

IPLOOK PCRF Web Operation Manual

Catalogue

Compilation history.....	错误！未定义书签。
1 Overview.....	4
2 Network Management Operation Instructions.....	4
2.1 Network management login.....	4
2.1.1 PCRF-Gx interface basic configuration.....	5
2.2.2 Basic configuration of PCRF-Rx interface.....	7
2.2 Configure User Data Subscriber.....	8
2.3 Quota Allocation.....	10
2.4 Configuring Service Information Template Service.....	12
2.4.1 Generate Service according to the template.....	12
2.4.2 Application Service.....	16
2.4.3 VoLTE Service.....	18
2.4.4 Traffic-based dynamic policy service.....	19
2.4.5 Dynamic Policy Service Based on APN.....	24
2.4.6 Based on location zone dynamic strategy service.....	26
2.4.7 Dynamic strategy service based on time period.....	28
2.4.8 Dynamic policy service based on user attributes.....	29
2.5 Service management.....	31
2.6 Subscription.....	33
2.6.1 Service subscription.....	33
2.6.2 Modify the subscription time.....	34
2.6.3 Unsubscribe.....	35
2.7 Maintenance.....	35
2.7.1 Basic Condition Info.....	35
2.7.2 Capture.....	36
2.8 System management.....	36
2.8.1 Software Upgrade Software Mgmt.....	36
2.8.2 Process Management Process Mgmt.....	37
2.8.3 License Management License Mgmt.....	38
2.8.4 PCRF-Web Upgrade Upgrade Omc.....	38
2.9 Alarm Monitoring.....	39
2.9.1 Real-time Alarms.....	39
2.9.2 Historical Alarms.....	39
2.10 Monitoring and Management.....	40
2.11 Notes on upgrading and modifying PLMN.....	41
3 FAQ.....	41
4 Conclusion.....	42

Compilation history

Version	Usage State	Modification Summary	Reviser	Reviewer	Revision date
V1.0	Normal	Create document	Wei Honghua		2019-05-24
V1.1	Normal	Added process restart, port link monitoring status view page	Wei Honghua		2019-09-12
V1.2	Normal	General beautification, detail modification	Xie Haoping		2020-02-07
V1.3	Normal	General beautification, English word modification	Huang Xinhua		2020-04-08

*Document version

Start with v1.0 and add 1 after the decimal point for each modification;

*Status of use

Abolished: no longer used;

Restricted use: special version, used under limited conditions, it is necessary to clearly describe the restricted conditions in the corresponding modification brief description;

Normal: The version in use.

* Reviewer

If there are multiple reviewers or multiple reviewers, fill in the main reviewer or person in charge.

1 Overview

This document provides guidance for the basic configuration of the PCRF system of Guangzhou Aipu Road, interfacing with PCEF, P-CSCF and other network elements, network element process management, system CPU status viewing, and software version monitoring and upgrade.

Supporting related software versions: IPKcrf-1.01.394 and later versions of the software

Configuration steps:

(1) Interface configuration → (2) Add user authentication data → (3) Add quota Quota → (4) Add Service according to the template → (5) Subscribe user service

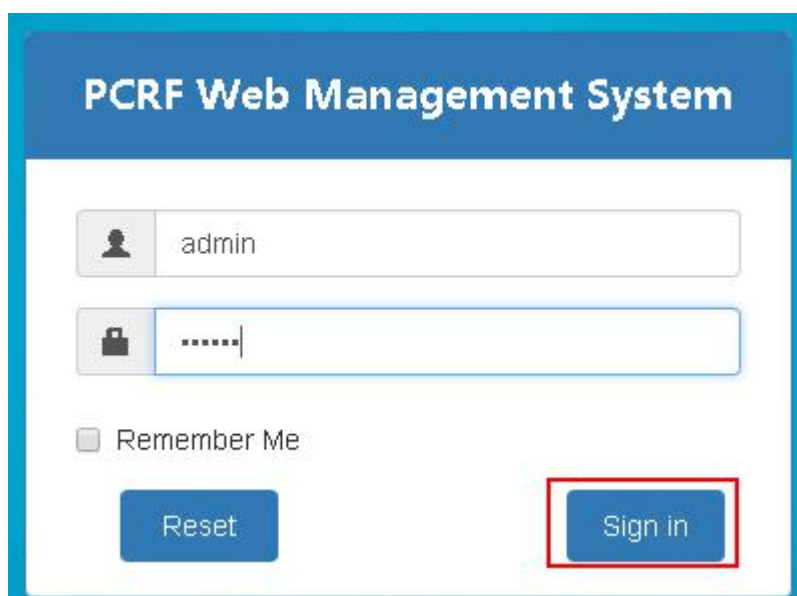
2 Network management operating instructions

2.1 Network Management Login

Using Firefox or Google Chrome, enter the PCR format IP format IP: 8000. The default username and password are admin / 123456 respectively

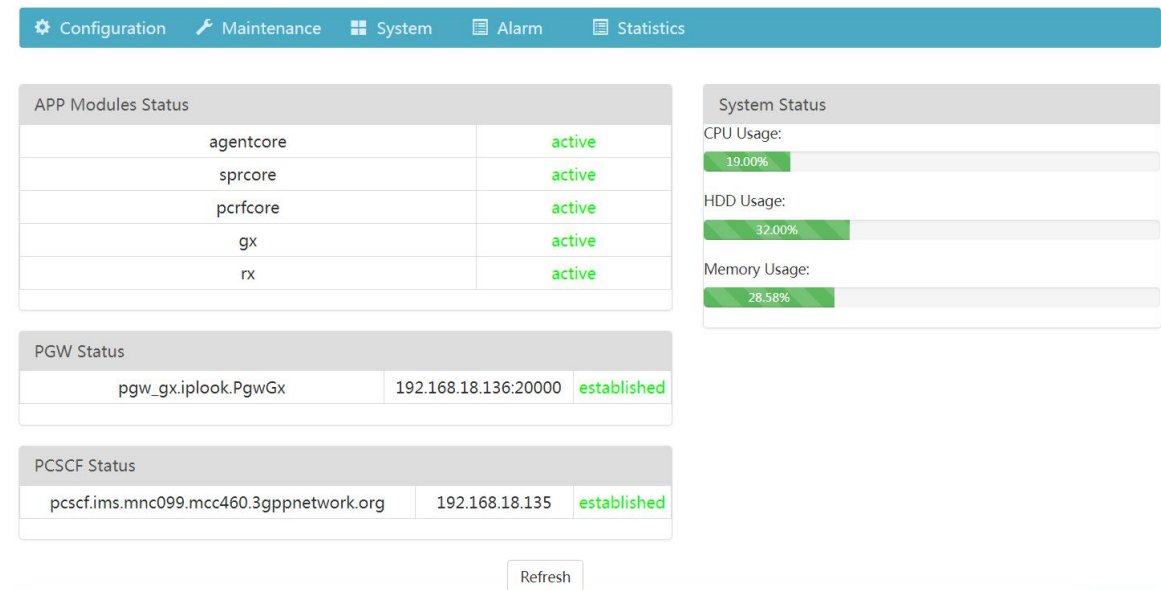


Picture 1



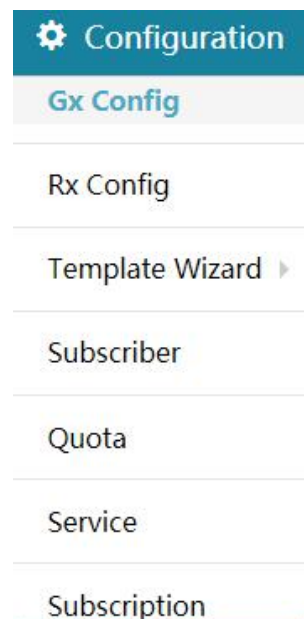
Picture 2

Log in, the first is to display the process status information page of the entire system



Picture 3

2.1.1 Basic configuration of PCRF-Gx interface



PCRF Gx Configuration

FQDN	Realm	IP&Port
pcrf.mnc000.mcc460.3gppnetwork.org	mnc000.mcc460.3gppnetwork.org	192.168.17.183:3869
<input type="button" value="Submit"/>		

PGW PCEF Configuration

FQDN	Realm	IP&Port	Metric
			0
<input type="button" value="Submit"/>			

FQDN	Realm	IP	Metric	Operation
pgw_gx.iplookpcef	pgwsgi	192.168.11.163:0	10	<input type="button" value="Delete"/>

Picture 4 Gx basic configuration

Reference

Gx Local Configuration

FQDN: pcrf.mnc000.mcc460.3gppnetwork.org

Realm: mnc000.mcc460.3gppnetwork.org

IP&Port: 192.168.18.138:3869

Gx Peer Configuration

FQDN: pgw_gx.iplook.PgwGx

Realm: PgwGx

IP&Port: 192.168.18.136:20000

Metric:10

32bit GW

FQDN: name.system-hostname

Realm: interface-name

```
cli>config ggsn profiles-tree diameter-profile show all detailed
name = pgw_gx
parent-name = pgw_node11
app = policy-control
customer-service-context = version1.ccg@iplook.com
system-hostname = iplook.PgwGx
destination-realm = mnc000.mcc460.3gppnetwork.org
destination-host = pcrf.mnc000.mcc460.3gppnetwork.org
interface-name = PgwGx
watchdog-timer = 6
last-assigned-peer-id = 0
report-time-event-in-pm-ext = enable
service-id-supported = true
pp-auth-req-after-resp = true
trans-type = tcp
loadbalance-flag = primary
```

Picture 5 32bit GW-Gx basic configuration

2.1.2 Basic configuration of PCRF-Rx interface

Configuration

Gx Config

Rx Config

Template Wizard

Subscriber

Quota

Service

Subscription

PCRF Rx Configuration

FQDN

pcrf.mnc000.mcc460.3gppnetwork.org

Realm

mnc000.mcc460.3gppnetwork.org

IP&Port

192.168.17.183:3868

Submit

PCSCF Configuration

FQDN

Realm

IP&Port

Metric

Submit

FQDN

pcscf.ims.mnc000.mcc460.3gppnetwork.org

Realm

ims.mnc000.mcc460.3gppnetwork.org

IP

192.168.11.165:0

Metric

10

Operation

Delete

Picture 6 PCRF-Rx basic configuration

Reference

Rx Local Configuration

FQDN: pcrf.mnc000.mcc460.3gppnetwork.org

Realm: mnc000.mcc460.3gppnetwork.org

IP&Port: 192.168.18.138:3868

Rx Peer Configuration

FQDN: pcscf.ims.mnc000.mcc460.3gppnetwork.org

Realm: ims.mnc000.mcc460.3gppnetwork.org

IP&Port: 192.168.18.135:0

Metric:10

2.2 Configure user data Subscriber

Path: Configuration → Subscriber

This page allows users to check, add, delete, and modify operations. Each user uses IMSI as a unique identifier.

Subscriber Management

Subscriber Detailed

IMSI 用户标识	<input type="text"/>	MSISDN	<input type="text" value="移动用户MSISDN号"/>
State 用户状态	<input type="text" value="normal"/>	HmeSrvZon	<input type="text" value="归属服务区"/>
Category 用户类别	<input type="text" value="normal"/>	Station	<input type="text" value="master"/>

用户身份

Picture 7 User configuration item information

Subscriber Detailed

IMSI 用户IMSI号	<input type="text" value="425442242422222"/>
MSISDN 移动用户MSISDN号	<input type="text"/>
State 用户状态	<input type="text" value="normal"/>
HmeSrvZon 归属服务区	<input type="text"/>
Category 用户种类	<input type="text" value="normal"/>
Station 用户组别	<input type="text" value="master"/>
Master Id	<input type="text"/>
Contact Method	<input type="text" value="sms"/>
Sub Terminal Type 用户终端类型	<input type="text" value="iphone, cpe, ue, other"/>
Email	<input type="text"/>

[Modify](#)[Delete](#)[Back](#)

Picture 8 User details

Sub Terminal Type: The user's terminal type is iphone, cpe, ue, other, etc.

Email: Only need to fill in when Contact Method selects Email. 【Temporarily not supported】

When Station selects slave, it is necessary to fill in MasterId [Master IMSI number].

Add in bulk

Batch Subscriber Add

IMSI	460000123456001	MSISDN	8618012340001
State	normal ▼	HmeSrvZon	46000
Category	normal ▼	Station	master ▼
Count	100		

Add

Batch Subscriber Delete

<input checked="" type="radio"/> IMSI	
<input type="radio"/> MSISDN	
Count	1

Delete

Picture 8 Add users in bulk

2.3 Quota Allocation

Path: Configuration → Quota

This page can be configured based on quota related properties.

Quota Model Detailed

Name	pop
Type 配额类型:volume time	volume ▼
Quota Octets 配额下发总的流量,单位为byte	0
Quota Times	0
Monitor Key 用量监控键值	101
Reset Period Type 复位周期类型	month ▼
Reset Date 复位日期	0
Level1 用量登记划分界限	70
Slice Type 切片类型	percent ▼
Slice Percent 切片百分比	0
Slice Octets 切片用量数	0
Slice Times	0
Remain BalanceDeal	add ▼

Modify

Delete

Back

Picture 9 Quota Allocation

Note: when the type of slice type is percent, slice percent is required

When the type of slice type is value, slice octets is required

Monitor Key and Usage Service → Rule → Actions → UsageReport match.If the two are the same, then there will be traffic update requests.

Reference

Quota Model Detailed

Name	quota
Type	volume ▼
Quota Octets	102400000
Quota Times	
Monitor Key	key_12345
Reset Period Type	month ▼
Reset Date	15
Level1	60
Slice Type	percent ▼
Slice Percent	10
Slice Octets	0
Slice Times	0
Remain BalanceDeal	add ▼

Modify
Delete
Back

Picture 10 Quota details

2.4 Configure service information template Service

2.4.1 Build from template Service

Path : Configuration → Template Wizard → Choose any template. Take category service template as an example. The configuration of conditions is based on user attributes, such as user classification. According to the classification of users (such as gold users, silver users, bronze users), set users to use different bandwidth. PCRF issues corresponding strategies.

Tips:

- Firstly, save the basic data of service. See Figure 11. Before saving, you need to check whether the name is the same or not, and then you can proceed to the next step.
- The default configuration of the loading template on the details page is completed, and the user must pull to the bottom of the page and click the orange button "save & complete" to complete the saving. This step is essential. See picture 12.
- After saving, it will automatically transfer to the service page.

Service Basic Information

Name	Category Service	Check		
APN	cmn	ActivateMod	PCEF	
QoSMod	replace	Priority	40	

2 Save & Continue

Picture 11 service Basic data

金牌用户

Action

120Mbps

AMBRDL	120000000	bps
AMBRUL	120000000	bps
PreemptionCapability	ENABLED	
ARPLLevel	1	
QCI	9	
PreemptionVulnerability	ENABLED	

Close Save

Policy

Policy

cs_policy

cs_gold_rule

Rule Basic In

ConditionOp	and	Operation	installRule
Type	dynamic	Priority	40

Save

Conditions

Condition Group	Condition	Group Relation	Group Desc
cs_gold_cg	cs_gold_cond	and	gold condition group.

Save

Actions

Action Group	Action
cs_gold_ag	QosAction
	DefaultBearerQos

Silver user

Condition Group

cs_gold_cg

Actions

cs_silver_rule

Rule Basic Info

ConditionOp

and

Operation

installRule

Type

dynamic

Priority

40

Save

Conditions

Condition Group	Condition	Group Relation	Group Desc
cs_silver_cg	cs_silver_cond	and	silver condition group.

Actions

Action Group	Action
cs_silver_ag	QosAction
	DefaultBearerQos

Action

12Mbps

AMBRDL

12000000

bps

AMBRUL

12000000

bps

PreemptionCapability

DISABLED

ARPLLevel

1

QCI

9

PreemptionVulnerability

ENABLED

Close

Save

Bronze
users

120 Kpbs

cs_normal_rule

Rule Basic Information

ConditionOp

Type

Conditions

Condition Group	Condition	Group Relation	Group Desc
cs_normal_cg	cs_normal_cond	and	normal condition group.

Save

Actions

Action Group	Action
cs_normal_ag	QosAction
	DefaultBearerQos

Close Save

AMBRDL 120000 bps

AMBRUL 120000 bps

PreemptionCapability ENABLED

ARPLLevel 1

QCI 9

PreemptionVulnerability ENABLED

cs_silver_rule

Rule Basic Information

ConditionOp and Operation InstallRule

Type dynamic Priority 40

save

Conditions

Condition Group	Condition	Group Relation	Group Desc
cs_silver_cg	cs_silver_cond	and	silver condition group.

Save

Actions

Action Group	Action
cs_silver_ag	QosAction
	DefaultBearerQos

Save & Complete

Picture 12 service Partial detailed configuration

Usage Report: Quota definition monitoring key for business level. Monitoring key is sent to PCEF through rules. When PCEF reports traffic usage, it needs to carry the monitoring key instruction to deduct it to a specific business category.

Default Bearer QoS: This action is used to change the default hosted QoS of 4G users, such as QCI and APN AMBR.

2.4.2 Application function service AF Service

Chinese: 应用功能服务

Path: Configuration→Template Wizard→AF Service

Service Basic Information

Name	AF Service	Check		
APN	ims	ActivateMod	PCEF	
QoSMod	replace	Priority	0	

2. Save & Continue

120 Mbps

AMBRDL	120000000	bps
AMBRUL	120000000	bps
PreemptionCapability	ENABLED	
ARPLLevel	1	
QCI	5	
PreemptionVulnerability	ENABLED	

Close

Save

Policy

Policy

afs_policy

Policy Desc

apn signaling

ty for VoLTE

usage.

afs_rule

Rule Basic Information

ConditionOp

and

Operation

installRule

Type

dynamic

Priority

0

Save

Conditions

Condition Group	Condition	Group Relation	Group Desc
-----------------	-----------	----------------	------------

Actions

Action Group	Action
afs_ag	DefaultBearerQos

Save & Complete

If no other parameters need to be modified, drop them down to the end

afs_rule

Rule Basic Information

ConditionOp	and	Operation	installRule
Type	dynamic	Priority	0

save

Conditions

Condition Group	Condition	Group Relation	Group Desc
-----------------	-----------	----------------	------------

Actions

Action Group	Action
afs_ag	DefaultBearerQos

Save & Complete

Saving successfully will automatically jump to the service page

Configuration

Maintenance

System

Alarm

Statistics

Gx Config

Rx Config

Template Wizard

Subscriber

Quota

Service

Subscription

Service Basic Information

AF Service	Delete
Category Service	Delete
Time Range Service	Delete
Usage Service	Delete
VoLTE Service	Delete

2.4.3 VoLTE Voice service VoLTE Service

Chinese: VoLTE 语音服务

Path: Configuration→Template Wizard→VoLTE Service

Service Basic Information

Name	VoLTE Service	Check		
APN	ims	ActivateMod	AF	
QoSMod	replace	Priority	0	

Save & Continue

If there is no other parameter modification, you can directly pull it to the end and click “Save & Complete”

Conditions

Condition Group	Condition	Group Relation	Group Desc	
vs_video_cg	vs_video_cond	and	VoLTE service video condition group.	Save

Actions

Action Group	Action
vs_video_ag	QosAction

Save & Complete

If saved successfully, it will be automatically transferred to the service page

Configuration Maintenance System Alarm Statistics

Gx Config Rx Config Template Wizard Subscriber Quota **Service** Subscription

Service Basic Information

Service Name	Operation
AF Service	Delete
Category Service	Delete
Time Range Service	Delete
Usage Service	Delete
VoLTE Service	Delete

2.4.4 Dynamic policy service based on traffic Usage Service

Chinese: 基于流量的动态策略

Path: Configuration→Template Wizard→Usage Service

Quota: Select the quota template you want to associate 【configuration of quota】

APN: Match whether there is initial rule installation according to the name of APN

An example of dynamic strategy control based on traffic:

quota	Threshold level	Threshold value	Usable interval	QoS strategy	Threshold strategy	Quota reset cycle
5G	Normal	none	0 ~ 70%	MBRUL: 1 Mbit/s MBRDL: 4 Mbit/s	Enabled	Monthly reset
	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	

Reality: when the quota runs out, the user's rate has been completely limited.

Service Basic Information

Name	Usage Service	Check	Quota	pop
APN			ActivateMod	PCEF
QoSMod	replace		Priority	10

4 Save & Continue

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

Action

AMBRDL	4 Mbit/s	4000000	bps
AMBRUL	1 Mbit/s	1000000	bps
PreemptionCapability	DISABLED		
ARPLLevel	1		
QCI	9		
PreemptionVulnerability	ENABLED		

Close

Save

us_level1_rule

AMBRDL	1 Mbit/s	1000000	bps
AMBRUL	1 Mbit/s	1000000	bps
PreemptionCapability	DISABLED		
ARPLLevel	1		
QCI	9		
PreemptionVulnerability	ENABLED		

Close

Save

Condition Group	Condition	Group Relation	Group Desc	
us_level1_cg	us_level1_cond	and	usage level1 condition group.	<div>Save</div>

Action Group	Action
us_level1_ag	UsageReport
	QosAction
	DefaultBearerQos

The screenshot shows a configuration modal for a policy rule. The modal contains the following fields:

- AMBRDL: 128 kbit/s, 128000 bps
- AMBRUL: 128 kbit/s, 128000 bps
- PreemptionCapability: DISABLED
- ARPLLevel: 1
- QCI: 9
- PreemptionVulnerability: ENABLED

The AMBRDL and AMBRUL fields are highlighted with a red box. The background shows a table for Conditions and a table for Actions.

Condition Group	Condition	Group Relation	Group Desc
us_exhaust_cg	us_exhaust_cond	and	usage exhaust condition group.

Action Group	Action
us_exhaust_ag	UsageReport
	QosAction
	DefaultBearerQos

The three levels of monitorkey need to be changed to be consistent with that in quota, which is the reported monitoring key value of traffic usage

Action

MonitorKey

key_12345

Close Save

If there is no other parameter modification, pull it to the end and click "save & complete"

Actions

Action Group	Action
us_level1_ag	UsageReport
	QosAction
	DefaultBearerQos

Save & Complete

Configuration Maintenance System Alarm Statistics

Gx Config Rx Config Template Wizard Subscriber Quota **Service** Subscription

Service Basic Information

AF Service	Delete
Category Service	Delete
Time Range Service	Delete
Usage Service	Delete
VoLTE Service	Delete

Saving successfully will automatically jump to the service page

2.4.5 Dynamic policy service based on APN Apn Service

Chinese: 基于 APN 的动态策略

Path: Configuration→Template Wizard→Apn Service

Service Basic Information

Name	Apn Service	Check		
APN	cmnet	ActivateMod	PCEF	
QoSMod	replace	Priority	100	

2 Save & Continue

Policy

as_policy

Condition

Attribute

IPSession.APN

Operation

equal

RightValue

cmnet

RightType

value

Close

Save

as_rule

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

Saving successfully will automatically drop to the service page

Configuration

Gx Config

Rx Config

Template Wizard

Subscriber

Quota

Service

Subscription

Maintenance

System

Alarm

Statistics

Service Basic Information

AF Service	Delete
Category Service	Delete
Time Range Service	Delete
Usage Service	Delete
VoLTE Service	Delete

2.4.6 Dynamic policy service based on location area Service Zone

Service

Chinese: 基于位置区的动态策略

Path: Configuration→Template Wizard→Service Zone Service

Service Basic Information			
Name	Service Zone Service	<input type="checkbox"/> Check	
APN	cmnet	ActivateMod	PCEF
QoSMod	replace	Priority	60

3 Save & Continue

Condition

Attribute	IPSession.MCCMNC
Operation	equal
RightValue	46000
RightType	value

Close Save

Rule Basic Info

ConditionOp: and Operation: installRule

Type: dynamic Priority: 60

Save

Conditions

Condition Group	Condition	Group Relation	Group Desc
szs_cg	szs_cg_cond	and	service zone condition group.

Save

Actions

Action Group	Action
szs_ag	QosAction
	DefaultBearerQos

Save & Complete

Saving successfully will automatically drop to the service page

Gx Config

Rx Config

Template Wizard ▶

Subscriber

Quota

Service

Subscription

Service Basic Information

AF Service	Delete
Apn Service	Delete
Category Service	Delete
Service Zone Service	Delete
Time Range Service	Delete
Usage Service	Delete
VoLTE Service	Delete

2.4.7 Dynamic policy service based on time period Time Range Service

Chinese: 基于时间段的动态策略



Examples of dynamic strategy control based on time period:


Different QoS policies for users in different time periods of each day

Rule name	时间段	QoS 策略
trs_other_rule	00:00:00 – 18:59:59 22:00:01 – 23:59:59	MBRUL: 512 kbit/s MBRDL: 1 Mbit/s
trs_time_rule	19:00:00 – 22:00:00	MBRUL: 1 Mbit/s MBRDL: 2 Mbit/s

Path: Configuration→ Template Wizard→Time Range Service

Service Basic Information

Name	Time Range Service 	Check		
APN	cmnet 	ActivateMod	PCEF	
QoSMod	replace	Priority	30	

 Save & Continue

Condition

Attribute	System.DateTime
Operation	equal
RightValue	15:43:12-18:43:12
RightType	value

Close Save

Rule Basic Information

ConditionOp	and	Operation	installRule
Type	dynamic	Priority	30

Save

Conditions

Condition Group	Condition	Group Relation	Group Desc
trs_time_cg	trs_time_cond	and	user define time range condition group.

Save

Actions

Action Group	Action
trs_time_ag	QosAction
	DefaultBearerQos

2.4.8 Dynamic policy service based on user attribute Category Service

Chinese: 基于用户属性的动态策略

用户属性	QoS 策略
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

Path: Configuration→ Template Wizard→Category Service

Service Basic Information

Name	Category Service	Check		
APN	cmnet		ActivateMod	PCEF
QoSMod	replace		Priority	40

Save & Continue

Action

AMBRDL	2 Mbit/s	2000000	bps
AMBRUL	2 Mbit/s	2000000	bps
PreemptionCapability	ENABLED		
ARPLLevel	1		
QCI	9		
PreemptionVulnerability	ENABLED		

Close Save

cs_gold_rule

Rule Basic Information

ConditionOp	and	Operation	InstallRule
Type	dynamic	Priority	40

Save

Conditions

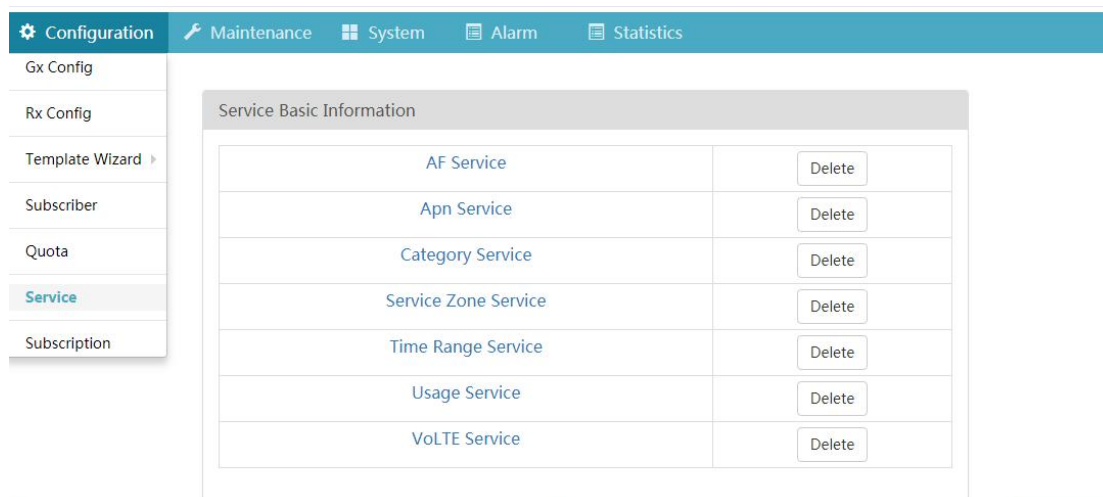
Condition Group	Condition	Group Relation	Group Desc
cs_gold_cg	cs_gold_cond	and	gold condition group.

Save

Actions

Action Group	Action
cs_gold_ag	QosAction
	DefaultBearerQos

Saving successfully will automatically drop to the service page

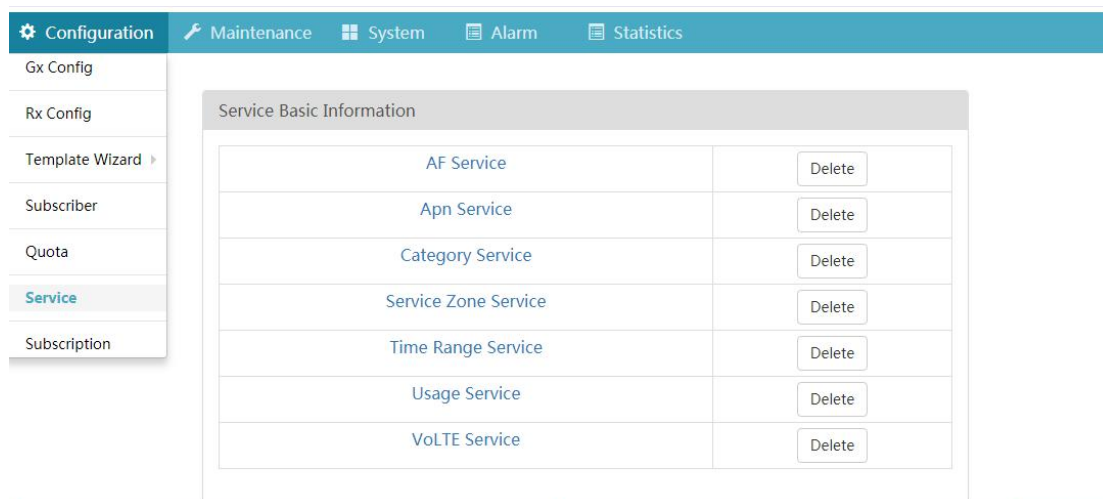


Service Basic Information	
AF Service	Delete
Apn Service	Delete
Category Service	Delete
Service Zone Service	Delete
Time Range Service	Delete
Usage Service	Delete
VoLTE Service	Delete

2.5 service Management

Path: Configuration → Service

This page allows you to query, delete, and modify the service.



Service Basic Information	
AF Service	Delete
Apn Service	Delete
Category Service	Delete
Service Zone Service	Delete
Time Range Service	Delete
Usage Service	Delete
VoLTE Service	Delete

Operation scenario: deploying voice over LTE applications requires the cooperation of Rx interface and GX interface to provide end-to-end reliable quality assurance. For example, when IMS users make a volte call, AF (i.e. P-CSCF of IMS domain) sends a resource establishment request to PCRF through RX interface, and reports session related attributes, such as application ID, media type, media stream status, media stream description, etc. to PCRF. PCRF makes policy judgment according to the information reported by AF and locally configured business policies, and sends the generated QoS rules to PCEF (policy enforcement and charging enforcement function), which is controlled by PCEF.

In this scenario, data application and volte application use two independent APNs (access point name). When users use the volte service, different bandwidth is distributed to users according to different service types, such as voice and video, and different strategies are implemented.

Business name	Simple description	Dynamic policy control	Application scenario example
AF Service	Streaming business		
Apn Service	Apn Business		
VoLTE Service	Voice VOLTE service		
Category Service	User type business	According to the types of users, different policies are issued to different levels of users	Different strategies are implemented based on user level such as gold medal, silver medal and ordinary user..
Time Range Service	Time period business	Through users' time use habits or network congestion, different strategies are used in different time periods.	Bandwidth control based on some time of day
Service Zone Service	Service area business	Dynamic strategy control based on location area	Local service area, non local service area
Usage Service	Traffic based services	PCC accumulates user traffic. When the cumulative traffic reaches the defined threshold, users in the service can use different strategies or network resources.	(1) Perform an action when the specified threshold is reached. (2) Perform different actions according to different threshold levels.

When the speed limit is needed, it can be modified: Actions → Default Bearer QoS [AMBRDL、AMBRDL]

tips：APN-Aggregated-Max-Bitrate-UL AVP When an action group is added, it is configured by referencing "AMBRUL" under action defaultbearerQoS

APN-Aggregated-Max-Bitrate-DL AVP is configured by referencing "AMBRDL" under action defaultbearerqos when adding action group.
APN-Aggregated-Max-Bitrate-UL AVP

Describes the approximate maximum uplink rate of QoS at the APN (access point name) level.

When the AVP is sent from PCEF to PCRF, it indicates the default maximum uplink rate of APN level reported by PCEF to PCRF.

When the AVP is sent from PCRF to PCEF, it indicates the maximum uplink rate of APN level authorized by PCRF to PCEF.

2.6 User service subscription

Path: Configuration → Subscription

Tips: You can batch add subscriptions and unsubscribe. Subscriptions are the binding between users and services.

Configuration
Maintenance
System
Alarm
Statistics

Subscription Mgmt
Batch Subscription

Batch Subscription

IMSI	<input type="text"/>	Service	0 selected ▼
Start Time	2020-04-08 22:19:08	End Time	2020-05-08 22:19:08
Count	1		

Add

Batch Subscription Cancel

IMSI	<input type="text"/>	Count	1
------	----------------------	-------	---

Unsubscription

2.6.1 Service subscription

Template
addition

Configuration
Maintenance
System
Alarm
Statistics

Subscription Mgmt
Batch Subscription

Batch Subscription

IMSI	<input type="text"/>	Service	0 selected ▾
Start Time	2020-04-08 22:19:08	End Time	2020-05-08 22:19:08
Count	1		

Add

Batch Subscription Cancel

IMSI	<input type="text"/>	Count	1
------	----------------------	-------	---

Unsubscription

2.6.2 Modify subscription time

Configuration
Maintenance

Subscription Mgmt
Batch Subscription

Edit Subscption

IMSI	460000123456005
Service	AF Service
Start Time	2019-05-06 11:47:53
End Time	2019-06-06 11:47:53

Close
Save

460000123456005	Apn Service	Edit	Unsubscription
460000123456005	VoLTE Service	Edit	Unsubscription
460000123456006	AF Service	Edit	Unsubscription
460000123456006	Apn Service	Edit	Unsubscription
460000123456006	VoLTE Service	Edit	Unsubscription
460000123456007	AF Service	Edit	Unsubscription

Showing 1 to 7 of 1017 entries
Next ▶ 7 / Page

2.6.3 Unsubscribe

Configuration
Maintenance
System
Alarm
Statistics

Subscription Mgmt

Batch Subscription

Batch Subscription

IMSI		Service	0 selected ▾
Start Time	2020-04-08 22:20:28	End Time	2020-05-08 22:20:28
Count	1		

Add

Batch Subscription Cancel

IMSI	460000123456001	Count	100
------	-----------------	-------	-----

Unsubscription

2.7 Maintenance

2.7.1 Basic status information

Path: Maintenance → Basic Info

Configuration
Maintenance
System
Alarm
Statistics

Basic Info

APP Modules Status

agentcore	active
sprcore	active
pcrfcore	active
gx	active
rx	active

PGW Status

pgw_gx.iplook.PgwGx	192.168.18.136:20000	established
---------------------	----------------------	-------------

PCSCF Status

pcscf.ims.mnc099.mcc460.3gppnetwork.org	192.168.18.135	established
---	----------------	-------------

System Status

CPU Usage:

20.00%

HDD Usage:

32.00%

Memory Usage:

28.94%

2.7.2 Capture

Path: Maintenance → Capture

Configuration Maintenance System Alarm Statistics

Basic Info

Capture

Pcrf Packet Capturing

Interface Name	Protocol Type	IP Port (Multi ports use)	Time Span
any	any		5sec

Start

Packet Info

Package Name	Size
admin_capture_20191023-114136.pcap	1.2M

Download

2.8 System Management

2.8.1 System upgrade Software Mgmt

Path: System → Software Mgmt

Upgrade steps: (1) click "select file" to upload the PCRF application package to be upgraded locally; (2) if the upload is successful, there will be an application package under "package name"; (3) if the application package is selected, click "upgrade", the application package will be successfully upgraded and loaded, and will be in "inactive" Zone "has its relevant information; (4) click" switch "to switch the zone, that is, to apply the latest application package to the active zone.

Software Mgmt

Software Upgrade

Package

选择文件 未选择任何文件

Name

Progress

Load Info

Active Zone

Load

IKPcrf-1.01.394-Ra_7.1.20

Build Date

2019-09-07 00:24:44

Version

1.01.394

Inactive Zone

Load

Build Date

Version

Switch

Package Name

Size

Upgrade

Delete

2.8.2 Process Management

Path: System → Process Mgmt

This page is mainly used to restart the process and query the monitoring status of ports and links.

[Configuration](#)
[Maintenance](#)
[System](#)
[Alarm](#)
[Statistics](#)

Progress Mgmt

Process Status

Agent Core	Active	restart
Spr Core	Active	restart
Pcrf Core	Active	restart
Gx	Active	restart
Rx	Active	restart

Port Status

GX	3869
RX	3868

Link Status

GX	null
RX	null

Refresh

2.8.3 license Management

Path: System → License Mgmt

2.8.4 PCRF-Web Upgrade OMC

Path: System → Upgrade Omc

Upgrade steps: (1) click "select file" to upload the network management compression package of pcrf-web to be upgraded locally; (2) if the upload is successful, it will be displayed below. Check the compression package and click "upgrade". This operation will take several seconds.

Configuration
Maintenance
System
Alarm
Statistics

Version Information

Web Version	4.900
Build Time	2020-03-25 01:48:57

OMC-WEB Upgrade

Package
选择文件 未选择任何文件
Name
Progress

	Package Name	Size
<input type="radio"/>	pcrfWeb_471.tar.gz	12M
<input type="radio"/>	pcrfWeb_478.tar.gz	12M
<input type="radio"/>	pcrfWeb_489.tar.gz	12M
<input type="radio"/>	pcrfWeb_490.tar.gz	12M
<input type="radio"/>	pcrfWebMgr	274
<input type="radio"/>	pcrfWebMgr_467.tar.gz	12M
<input type="radio"/>	pcrfWebMgr_468.tar.gz	12M

3
Upgrade
Delete

2.9 Alarm monitoring

2.9.1 Real-time Alarm

Path: Alarm → Active Alarm

Configuration
Maintenance
System
Alarm
Statistics

Active Alarm
History Alarm

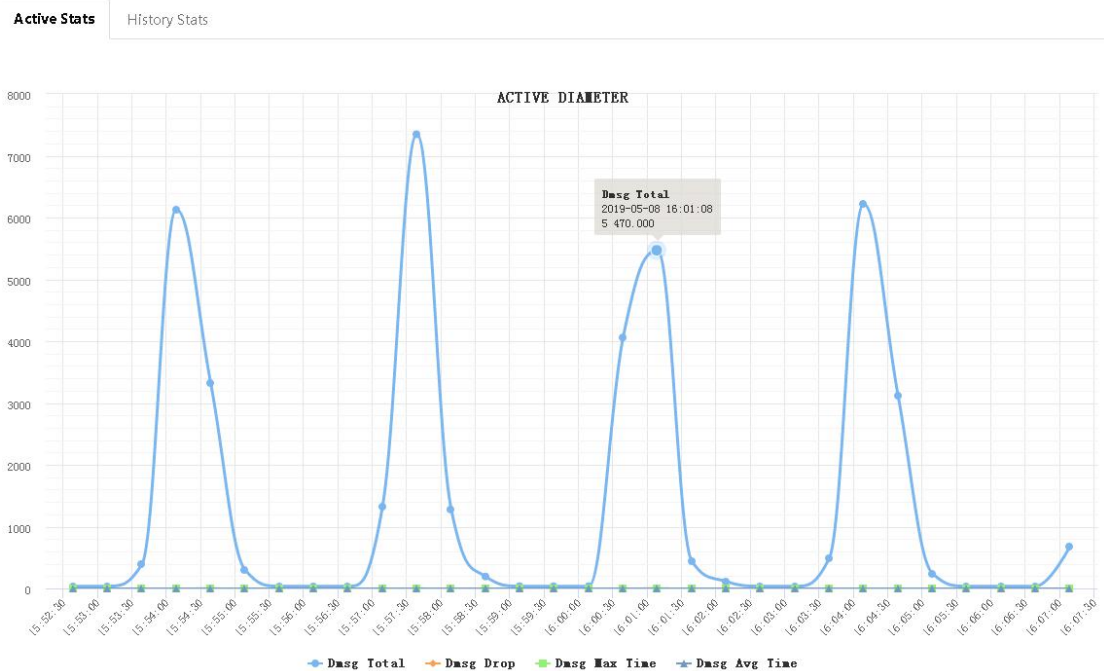
Time	Content	Type	Level	Status
2019-05-08 16:01:21	[System] host:[host1] cpu usage over level:[1].	getActivateAlarm	major	open

2.9.2 Historical warning

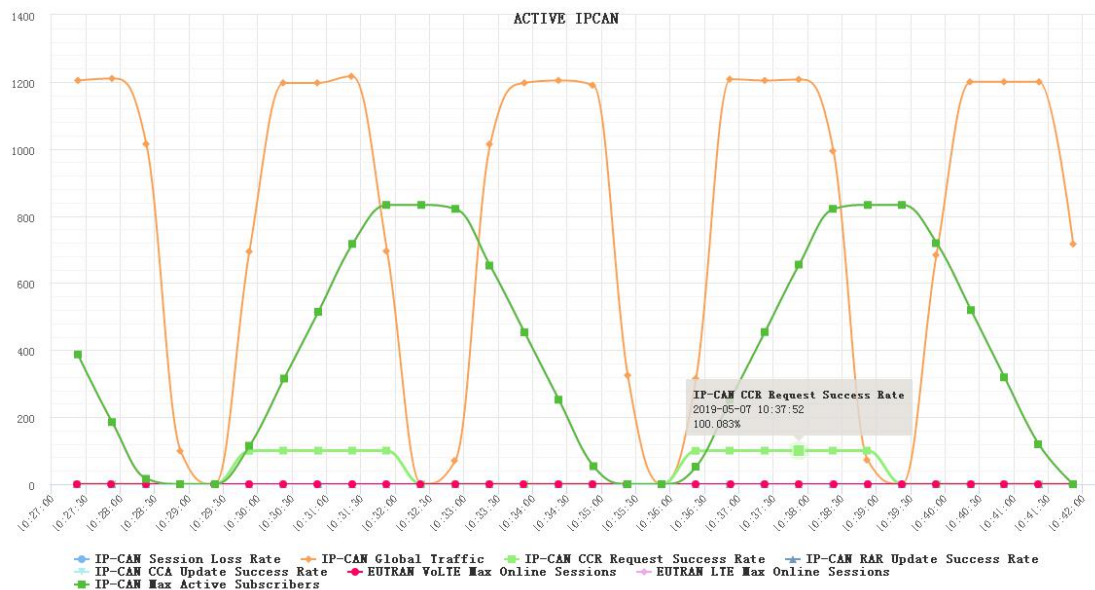
Path: Alarm → Active Alarm

Active Alarm		History Alarm		
Start Time	Content	Type	Level	End Time
2019-05-06 14:46:39	[Link] tcp connection down between PCRF node: [pcrf.mnc000.mcc460.3gppnetwork.org] and PCEF node: [pgw_gx.iplook.PgwGx]	pcrfgx	major	2019-05-06 14:47:42
2019-05-06 11:34:52	[Module] group:[group1] component:[pcore6] loading pre-defined services failed.	pcore6	major	2019-05-06 11:34:57
2019-05-06 11:34:47	[Module] group:[group1] tcp connection down between PCore: [pcore6] and SPR:[127.0.0.1:9900]	pcore6	major	2019-05-06 11:34:52
2019-05-05 17:49:09	[Link] tcp connection down between PCRF node: [pcrf.mnc000.mcc460.3gppnetwork.org] and PCEF node: [pgw_gx.iplook.PgwGx]	pcrfgx	major	2019-05-05 17:50:06
2019-05-05 17:33:59	[Module] group:[group1] component:[pcore1] loading pre-defined services failed.	pcore1	major	2019-05-05 17:34:04

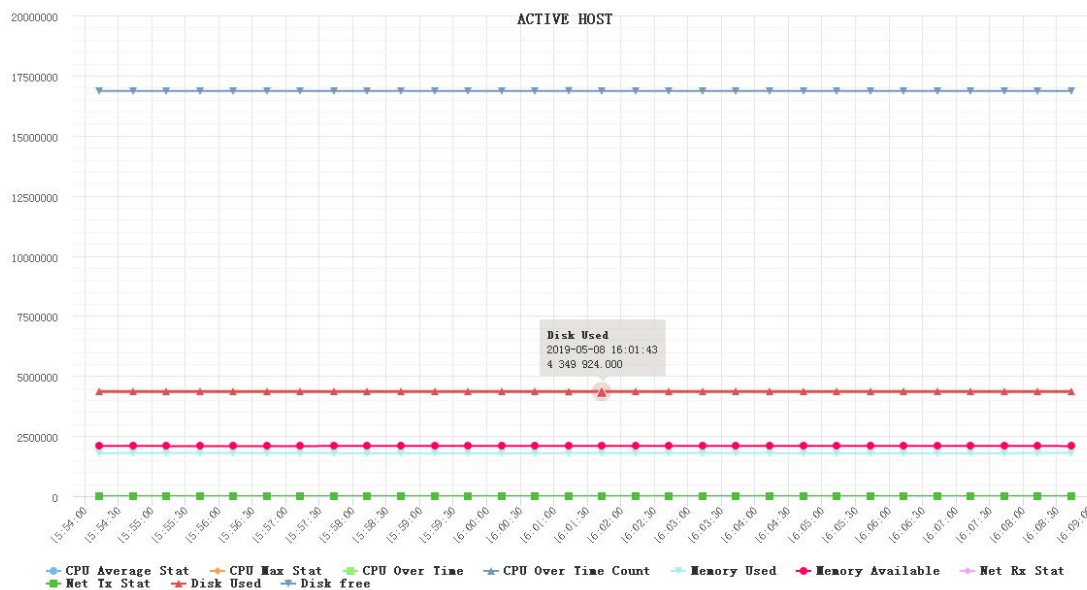
2.10 Monitoring and management



Active Stats History Stats



Active Stats History Stats



2.11 Precautions for upgrading and modifying PLMN

Tips:

(1) IP modification

After version upgrade, the default IP is 192.168.11.145

Source IP: 192.168.11.145 destination IP: 192.168.11.134

```
sed -i 's/192.168.11.145/192.168.11.134/g' `grep -rl 192.168.11.145 /opt/IKPcrf/config`
```

(2) Modify PLMN:

Source PLMN: 46000 new PLMN: 46099

```
sed -i 's/mnc000.mcc460/mnc099.mcc460/g' `grep -rl mnc000.mcc460 /opt/IKPcrf/config`
```

4.1.5 dynamic strategy based on location area, matching condition rules also need to be modified

(3) Docking configuration

GX configuration of GW also needs to be modified

32bit: background modification recommended

config ggsn profiles-tree diameter-profile show all detailed

64bit: page modifiable

(4) APN modification

4.1.4 dynamic policy based on APN, matching condition rules also need to be modified

3 FAQs

4 Conclusion

This manual is suitable for users and field engineers.

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