CM service, in the format: ip:8501
PM IP	IP address of the PM service, in the



	format: ip:8502
FM IP	IP address of the FM service in the format: ip:8503
OMC IP	IP address of the OMC service, in the format: ip:8500
OAM IP	IP address of the OAM service, in the format: ip
System IP	The ip address of the epc, in the format: ip
License Server IP	The IP address of the License server, in the format: ip: 8800
Zookeeper IP	The IP address of the Zookeeper server, in the format: ip: 2181
Redis Server IP	IP address of the redis server in the format: 127.0.0.1:6397
DB Server IP	The IP address of the DB server in the format: ip: 3306


### 6.2.2. Enquiry System Services

**Path:** System-->Device Management-->System Service Management

**Step:** Select the type of query in the drop-down box --> click "Query" button, if it exists, the query result will be displayed under the list, if not, the list will be displayed as empty.

### 6.2.3. Modification of system services

**Path:** System-->Device Management-->System Service Management

**Step:** Click the  icon on the right side of the corresponding row in the System Service Management list --> Fill in the modified configuration information in the pop-up box and click the "Modify" button --> Click the "OK" button in the pop-up box. " button in the pop-up box, the modification is successful.

## 6.3. NIC management

**Description:** Provides management NIC configuration

**Path:** System-->Device Management--> NIC Management

### 6.3.1. Adding a network card

**Path:** System-->Device Management--> NIC Management

**Steps:** Click the "Add NIC" button under the NIC Management page --> fill in

the configuration information in the pop-up box --> click the "Add" button in the pop-up box to add successfully.

**Attention:**

1. need to set which NIC is the master nic and the other NICs are no first.
2. Add em1: X. Since the master NIC has been set earlier, the Master NIC must be no here, and the IP and Mask must be filled in with the mask prefix after the IP here, and the Gateway and Net Mask must also be written on.
3. Add lo: X.IP and Mask Here fill in the IP must be written after the mask prefix Net Mask must also be written, while the Gateway can be left out.

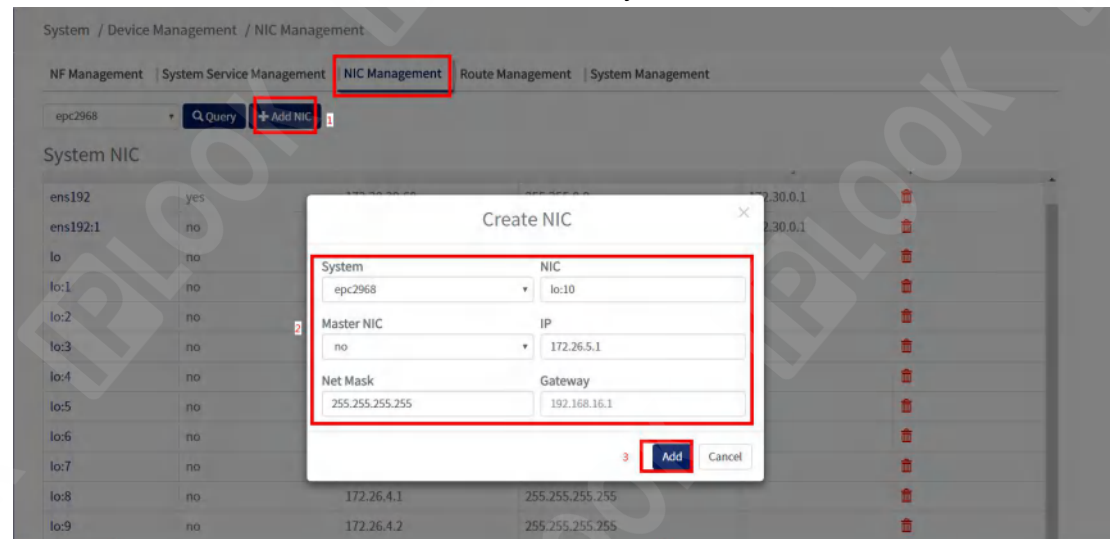


Figure 6.3-1 Example of Adding a NIC Management Configuration Configuration items and descriptions.

configuration item	instructions
System	Select the core network system to use, the default is epc
NIC	Added network card name
Master NIC	Select whether to be the primary NIC, choose no/yes/unknown
IP	IP configured by the network card
Net Mask	subnet mask
Gateway	gateway (Internet or between networks)

### 6.3.2. Check NIC

**Path:** System-->Device Management--> NIC Management

**Step:** Select the type of query in the drop-down box --> click "Query" button, if it exists, the query result will be displayed under the list, if not, the list will be displayed as empty.

### 6.3.3. Delete NIC

**Path:** System-->Device Management--> NIC Management

**Steps:** Click the delete icon in the corresponding row of the NIC you want to delete under the System NIC list in the NIC Management page --> click "OK" in the pop-up box to delete successfully.

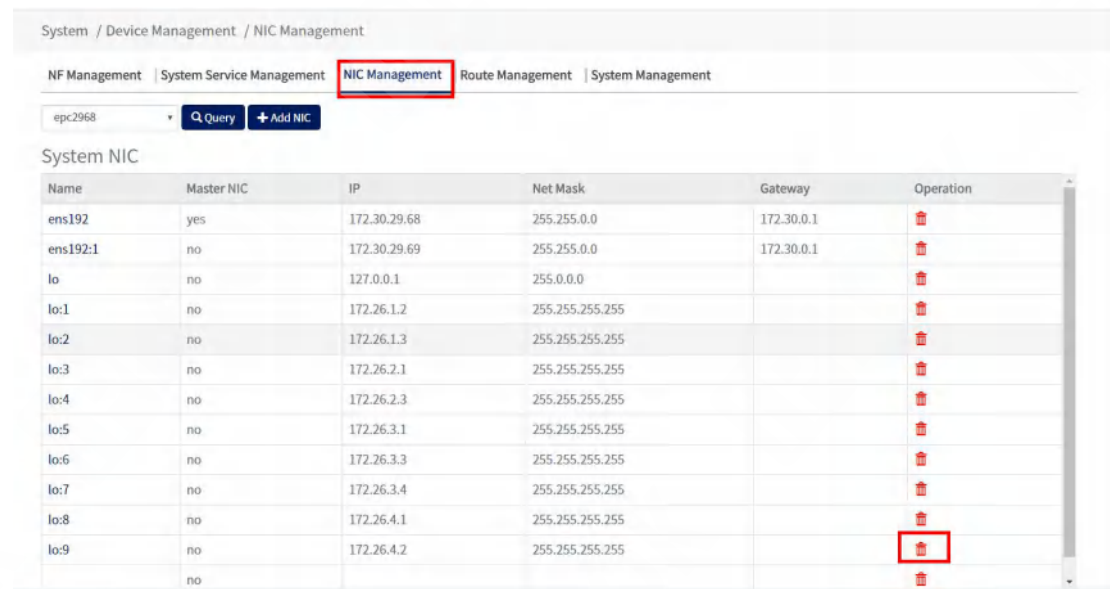


Figure 6.3-2 Example of Deleting NIC Management Configuration

## 6.4. routing

**Description:** Provides administrative routing configuration

**Path:** System-->Device Management-->Route Management

### 6.4.1. Adding a Routing Configuration

**Path:** System-->Device Management-->Route Management

**Steps:** Click "Add Route" --> fill in the configuration information in the pop-up box --> click "Add" button, add successfully.

Figure 6.4-1 Route Management page

Configuration items and descriptions.

configuration item	instructions
System	Core network systems used
NIC	The name of the network card to which the route is tied
Network Segment	Network segment, format: ip network segment/subnet mask digits
Gateway	Gateway ip address

### 6.4.2. Querying the routing configuration

**Path:** System-->Device Management-->Route Management

**Step:** Select epc in the drop down box --> click "Query", if it exists, the result will be displayed under the list, if not, the list will be empty.

### 6.4.3. Modify the routing configuration

**Path:** System-->Device Management-->Route Management

**Steps:** Click the Iface column in the list to modify the configuration item NIC name --> fill in the pop-up box NIC, Network Segment, Gateway information --> click the "Modify" button, modify successfully.

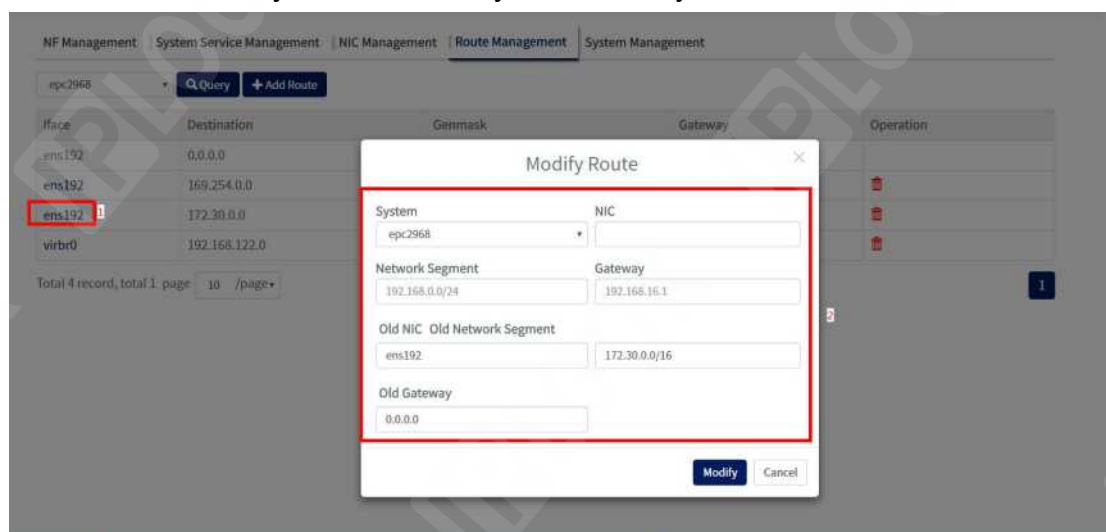


Figure 6.4-2 Modifying Route Management Configuration Information

### 6.4.4. Deleting a routing configuration

**Path:** System-->Device Management-->Route Management

**Step:** Click the delete icon in the corresponding row of the route configuration you want to delete in the list -> click the "OK" button -> click the "OK" button to delete successfully.

## 6.5. system administration

**Description:** Provides configuration for managing core network element machines

**Path:** System-->Device Management-->System Management

### 6.5.1. Add Management System

**Path:** System-->Device Management-->System Management

**Steps:** Click "Add System" on the System Management page --> fill in the configuration information in the pop-up box --> click "Add" in the pop-up box to add successfully

Name	IP	Operation
epc2968	172.30.29.68	Backup NFs Recover NFs Backup system Recover system
gw29199	172.30.29.199	

Figure 6.5-1 System Management Configuration Page

### 6.5.2. Delete management system

**Path:** System-->Device Management-->System Management

**Step:** Click the delete icon in the corresponding row of the NIC you want to delete in the list in the System Management page --> click "OK" in the pop-up box, the deletion is successful.

### 6.5.3. Other configurations

**Path:** System-->Device Management-->System Management

**Note:** The ip address of the network administrator login, the configured ip address should be the same as the ip address of the network administrator host, the default port is 8500, if it is not the same, the login to the network administrator will fail.

Name	IP	Operation
epc2968	172.30.29.68	Backup NFs Recover NFs Backup system Recover system
gw29199	172.30.29.199	

Figure 6.5-2 Other configuration paths

## 7. software management

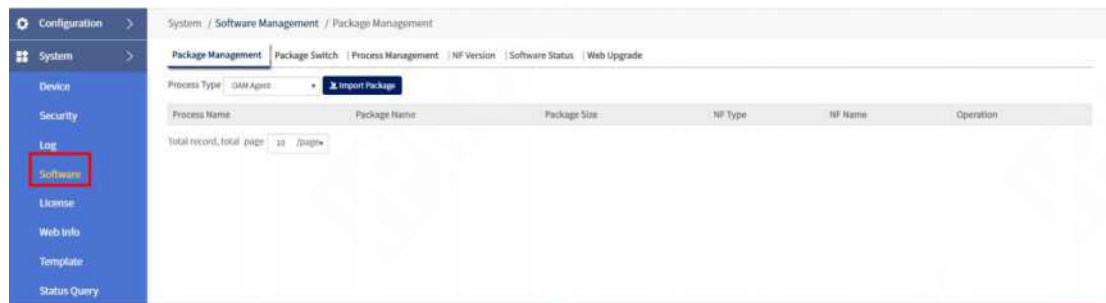


Figure 7-1 Software path

### 7.1. Installation package management

**Path:** System-->Software-->Package Management

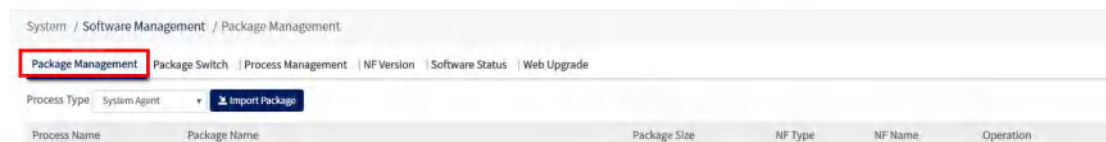


Figure 7.1-1 Package Management page

### 7.2. InstallerToggle

**Path:** System-->Software-->Package Switch

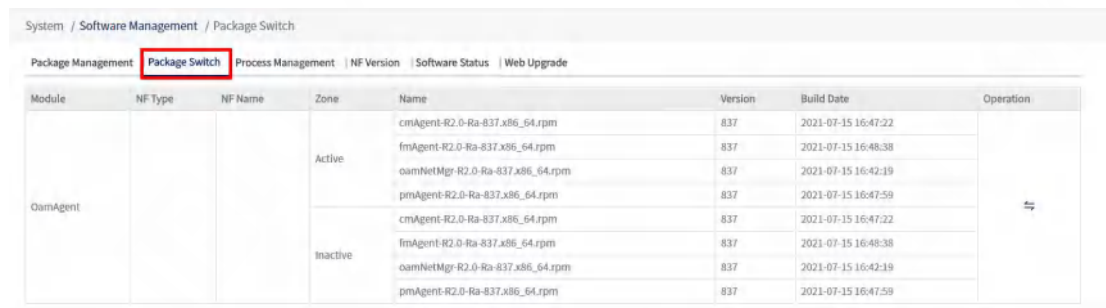


Figure 7.2-1 Package Switch page

### 7.3. Network Element Process Management

**Path:** System-->Software-->Process Management



System / Software Management / Process Management

Package Management | Package Switch | **Process Management** | NF Version | Software Status | Web Upgrade

Filter: ALL | NF Name: all NF |

Agent Name	Status	Description	NF Type	NF Name	Operation
oam:oamSysAgent	Active	pid 4661, uptime 6:02:50			
gw:dpdkproc	Inactive	Not started	GW	gw2968	
gw:gwHealthCheck	Active	pid 4630, uptime 6:02:51	GW	gw2968	
gw:gwOamAgent	Active	pid 4621, uptime 6:02:51	GW	gw2968	
gw:pgwDpmgr	Active	pid 4627, uptime 6:02:51	GW	gw2968	
gw:pgwcpeActive	Active	pid 4632, uptime 6:02:51	GW	gw2968	
gw:pgwcpeStandby	Active	pid 4619, uptime 6:02:51	GW	gw2968	
gw:sgwDpmgr	Active	pid 4618, uptime 6:02:51	GW	gw2968	
gw:sgwcpeActive	Active	pid 4615, uptime 6:02:51	GW	gw2968	
gw:sgwcpeStandby	Active	pid 4628, uptime 6:02:51	GW	gw2968	

Total 49 record, total 5 page 10 /page

1 2 3 4 5 > Last

Figure 7.3-1 Process Management page

## 7.4. network element versioning

**Path:** System-->Software-->NF Version

System / SoftwareManagement / Package status Management

Package Management | Package Switch | Process Management | **NF Version** | Software Status | Web Upgrade

System	Master/Backup	NF Type	NF Name	Zone	Name	Version	Build Date
epc2968		gw	gw2968	activate	gw-R2.0-Ra-57.x86_64.rpm	57	2021-09-09 10:25:50
		mme	mme2968	activate	mme-R2.0-Ra-651.x86_64.rpm	651	2021-09-08 17:29:47
		pcrf	pcrf2968	activate	PCRF-R1.0.01.1050	R1.0.01.1050	2021-09-09 14:48:32
		scef	scef2968	activate	nef-R1.0-Ra-18.x86_64.rpm	18	2021-08-31 14:19:58
		udm	udm2968	activate	HSS-R4.0-Ra-1358.x86_64.rpm	1358	2021-09-08 17:01:02
		sysAgent	epc2968	activate	sysAgent-R2.0-Ra-1064.x86_64.rpm	1064	2021-09-10 15:15:10

Figure 7.4-1 NF Version page

## 7.5. Software Status Inquiry

**Description:** You can check the operating status of each network element, whether it is in the interrupt state or in the connected state

**Path:** System-->Software-->Software Status

**Step:** Click the "Load" button and the query results will be displayed under the list.

System / Software Management / Software Status

Package Management | Package Switch | Process Management | NF Version | **Software Status** | Web Upgrade

**Q Load** 1

System	Software Type	Status	Health Item	Health Check Result	Cause
epc2968	GW	● normal	process	normal	
			port	normal	
	MME	● normal	process	normal	
			port	normal	
	PCRF	● aborted	process	normal	
			port	aborted	3868 is not listening.
	SCEF	● normal	process	normal	
			port	normal	
	UDM	● normal	process	normal	
			port	normal	
	OAM system agent	● normal	process	normal	
			port	normal	
	middleware	● normal			
	DRA	● normal	process	normal	

Figure 7.5-1 Software Status screen

## 7.6. Network Management Updates

**Path:** System-->Software-->Web Upgrade

System / Software Management / Web Upgrade Management

Package Management | Package Switch | Process Management | NF Version | Software Status | **Web Upgrade**

Select file... **Browse**

Current Version: Build Time: 2021-06-27 02:05:42

Package Name	Size	Operation
--------------	------	-----------

Figure 7.6-1 Web Upgrade page

## 8. Fault management

**Description:** Provides real-time alarms, historical alarms, alarm summary view, alarm file management, alarm storage time, alarm generation time, CPU threshold setting several major functions.

### 8.1. Real-time alarms

#### 8.1.1. Alarm queries

**Path:** Alarm-->Active Alarm

**Step:** Select the option in each drop down box -> click "Query Alarm" -> click "Refresh", the query result will be displayed in the list.

Figure 8.1-1 Active Alarm page

Configuration items and descriptions.

configuration item	instructions
NF Type	NF Type
NF Name	NF name
Select Alarm Level	Select alarm level, choose All Status/minor/major/critical
Select Alarm Type	Select alarm type, choose All/AppAlarm/LinkAlarm/SystemAlarm
Start	Starting time
End	Termination time
Alarm Code	Alarm Code
Alarm Info	Alarm Messages
Event Time	Trigger alarm time
Limit Set	thresholds
Alarm Status	Alarm Status

### 8.1.2. Alarm Remarks

**Path:** Alarm-->Active Alarm

**Steps:** Check the alarm record item in the list you want to add a note --> click "Alarm Remarks" --> fill in the note information --> click "Save" --> click the pop-up box in the "OK" button in the pop-up box, the note is successful.

Figure 8.1-2 Example of Alarm Remarks

### 8.1.3. Alarm Download

**Path:** Alarm-->Active Alarm

**Steps:** Check the alarm records you want to download in the list --> click "Download" --> choose to open or save the downloaded excel file.

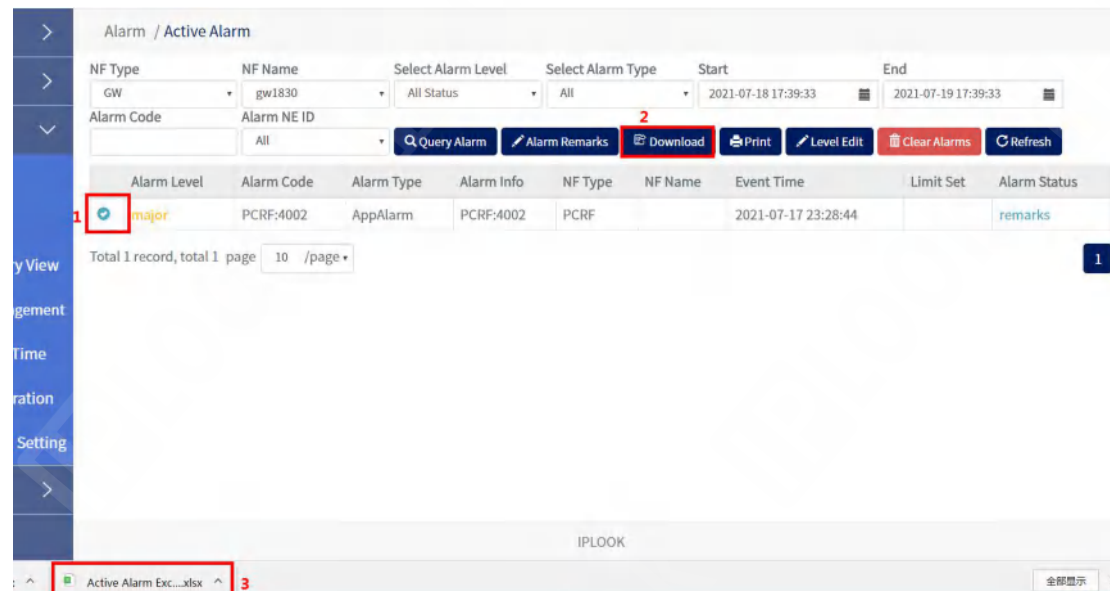


Figure 8.1-3 Example of an alarm download

### 8.1.4. Alarm Printing

**Path:** Alarm-->Active Alarm

**Steps:** Check the alarm record you want to print in the list --> click "Print" to jump to the page of connected printer.

### 8.1.5. Alarm Level Editor

**Path:** Alarm-->Active Alarm

**Step:** Check the alarm record item in the list that you want to modify the alarm level --> click "Level Edit" button --> select the level in the Select Alarm Level drop-down box --> click "Save "button --> click "OK" button, the editing is successful.

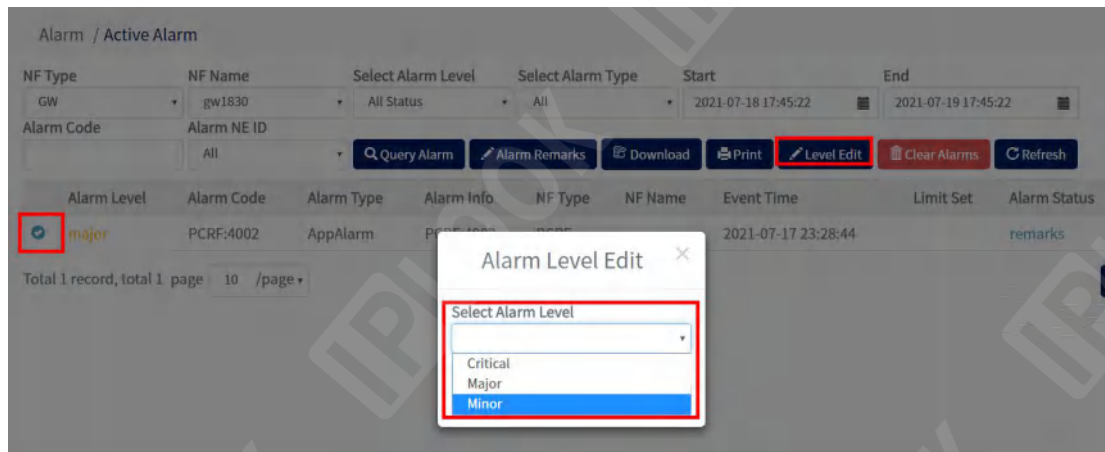


Figure 8.1-4 Example of alarm level editing

### 8.1.6. Clear alarms

**Path:** Alarm-->Active Alarm

**Steps:** Check the alarm records you want to delete in the list --> click "Clear Alarms" --> click the "OK" button in the pop-up box to clear them successfully.

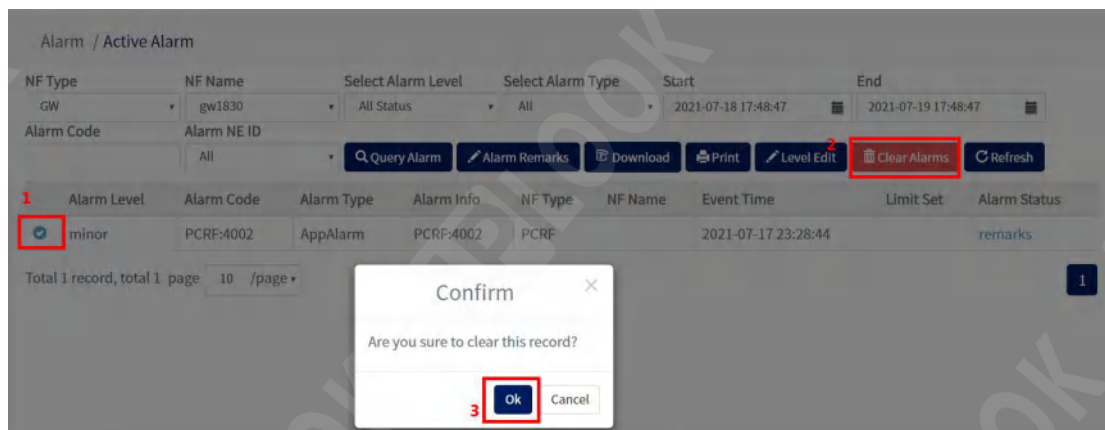


Figure 8.1-4 Example of clearing alarms

### 8.1.7. Refresh Alarms

**Path:** Alarm-->Active Alarm

**Step:** Use with "Query Alarm".

## 8.2. Historical alerts

### 8.2.1. Historical Alarm Search

**Path:** Alarm-->History Alarm

**Step:** Select the option in each drop down box -> click on "Query", the query

result will be displayed in the list.

Figure 8.2-1 Histroy Alarm page

Configuration items and descriptions.

configuration item	instructions
NF Type	NF Type
NF Name	NF name
Select Alarm Level	Select alarm level
Select Alarm Type	Select alarm type
Start	Starting time
End	Termination time
Alarm Level	Alarm Level
Alarm Code	Alarm Code
Alarm Info	Alarm Messages
Event Time	Trigger alarm time
Limit Set	thresholds
Alarm Status	Alarm Status
End Time	Termination time
Alarm Remarks	note

### 8.2.2. Remarks Historical alarms

**Path:** Alarm-->History Alarm

**Steps:** Check the alarm record item in the list you want to add a note --> click "Alarm Remarks" --> fill in the note information --> click "Save" --> click the pop-up box in the "OK" button in the pop-up box, the note is successful.

### 8.2.3. Download History Alerts

**Path:** Alarm-->History Alarm

**Steps:** Check the alarm records you want to download in the list --> click "Download" --> choose to open or save the downloaded excel file.

### 8.2.4. Print alarm queries

**Path:** Alarm-->History Alarm

**Steps:** Check the alarm record you want to print in the list --> click "Print" to



jump to the page of connected printer.

### 8.2.5. Edit historical alarm levels

**Path:** Alarm-->History Alarm

**Step:** Check the alarm record item in the list that you want to modify the alarm level --> click "Level Edit" button --> select the level in the Select Alarm Level drop-down box --> click "Save "button --> click "OK" button, the editing is successful.

### 8.2.6. Clear historical alarms

**Path:** Alarm-->History Alarm

**Steps:** Check the alarm records you want to delete in the list --> click "Clear Alarms" --> click the "OK" button in the pop-up box to clear them successfully.

## 8.3. Alarm Summary View

**Path:** Alarm-->Alarm Summary View

**Description:** Provides statistics on the number of alarms

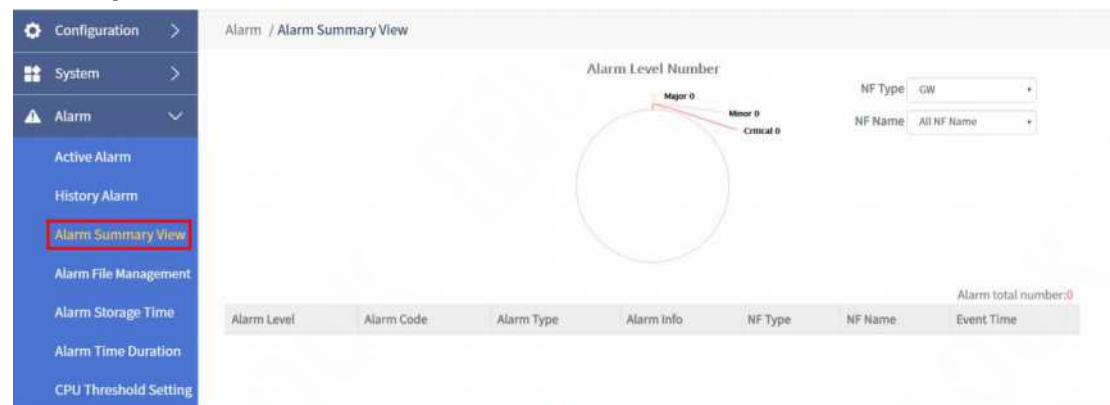


Figure 8.3-1 Alarm Summary View page

Statistical parameters and description.

Statistical parameters	instructions
Alarm Level	Alarm Level
Alarm Code	Alarm Code
Alarm Type	Alarm Type
Alarm Info	Alarm Messages
NF Type	NF Type
NF Name	NF name
Event Time	Trigger alarm time

## 8.4. Alarm file management

**Path:** Alarm-->Alarm File Management

**Description:** Provides the functions of downloading alarm files, deleting individual alarm files and deleting alarm files in bulk.

File Name	Time Duration	Operation
alarm-20210707195351	29ns	
alarm-20210709010107	41ns	
alarm-20210710010107	15ns	
alarm-20210711010107	15ns	
alarm-20210712010107	15ns	
alarm-20210713010107	15ns	
alarm-20210714010107	14ns	
alarm-20210715010107	16ns	
alarm-20210716010107	15ns	
alarm-20210717010107	16ns	

Total 11 records total 2 pages 10 /page

1 2 > Last

Figure 8.4-1 Alarm File Management page

Configuration items and descriptions.

configuration item	instructions
File Name	file name
Time Duration	span
Operation	operations

### 8.4.1. Download alert file

**Path:** Alarm-->Alarm File Management

**Steps:** Click the download icon on the right side of the row corresponding to the alarm record item you want to download in the list --> choose to open or save the downloaded excel file.

### 8.4.2. Deleting a single alarm file

**Path:** Alarm-->Alarm File Management

**Steps:** Check the alarm record you want to delete in the list --> click the "OK" button in the pop-up box --> click the "OK" button in the pop-up box to delete successfully.

### 8.4.3. Batch delete alarm files

**Path:** Alarm-->Alarm File Management

**Step:** Click the delete icon on the right side of the corresponding row of the alarm record you want to delete in the list --> click the "Delete Alarm Files" button in the pop-up box --> click the "OK" button in the pop-up box --> Click the "OK" button in the pop-up box, the deletion is successful.

### 8.5. Set alarm storage time

**Path:** Alarm-->Alarm Storage Time

**Description:** Set the time that alarms are stored in the system

**Step:** Select the time in the Select Time drop-down box --> click the "Save" button --> click the "OK" button to set successfully.

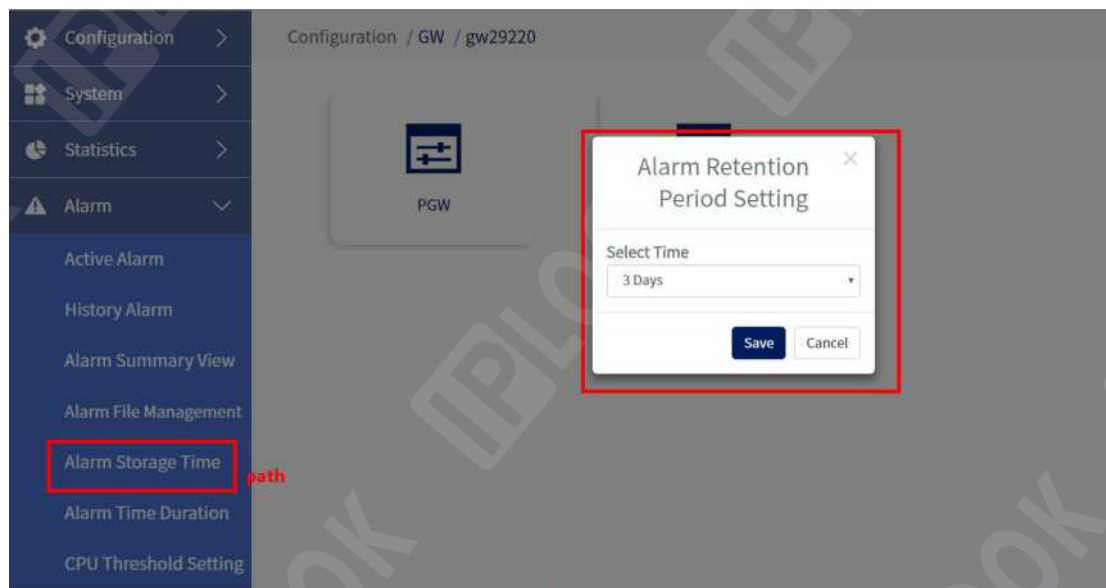


Figure 8.5-1 Alarm Storage Time page

Configuration items and descriptions.

configuration item	instructions
Select Time	Select alarm storage time

### 8.6. Set alarm generation time

**Path:** Alarm-->Alarm Time Duration

**Description:** Set the length of the alert service in the system

**Steps:** Enter the value in "Set Alarm Time" -> select the unit in the drop-down box -> click "Save" -> click "OK" in the pop-up box ", the setting is successful.

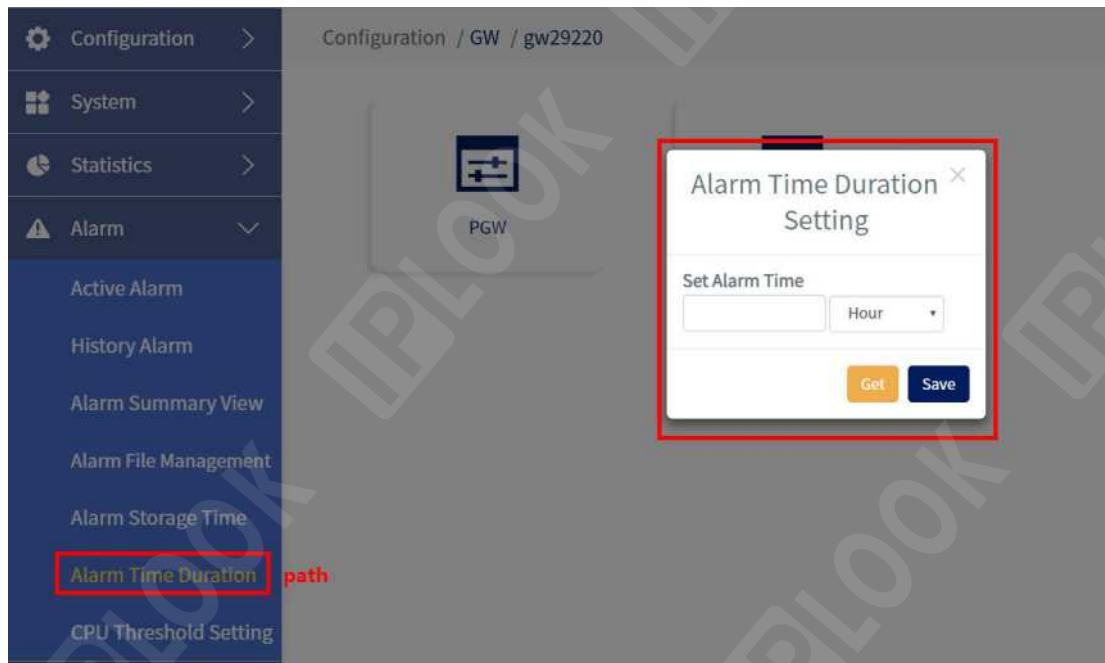


Figure 8.6-1 Alarm Time Duration Page

Configuration items and descriptions.

configuration item	instructions
Set Alarm Time	Setting the alarm time

## 8.7. CPU Threshold Setting

**Path:** Alarm-->Alarm Threshold Setting

**Description:** Set how much the cpu usage of each network element in the system will generate an alarm when it reaches.

**Steps:** Fill in the configuration information in the pop-up box --> click the "Save" button --> click the "OK" button in the pop-up box, the setting is successful.

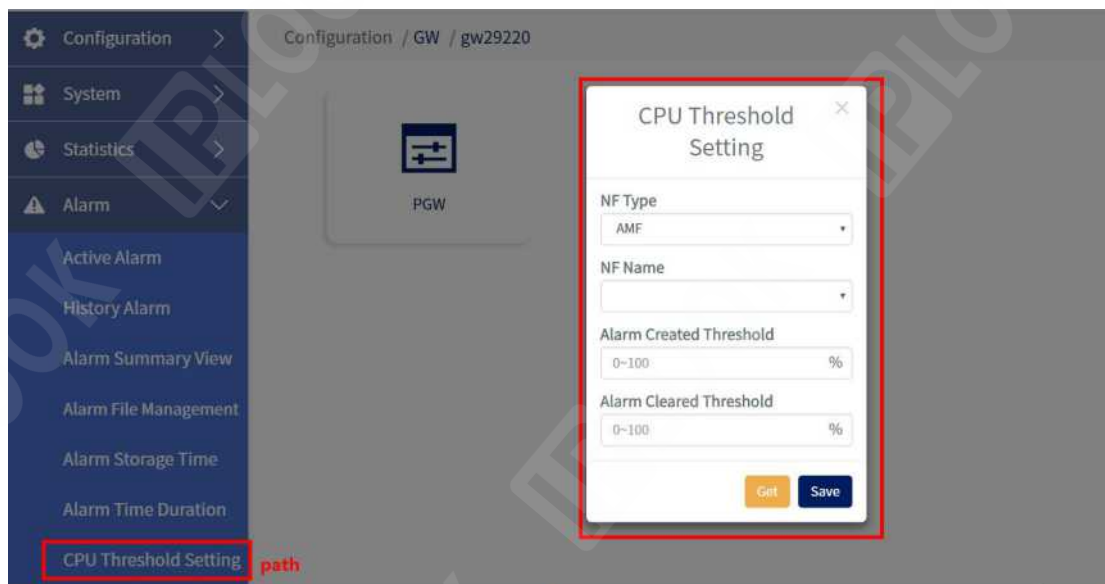


Figure 8.7-1 CPU Threshold Setting page

Configuration items and descriptions.

configuration item	instructions
NF Type	NF Type
NF Name	NF name
Alarm Created Threshold	Alarm Establishment Threshold
Alarm Cleared Threshold	Alarm Clear Threshold

## 9. Grafana

### 9.1. Access to Grafana way

(1) Initial login default username and password: username: admin, password: admin

(2) Webmaster page links jump to.

Click Integration Configuration under Unified Network Management interface --> Click Grafana to jump to Grafana login screen --> Fill in username and password in the login screen --> Click "Log in" --> Go to reset password page and click "Skip" to login and go to Grafana home page.

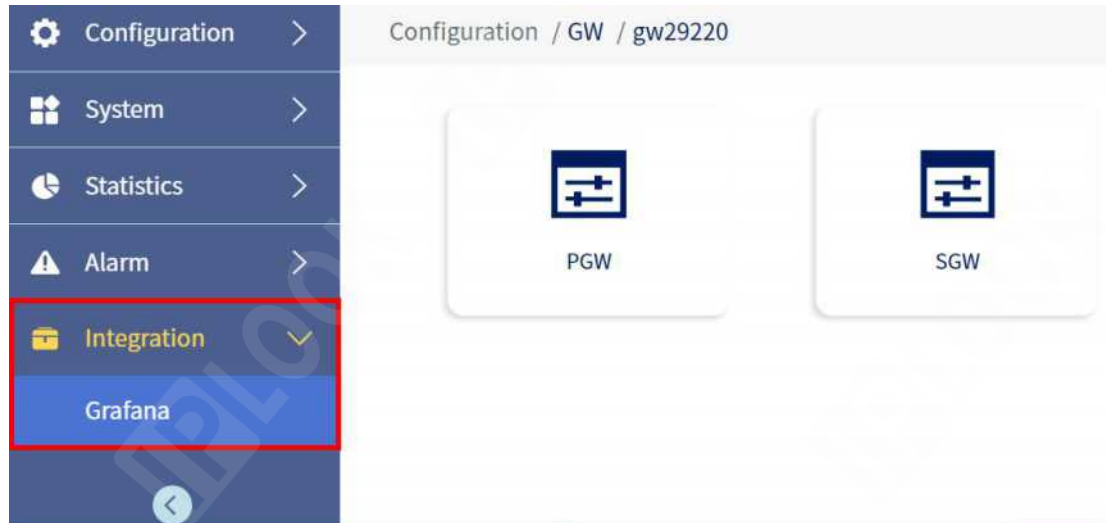


Figure 9.1-1 Grafana Path

(3) Enter Grafana URL in the URL box of your browser: ip:3000 --> fill in your username and password --> click "Log in" --> enter the reset password page and click "Skip". After login, you will enter Grafana home page.



Figure 9.1-2 Grafana Login Screen

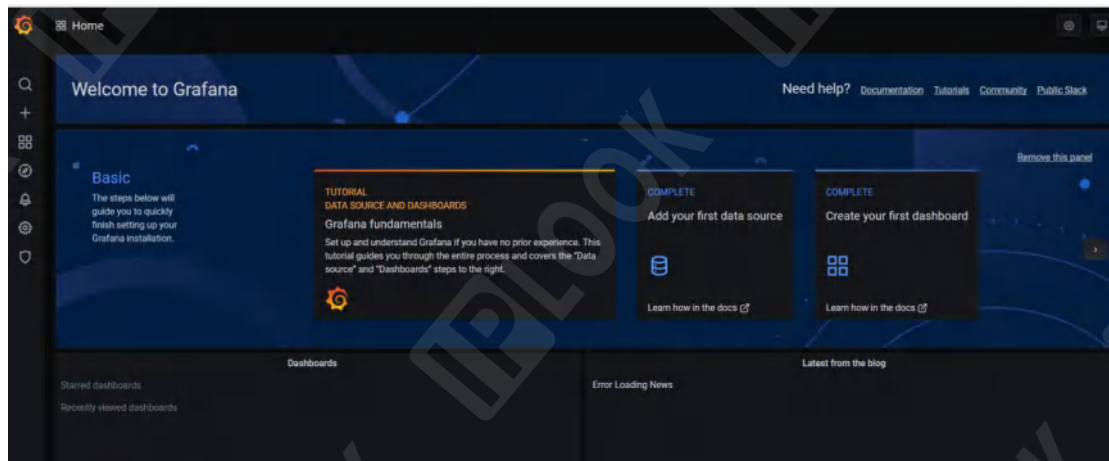


Figure 9.1-3 Grafana Home Screen

## 9.2. Manage

**Description:**Go to the KPI screen for each network element of Grafana selection

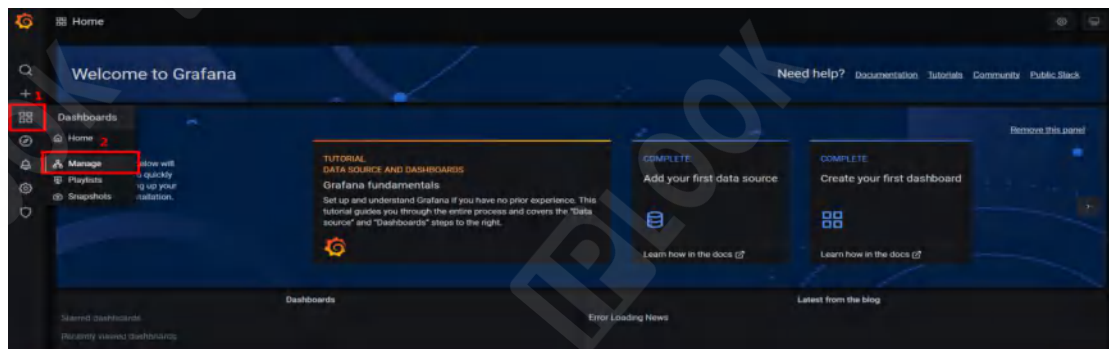


Figure 9.2-1 Manage Path



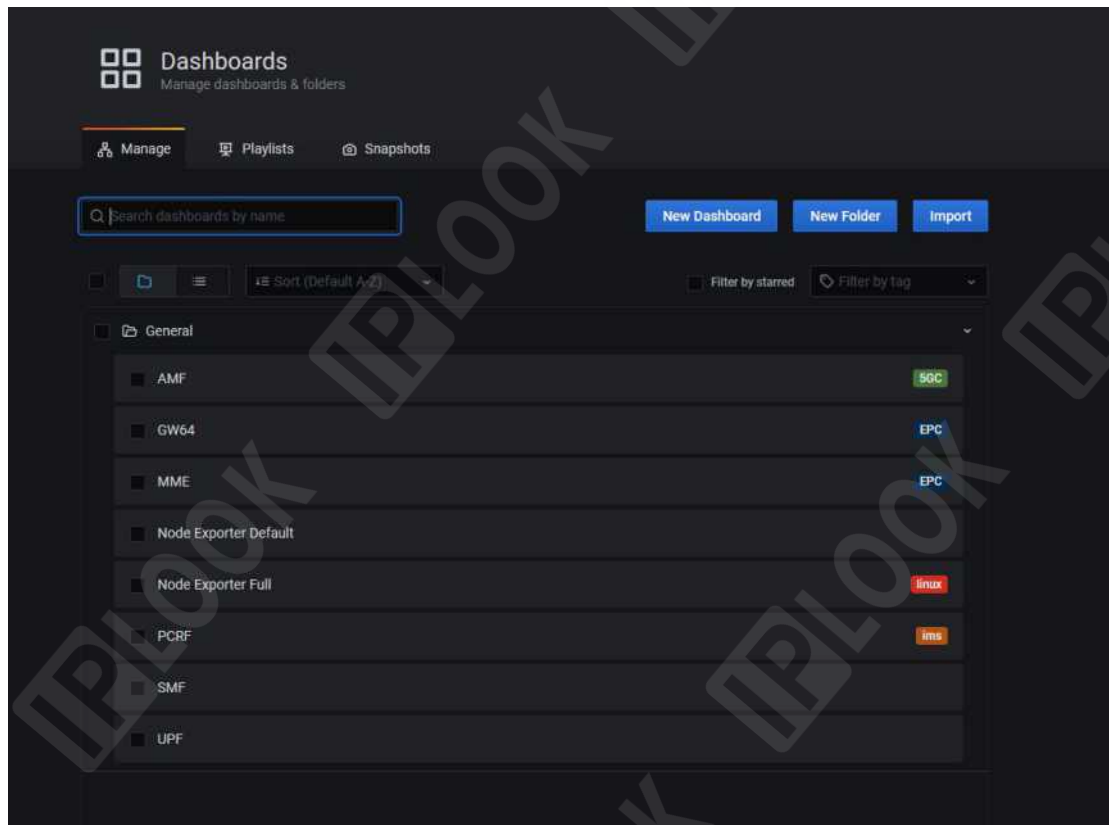


Figure 9.2-2 Manage page

### 9.2.1. Manage - MME

Path: Manage --> MME

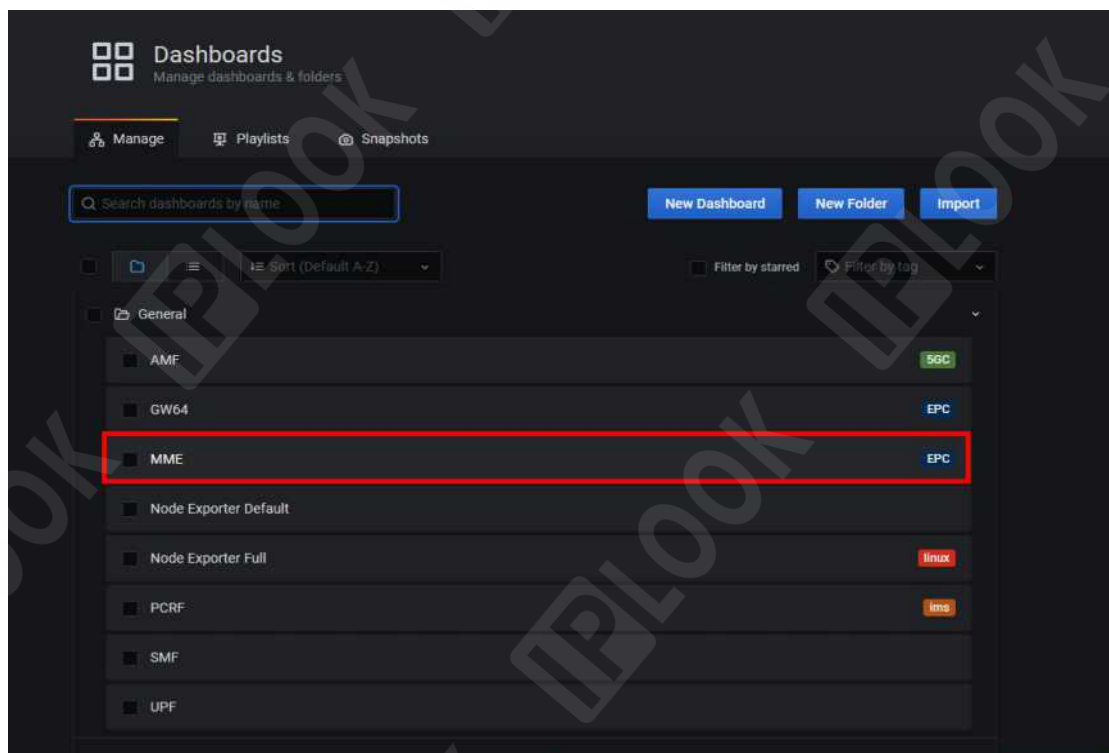


Figure 9.2.1-1 MME path

**Page Description.**

- 1: Last 6 hours: statistics for the last 6 hours
- 2: 10s: page refreshes automatically every 10s
- 3: Real-time monitoring data statistics
- 4: Statistics for the last 6 hours

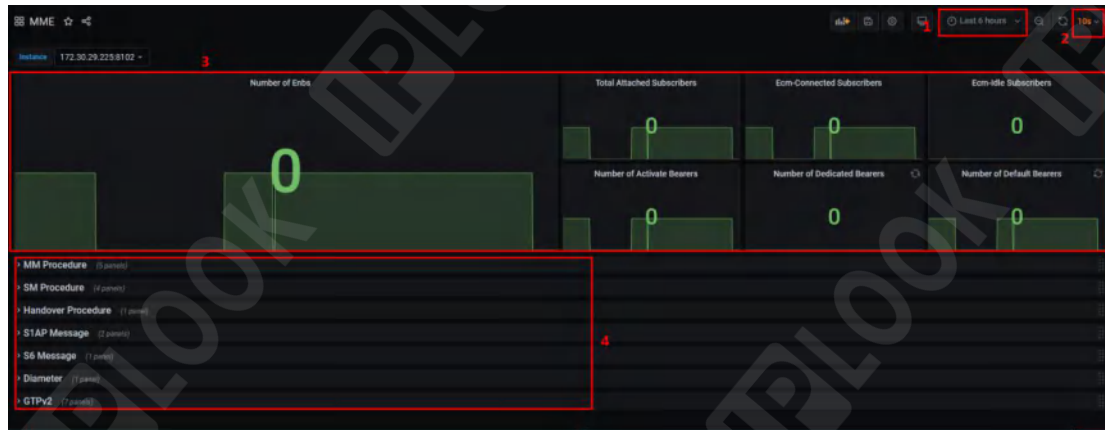


Figure 9.2.1-2 MME page

**9.2.1.1. Real-time monitoring data**

**Path:** Manage-->MME-->Instance

**Description:** Statistics on the number of online base stations in real time, the total number of attached users, the total number of users in different states and the total number of different bearers.

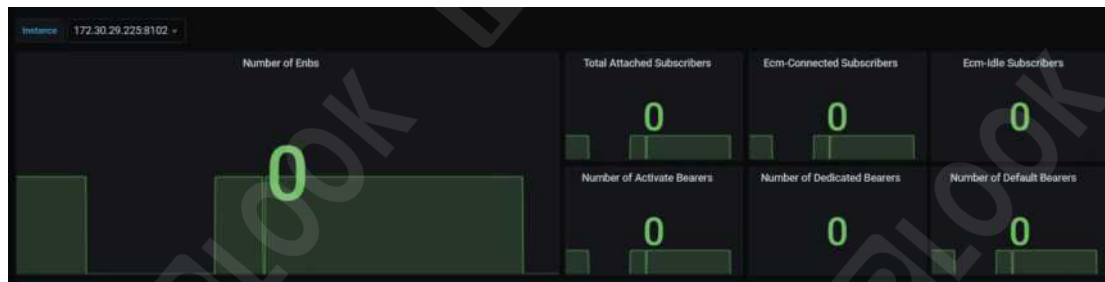


Figure 9.2.1.1-1 Real-time monitoring data section

Statistical parameters and description.

Statistical parameters	instructions
Number of Enbs	Number of online base stations
Total Attached Subscribers	Total number of affiliated users
Ecm-Connected Subscribers	Number of connected state users
Ecm-Idle Subscribers	Number of users in idle state
Number of Activate Bearers	Total number of active bearers
Number of Dedicated Bearers	Dedicated load capacity
Number of Default Bearers	Default number of carriers

## 9.2.1.2. MM Procedure

### 9.2.1.2.1. Attach/Detach

**Path:** Manage-->MME-->MM Procedure-->Attach/Detach

**Description:** Counts the number of attachments and de-attachments in a given time period



Figure 9.2.1.2.1-1 Attach/Detach Statistics Chart

Statistical parameters and description.

Statistical parameters	instructions
Attach Attempt	Number of attempts to attach
Attach Accept	Number of attachments received
Attach Reject Total	Number of rejections attached
Attach Reject IllegalMs	Number of illegal mobile user attachment refusals
Attach Reject IllegalMe	Number of illegal mobile device attachment rejections
Attach Reject Gprs Service not allowed	Number of uncontracted data business attachment rejections
Attach Reject Gprs and Non Gprs Service not allowed	Number of denials of attachment for unauthenticated and unsigned data services
Identity Attempt	Number of ID user identity requests attempted
Identity Success	Number of successful ID user identity acquisition successes
Detach UeAttempt	Number of user-initiated de-attachments
Detach UeSuccess	Number of successful user-initiated de-attachments

### 9.2.1.2.2.Security

**Path:** Manage-->MME-->MM Procedure-->Security

**Description:** Counts the number of times different forensic scenarios occur within a certain period of time

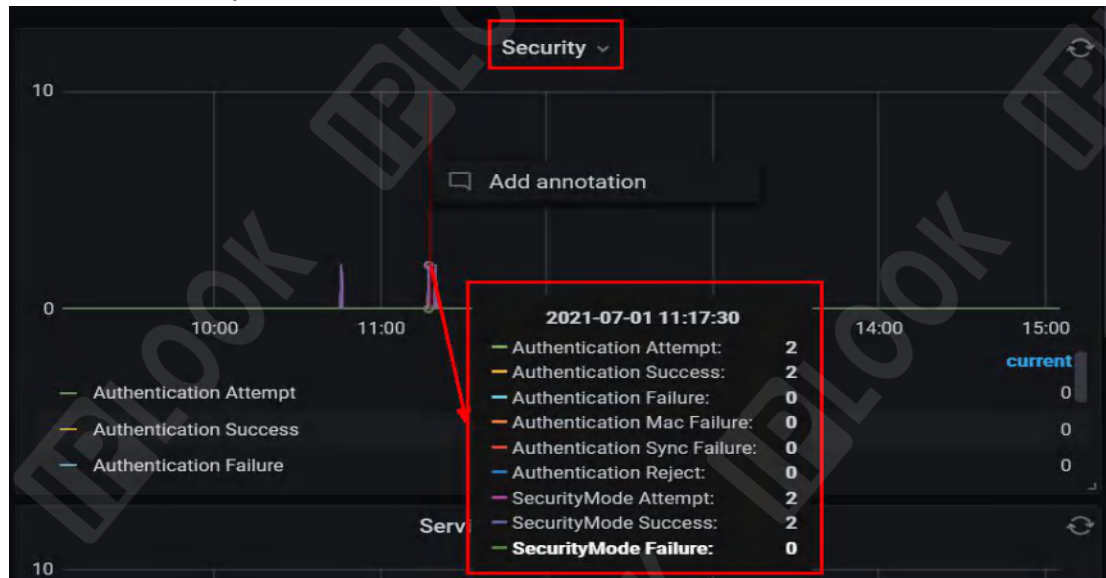


Figure 9.2.1.2.2-1 Security Statistics Chart

Statistical parameters and description.

Statistical parameters	instructions
Authentication Attempt	Number of attempts at authentication
Authentication Success	Number of successful identifications
Authentication Failure	Number of failed authentication attempts
Authentication Mac Failure	Number of failed authentication Mac errors
Authenctication Sysnc Failure	Number of authentication sync failures
Authentication Reject	Number of denials of forensic rights
SecurityMode Attempt	Number of safe mode attempts
SecurityMode Success	Number of safe mode successes
SecurityMode Failure	Number of safe mode failures

### 9.2.1.2.3.Tau

**Path:** Manage-->MME-->MM Procedure-->Tau

**Description:** Count the number of occurrences of Tau in different situations in a given time

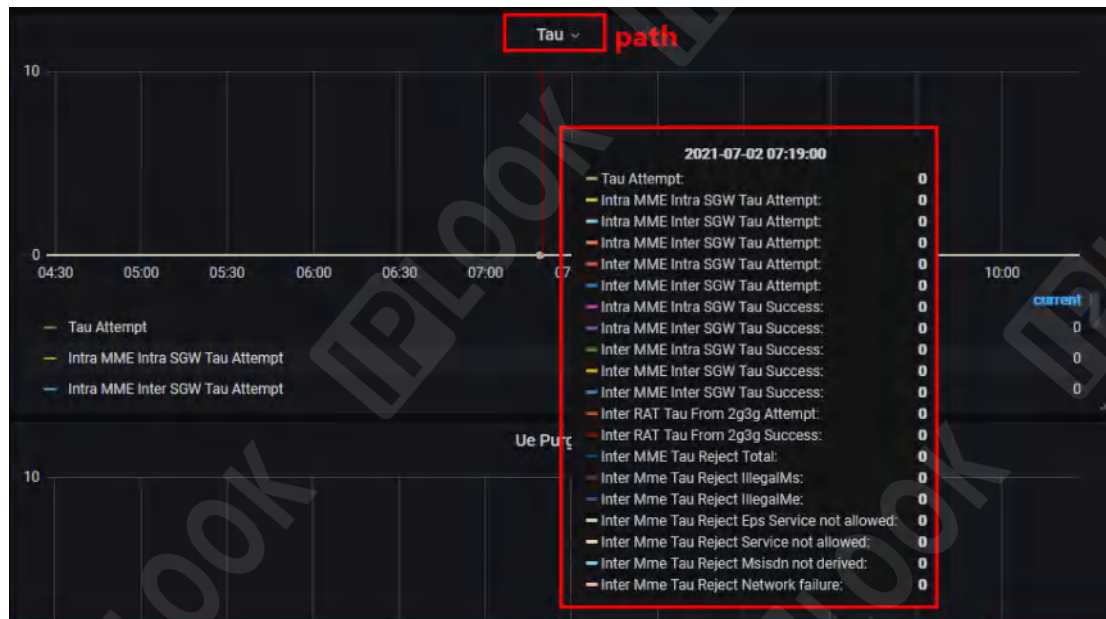


Figure 9.2.1.2.3-1 Tau Statistical Chart

Statistical parameters and description.

Statistical parameters	instructions
Tau Attempt	Number of Tau attempts
Intra MME Intra SGW Tau Attempt	mme constant sgw constant Tau times
Intra MME Inter SGW Tau Attempt	mme constant sgw change Tau times
Inter MME Intra SGW Tau Attempt	mme change sgw constant Tau times
Inter MME inter SGW Tau Attempt	mme change sgw change tau times
Inter RAT Tau From 2g3g Attempt	From 2g3g network user Tau times
Inter RAT Tau From 2g3g Success	Number of successes from 2g3g network users Tau
Inter MME Tau Reject Total	mme changes the total number of Tau rejections
Inter MME Tau Reject IllegalMs	mme change Tau illegal mobile user refusal count
Inter MME Tau Reject IllegalMe	mme change Tau illegal mobile device rejections
Inter MME Tau Reject Eps Service not allowed	mme Change Tau Unsigned Eps Service Denials
Inter MME Tau Reject Service not allowed	mme change Tau service disallow rejection count
Inter MME Tau Reject Msisdn not derived	mme change tau user identity unrecognizable denial count
Inter MME Tau Reject Network failure	mme change tau network error rejection count



#### 9.2.1.2.4.Service Request/Paging

**Path:** Manage-->MME-->MM Procedure-->Service Request/Paging

**Description:** Counts the number of paging calls and service rejections for different situations in a given time period.

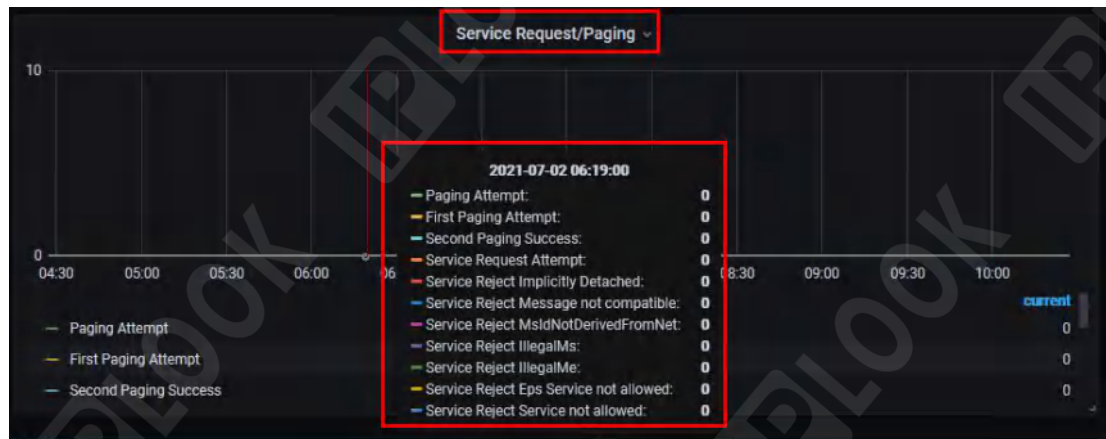


Figure 9.2.1.2.4-1 Service Request/Paging Statistics Chart

Statistical parameters and description.

Statistical parameters	instructions
Paging Attempt	Number of paging attempts
First Paging Attempt	Number of first paging attempts
Second Paging Success	Number of successful second paging attempts
Service Request Attempt	Number of service requests attempted
Service Reject Implicitly Detached	Service rejection implicit de-attachment has been implicitly de-attachment service rejection times
Service Reject Message not compatible	Number of incompatible message service rejections
Service Reject MsIdNotDerivedFromNet	Number of user-identifying service rejections
Service Reject IllegalMs	Number of illegal mobile user service denials
Service Reject IllegalMe	Number of denials of service for illegal mobile devices
Service Reject Eps Service not allowed	Service Denial Disabled eps Service Unsigned Eps Service Denial Count
Service Reject Service not allowed	Service Denial Disabled Service Service Disallowed Service Denial Count



### 9.2.1.2.5.Ue Purge

**Path:** Manage-->MME-->MM Procedure-->Ue Purge

**Description:** Count the number of UE requests cleared in different cases within a certain period of time

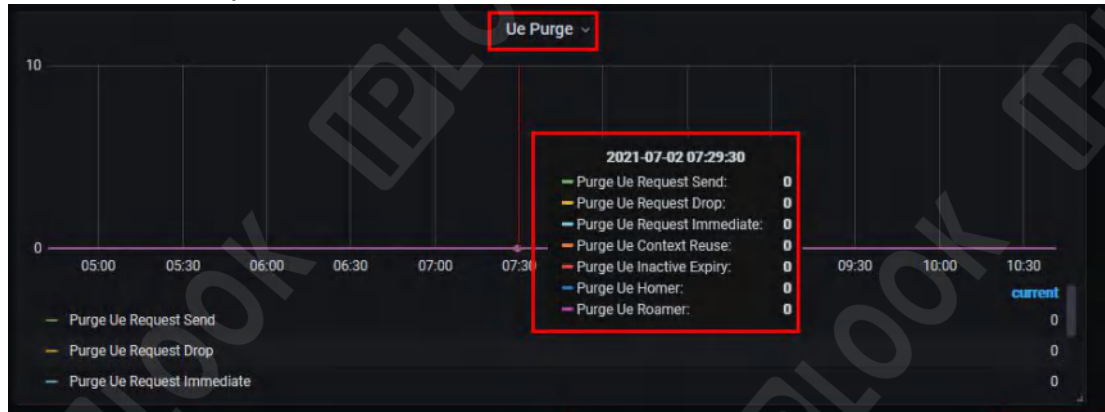


Figure 9.2.1.2.5-1 Ue Purge Statistical Chart

Statistical parameters and description.

Statistical parameters	instructions
Purge Ue Request Send	Clear the number of user requests sent
Purge Ue Request Drop	Clear the number of user request discards
Purge Ue Request Immediate	Immediate clearance of user requests
Purge Ue Context Reuse	Context reuse clear user counts
Purge Ue Inactive Expiry	Number of times a user is inactive and due to be cleared
Purge Ue Homer	Number of cleared attributed users
Purge Ue Roamer	Number of roaming users cleared

### 9.2.1.3. SM Procedure

**Path:** Manage-->MME-->SM Procedure

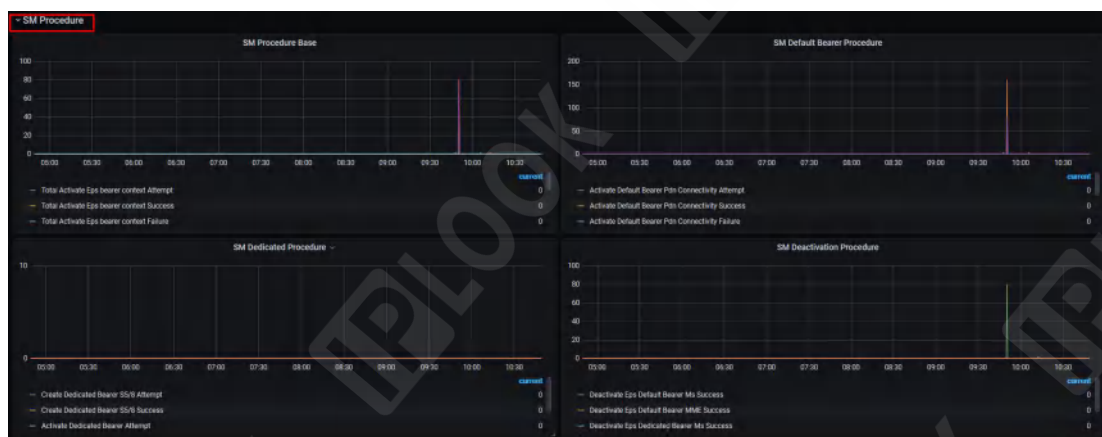


Figure 9.2.1.3-1 SM Procedure section

### 9.2.1.3.1.SM Procedure Base

**Path:** Manage-->MME-->SM Procedure-->SM Procedure Base

**Description:** Counts the number of bearers for different situations in a given time and the number of switches.

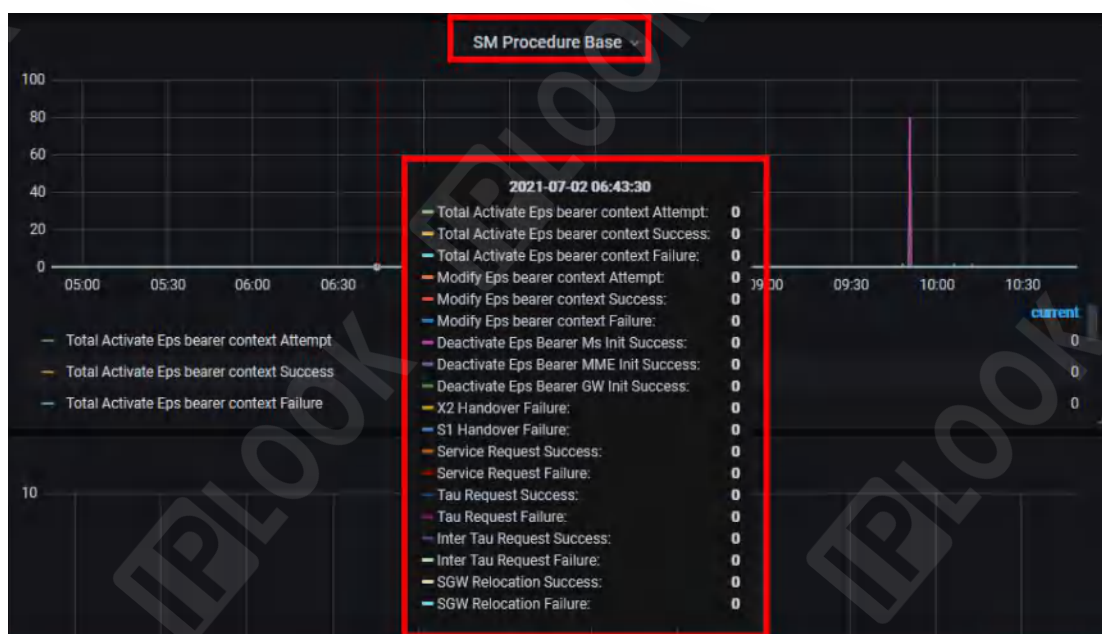


Figure 9.2.1.3.1 SM Procedure Base Statistical Chart

Statistical parameters and description.

Statistical parameters	instructions
Total Activate Eps bearer context Attempt	Total number of activation eps bearer context attempts
Total Activate Eps bearer context Success	Total number of successful activation eps bearer contexts
Total Activate Eps bearer context Failure	Total number of failed activation eps bearer contexts

Modify Eps bearer context Attempt	Number of eps bearer context modification attempts
Modify Eps bearer context Success	Number of successful modifications to eps bearer contexts
Modify Eps bearer context Failure	Number of failed eps bearer context modifications
Deactivate Eps Bearer Ms Init Success	Number of successful de-activation bearers initiated by mobile users
Deactivate Eps Bearer MME Init Success	Number of successful MME initiated de-activation bearers
Deactivate Eps Bearer GW Init Success	Number of times GW initiated de-activation bearers were successful
X2 Handover Failure	Number of X2 switch failures
S1 Handover Failure	S1 Number of switch failures
Service Request Success	Number of successful service requests
Service Request Failure	Number of failed service requests
Tau Request Success	Number of successful Tau requests
Tau Request Failure	Number of failed Tau requests
Inter Tau Request Success	Number of successful inter-system Tau requests
Inter Tau Request Failure	Number of failed inter-system Tau requests
SGW Relocation Success	Number of successful sgw reselections
SGW Relocation Failure	Number of sgw reselection failures

#### 9.2.1.3.2.SM Default Bearer Procedure

**Path:** Manage-->MME-->SM Procedure-->SM Default Bearer Procedure

**Description:** Counts the number of default loaders for different situations in a given time period.

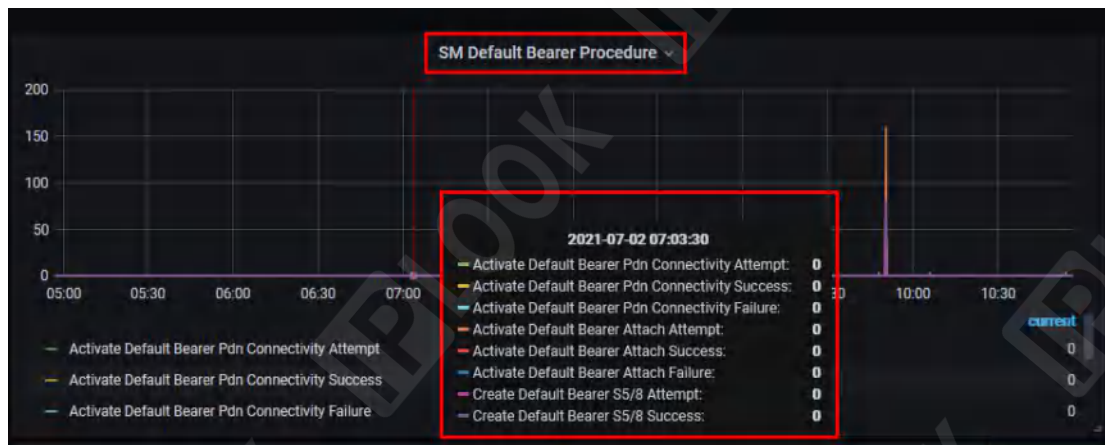


Figure 9.2.1.3.2 SM Default Bearer Procedure Statistics

Statistical parameters and description.

Statistical parameters	instructions
Activate Default Bearer Pdn Connectivity Attempt	Pdn connection request activation default bearer attempts
Activate Default Bearer Pdn Connectivity Success	Pdn connection request activation default bearer success count
Activate Default Bearer Pdn Connectivity Failure	Pdn connection request activation default bearer failure count
Activate Default Bearer Attach Attempt	Number of default bearer attempts for attachment request activation
Activate Default Bearer Attach Success	Attachment request activation default bearer success count
Activate Default Bearer Attach Failure	Attachment request activation default bearer failure count
Create Default Bearer S5/8 Attempt	Number of default bearer creation attempts with S5/8 interface
Create Default Bearer S5/8 Success	There are S5/8 interfaces to create the default number of bearer successes

#### 9.2.1.3.3.SM Dedicated Procedure

**Path:** Manage-->MME-->SM Procedure-->SM Dedicated Procedure

**Description:** Counts the number of proprietary bearers for different situations in a given time period

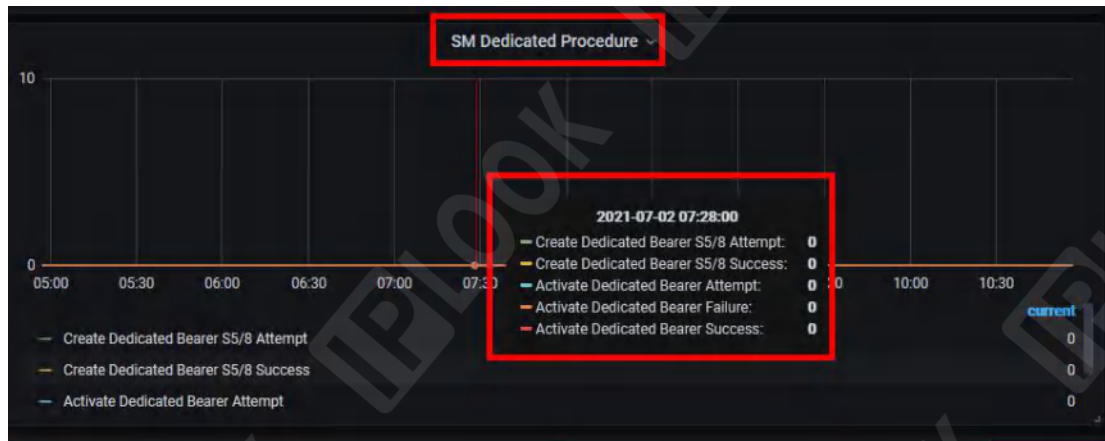


Figure 9.2.1.3.3-1 SM Dedicated Procedure Statistical Chart  
Statistical parameters and description.

Statistical parameters	instructions
Create Dedicated Bearer S5/8 Attempt	Number of attempts to establish proprietary bearer with s5/8 interface
Create Dedicated Bearer S5/8 Success	Number of successes in establishing proprietary bearers with s5/8 interfaces
Activate Dedicated Bearer Attempt	Number of attempts to activate the proprietary bearer
Activate Dedicated Bearer Failure	Number of failed activation of proprietary bearer
Activate Dedicated Bearer Success	Number of successful activation of proprietary bearers

#### 9.2.1.3.4.SM Deactivation Procedure

**Path:** Manage-->MME-->SM Procedure-->SM Deactivation Procedure

**Description:** Counts the number of de-activated default carriers for different situations in a given time period

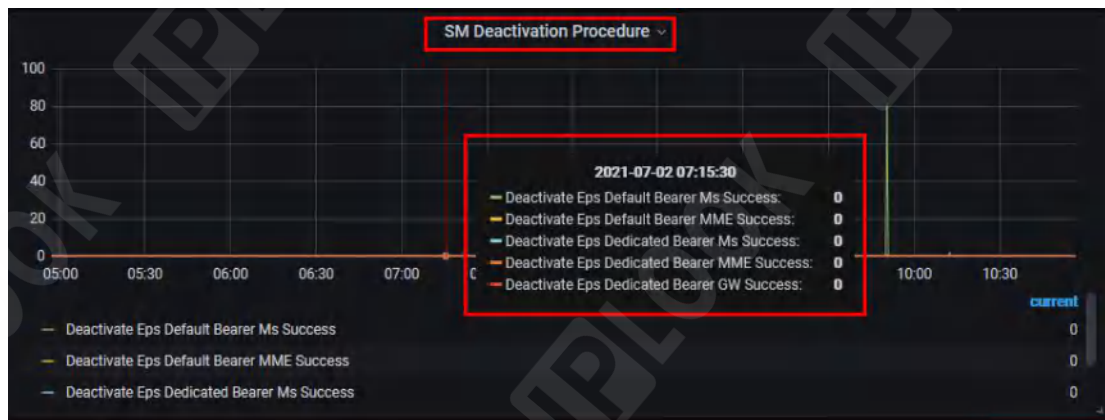


Figure 9.2.1.3.4 SM Deactivation Procedure Statistical Chart  
Statistical parameters and description.



Statistical parameters	instructions
Deactivate Eps Default Bearer Ms Success	User initiated de-activation default bearer success times
Deactivate Eps Default Bearer MME Success	MME initiates de-activation default bearer success count
Deactivate Eps Dedicated Bearer Ms Success	Number of successful user-initiated de-activation of proprietary bearers
Deactivate Eps Dedicated Bearer MME Success	Number of successful MME initiated de-activation of proprietary bearers
Deactivate Eps Dedicated Bearer GW Success	Number of times GW initiated de-activation of proprietary bearer success

#### 9.2.1.4. Handover Procedure

**Path:** Manage-->MME-->Handover Procedure

**Description:** Counting the number of switches for different situations in a certain time

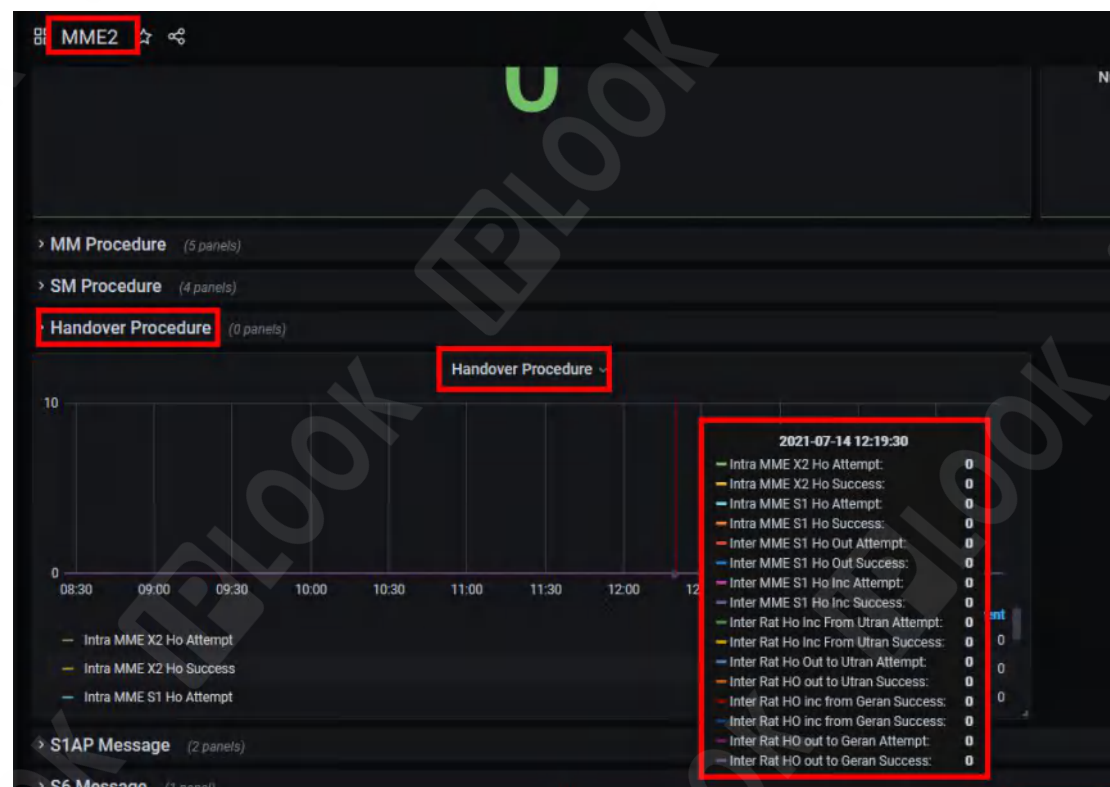


Figure 9.2.1.4 Handover Procedure Statistics Chart

Statistical parameters and description.

Statistical parameters	instructions
Intra MME X2 Ho Attempt	x2 number of switching attempts
Intra MME X2 Ho Success	x2 Number of successful switches
Intra MME S1 Ho Attempt	mme constant number of S1 switching



	attempts
Intra MME S1 Ho Success	mme constant number of S1 switching successes
Inter MME S1 Ho Out Attempt	mme change, the number of times the source mme tries to switch to the target mme
Inter MME S1 Ho Out Success	mme changes, the number of times the source mme successfully switches to the target mme
Inter MME S1 Ho Inc Attempt	mme changes, target mme attempts to switch
Inter MME S1 Ho Inc Success	mme change, number of times target mme successfully switched
Inter Rat Ho Inc From Utran Attempt	Number of 3G to 4G switching attempts
Inter Rat Ho Inc From Utran Success	Number of successful 3G to 4G switches
Inter Rat Ho Out To Utran Attempt	Number of 4G to 3G switching attempts
Inter Rat Ho Out To Utran Success	Number of successful 4G to 3G switches
Inter Rat Ho Inc From Geran Attempt	Number of 2G to 4G switching attempts
Inter Rat Ho Inc From Geran Success	Number of successful 2G to 4G switches
Inter Rat Ho Out to Geran Attempt	Number of 4G to 2G switching attempts
Inter Rat Ho Out to Geran Success	Number of successful 4G to 2G switches

### 9.2.1.5. S1AP Message



Figure 9.2.1.5 S1AP Message section

#### 9.2.1.5.1. Outgoing Messages

**Path:** Manage-->MME-->S1AP Message-->Outgoing Messages

**Description:** Statistics on the signaling sent by S1 interface in a certain period of time

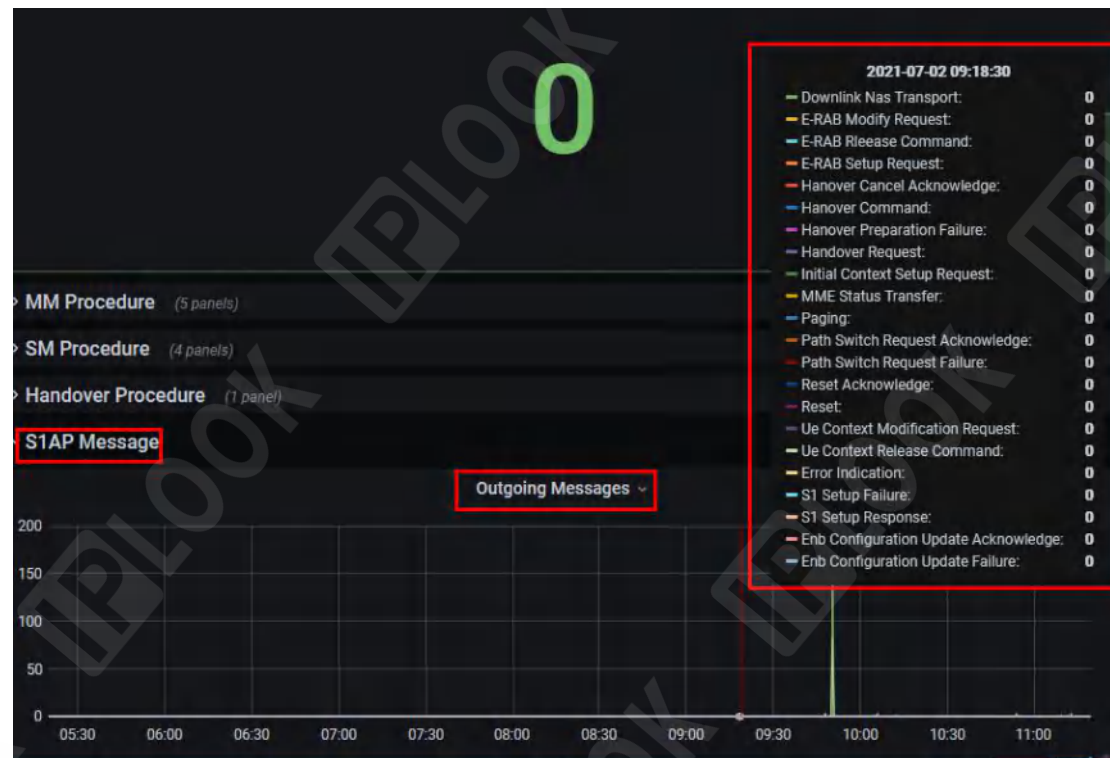


Figure 9.2.1.5.1 Outgoing Messages Statistics Chart

Statistical parameters and description.

Statistical parameters	instructions
RAB Modify Request	Number of RAB amendment requests
E-RAB Release Command	Number of E-RAB release orders
E-RAB Setup Request	Number of E-RAB establishment requests
Handover Cancel Acknowledge	Number of toggle cancellation confirmations
Handover Command	Number of switching commands
Handover Preparation Failure	Number of switch preparation failures
Handover Request	Number of switching requests
Initial Context Setup Request	Number of initial context creation requests
MME Status Transfer	Number of mme status transmissions
Paging	Number of paging sessions
Path Switch Request Acknowledge	Number of path exchange request acknowledgements
Path Switch Request Failure	Number of failed path exchange requests
Reset Acknowledge	Number of resets confirmed
Reset	Number of resets
Ue Context Modification Request	Number of requests for modification

	under ue above
Ue Context Release Command	Number of ue context release commands
Error Indication	Number of error displays
S1 Setup Failure	S1 Number of failed session establishment
S1 Setup Response	S1 Number of responses to establish sessions
Enb Configuration Update Acknowledge	Number of base station configuration change confirmations
Enb Configuration Update Failure	Number of failed base station configuration changes

### 9.2.1.5.2.Incoming Messages

**Path:** Manage-->MME-->S1AP Message-->Incoming Messages

**Description:** Statistics on the signaling received on S1 interface within a certain period of time

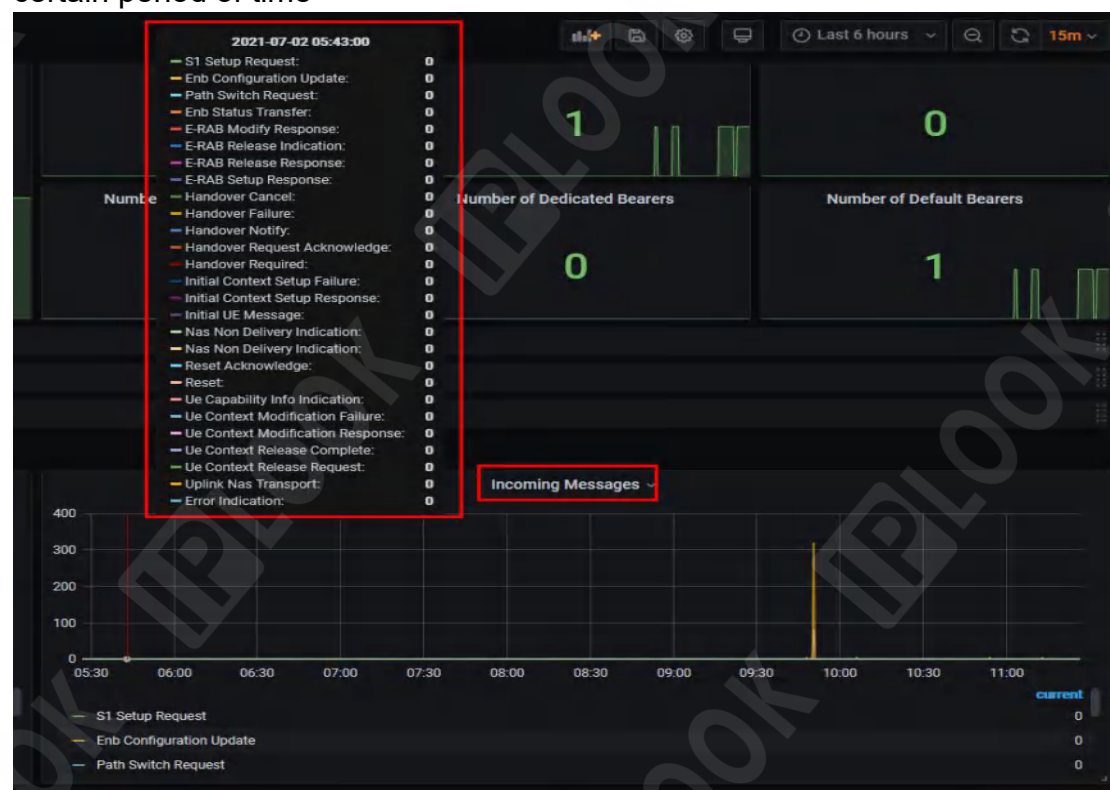


Figure 9.2.1.5.2 Incoming Messages Statistics Chart

Statistical parameters and description.

Statistical parameters	instructions
S1 Setup Request	s1 Number of session establishment requests

Enb Configuration Update	Number of base station configuration changes
Path Switch Request	Number of path exchange requests
Enb Status Transfer	Number of base station status transfers
E-RAB Modify Response	E-RAB modifies the number of responses
E-RAB Release Indication	E-RAB release display times
E-RAB Release Response	Number of E-RAB release responses
E-RAB Setup Response	Number of E-RAB build responses
Handover Cancel	Number of toggle cancellations
Handover Failure	Number of switching failures
Handover Notify	Number of toggle notifications
Handover Request Acknowledge	Number of switch request confirmations
Handover Request	Number of switching requests
Initial Context Setup Failure	Number of initial context creation failures
Initial Context Setup Response	Number of initial context creation responses
Initial UE Message	Number of initial ue messages received
Nas Non Delivery Indication	The number of times the base station cannot send nas to the terminal display
Reset Acknowledge	Number of resets confirmed
Reset	Number of resets
Ue Capability Info Indication	Number of times ue capacity information is displayed
Ue Context Modification Failure	Number of failed ue context modifications
Ue Context Modification Response	ue Context Modification Response Count
Ue Context Release Complete	Number of ue context release completions
Ue Context Release Request	Number of ue context release requests
Uplink Nas Transport	Number of uplink nas shipments
Error Indication	Number of error displays

#### 9.2.1.6. S6 Message

**Path:** Manage-->MME-->S6 Messages

**Description:** Statistics of S6 interface signaling in a certain period of time

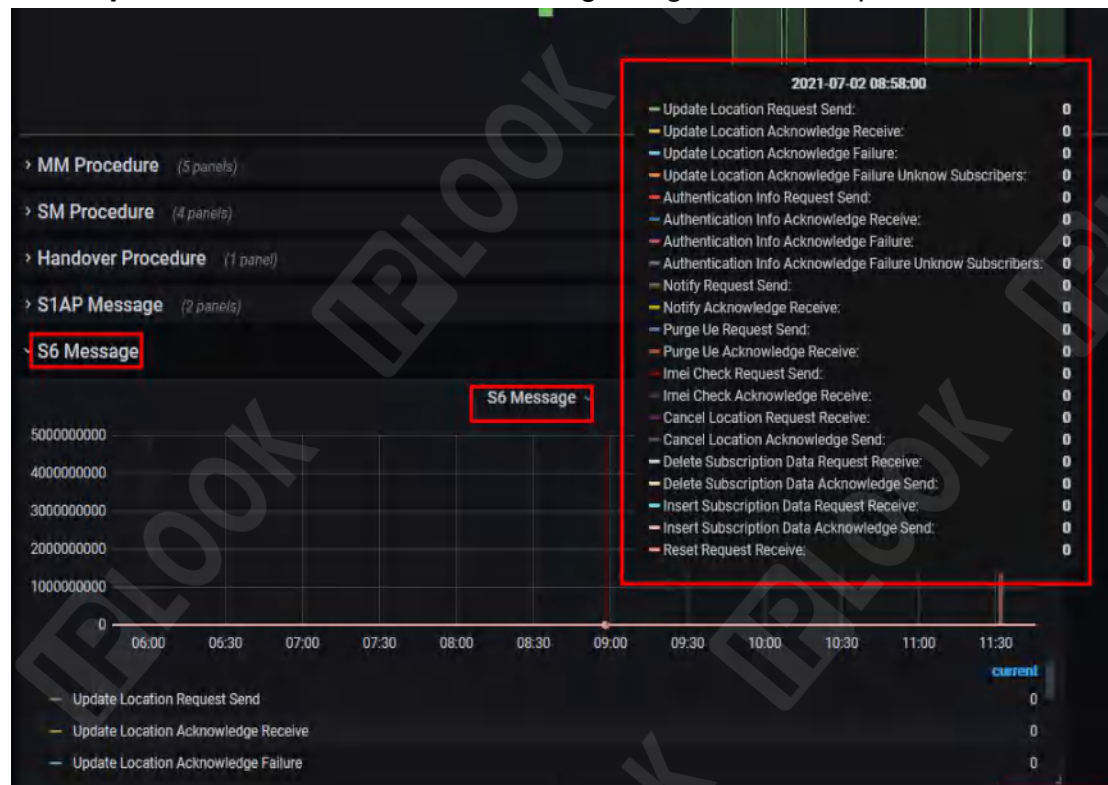


Figure 9.2.1.6 S6 Message Statistics Chart

Statistical parameters and description.

Statistical parameters	instructions
Update Location Request Send	Modify the number of location requests sent
Update Location Acknowledge Receive	Revision of location acknowledgement received
Update Location Acknowledge Failure	Number of failed confirmation of change of location
Update Location Acknowledge Failure Unknown Subscribers	Number of failed location modification confirmations due to unknown users
Authentication Info Acknowledge Send	Number of times authentication information is confirmed to have been sent
Authentication Info Acknowledge Receive	Number of acknowledgements of receipt of authentication information
Authentication Info Acknowledge Failure	Number of failed authentication message confirmations
Authentication Info Acknowledge Failure Unknown Subscribers	Number of failures to confirm authentication information due to unknown users
Notify Request Send	Number of notification requests sent
Notify Acknowledge Receive	Number of notifications acknowledging receipt



Purge Ue Request Send	Number of pagingue requests sent
Purge Ue Acknowledge Receive	Number of paging ue acknowledgements received
Imei Check Request Send	Number of imei check requests sent
Imei Check Acknowledge Send	imei check confirmation send count
Cancel Location Request Receive	Number of cancellations of location requests received
Cancel Location Acknowledge Send	Number of cancellation of location confirmation sending
Delete Subscription Data Request Receiver	Delete the number of subscription data requests received
Delete Subscription Data Acknowledge Send	Delete the number of times subscription data is confirmed to be sent
Insert Subscription Data Request Receive	Increase the number of subscription data requests received
Insert Subscription Data Acknowledge Send	Increasing the number of subscription data confirmations sent
Reset Request Receive	Number of reset requests received

### 9.2.1.7. Diameter

**Path:** Manage-->MME-->Diameter

**Description:** Statistics of Diameter protocols received and sent by MME in a certain period of time

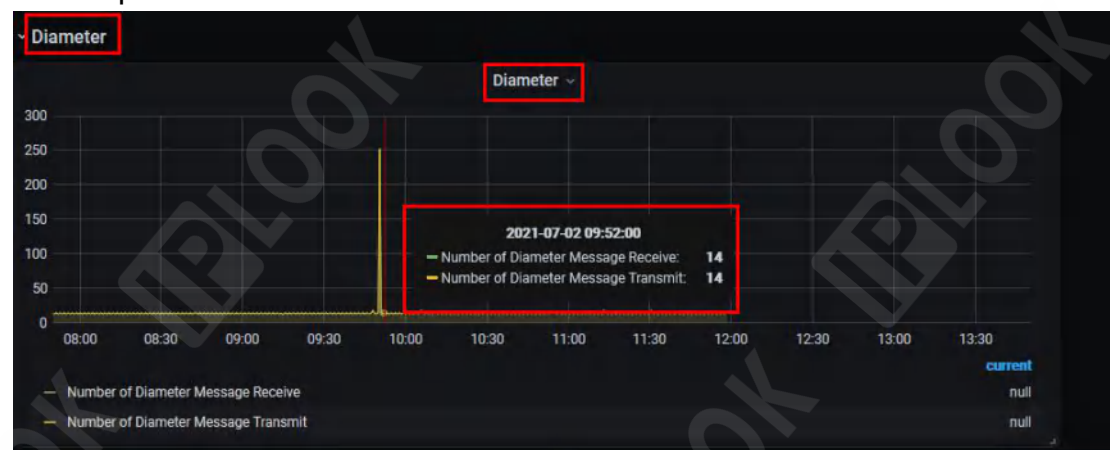


Figure 9.2.1.7 Diameter Statistics Chart

Statistical parameters and description.

Statistical parameters	instructions
Number of Diameter Message Receive	Number of diameters messages received
Number of Diameter Message	Number of diameter messages sent



Transmit

### 9.2.1.8. GTPv2

**Path:** Manage-->MME-->GTPv2



Figure 9.2.1.8-1 GTPv2 section

#### 9.2.1.8.1. Number of Paths & Transactions

**Path:** Manage-->MME-->GTPv2-->Number of Paths

**Path:** Manage-->MME-->GTPv2-->Number of Transactions

**Description:** Real-time connection to GTPv2 peer data and number of GTPv2 requests sent with no reply data

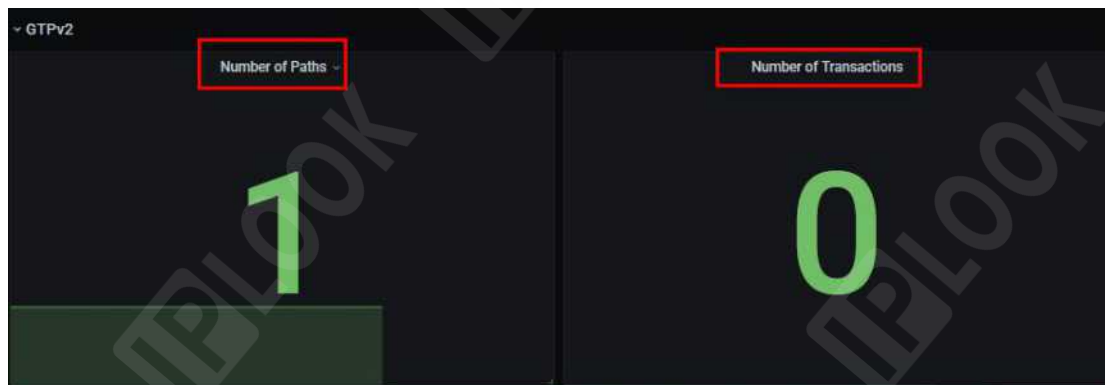


Figure 9.2.1.8.1 Number of Paths & Transactions Statistical Chart

#### 9.2.1.8.2. Global Operation

**Path:** Manage-->MME-->GTPv2-->Global Operation

**Description:** Statistics of GTPv2 paths at a certain time

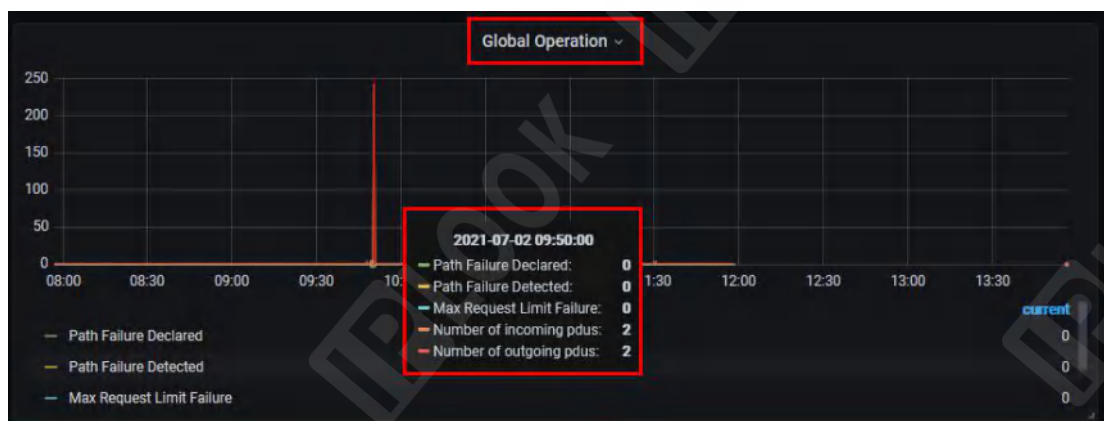


Figure 9.2.1.8.2 Global Operation Statistical Chart

Statistical parameters and description.

Statistical parameters	instructions
Path Failure Declared	Number of path failure statements
Path Failure Detected	Number of path failures detected
Max Request Limit Failure	Maximum number of failed request intervals
Number of incoming pdus	Number of pdus received
Number of outgoing pdus	Number of pdus sent out

### 9.2.1.8.3.GTPv2 Incoming Messages

**Path:** Manage-->MME-->GTPv2-->GTPv2 Incoming Messages

**Description:** Statistics on the received signaling of GTPv2 paths in a certain time period

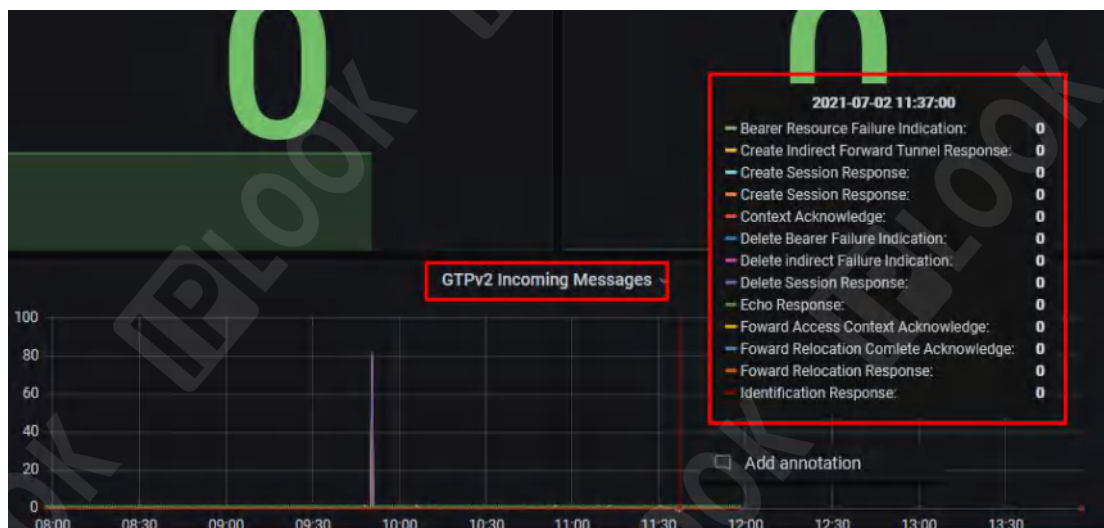


Figure 9.2.1.8.3 GTPv2 Incoming Messages Statistics

Statistical parameters and description.

Statistical parameters	instructions
Bearer Resource Failure Indication	Number of failed resource load displays
Create Indirect Forward Tunnel	Number of indirect forwarding tunnel

Response	requests established
Create Session Response	Number of responses to establish sessions
Context Acknowledge	Number of contextual confirmations
Delete Bearer Failure Indication	Delete the number of times the carrier failed to display
Delete Indirect Failure Indication	Delete the number of indirect failures displayed
Delete Session Response	Delete session replies
Echo Response	Number of echo responses received
Forward Access Context Acknowledge	Number of forwarding access context acknowledgements
Forward Relocation Complete Acknowledge	Number of forwarding repositioning completion confirmations
Forward Relocation Response	Number of retweets retargeting replies
Identification Response	Number of identification responses

#### 9.2.1.8.4.GTPv2 Incoming Messages

**Path:** Manage-->MME-->GTPv2-->GTPv2 Incoming Messages

**Description:** Statistics on the received signaling of the GTPv2 path in a certain time period

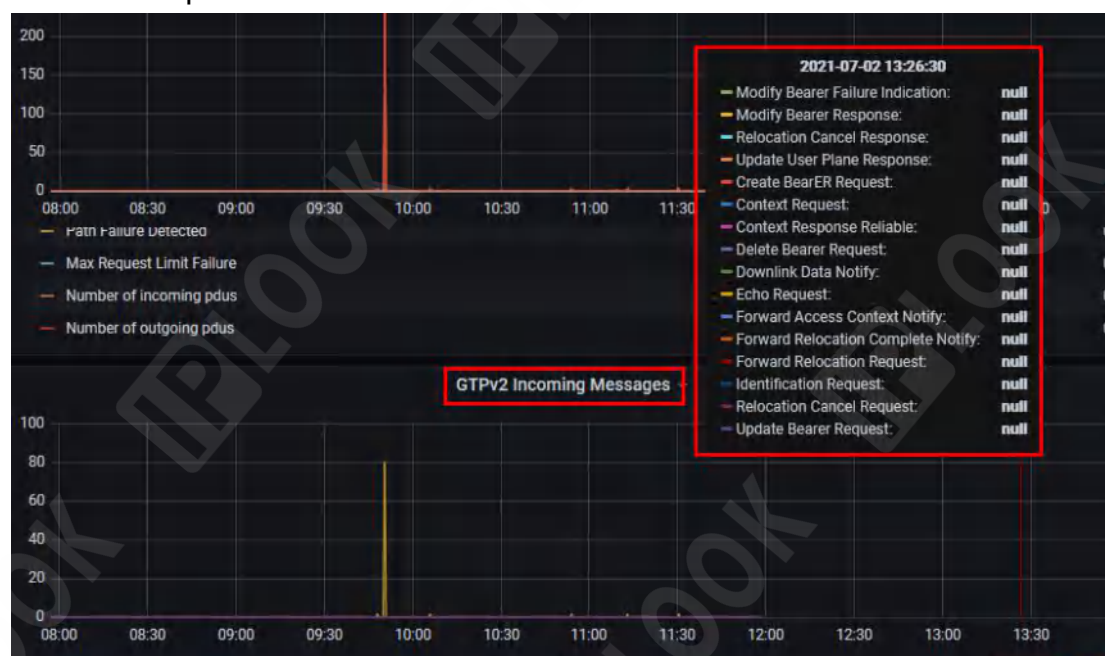


Figure 9.2.1.8.4 GTPv3 Incoming Messages Statistics

Statistical parameters and description.

Statistical parameters	instructions
Modify Bearer Failure Indication	Modify the number of carrier failure

	displays
Modify Bearer Response	Modify the number of bearer responses
Relocation Cancel Response	Number of repositioned cancellation responses
Create BearER Request	Number of bearer requests established
Context Request	Number of contextual requests
Context Response Reliable	Number of contextual response reliability
Delete Bearer Request	Delete the number of bearer requests
Downlink Data Notify	Number of downlink data notifications
Echo Request	Number of echo requests received
Forward Access Context Notify	Number of access context notifications forwarded
Forward Relocation Complete Notify	Number of repositioning completion notifications forwarded
Forward Relocation Request	Number of relocation requests forwarded
Identification Request	Number of authentication requests
Relocation Cancel Request	Number of relocation cancellation requests
Update Bearer Request	Modify the number of bearer requests

#### 9.2.1.8.5.GTPv2 Outgoing Messages

**Path:** Manage-->MME-->GTPv2-->GTPv2 Outgoing Messages

**Description:** Statistics on the outgoing signaling of GTPv2 paths in a given time period

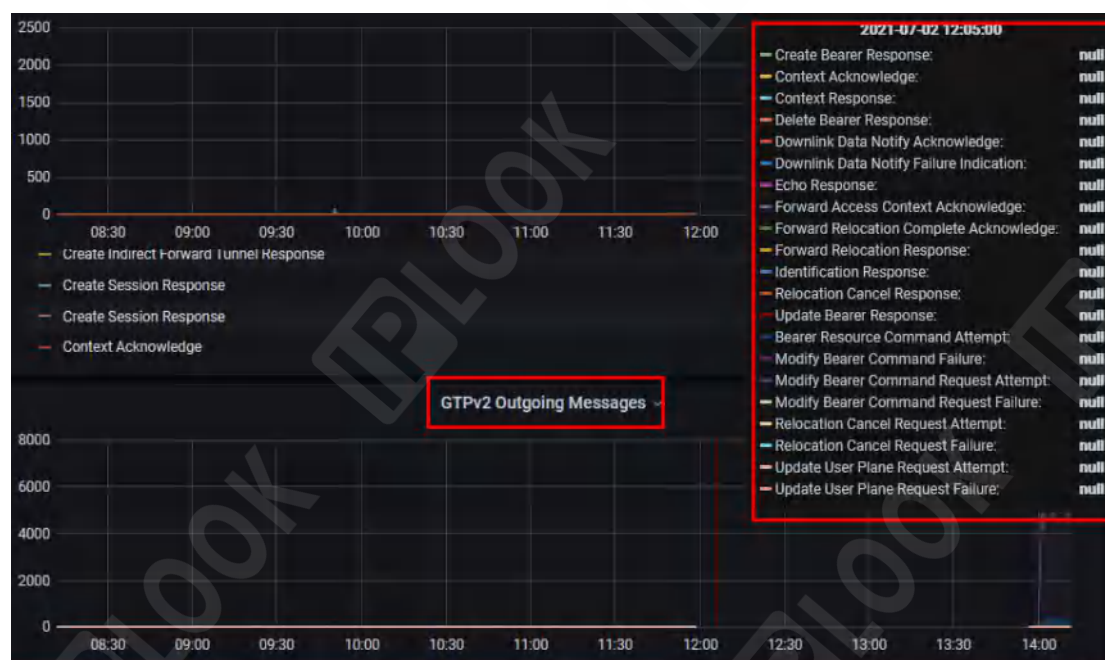


Figure 9.2.1.8.5 GTPv2 Outgoing Messages Statistics

Statistical parameters and description.

Statistical parameters	instructions
Create Bearer Response	Number of carrier responses established
Context Acknowledge	Number of contextual confirmations
Context Response	Number of contextual responses
Delete Bearer Response	Delete the number of bearer responses
Downlink Data Notify Acknowledge	Number of downlink data notification acknowledgements
Downlink Data Notify Failure Indication	Number of failed downlink data notification displays
Echo Response	Number of echo responses sent
Forward Access Context Acknowledge	Number of forwarding access context acknowledgements
Forward Relocation Complete Acknowledge	Number of forwarding repositioning completion confirmations
Forward Relocation Response	Number of retweets retargeting replies
Identification Response	Identity Response
Relocation Cancel Response	Number of repositioned cancellation responses
Update Bearer Response	Modify the number of bearer responses
Bearer Resource Command Attempt	Number of attempts to carry resource requests
Modify Bearer Command Failure	Number of failures to modify the



	bearer command
Modify Bearer Command Request Attempt	Modify the number of bearer command request attempts
Modify Bearer Command Request Failure	Number of failed requests for successful modification orders
Relocation Cancel Request Attempt	Number of relocation cancel request attempts
Relocation Cancel Request Failure	Number of failed relocation cancellation requests
Update User Plane Request Attempt	Modify the number of user face request attempts
Update User Plane Request Failure	Modify the number of failed user face requests

#### 9.2.1.8.6.GTPv2 Outgoing Messages

**Path:** Manage-->MME-->GTPv2-->GTPv2 Outgoing Messages

**Description:** Statistics on the outgoing signaling of GTPv2 paths in a certain period of time

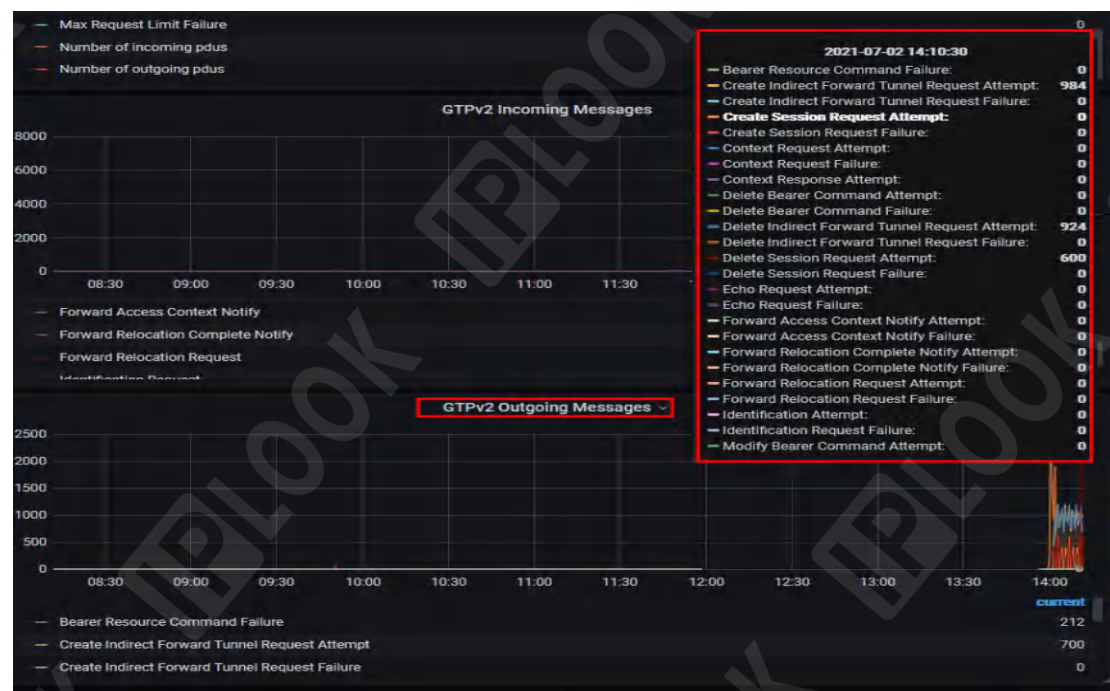


Figure 9.2.1.8.6 GTPv2 Outgoing Messages Statistics

Statistical parameters and description.

Statistical parameters	instructions
Bearer Resource Command Failure	Number of failed load resource orders
Create Indirect Forward Tunnel Request Attempt	Number of attempts to establish an indirect forwarding tunnel request
Create Indirect Forward Tunnel	Number of failed requests to establish



Request Failure	indirect forwarding tunnels
Create Session request attempt	Number of attempts to establish a session request
Create Session request Failure	Number of failed session establishment requests
Context request Attempt	Number of context request attempts
Context Request Failure	Number of failed contextual requests
Context Response Attempt	Number of contextual response attempts
Delete Bearer Command Attempt	Number of attempts to remove the bearer command
Delete Bearer Command Failure	Number of failures of the delete bearer command
Delete Indirect Forward Tunnel Request Attempt	Remove the number of indirect forwarding tunnel request attempts
Delete Indirect Forward Tunnel Request Failure	Delete the number of failed indirect forwarding tunnel requests
Delete Session Request Attempt	Number of attempts to delete session requests
Delete Session Request Failure	Number of failed requests to delete sessions
Echo Request Attempt	Number of attempts to send an echo request
Echo Request Failure	Number of failed echo requests sent
Forward Access Context Notify Attempt	Number of access context notification attempts forwarded
Forward Access Context Notify Failure	Number of failed access context notifications forwarded
Forward Relocation Complete Notify Attempt	Number of attempts to forward repositioning completion notifications
Forward Relocation Complete Notify Failure	Number of failed retargeting completion notifications forwarded
Forward Relocation Request Attempt	Number of forwarding relocation request attempts
Forward Relocation Request Failure	Number of failed retargeting requests forwarded
Identification Attempt	Number of authentication attempts
Identification Request Failure	Number of failed authentication requests
Modify Bearer Command Attempt	Modify the number of bearer command attempts

### 9.2.2. Manage-64GW

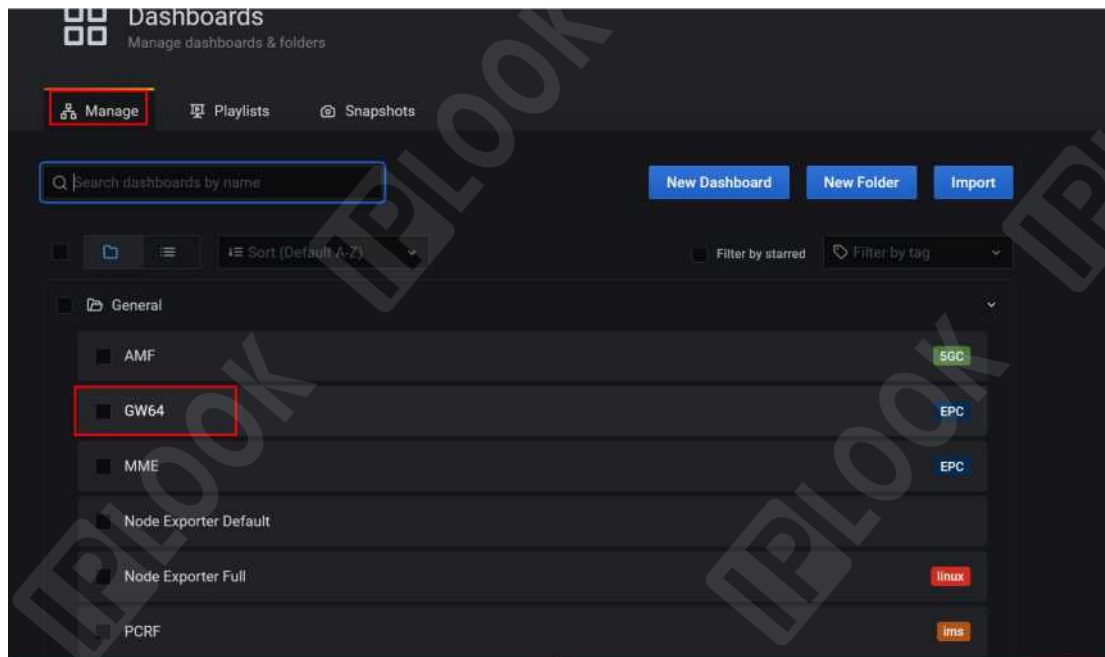


Figure 9.2.2-1 Manage - GW64 path

#### Page Description.

- 1: Last 2 days: Monitor the last 2 days of data
- 2: 5s: the interface is automatically modified every 5s
- 3: Real-time monitoring statistics
- 4: Last 2 days of statistics

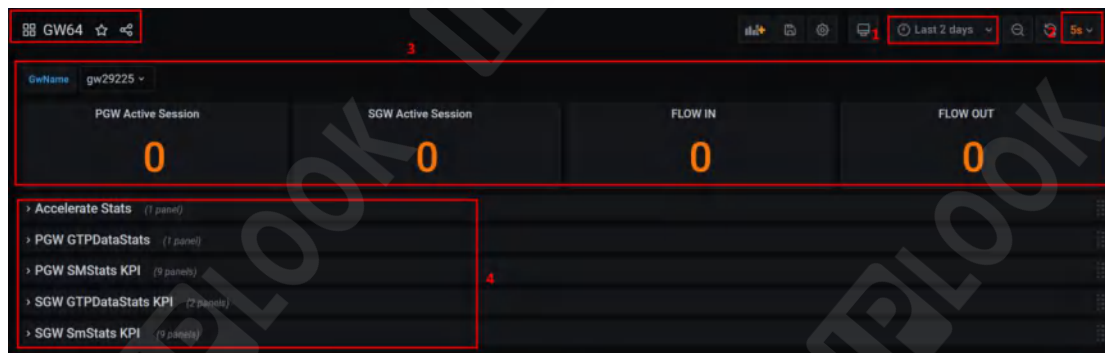


Figure 9.2.2-2 64GW page

#### 9.2.2.1. Real-time monitoring data

**Path:** Manage --> 64GW

**Description:** Real-time monitoring of 64GW session data and traffic data

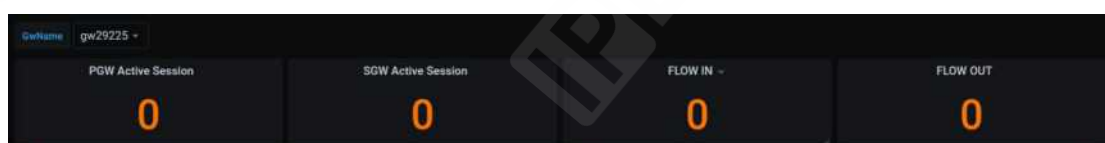


Figure 9.2.2.1-1 Real-time monitoring data

Statistical parameters and description.

Statistical parameters	instructions
PGW Active Session	Number of PGW activation sessions
SGW Active Session	Number of SGW activation sessions
FIOW IN	Flow into gw
FIOW out	Traffic sent by gw

### 9.2.2.2. Accelerate Stats

**Path:** Manage-->64GW--> Accelerate Stats

**Description:** Statistics on acceleration with DPDK on for a certain period of time



Figure 9.2.2.2-1 Accelerate Statistics

### 9.2.2.3. PGW GTPDataStats

**Path:** Manage --> 64GW --> PGW GTPDataStats

**Description:** Statistics on the data surface of the S5S8 interface of PGW in a certain period of time



Figure 9.2.2.3 PGW GTPDataStats statistics graph

Statistical parameters and description.

Statistical parameters	instructions
GTP-U packets in discarded received	Number of GTP-U packets discarded on reception
GTP-U error indication message	Number of ErrInd packets received

received	
incoming GTP octets	Number of bytes of GTP packets received
GTP error indication message sent	Number of ErrInd packets sent
Error indication message ignored by GGSN	Number of ErrInd packets ignored by GGSN
GTP-U packets out discarded received	Number of GTP-U packets sent and discarded
GTP-U packets in discarded received	Number of GTP-U packets received and discarded
incoming GTP octets	Number of bytes of GTP packets received
outgoing GTP octets toward	Number of bytes of GTP packets sent

#### 9.2.2.4. PGW SMStats KPI

**Path:** Manage --> 64GW --> PGW SMStats KPI

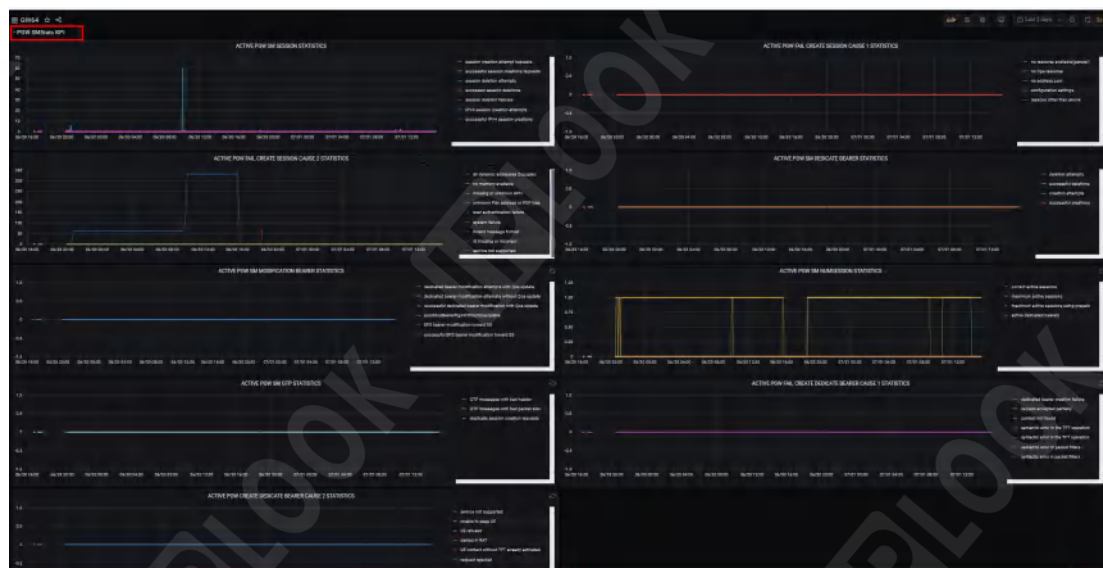


Figure 9.2.2.4 PGW SMStats KPI page

##### 9.2.2.4.1.Active PGW SM SESSION STATISTICS

**Path:** Manage-->64GW-->PGW SMStats KPI-->Active PGW SM SESSION STATISTICS

**Description:** Statistics on PGW sessions over a certain period of time

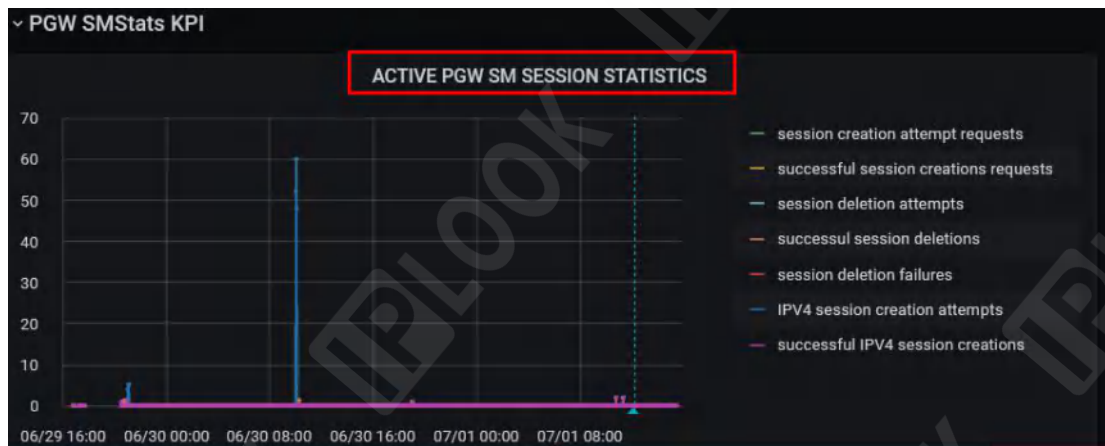


Figure 9.2.2.4.1-1 ACTIVE PGW SM SESSION STATISTICS

Statistical parameters and description.

Statistical parameters	instructions
session creation attempt requests	Number of attempts to establish session requests
successful session creations requests	Number of successful session establishment requests
session deletion attempts	Number of sessions attempted to be deleted
successful session deletions	Number of successfully deleted sessions
session deletion failures	Number of failed deletion sessions
IPV4 session creation attempts	Number of attempts to establish ipv4 sessions
successful IPV4 session creations	Number of successfully established ipv4 sessions

#### 9.2.2.4.2.ACTIVE PGW TAIL CREATE SESSION CAUSE 1 STATISTICS

**Path:** Manage-->64GW-->PGW SMStats KPI-->Active PGW TAIL CREATE SESSION CAUSE STATISTICS

**Description:** Statistics on the causes of session creation errors in PGW over a certain period of time

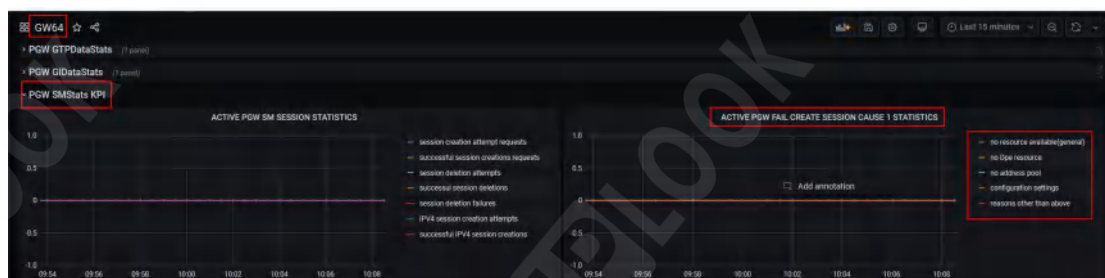


Figure 9.2.2.4.2 ACTIVE PGW TAIL CREATE SESSION CAUSE 1 STATISTICS

Statistical parameters and description.



Statistical parameters	instructions
no resource available (general)	No resources available
no Dpe resource	DPE-free resources
no address pool	No address pool
configuration settings	Configuration settings
reasons other than above	Reasons other than the above

#### 9.2.2.4.3.ACTIVE PGW FALL CREATE SESSION CAUSE 2 STATISTICS

**Path:** Manage-->64GW-->PGW SMStats KPI-->Active PGW FALL CREATE SESSION CAUSE 2 STATISTICS

**Description:** Statistics on the causes of session creation errors in PGW over a certain period of time

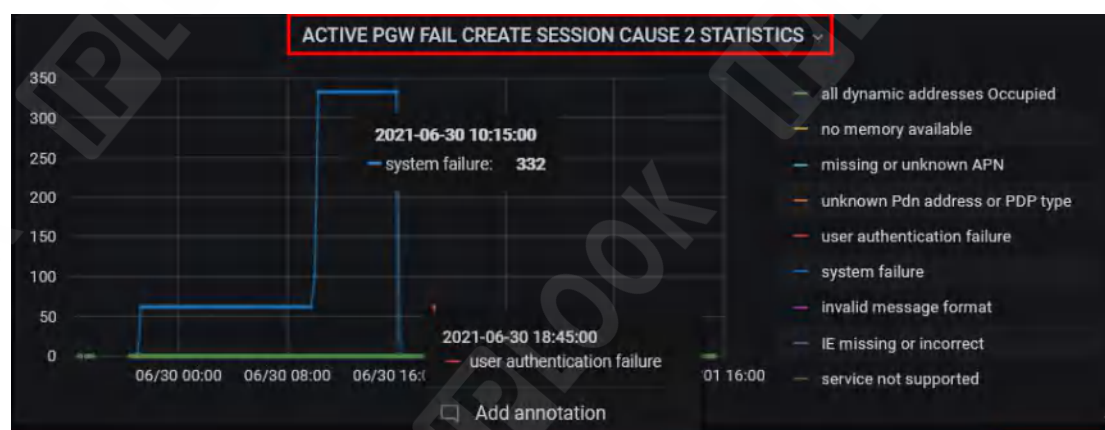


Figure 9.2.2.4.3 active pgw fail create session cause 2 statistics graph  
Statistical parameters and description.

Statistical parameters	instructions
All dynamic addresses Occupied	All dynamic addresses are occupied
no memory available	No memory available
Missing or unknown APN	Missing or unknown APNs
unknown Pdn address or PDP type	Unknown pdn address or pdp type
user authentication failure	User authentication failed
system failure	system error
invalid information format	Invalid information formats
IE missing or incorrect	IE loss or error
service not supported	Services not supported

#### 9.2.2.4.4.Actives pgw dedicate bearer statics

**Path:** Manage-->64GW-->PGW SMStats KPI-->Active PGW DEDICATE BEARER STATISTICS

**Description:** Counts the number of proprietary bearers created and deleted by



PGW in a given time period

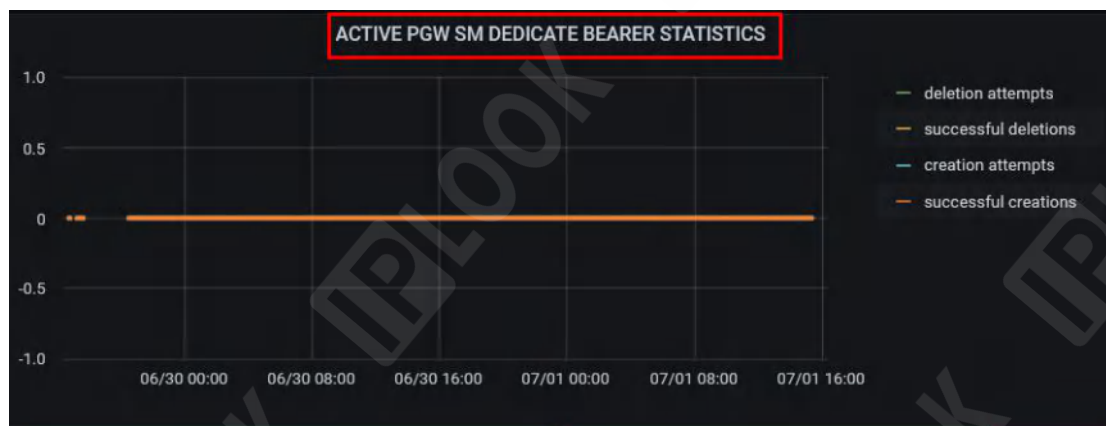


Figure 9.2.2.4.4 active pgw sm dedicate bearer statistics

Statistical parameters and description.

Statistical parameters	instructions
deletion attempts	Attempts to delete numbers
successful deletions	Number of successful deletions
creation attempts	Attempts to create numbers
successful creations	Successful establishment of the number

#### 9.2.2.4.5.Active pgw sm modifications bearer statics

**Path:** Manage-->64GW-->PGW SMStats KPI-->Active PGW SM MODIFICATION BEARER STATISTICS

**Description:** Statistics on the number of modified bearer reasons for PGW in a given period of time

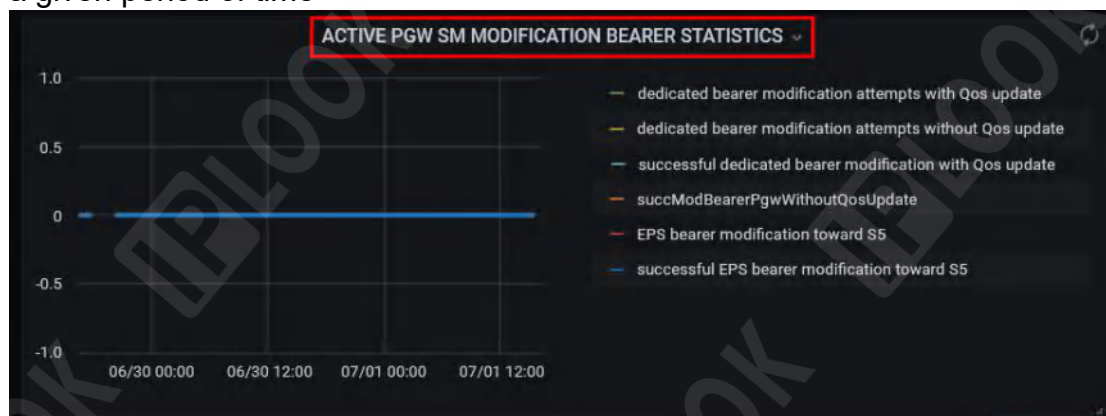


Figure 9.2.2.4.5 active pgw sm modification bearer statistics

Statistical parameters and description.

Statistical parameters	instructions
dedicated bearer modification attempts with Qos update	Number of modification bearer attempts for Qos modifications
dedicated bearer modification attempts without Qos update	Qos unmodified modification of the number of bearer attempts

successful dedicated bearer modification with Qos update	Number of successful modification bearers for Qos modifications
succModBearerPgwWithoutQosUpdate	Qos unmodified modification of the number of successful bearers
EPS bearer modification toward S5	s5 received eps carries the number of modifications
successful EPS bearer modification toward S5	The number of successful modifications to the bearer received by s5

#### 9.2.2.4.6.Active pgw sm numsession statics

**Path:** Manage-->64GW-->PGW SMStats KPI-->Active PGW SM NUMSESSION STATISTICS

**Description:** Counts the number of PGW sessions for different scenarios in a given time period

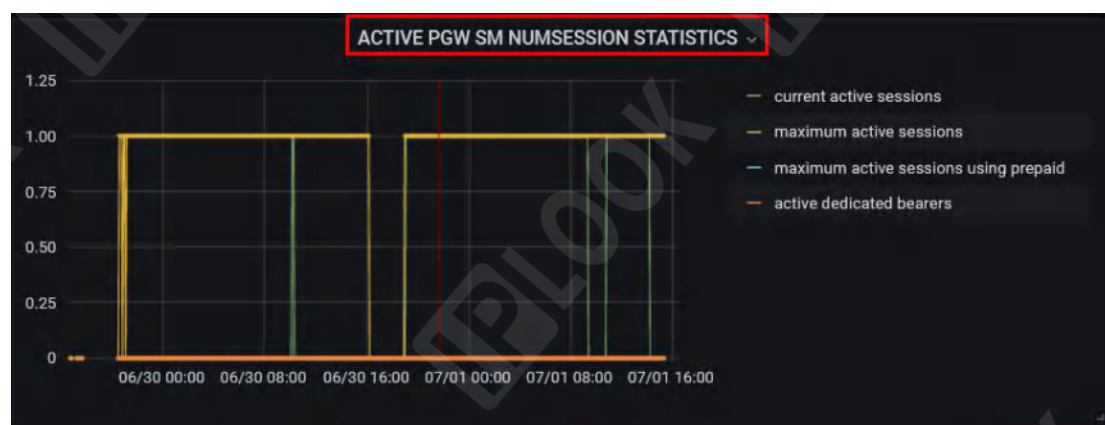


Figure 9.2.2.4.6 active pgw sm numsession statistics

Statistical parameters and description.

Statistical parameters	instructions
current active sessions	Number of currently active sessions
maximum active sessions	Maximum number of active sessions
maximum active sessions using prepaid	Maximum number of sessions using billing
active dedicated bearers	Number of activated proprietary bearers

#### 9.2.2.4.7.ACTIVE PGW SM GTP STATISTICS

**Path:** Manage-->64GW-->PGW SMStats KPI-->Active PGW SM GTP STATISTICS

**Description:** Statistics on the occurrence of GTP packets in PGW within a certain period of time

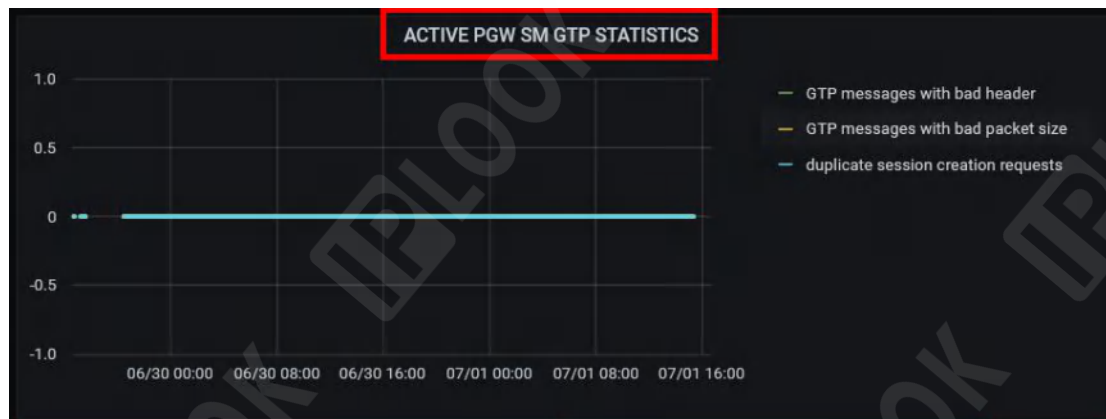


Figure 9.2.2.4.7 active pgw sm gtp statistics

Statistical parameters and description.

Statistical parameters	instructions
GTP messages with bad header	Wrong number of gtp header messages
GTP messages with bad packet size	Number of incorrect GTP packet lengths
duplicate session creation requests	Proprietary session establishment requests

#### 9.2.2.4.8.Active pgw fail create dedicate bearer cause 1 statics

**Path:** Manage-->64GW-->PGW SMStats KPI-->Active PGW FAIL CREATE DEDICATE BEARER CAUSE 1 STATISTICS

**Description:** Statistics on the causes of professional bearer establishment errors in PGW over a certain period of time

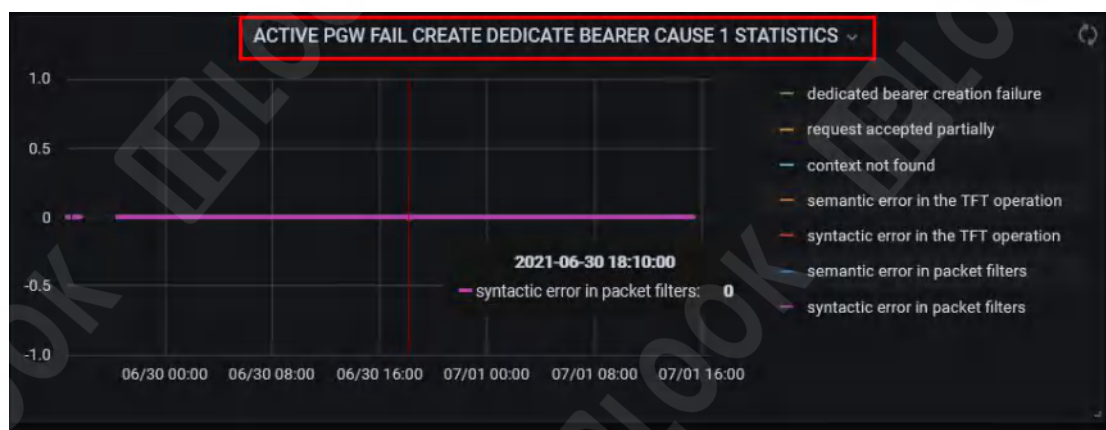


Figure 9.2.2.4.8 active pgw fail create dediacate bearer cause 1 statistics graph

Statistical parameters and description.

Statistical parameters	instructions
------------------------	--------------

dedicated bearer creation failure	Proprietary bearer establishment failure
request accepted partially	Partially successful requests
context not found	Can't find the context
semantic error in the TFT operation	TFT Semantic Error
syntactic error in the TFT operation	TFT syntax error
semantic error in packet filters	Flt semantic error
syntactic error in packet filters	Flt syntax error

#### 9.2.2.4.9.active pgw faul create dedicate bearer cause 2 statics

**Path:** Manage-->64GW-->PGW SMStats KPI-->Active PGW FAIL CREATE DEDICATE BEARER CAUSE 2 STATISTICS

**Description:** Statistics on the causes of professional bearer establishment errors in PGW over a certain period of time

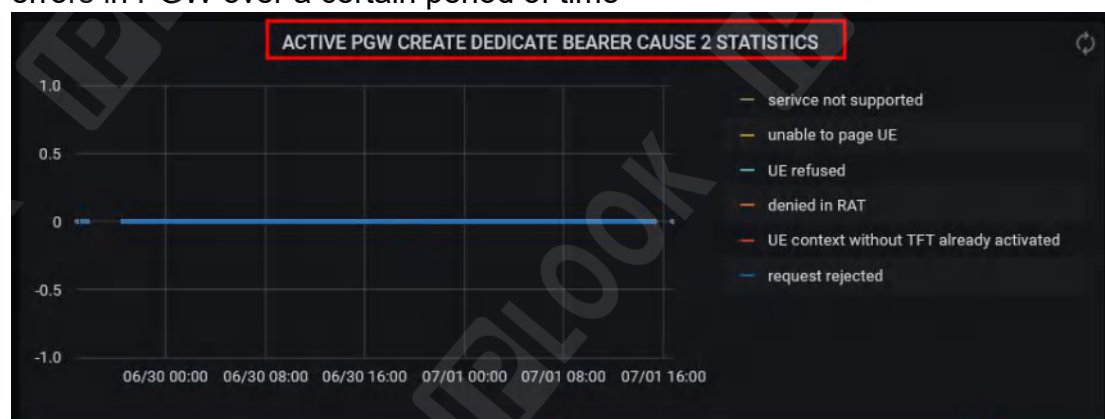


Figure 9.2.2.4.9 active pgw create dedicate bearer cause 2 statistics graph  
Statistical parameters and description.

Statistical parameters	instructions
service not supported	Services not supported
unable to page UE	Disable paging UE
UE refused	UE rejects
denied in RAT	RAT rejects
UE context without TFT already activated	No available TFT
request rejected	Request denied

#### 9.2.2.5. SGW GTPDataStats KPI

**Path:** Manage --> 64GW --> SGW GTPDataStats KPI



Figure 9.2.2.5 sgw gtpDataStats KPI section

### 9.2.2.5.1.ACTIVE SGW GTP S1U INCOMING/OUTGOING PKT STATISTICS

**Path:** Manage-->64GW-->SGW GTPDataStats KPI-->ACTIVE SGW GTP S1U INCOMING/OUTGOING PKT STATISTICS

**Description:** Statistics on the S1U interface data surface of SGW in a certain time period

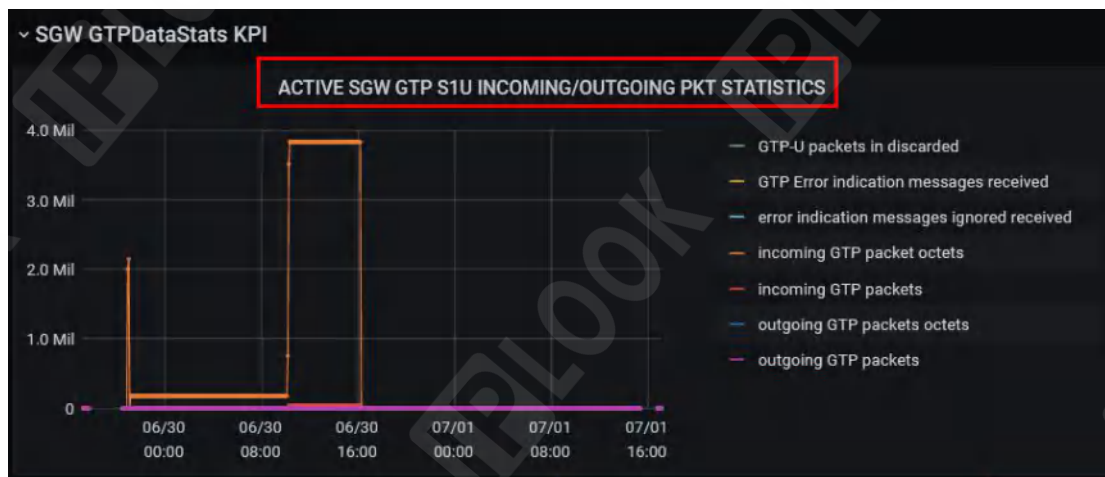


Figure 9.2.2.5.1 active sgw gtp s1u incoming/outgoing pkt statistics  
Statistical parameters and description.

Statistical parameters	instructions
GTP-U packets in discarded	Number of GTP-U packets discarded
GTP Error indication messages received	Number of GTP error packets received
error indication messages ignored received	Number of ErrInd packets received and ignored
incoming GTP packet octets	Number of bytes of GTP packets received
incoming GTP Packets	Number of GTP packets received
outgoing GTP packet octets	Number of bytes of GTP packets sent
outgoing GTP packets	Number of GTP packets sent



### 9.2.2.5.2.ACTIVE SGW GTP S5S8 INCOMING/OUTGOING PKT STATISTICS

**Path:** Manage-->64GW-->SGW GTPDataStats KPI-->ACTIVE SGW GTP S5S8 INCOMING/OUTGOING PKT STATISTICS

**Description:** Statistics on the data surface of SGW's S5S8 interface within a certain period of time

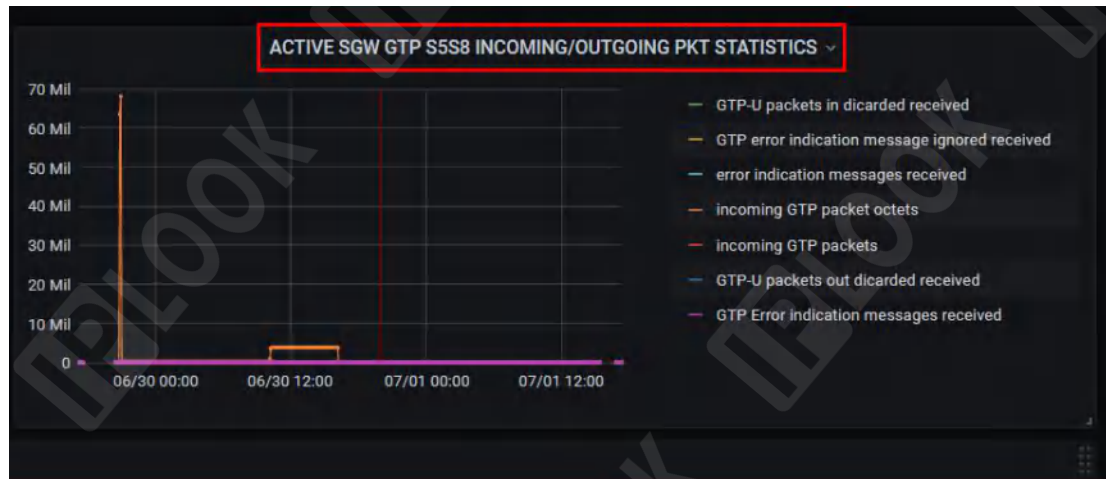


Figure 9.2.2.5.2 active sgw gtp s5s8 incoming/outgoing pkt statistics  
Statistical parameters and description.

Statistical parameters	instructions
GTP-U packets in dicarded received	Number of GTP packets discarded on reception
GTP error indication message ignored received	Number of gtp packets ignored on reception
error indication messages received	Number of ErrInd packets received
incoming GTP packet octets	Number of bytes of GTP packets received
incoming GTP packets	Number of GTP packets received
GTP-U packets out dicarded received	Number of GTP packets discarded while sending
GTP Error indication messages received	Number of GTP ErrInd packets received

### 9.2.2.6. SGW SmStats KPI

**Path:** Manage --> 64GW --> SGW SmStats KPI





Figure 9.2.2.6 SGW SmStats KPI section

### 9.2.2.6.1.ACTIVE SGW SM SESSION STATISTICS

**Path:** Manage-->64GW-->SGW SmStats KPI-->ACTIVE SGW SM SESSION STATISTICS

**Description:** Statistics on SGW sessions over a certain period of time



Figure 9.2.2.6.1 Active sgw sm session statistics

Statistical parameters and description.

Statistical parameters	instructions
session creation attempts requests	Attempt to establish a session request
successful session creation requests	Successful session establishment request
session deletion attempt requests	Attempting to delete a session request
successful session deletion requests	Successful deletion of session request
session deletion failures	Failed to delete session
session creation failures with no response	Session creation failed with no reply

bearer creations through S5/S8 attempts	Trying to build a bearer via s5/s8
ipv4 session creation attempts requests	Attempting to establish an ipv4 session request
successful IPV4 session creations	Successful establishment of ipv4 session

#### 9.2.2.6.2.ACTIVE SGW FAIL CREATE SESSION CAUSE 1 STATISTICS

**Path:** Manage-->64GW-->SGW SmStats KPI-->ACTIVE SGW FAIL CREATE SESSION CAUSE 1 STATISTICS

**Description:** Statistics on the causes of session establishment errors in SGW within a certain time period

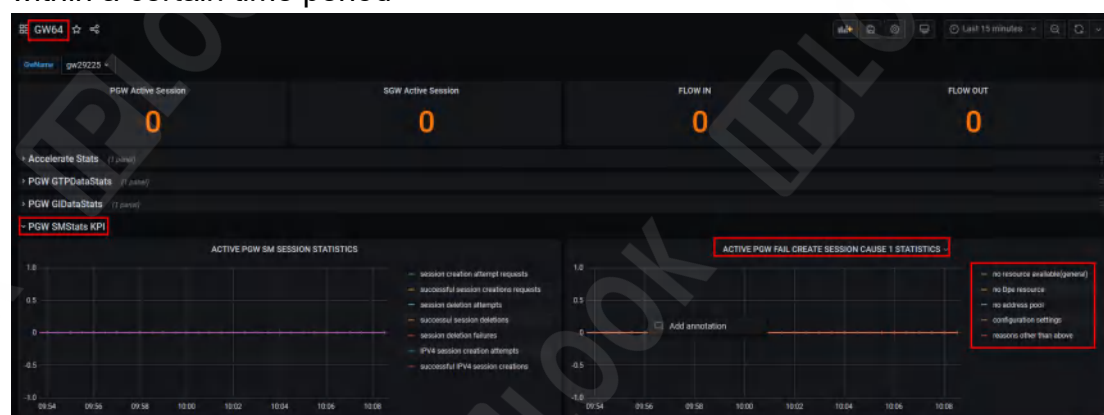


Figure 9.2.2.6.2 active sgw fail create session cause 1 statistics graph  
Statistical parameters and description.

Statistical parameters	instructions
PGW failure	PGW failure
no recourse (general)	Resources not available
no Dpe recourse	No dpe resources available
no memory	No memory available
reason other than listed	Other reasons
Missing or unknown APN	No APN available or using an unknown APN

#### 9.2.2.6.3.ACTIVE SGW FAIL CREATE SESSION CAUSE 2 STATISTICS

**Path:** Manage-->64GW-->SGW SmStats KPI-->ACTIVE SGW FAIL CREATE SESSION CAUSE 2 STATISTICS

**Description:** Statistics on the causes of session establishment errors in SGW within a certain time period

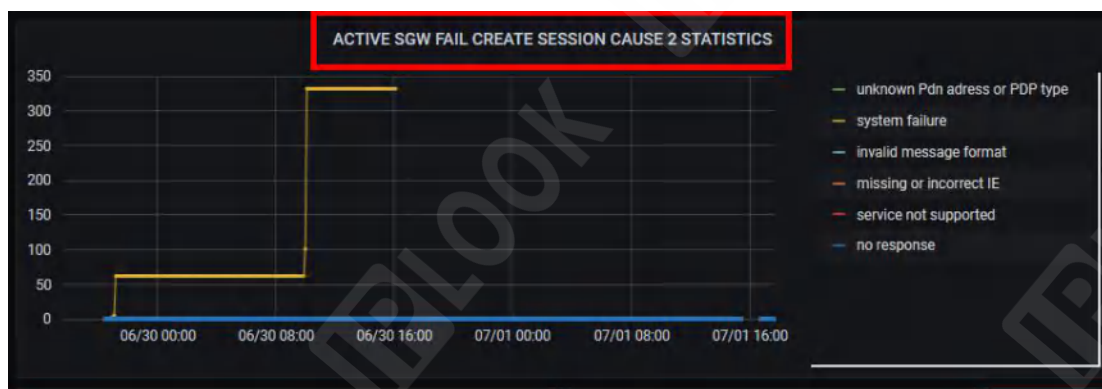


Figure 9.2.2.6.3 active sgw fail create session cause 2 statistics graph  
Statistical parameters and description.

Statistical parameters	instructions
unknown Pdn address or PDP type	Unknown pdn address or pdp type
system failure	system error
invalid message format	Invalid information format
Missing or incorrect IE	Unknown IE or incorrect IE
service not supported	Services not supported
no response	no reply

#### 9.2.2.6.4.ACTIVE SGW SM MODIFICATION BEARER STATISTICS

**Path:** Manage-->64GW-->SGW SmStats KPI-->ACTIVE SGW SM MODIFICATION BEARER STATISTICS

**Description:** Statistics on the number of modified bearer reasons for SGW in a certain period of time

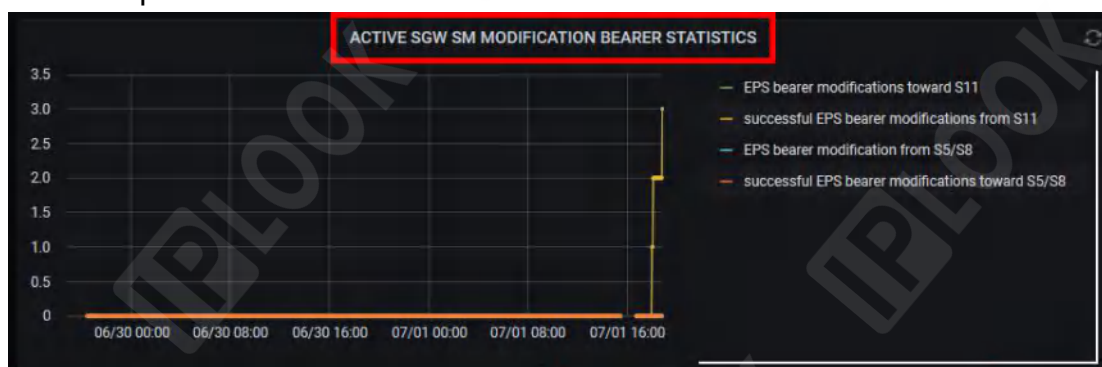


Figure 9.2.2.6.4 Active sgw sm modification bearer statistics  
Statistical parameters and description:

Statistical parameters	instructions
EPS bearer modification toward S11	The number of modified bearers received by s11
successful EPS bearer modifications from S11	The number of successful modification bearers sent by s11
EPS bearer modification from S5/S8	The number of modified bearers sent

	by s5/s8
successful EPS bearer modifications toward S5/S8	Number of successful modifications to bearers received by s5/s8

#### 9.2.2.6.5.ACTIVE SGW SM NUMSESSION STATISTICS

**Path:** Manage-->64GW-->SGW SmStats KPI-->ACTIVE SGW SM NUMSESSION STATISTICS

**Description:** Counts the number of SGW sessions for different situations in a given time

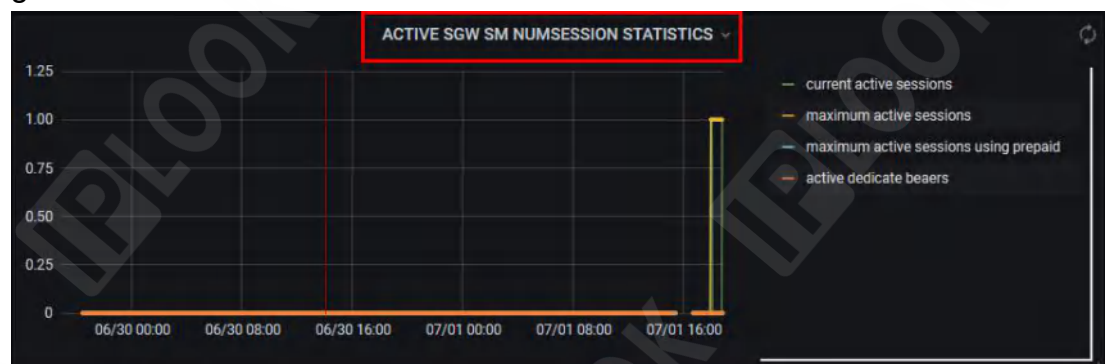


Figure 9.2.2.6.5 Active sgw sm numsession statistics

Statistical parameters and description:

Statistical parameters	instructions
current active sessions	Number of currently active sessions
maximum active sessions	Maximum number of active sessions
maximum active sessions using prepaid	Maximum number of active sessions using billing
active dedicate bearers	Number of activated proprietary bearers

#### 9.2.2.6.6.Active sgw sm dedicate bearer statics

**Path:** Manage-->64GW-->SGW SmStats KPI-->ACTIVE SGW SM DEDICATE BEARER STATISTICS

**Description:** Counts the number of times SGW's proprietary bearers are created and deleted in a given period of time

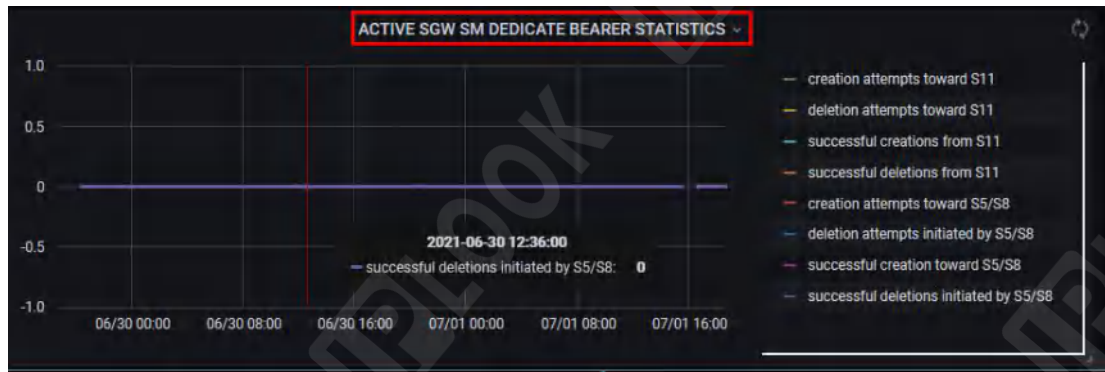


Figure 9.2.2.6.6 Active sgw sm dedicate beareer statistics  
Statistical parameters and description.

Statistical parameters	instructions
creation attempts toward S11	Trying to create s11-oriented interfaces
deletion attempts toward S11	Try to remove the s11-oriented interface
successful creations from S11	Successfully created from s11 interface
successful deletions from s11	Successfully deleted from s11 interface
creation attempts toward S5/S8	Trying to create S5/S8 oriented interfaces
deletion attempts initiated by S5/S8	Trying to delete from s5/s8 interface
successful creation toward S5/S8	Successful creation of S5/S8 oriented
successful deletions initiated by S5/S8	Successfully deleted from s5/s8 interface

#### 9.2.2.6.7.ACTIVE SGW SM GTP STATISTICS

**Path:** Manage-->64GW-->SGW SmStats KPI-->ACTIVE SGW SM GTP STATISTICS

**Description:** Statistics on the occurrence of GTP packets in SGW within a certain period of time

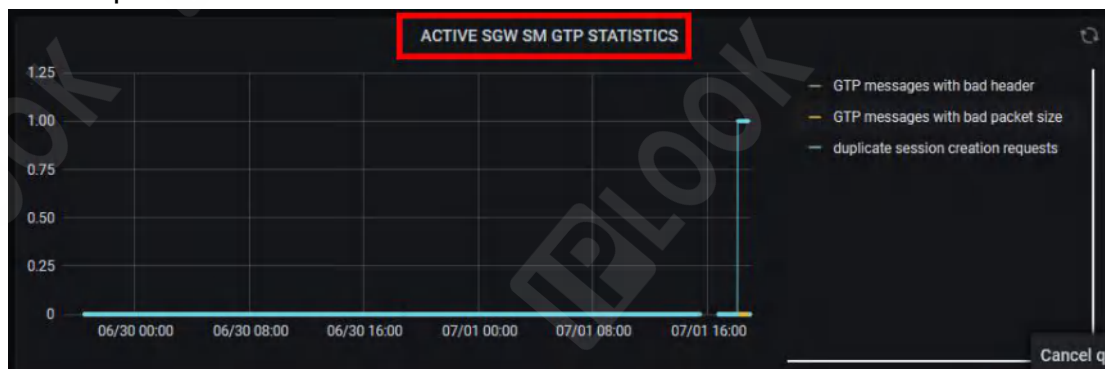


Figure 9.2.2.6.7 active sgw sm gtp statistics



Statistical parameters and description.

Statistical parameters	instructions
GTP messages with bad header	Wrong gtp header
GTP messages with bad packet size	Wrong gtp packet length
duplicate session creation requests	Number of repeat session establishment requests

#### 9.2.2.6.8.Active sgw sm forwarding tunnel statics

**Path:** Manage-->64GW-->SGW SmStats KPI-->ACTIVE SGW SM FORWARDING TUNNEL STATISTICS

**Description:** Counts the number of GTPv2 tunnel forwarding of SGW in a certain period of time

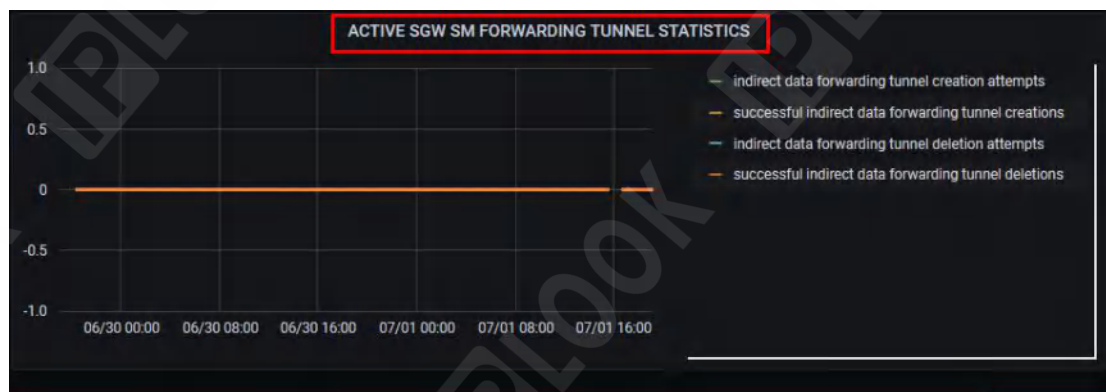


Figure 9.2.2.6.8 Active sgw sm forwarding tunnel statistics

Statistical parameters and description.

Statistical parameters	instructions
indirect data forwarding tunnel creation attempts	Number of indirect forwarding tunnels attempted
successful indirect data forwarding tunnel creations	Number of indirect forwarding tunnels successfully established
indirect data forwarding tunnel deletion attempts	Attempt to delete the number of indirect forwarding tunnels
successful indirect data forwarding tunnel deletions	Number of indirect forwarding tunnels successfully deleted

#### 9.2.2.6.9.ACTIVE SGW SM PAGING STATISTICS

**Path:** Manage-->64GW-->SGW SmStats KPI-->ACTIVE SGW PAGING STATISTICS

**Description:** Statistics of SGW paging in a certain period of time



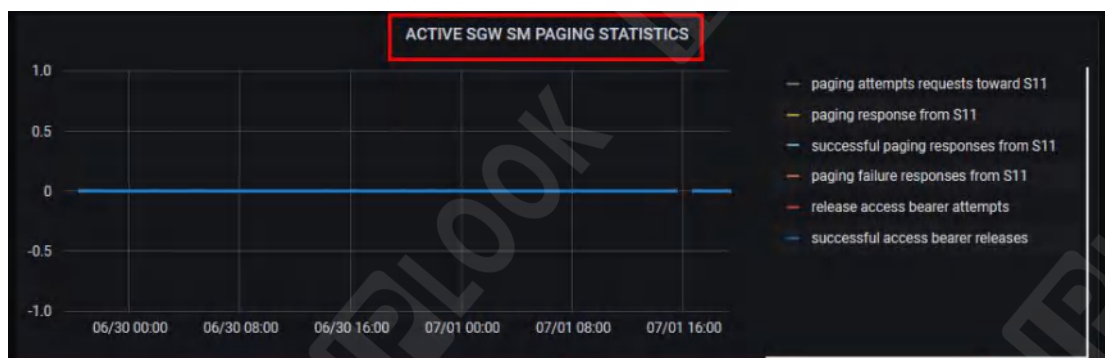


Figure 9.2.2.6.9 active sgw sm paging statistics

Statistical parameters and description.

Statistical parameters	instructions
paging attempts requests toward S11	Number of attempted paging requests received by s11
paging response from S11	Number of paging responses sent by s11
successful paging responses from S11	s11 number of successful paging responses sent
release access bearer attempts	s11 number of access bearers attempted to be released
successful access bearer releases	Number of access bearers successfully released by s11

### 9.2.3. Manage - PCRF

Path: Manage --> PCRF

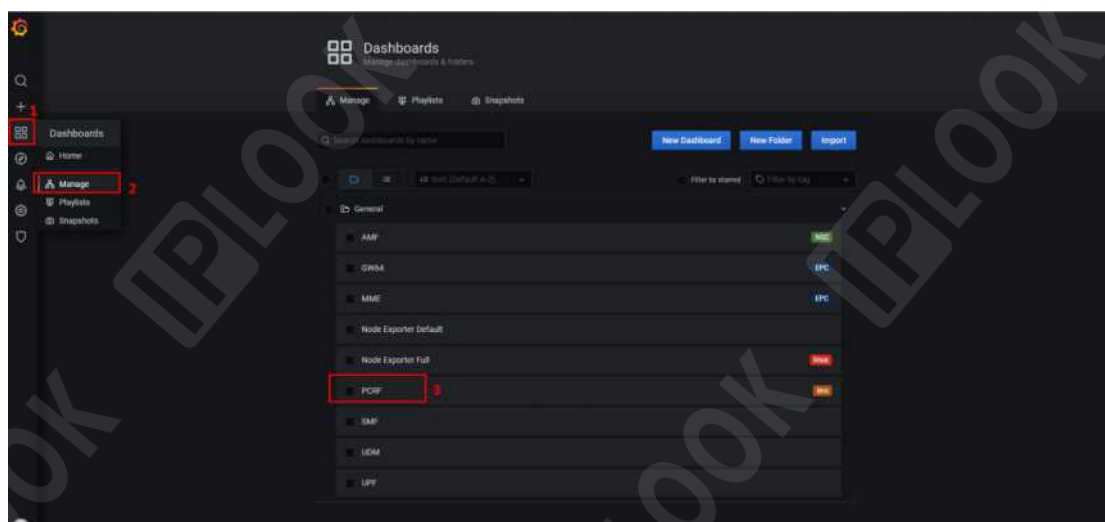


Figure 9.2.3-1 PCRF path

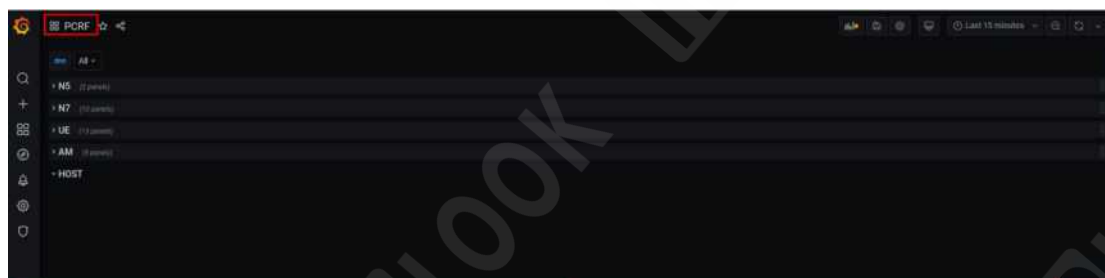


Figure 9.2.3-2 Manage - PCRF page

### 9.2.3.1. Rx

**Path:** Manage-->PCRF-->Rx



Figure 9.2.3.1 Rx paths and pages

#### 9.2.3.1.1.Rx\_Register\_Success\_Rate

**Path:** Manage-->PCRF-->Rx-->Rx\_Register\_Success\_Rate

**Description:** check rx registration success rate

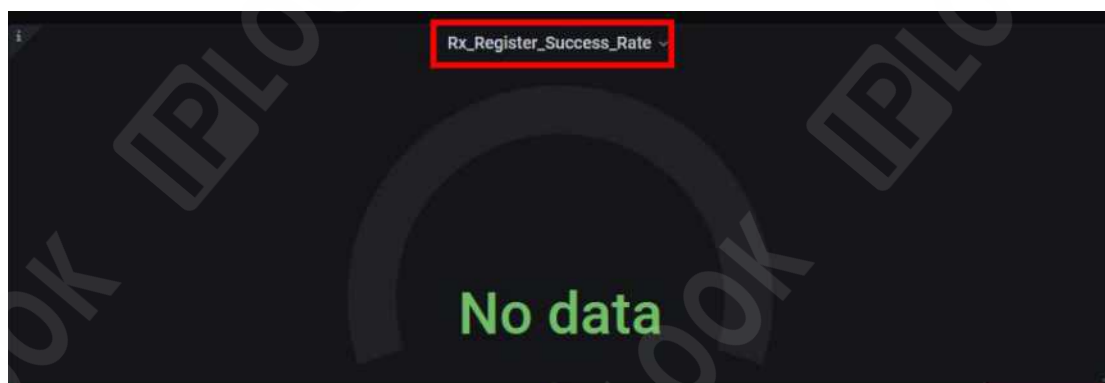


Figure 9.2.3.1.1 rx\_register\_success\_rate statistics

#### 9.2.3.1.2.Rx\_Call\_Success\_Rate

**Path:** Manage-->PCRF-->Rx-->Rx\_Call\_Success\_Rate

**Description:** check rx call success rate

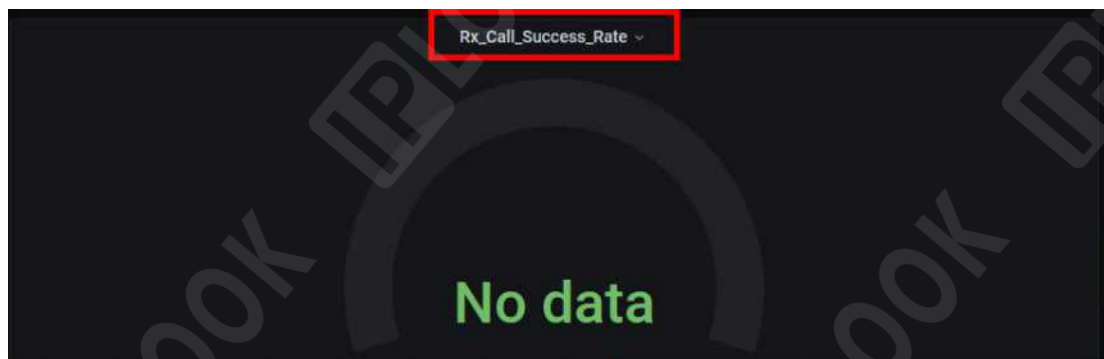


Figure 9.2.3.1.2 rx\_call\_success\_rate statistics

#### 9.2.3.1.3.Rx\_Call\_Max\_Online\_Session

**Path:** Manage-->PCRF-->Rx-->Rx\_Call\_Max\_Online\_Session

**Description:** View the maximum number of online sessions for rx calls



Figure 9.2.3.1.3 rx\_call\_Max\_Online\_session statistics

#### 9.2.3.1.4.Rx\_Register\_Max\_Online\_Session

**Path:** Manage-->PCRF-->Rx-->Rx\_Register\_Max\_Online\_Session

**Description:** View rx registered max online sessions



Figure 9.2.3.1.4 rx\_register\_Max\_Online\_session statistics

### 9.2.3.2. Pcore

**Path:** Manage-->PCRF-->Pcore

**Description:** check pcore usage

#### 9.2.3.2.1.active\_ipcan\_num

**Path:** Manage-->PCRF-->Pcore-->active\_ipcan\_num

**Description:** Total number of current sessions.



Figure 9.2.3.2.1 Active\_ipcan\_num statistics

#### 9.2.3.2.2.Ipcan\_volte\_session\_num

**Path:** Manage-->PCRF-->Pcore--> ipcan\_volte\_session\_num

**Description:** Number of current volte sessions



Figure 9.2.3.2.2 ipcan\_volte\_session\_num statistics

#### 9.2.3.2.3.ipcan\_subscriber\_num

**Path:** Manage-->PCRF-->Pcore--> ipcan\_subscriber\_num

**Description:** Number of current online users



Figure 9.2.3-46 ipcan\_subscriber\_num Statistics

#### 9.2.3.2.4.ipcan\_call\_loss\_rate

**Path:** Manage-->PCRF-->Pcore-->Ipcan\_call\_loss\_rate

**Description:** Current call loss rate



Figure 9.2.3.2.4 lpcan\_call\_loss\_rate statistics

#### 9.2.3.2.5.rar\_success\_rate

**Path:** Manage-->PCRF-->Pcore-->rar\_success\_rate

**Description:** indicates the success rate of rar requests in the most recent kpi reporting cycle



Figure 9.2.3.2.5 rar\_success\_rate statistics

#### 9.2.3.2.6.ccr\_success\_rate

**Path:** Manage-->PCRF-->Pcore-->ccr\_success\_rate

**Description:** Indicates the success rate of ccr-i requests in the most recent kpi reporting cycle





Figure 9.2.3.2.6 ccr\_success\_rate statistics

#### 9.2.3.2.7.ccr\_u\_success\_rate

**Path:** Manage-->PCRF-->Pcore-->ccru\_success\_rate

**Description:** Indicates the success rate of ccr-u requests in the most recent kpi reporting cycle



Figure 9.2.3.2.7 ccru\_success\_rate statistics

#### 9.2.3.3. SPR

**Path:** Manage --> PCRF --> SPR

**Description:**Check spr usage



Figure 9.2.3.3 Paths of SPR and their statistical plots

#### 9.2.3.3.1.SPR\_Requests

**Path:** Manage-->PCRF-->SPR-->SPR\_Requests

**Description:**The number of messages received by the spr process



Figure 9.2.3.3.1-1 SPR\_Requests Statistical Chart

SPR\_Successful\_Requests

**Path:** Manage-->PCRF-->SPR-->SPR\_Successful\_Requests

**Description:**spr Success rate of processing messages



Figure 9.2.3.3.1-2 SPR\_Successful\_Requests Statistical Chart

### 9.2.3.3.2.SPR\_Notifications

**Path:** Manage-->PCRF-->SPR-->SPR\_Notifications

**Description:** spr Number of notifications sent (not used)



Figure 9.2.3.3.2 SPR\_Notifications Statistical Chart

### 9.2.3.4. Diameter

**Path:** Manage-->PCRF-->Diameter

**Description:** Use of the diameter protocol case

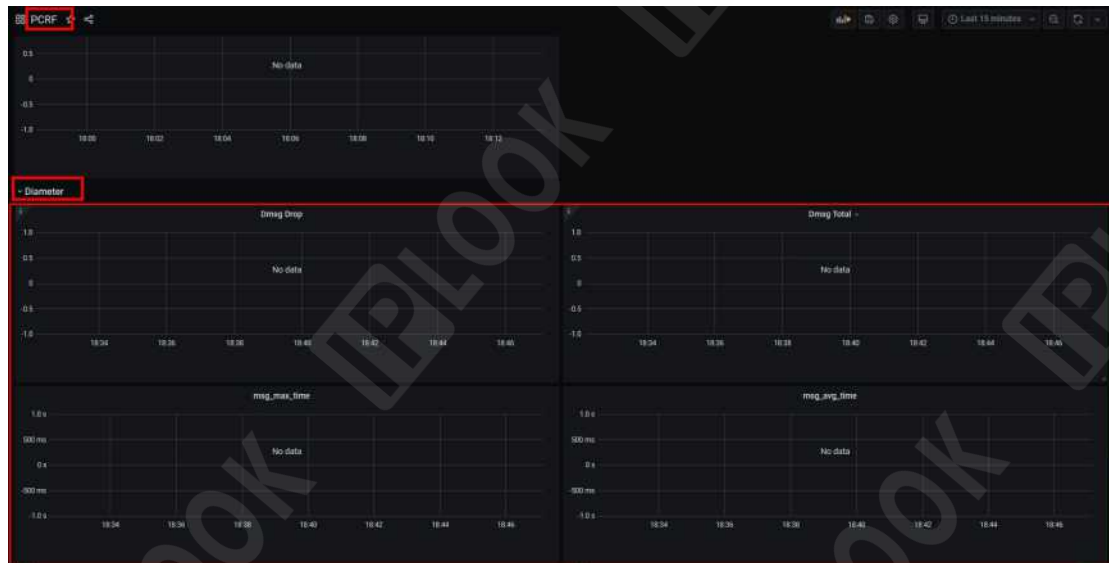


Figure 9.2.3.4 Diameter's path and its statistical graph

#### 9.2.3.4.1.Dmsg Drop

**Path:** Manage-->PCRF-->Diameter-->Dmsg Drop

**Description:** Number of discarded diameter messages



Figure 9.2.3.4.1 Dmsg Drop Statistics Chart

#### 9.2.3.4.2.Dmsg Total

**Path:** Manage-->PCRF-->Diameter-->Dmsg Total

**Description:** Total number of diameters messages received



Figure 9.2.3.4.2 Dmsg Total Statistics Chart

#### 9.2.3.4.3.mag\_max\_time

**Path:** Manage-->PCRF-->Diameter-->mag\_max\_time

**Description:** The maximum time to process a diameter message in the last kpi upload cycle

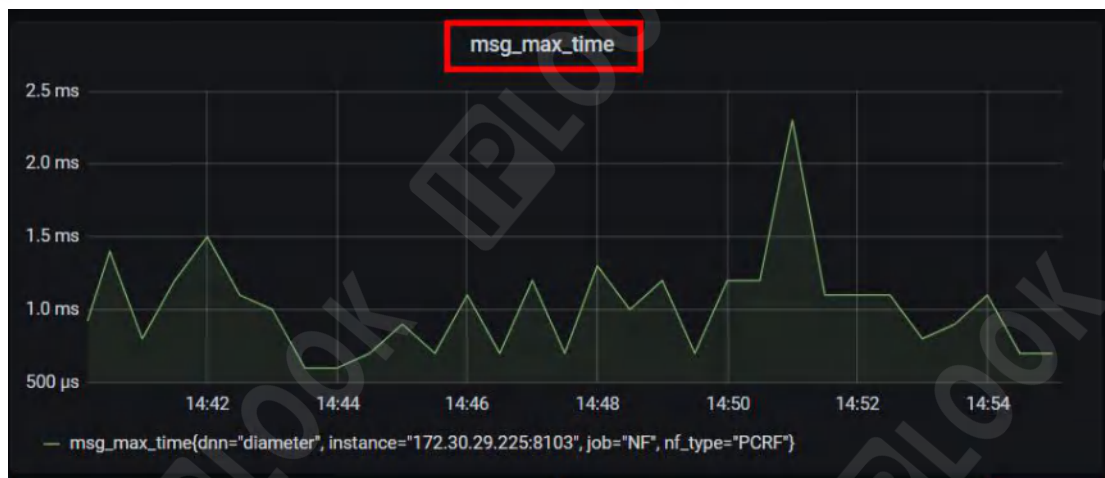


Figure 9.2.3.4.3 msg\_max\_time statistics

#### 9.2.3.4.4.msg\_avg\_time

**Path:** Manage-->PCRF-->Diameter-->msg\_avg\_time

**Description:** The average time to process a diameter message in the most recent kpi reporting cycle

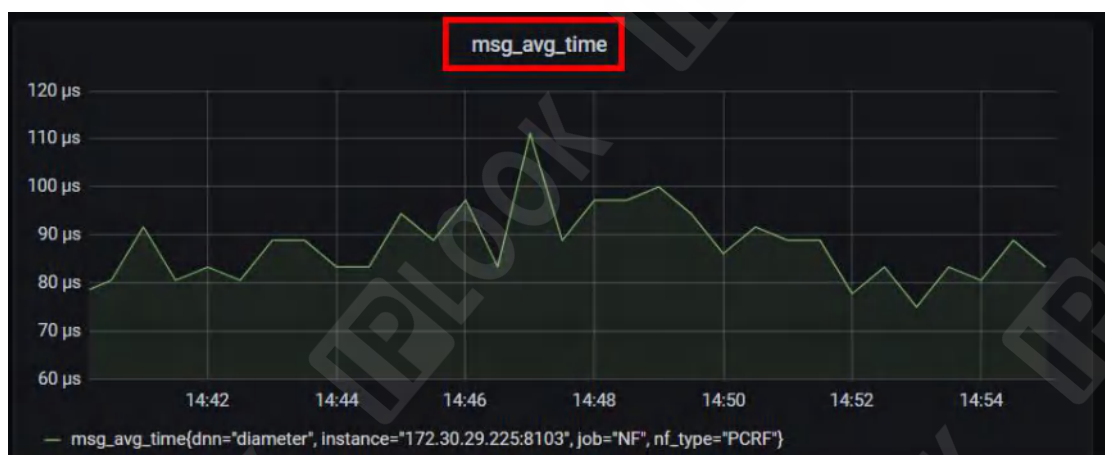


Figure 9.2.3.4.4 msg\_avg\_time statistics

## 9.2.4. Manage - UDM

Path: Manage --> UDM

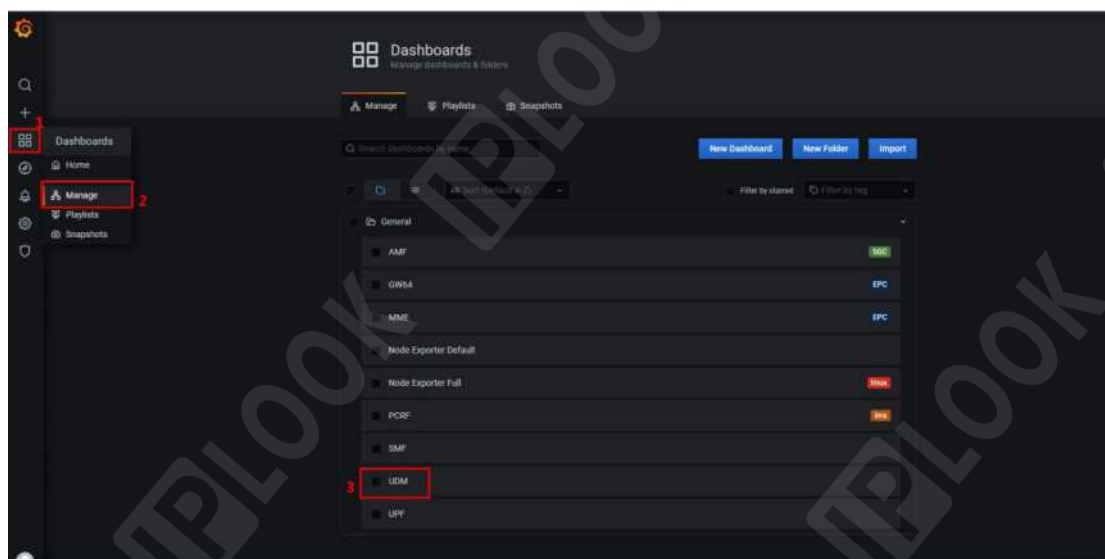


Figure 9.2.4-1 UDM path





Figure 9.2.4-2 UDM page

#### 9.2.4.1. Update location

**Path:** Manage-->UDM-->update location

**Description:** Location modification



Figure 9.2.4.1 Update location statistics chart

Statistical parameters and description.

Statistical parameters	instructions
ULARatNotAll	The location modification response reports that the RAT type is not allowed
ULARoaNotAll	Location changes in response to mid-report roaming access restrictions
ULAFail	Number of failed location modification responses
ULASent	Number of location modification responses
ULASucc	Number of successful location modification responses
ULAUsrUnk	Number of failed location modification responses due to non-existent eps contracted users
ULAUnkSubs	Number of failed location modification responses due to non-existent apn signed user in eps
ULRRecv	Number of times Hss processed location change requests
ULRFail	Number of failed location change requests processed by Hss

#### 9.2.4.2. Reset

**Path:** Manage-->UDM-->reset

**Description:** Reset



Figure 9.2.4.2 Reset Statistics Chart

Statistical parameters and description:

Statistical parameters	instructions
RSRSent	Number of Reset Request messages sent by HSS to MME

RSRFail	Number of failed Reset Request messages sent by HSS to MME
RSABFail	Number of failed Reset Answer messages received by HSS
RSABRecv	Number of successful Reset Answer messages received by HSS

### 9.2.4.3. Notify

**Path:** Manage-->UDM-->notify

**Description:** Check the notify status



Figure 9.2.4.3 Notification statistics chart

Statistical parameters and description.

Statistical parameters	instructions
NOAFail	Number of failed notify answers sent to mme
NOASent	Number of notify answers sent to mme
NOASucc	Number of successful notify answers sent to mme
NOAUnkSerNod	Number of times DIAMETER_ERROR_UNKNOWN_SERVING_NODE is reported in the notify answer sent to mme
NOAUsrUnk	Number of times the notify answer sent to mme reported DIAMETER_ERROR_USER_UNKNOWN
NORFail	Number of failed Notify Request received
NORRecv	Number of Notify Requests received

#### 9.2.4.4. Purge ue

**Path:** Manage-->UDM-->purge ue

**Description:** Check the paging ue status

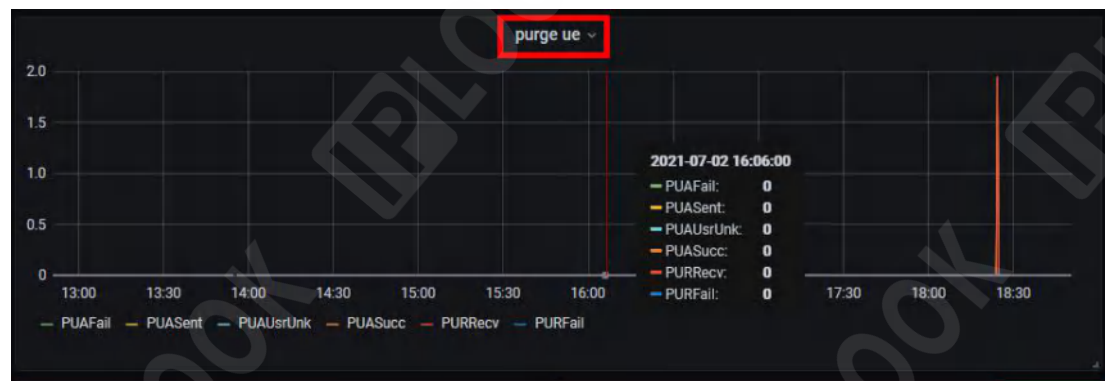


Figure 9.2.4.4 purge ue statistics graph

Statistical parameters and description.

Statistical parameters	instructions
PUAFail	Number of reported failures in the Purge-UE-Answer package
PUASent	Number of Purge-UE-Answer packets sent
PUAUsrUnk	Number of times DIAMETER_USER_UNKNOWN is reported in the Purge-UE-Answer package
PUASucc	Number of successes reported in Purge-UE-Answer packets sent
PURRecv	Number of Purge-UE-Request packets received
PURFail	Number of reported failures in received Purge-UE-Request packets

#### 9.2.4.5. Insert subscriber data

**Path:** Manage-->UDM-->insert subscriber data

**Description:** Check the status of added subscription data



Figure 9.2.4.5 Insert subscriber data statistics graph

Statistical parameters and description.

Statistical parameters	instructions
ISRFail	The number of failures reported in the insert subsData Request messages sent
ISRSent	Number of insert subsData Request messages sent
ISAFail	The number of failures reported in the received insert subsData Answer message
ISARRecv	Number of incoming insert subsData Answer messages

#### 9.2.4.6. Diameter

**Path:** Manage-->UDM-->Diameter

**Description:** Check the use of Diameter



Figure 9.2.4.6 Diameter Statistics Chart

Statistical parameters and description.

Statistical parameters	instructions
DialIndOrCfmFail	Number of failed Diameter transmissions
DialIndOrCfmSent	Diameter Number of times sent
DiaReqIncSucc	Number of successful Diameter requests

DiaRsplncFail	Number of failed Diameter responses
DiaRsplncSucc	Number of successful Diameter replies

#### 9.2.4.7. Delete subscriber data

**Path:** Manage-->UDM-->delete subscriber data

**Description:** View the deletion of subscription data

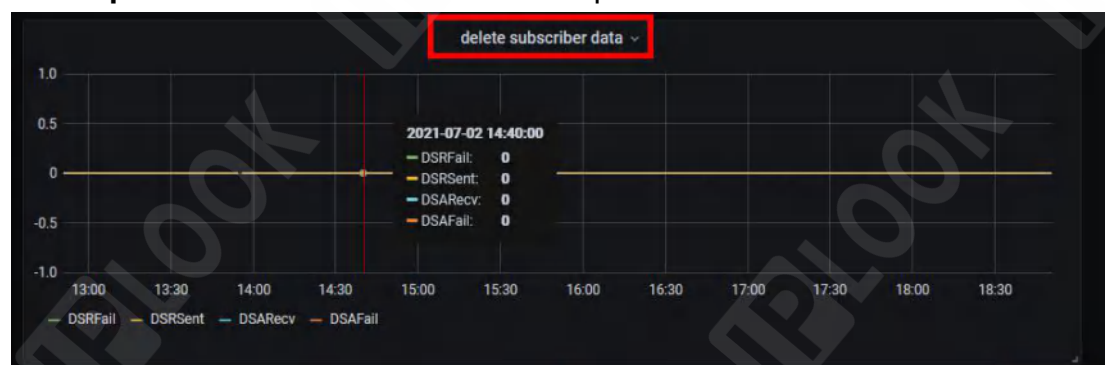


Figure 9.2.4.7 The delete subscriber data statistics graph

Statistical parameters and description:

Statistical parameters	instructions
DSRFail	The number of failures reported in the delete subsData Request message sent by hss
DRSent	Number of delete subsData Request messages sent by hss
DSARcv	Number of delete subsData Answer messages received by hss
DSAFail	The number of failures reported in the delete subsData Answer message received by hss

#### 9.2.4.8. Cancel location

**Path:** Manage-->UDM-->cancel location

**Description:** Checking the cancellation of positioning



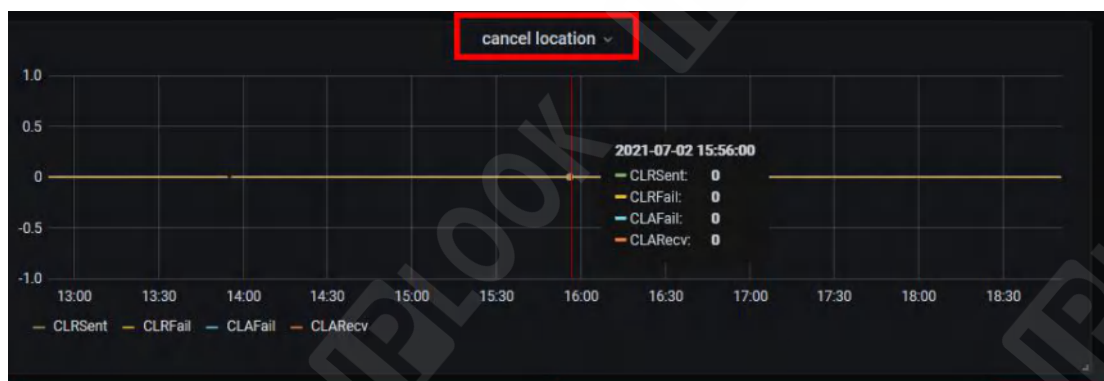


Figure 9.2.4.8 Statistical chart of cancel location

Statistical parameters and description.

Statistical parameters	instructions
CLRSent	Number of unlocation requests sent by hss
CLRFail	Number of failed unlocation requests sent by hss
CLAFail	Number of failed unlocation responses received by hss
CLARecv	Number of unpositioned responses received by hss

#### 9.2.4.9. Authentication information

**Path:** Manage-->UDM-->authentication information

**Description:** Check the status of forensic information

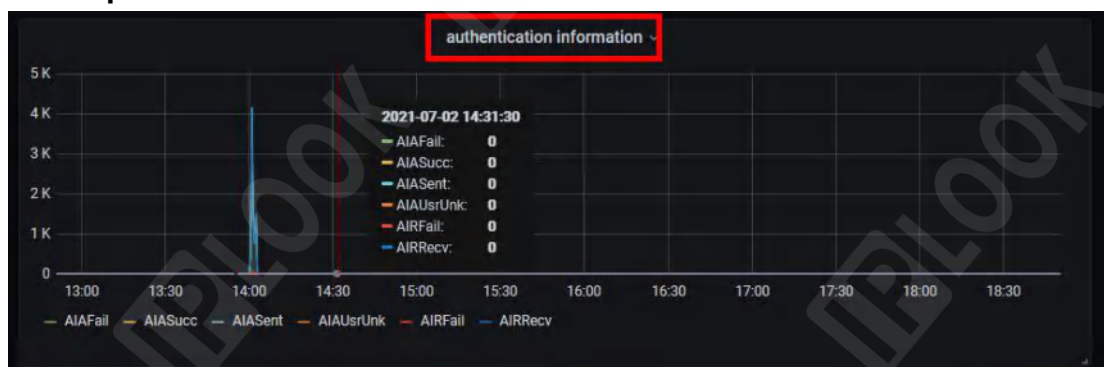


Figure 9.2.4.9 Statistical chart of authentication information

Statistical parameters and description.

Statistical parameters	instructions
AIAFail	The number of failed Authentication-Information-Answer messages sent by hss
AIASucc	The number of successful Authentication-Information-Answer messages sent by hss
AIASent	Number of

	Authenticaiton-Information-Answer messages sent by hss
AIAUsrUnK	Number of failed user signups in Authentication-Information-Answer messages sent by hss
AIRFail	The number of failed Authentication-Information-Request messages received by hss
AIRRecv	Number of Authentication-Information-Request messages received by hss

## 10. Other system functions

### 10.1. License

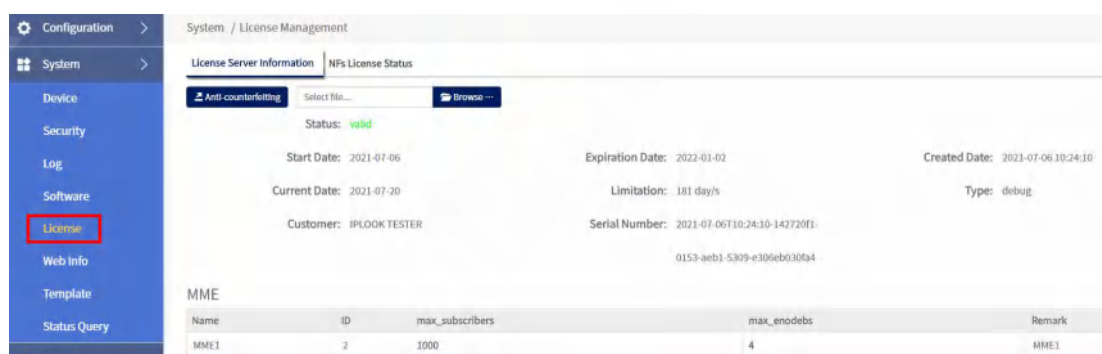


Figure 10.1 License Management path

#### 10.1.1. License Service Information

##### 10.1.1.1. Importing License Files

**Description:** Used to obtain anti-counterfeit code and upload license file

**Path:** System-->License-->License Server Information

**Step:** Click "Browse" to locate the path of license file --> click "Upload" --> click "OK", if If the file is valid, the Status will show a green "valid" value, if the file is invalid, the Status will show a red "in-valid" value.

System / License Management

License Server Information NFs License Status

2 Anti-counterfeiting Select File... Browse

Status: valid

Start Date: 2021-07-06 Expiration Date: 2022-01-02 Created Date: 2021-07-06 10:24:10

Current Date: 2022-07-20 Limitation: 181 day/h Type: debug

Customer: IPLOOK TESTER Serial Number: 2021-07-06T10:24:10-14272003-0153

anti: 5309-e306eb030f4

MME

Name	ID	max_subscribers	max_enodebs	Remark
MME1	2	1000	4	MME1

XGW

Name	ID	maxSession	IsStopWorking	mbir	Remark
XGW1	1	256	TRUE	1000000	XGW1

PCRF

Name	ID	max_sub_count	max_of_session_count	max_sm_session_count	max_ip_can_session_count	gx_peer_count	rx_policy	rx_peer_count	gx_policy	Remark
PCRF1	4	1000	1000	100	100	10	TRUE	10	TRUE	PCRF1

UDM

Name	ID	Backend Subscribers Number				Dynamic Subscribers Number				auc_be_subs_num	Remark
		HLR	SAE-HSS	IMS-HSS	UDM	HLR	SAE-HSS	IMS-HSS	UDM		
UDM1	1										

Figure 10.1.1.1 License Server Information page

## 10.1.2. NFs License Status

**Description:** Check the license status of a network element node

**Path:** System-->License-->NFs License Status

System / License Management

License Server Information NFs License Status

GW

NF Internal ID	License Status	License ID	Maximum Session	MBR	Is Stop Working
gw2968	valid	1	50000	40G	TRUE

MME

NF Internal ID	License Status	max_subscribers	max_enodebs
mme2968	valid	50000	200

UDM

NF Internal ID	License Status	sae_hss_be_subs_num	hlr_be_subs_num	udm_be_subs_num	ims_hss_be_subs_num	hlr_dyn_subs_num	udm_dyn_subs_num	auc_be_subs_r
udm2968	valid	50000	50000	50000	50000	50000	50000	50000

Figure 10.1.2 NFs License Status page

## 10.2. network management information management

**Description:** View and change the title and icon of the webmaster

**Path:** System-->Web Info

The screenshot shows the 'System / Web Info Management' interface. On the left, the 'Website Name Configuration' section has fields for 'Current Site Name' (IPLOOK\_3G Web OMC), 'New Site Name', 'Current Company Name' (IPLOOK), and 'New Company Name'. An 'Update' button is at the bottom. On the right, the 'Company Logo Update' section has a 'Package' dropdown set to '选择文件' (Select File) and a table with columns 'Package Name' and 'Size'.

Figure 10.2-1 Web Info page

### 10.2.1. Change Web Info

**Path:** System--> Web Info->Website Name Configuration/New Company Name

**Step:** Enter the new name on New Site Name and New Company Name and click update

This screenshot is similar to the previous one but highlights the 'New Site Name' and 'New Company Name' input fields with red rectangles. The 'Current Site Name' is 'IPLOOK\_EPC\_OMC' and the 'Current Company Name' is 'IPLOOK\_Network'. The 'Update' button is visible at the bottom of the configuration section.

Figure 10.2.1-1 Changing the Name of Web Info

### 10.2.2. Change Logo

**Path:** System--Web Info-> Company Logo Update

**Step:** Select 'Select File' in Company Logo Update, select the required


Company Logo image from local to upload to Web Info, then click , then you can upload to OAM webmaster.

Figure 10.2.2-1 Changing the company logo

## 10.3. Template Management

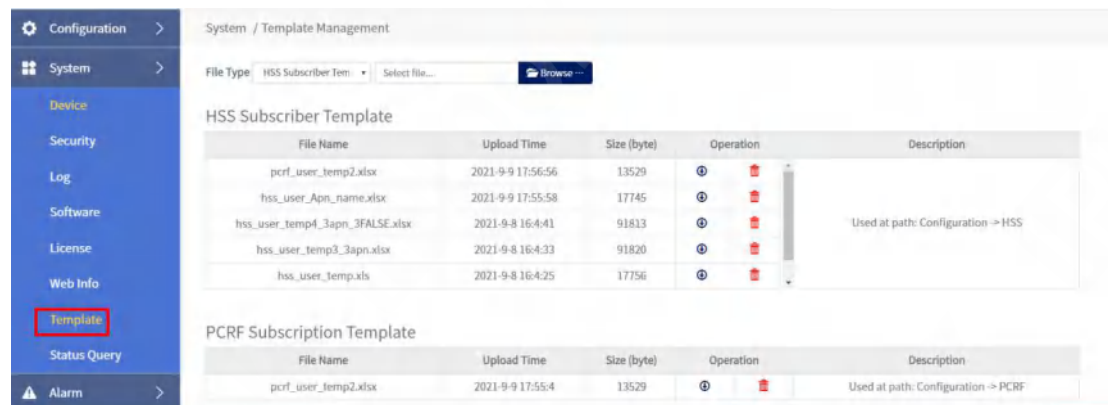


Figure 10.3 Template path

### 10.3.1. Add Template

**Description:** Used to manage HSS user template files and PCRF user template files

**Path:** System-->Template

**Step:** Select HSS Subscriber Template/PCRF Subscription Template in File Type, click "Browse" to locate the path of HSS Subscriber Template/PCRF Subscription Template file --> click "Upload" --> click "OK"

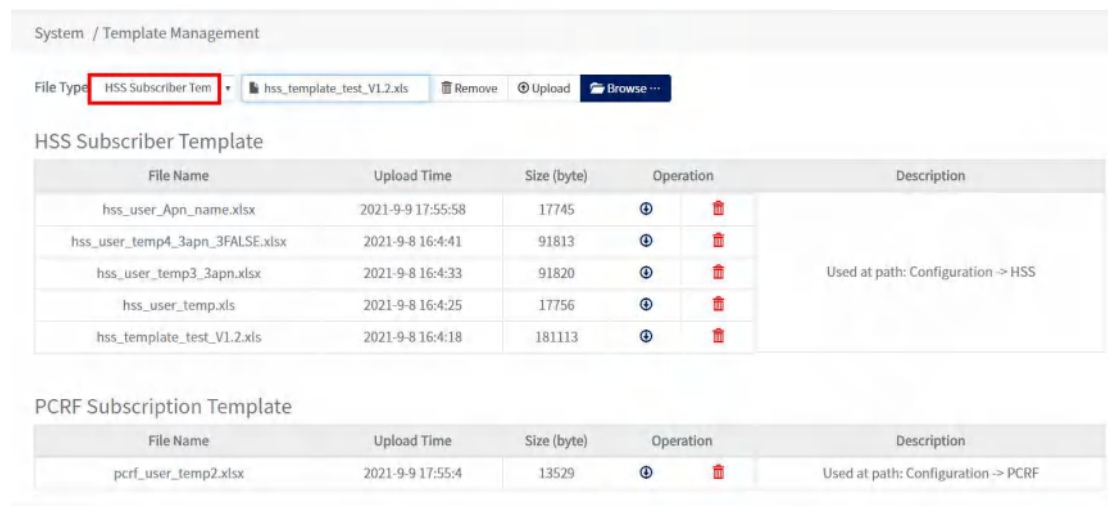


Figure 10.3.1-1 HSS Subscriber Template Add Path

System / Template Management

File Type: PCRF Subscription T subscription template examp Remove Upload Browse ...

### HSS Subscriber Template

File Name	Upload Time	Size (byte)	Operation	Description
hss_user_Apn_name.xlsx	2021-9-9 17:55:58	17745		Used at path: Configuration -> HSS
hss_user_temp4_3apn_3FALSE.xlsx	2021-9-8 16:4:41	91813		
hss_user_temp3_3apn.xlsx	2021-9-8 16:4:33	91820		
hss_user_temp.xls	2021-9-8 16:4:25	17756		
hss_template_test_V1.2.xls	2021-9-8 16:4:18	181113		

### PCRF Subscription Template

File Name	Upload Time	Size (byte)	Operation	Description
pcrf_user_temp2.xlsx	2021-9-9 17:55:4	13529		Used at path: Configuration -> PCRF

Figure 10.3.1-2 PCRF Subscription Template Add Path

### 10.3.2. Download Template

**Path:** System-->Template

**Step:** Select HSS Subscriber Template/PCRF Subscription Template in , to download the template file

System / Template Management

File Type: PCRF Subscription T Select file... Browse ...

### HSS Subscriber Template

File Name	Upload Time	Size (byte)	Operation	Description
hss_user_Apn_name.xlsx	2021-9-9 17:55:58	17745		Used at path: Configuration -> HSS
hss_user_temp4_3apn_3FALSE.xlsx	2021-9-8 16:4:41	91813		
hss_user_temp3_3apn.xlsx	2021-9-8 16:4:33	91820		
hss_user_temp.xls	2021-9-8 16:4:25	17756		
hss_template_test_V1.2.xls	2021-9-8 16:4:18	181113		

### PCRF Subscription Template

File Name	Upload Time	Size (byte)	Operation	Description
pcrf_user_temp2.xlsx	2021-9-9 17:55:4	13529		Used at path: Configuration -> PCRF

Figure 10.3.2 HSS Subscriber Template/PCRF Subscription Template Download Template

### 10.3.3. Delete Template

**Path:** System-->Template

**Step:** Select HSS Subscriber Template/PCRF Subscription Template in , to delete the current template, and then click OK



System / Template Management

File Type: PCRf Subscription T

**HSS Subscriber Template**

File Name	Upload Time	Size (byte)	Operation	Description
hss_user_Apn_name.xlsx	2021-9-9 17:55:58	17745		Used at path: Configuration -> HSS
hss_user_temp4_3apn_3FALSE.xlsx	2021-9-8 16:4:41	91813		
hss_user_temp3_3apn.xlsx	2021-9-8 16:4:33	91820		
hss_user_temp.xls	2021-9-8 16:4:25	17756		
hss_template_test_V1.2.xls	2021-9-8 16:4:18	181113		

**PCRf Subscription Template**

File Name	Upload Time	Size (byte)	Operation	Description
pcrf_user_temp2.xlsx	2021-9-9 17:55:4	13529		Used at path: Configuration -> PCRf

Figure 10.3.3 HSS Subscriber Template/PCRf Subscription Template Deletion Template

## 10.4. Status Search

Description : Provides connection status query of base station information, terminal information, and information of each network element of the system

**Path:** System-->Status Query

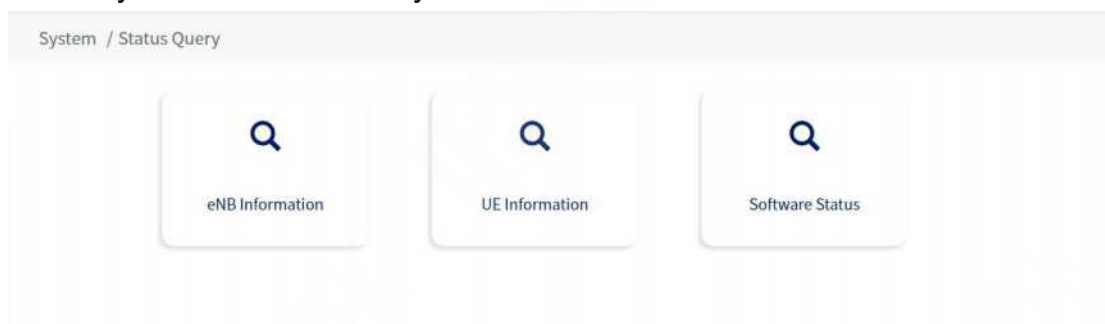


Figure 10.4 Status Query page

### 10.4.1. Base Station Information Search

**Path:** System-->Status Query-->eNB Information

Configuration / MME / mme2968 / Opration / eNB Information

**eNB Information**

Query Type: eNB ID

No.	PLMN	eNB IP	eNB Type	eNB Name	eNB ID
Total 0 record, total 0 page 10 /page					

### 10.4.2. Terminal Information Inquiry

**Path:** System-->Status Query-->UE Information

**Query steps:** fill in the IMSI information or the information in the gNB IP box --> select CONNECTED/IDLE in the User State drop-down box --> click "Query", the query result will be displayed under the list.

**Download steps:** Click the "Download" button --> choose to open or save the downloaded excel file.

Figure 10.4.2 UE Information page

### 10.4.3. Software Status Inquiry

**Path:** System-->Status Query-->Software Status

**Description:** You can view the operational status of each network element, whether it is in working or non-working.

**Step:** Click the "Load" button and the query results will be displayed under the list.

System	Software Type	Status	Health Item	Health Check Result	Cause
epc2968	GW	● normal	process	normal	
			port	normal	
	MME	● normal	process	normal	
			port	normal	
	PCRF	● aborted	process	normal	
			port	aborted	3868 is not listening.
	SCEF	● normal	process	normal	
			port	normal	
	UDM	● normal	process	normal	
			port	normal	

Figure 10.4.3 Software Status screen

## **11. Common problems**

## **12. Concluding remarks**

This manual is suitable for users and field engineers.