

RG-MACC-BASE

Cookbook V1.0

Preface

Thank you for using our products.

Audience

This manual is intended for:

- Network engineers
- Technical support and servicing engineers
- Network administrators

Symbols

0	Important information.	ontains helpful suggestions or references.

Luse caution. Could result in equipment damage or data loss.

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2. Software Introduction

2.1. Overview

The Ruijie RG-MACC (Managed @ Cloud Center) is a revolutionary cloud management platform which supports unified management and configuration of APs, switches and gateway devicess as well as value-added marketing features, site survey, etc.

The RG-MACC-BASE is a key component of the RG-MACC, supports device planning, configuration, control, operation and maintenance on cloud, which provides an easy solution to centrally manage all the Wi-Fi devices.

3. Network Topology Requirements



- MACC-BASE server with enough AP count license
- A DHCP-enabled network (so any device can obtain an IP address)
- Model of Access Point can support MACC-BASE since AP version B9P5
- Connectivity between the Access Point to MACC-BASE server

Product Type	Product Series	Hardware Model	Minimum Version Required
Access Point	AP130 Series	AP130(W2), AP130(L)	AP_RGOS 11.1(5)B9P2 AP_RGOS 11.1(5)B9P5
	AP520 Series	AP520-I, AP520, AP520(BT), AP520(DA), AP520-I(G2), AP520(W2)	AP_RGOS 11.1(5)B9P2 AP_RGOS 11.1(5)B9P5
	AP630 Series	AP630(IDA), AP630(IODA), AP630(CD)	AP_RGOS 11.1(5)B9P2 AP_RGOS 11.1(5)B9P5
	AP720 Series	AP720-I	AP_RGOS 11.1(5)B9P2 AP_RGOS 11.1(5)B9P5
	AP740 Series	AP740-I	AP_RGOS 11.1(5)B9P2 AP_RGOS 11.1(5)B9P5
MTFI	M520 Series	RG-MTFi-M520(IZEAA), RG-MTFi-M520(ILEAA)	MTFI_3.0(1)B3_MTFI-M520- RLIF
Switch	RG-S2910	RG-S2910-24GT4SFP-UP-H	S29_RGOS 11.4(1)B12
	RG-S2910C	RG-S2910C-24GT2XS-HP-E	S2910_RGOS 11.4(1)B1P3
	RG-S2928G	RG-S2928G-E V3.0	S29_RGOS 11.4(1)B12

4. Hardware Supported

5. Software Installation

RG-MACC-BASE_3.1 supports two installation methods: OVF and ISO.

5.1. OVF Install

System Requirements

Application	VMware Workstation						
OS	Windows 7 / 8 / 10 (64-bit only) server						
Device Count	< 1000	Above 4000					
CPU	4 cores 2.0 GHz	8 cores 2.0 GHz					
RAM 8 GB		16 GB					
HDD	768GB	1 TB					
Remark	-	-	Contact Support				

Installation Procedures

1) Click File > Open



2) Download MACC-BASE image and unzip the OVF file, then Choose OVF format file on VMware.

RG-M	ACC-BASE_3.1_Build20180126.OVF > MACC-BASE-3.1	Search MACC-B	ASE-3.1-ovf	2		
lder					•	?
^	Name	Date modified	Туре	Size		
	ACC-BASE-3.1.ovf	1/30/2018 10:21 AM	Open Virtualization F	7 КВ		
~						
<u>n</u> ame	:		~	All supported fi	es	\sim
				<u>O</u> pen	Cance	I

3) Set a name and storage path for the virtual machine.

Imp	ort Virtual Ma	chine			<u>×</u>
u	Store the new Provide a n virtual mad	v Virtual Mad ame and local hine.	c hine I storage path fi	or the new	e
Na	ame for the new v	virtual machin	e:		
St	orage path for th :\Virtual Machine	ne new virtual s\MACC	machine:	Browse	
	Help		Import	Canc	el

4) Set the hardware parameter according to your requirements.



5) After installation, user can login system console by using account: root/ruijie.

Advanced Setting-Network Setup

It provides a quick access to Network Manager UI for modifying the system IP address, DNS and so on.

1) Press 1 and go to network setup UI.

2) Select "Edit a connection" and Choose Edit.



3) Input the related Ethernet parameters base on network design.



4) Choose "OK" and "Quit" the Network Manager page.



Advanced Setting-SSO Setting

The MACC-BASE enabled SSO and only allow the user accesses the service from unique IP address, admin user can disable or change the SSO IP/URL by following setting.

1) Press 2 to modify the SSO setting



2) Modify SSO setting by following the prompt.



5.2. ISO Install

System Requirements

The following table lists the minimum hardware and operating system configuration requirements:

Device Count	< 1000	1000 to 4000	Above 4000	
CPU	4 cores 2.0 GHz	8 cores 2.0 GHz		
RAM	8 GB	16 GB		
HDD	256GB	512GB		
Bandwidth (AP Connection)	10Mbps	10Mbps		
Remark	-	-	Contact Support	
Operation System CentOS-7-x86_64-Minimal-1511.iso Download URL: http://vault.centos.org/7.2.1511/isos/x86_64/				

A If the hardware cannot meet the requirements, the server may not work.

A Port mapping (This requirement can be skipped if servers use public network IP addresses):

Internal Port	External Port	Protocol	Mandatory or Optional	Remarks
Port 80	Custom	TCP	Mandatory	HTTP access port
Port 443	Custom	TCP	Optional	HTTPS access port
Port 3478	Port 3478(Fixed)	UDP	Mandatory	For device interaction and Stun learning
Port 3479	Port 3479(Fixed)	UDP	Mandatory	For device interaction and STUN learning
Port 22	Custom	TCP	Optional	Secure shell (SSH) remote login port for the MACC- BASE server.
				Do not use Port 22 for mapping. The password for running the operating system must be highly complex to avoid attacks.
Port 8090	Custom	TCP	Optional	MACC-BASE Back-end Management

Ensure below port numbers are accessible and not be blocked by security equipment:

> Disk Partition and Directory Requirements

The *Imacc* directory is used for saving both MACC-BASE installation and running data. This directory is required and assigned 200 GB or more space.

Single mass storage disk

If the operating system has been installed and cannot be partitioned, the **/macc** directory can be created by running the following command:

[root@localhost ~]# mkdir /macc

Multiple disks with no data disk mounted (Take the Alibaba Cloud Computing server as an example.)

Usually, the system has two disks: system and data.

To check the disk status, run the **fdisk –I** command:

[root@xxxxxx ~]# fdisk -l

Disk /dev/xvda: 21.5 GB, 21474836480 bytes 255 heads, 63 sectors/track, 2610 cylinders Units = cylinders of 16065 * 512 = 8225280 bytes Sector size (logical/physical): 512 bytes / 512 bytes I/O size (minimum/optimal): 512 bytes / 512 bytes Disk identifier: 0x00078f9c

Device Boot	Start	End	Blocks	Id S	ystem
/dev/xvda1 *	1	2611	20970496	83	Linux

Disk /dev/xvdb: 429.5 GB, 429496729600 bytes 255 heads, 63 sectors/track, 52216 cylinders Units = cylinders of 16065 * 512 = 8225280 bytes Sector size (logical/physical): 512 bytes / 512 bytes I/O size (minimum/optimal): 512 bytes / 512 bytes Disk identifier: 0x0000000

To check the disk mounting status, run the **df** command:

[root@iZ28iclrr63Z ~]# df -h							
Filesystem	Size	Used Av	vail Use	% Mounted on			
/dev/xvda1	20G	2.4G	17G	13% /			
/dev/xvdb	394G	275G	100G	74% /macc			

If the data disk (/dev/xvdb in the example above) is not mounted, it needs to be formatted and mounted to /macc. The following process is recommended:

mkfs -t ext4 /dev/xvdb mkdir /macc mount /dev/xvdb /macc ##Modifying /etc/fstab Automatically mounts the disk upon startup. vi /etc/fstab Adding a line at the end. /dev/xvdb /macc ext4 defaults 0 0 /dev/xvdb is added as required. Run the df command for confirmation after restarting the server.

Multiple disks with the data disk mounted

It is necessary to create the data disk soft link in *Imacc*.

To check the disk mounting status, run the **df** command:

[root@iZ28iclrr63Z ~]# df -h							
Filesystem	Size	Used Av	vail Use	% Mounted on			
/dev/xvda1	20G	2.4G	17G	13% /			
/dev/xvdb	394G	275G	100G	74% /data			

If the data disk is mounted under the **/data** directory, you need to run the **mkdir/macc** command to create the **/macc** directory. Run the **vi/etc/fstab** command to mount the data disk to **/macc**, and then restart the server.

Changing System Time

1) Run command **timedatectI** to display the current time.

```
[root@localhost ~] # timedatectl
    Local time: Fri 2017-11-24 01:10:24 EST
Universal time: Fri 2017-11-24 06:10:24 UTC
    RTC time: Fri 2017-11-24 06:10:37
    Time zone: America/New_York (EST, -0500)
    NTP enabled: n/a
NTP synchronized: no
    RTC in local TZ: no
        DST active: no
    Last DST change: DST ended at
        Sun 2017-11-05 01:59:59 EDT
        Sun 2017-11-05 01:00:00 EST
    Next DST change: DST begins (the clock jumps one hour forward) at
        Sun 2018-03-11 01:59:59 EST
        Sun 2018-03-11 03:00:00 EDT
```

2) Run command timedatectl set-timezone xxxxxxx to edit the time zone.

```
[root@localhost ~]# timedatectl set-timezone Asia/Shanghai
[root@localhost ~]# timedatectl
Local time: Fri 2017-11-24 14:10:55 CST
Universal time: Fri 2017-11-24 06:10:55 UTC
RTC time: Fri 2017-11-24 06:11:08
Time zone: Asia/Shanghai (CST, +0800)
NTP enabled: n/a
NTP synchronized: no
RTC in local TZ: no
DST active: n/a
```

3) Run command timedatectl set-time "YYYY-MM-DD HH:MM:SS" to set the time.

```
[root@localhost ~]# timedatectl set-time "2017-11-25 14:44:00"
[root@localhost ~]# timedatectl
   Local time: Sat 2017-11-25 14:44:04 CST
Universal time: Sat 2017-11-25 06:44:04 UTC
   RTC time: Sat 2017-11-25 06:44:05
   Time zone: Asia/Shanghai (CST, +0800)
   NTP enabled: n/a
NTP synchronized: no
RTC in local TZ: no
   DST active: n/a
```

A The new time settings will take effect after the system is restarted.

Configuring IP Addresses and DNS Servers

The IP address and DNS server need to be configured before deployment and installation.

A Configuring the IP addresses

Run the **ifconfig** command to identify the external network interface:

[root@localhost ~]# ifconfig

eth0	Link encap:Ethernet HWaddr 00:15:5D:5D:27:0B inet addr:172.18.33.67 Bcast:172.18.33.255 Mask:255.255.255.0 inet6 addr: fe80::215:5dff:fe5d:270b/64 Scope:Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:1212674 errors:0 dropped:0 overruns:0 frame:0 TX packets:1061523 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:1133515990 (1.0 GiB) TX bytes:1032504656 (984.6 MiB)
lo	Link encap:Local Loopback inet addr:127.0.0.1 Mask:255.0.0.0 inet6 addr: ::1/128 Scope:Host UP LOOPBACK RUNNING MTU:16436 Metric:1 RX packets:3407442 errors:0 dropped:0 overruns:0 frame:0 TX packets:3407442 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:0 RX bytes:504690004 (481.3 MiB) TX bytes:504690004 (481.3 MiB)

Take eth0 above as an example. Modify /etc/sysconfig/network-scripts/ifcfg-eth0. Assume that the IP address of Port eth0 is 192.168.23.128 and the gateway IP address of Port eth0 is 192.168.23.1.

```
vi /etc/sysconfig/network-scripts/ifcfg-eth0
```

```
DEVICE=eth0
HWADDR=00:0C:29:1E:A8:FE
TYPE=Ethernet
UUID=af14aac2-b6ab-413a-af07-a1c3f4328391
ONBOOT=yes
NM_CONTROLLED=yes
BOOTPROTO=static
IPADDR=192.168.23.128
GATEWAY=192.168.23.1
NETMASK=255.255.255.0
```

Set **ONBOOT** to **yes**, and **BOOTPROTO** to **static**. Add IPADDR (IP address), GATEWAY (gateway), NETMASK (subnet mask), and then restart the server.

A Configuring DNS servers

For example, run the following command to add the server with the IP address 8.8.8.8 as a DNS server:

echo "nameserver 8.8.8.8" >> /etc/resolv.conf

Uploading MACC-BASE Installation Package

The MACC-BASE installation package is in ISO format. This section describes how to upload the MACC-BASE installation package to the server, run the **mount** command to

mount the installation package to **/mnt/iso**, and to copy the ISO file to the **/mnt/install/** directory.

Using FTP/SFTP Tool

CentOS provides a simple tool that enables users to implement direct interaction between Windows and Linux systems. For details about using the tool, see "SecureFXPortable.exe (File Copy Tool)".

Copy the ISO file to any directory of the server.

Run the **mount–o loop /directory for storing the upgrade file/file name/mnt/iso** command to mount the ISO file.

For example, to save a file in the **home** directory, run the following command:

```
mkdir /mnt/iso
mount -o loop /home/RG-MACC-BASE_3.1_Build20180126.iso /mnt/iso
```

Next, to copy the ISO file to the /mnt/install/ directory, run the following command:

mkdir /mnt/install cp -ar /mnt/iso/* /mnt/install/

Using a USB Flash Drive

Insert a USB flash drive into the USB port.

Run the fdisk -I command to check partitions:

```
Disk /dev/sdb: 53.7 GB, 53687091200 bytes
255 heads, 63 sectors/track, 6527 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk identifier: 0x502626b1
     Device Boot Start
ev/sdb2 1
                                                                       Blocks Id System
52428096 8e Linux LVM
                                                            End
 /dev/sdb2
                                                           6527
 /uev/suas
                                          57140
                                                                   UJ2/1
                                                                                   22090/104
                                                                                                           OF LINUX LVM
 Disk /dev/sdb: 53.7 GB, 53687091200 bytes
255 heads, 63 sectors/track, 6527 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
 Disk identifier: 0x502626b1
      Device Boot
                                          Start
                                                                       End
                                                                                          Blocks
                                                                                                             Id
                                                                                                                     System
                                                                                                             8e Linux LVM
                                                                                      52428096
  dev/sdb2
                                                                     6527
                                                  1
```

Run the **mount -o loop /dev/sdb2 /mnt/** command to mount the USB flash drive to the **/mnt** directory.

mkdir /mnt/iso mount –o loop /dev/sdb2 /mnt/iso

Copy the ISO file to the /mnt/install directory.

mkdir /mnt/install cp -ar /mnt/iso/* /mnt/install/

Deployment and Installation

Note: Enter commands manually to perform installation.

As described in "Uploading MACC-BASE Installation Package", the MACC-BASE installation package has been uploaded to the server and mounted to the **/mnt/iso** directory. The ISO file has been copied to the **/mnt/install/** directory.

1) The following directories will be displayed in the deployment and upgrade directory:

[root@localhost pkg]# cd /mnt/install/ [root@localhost pkg]# ll drwxr-xr-x. 4 root root 4096 Aug 29 16:43 installpkg -rwx--x--x. 1 root root 35048 Aug 29 16:43 install.sh <<-----Executed for initial installation

2) Run command install.sh.

[root@localhost install]#./install.sh **-I en** -i 172.18.33.200 <<----Herein, 172.18.33.200 is an external IP address.

System version : CentOS-7-x86_64-Minimal Checking for system ...64-bit Checking for macc directory...yes Checking for ppl...no Installing ppl...

Note 1: Run command chmod to obtain the execution permission of install.sh.

chmod 777 /mnt/install/install.sh

Note 2: The following RPM signature warning can be ignored.

warning:

/macc/install_pkg/ RG-MACC-BASE_3.1_Build20180126/installpkg/soft/rpm/kernel-headers-2.6.32-504.1.3.el6.x86_64.rpm: Header V3 RSA/SHA1 Signature, key ID c105b9de: NOKEY

Note 3: The following MySQL startup error can be ignored, and does not affect the installation.

Initializing mysql... ERROR! MySQL server PID file could not be found! Starting MySQL.. SUCCESS! SUCCESS! MySQL running (2811) Initialize mysql.......[OK] Checking for tomcat...no spawn openss! genrsa -des3 -out ./ca/serverkey.pem 2048

Note 4: Run the following commands to restart mongoDB if it does not start normally.

[root@localhost mongo]# ps -ef|grep mongod <<-----lt starts normally if the mongod process exists. mongod 3810 1 2 13:24 ? 00:00:00 /usr/bin/mongod -f /etc/mongod.conf root 3838 2110 0 13:24 pts/0 00:00:00 grep mongodwarning: <-----If mongoDB is not started, execute the following operation to start mongoDB. [root@localhost mongo]# rm -rf /var/lib/mongo/* <-----Deleting all the files under this directory.

[root@localhost mongo]# service mongod start <<-----Starting mongoDB. Starting mongod: [OK]

5.3. Verifying Deployment and Installation

> Verifying MACC-BASE Service

Open the Google Chrome browser, and enter the URL <u>http://IP address or http://IP</u> <u>address:port</u> into the address bar to visit the website (the IP address is the actual IP address during installation and the default port is Port 80). Enter the account **admin** and password **admin** (default password) to log in to the MACC-BASE server. For details, see *RG-MACC-BASE_3.1 User Guide*.

Welcome to	Image: Cloud Center Image: Cloud Cent
E2000-2018 Ruije Networks Co.Ltd Priva	Login Forget password?

> Verifying Back-end Management System

Use account **admin** and password **admin** to log in to the back-end management system (http://IP address:8090). It includes function of **Upgrade**, **HTTPs** and **Backup**.



6. Quick Start

6.1. MACC-BASE Account Management

MACC provides 3 different roles for sub-account for admin user to manage system easily.

- Admin: Own the permissions to create sub-account, edit, read.
- **Employee**: Own the permissions to edit, read.
- Guest: Own the permissions to read.

Configure Steps:

1) Login MACC-BASE and click Account on top right corner

	Ø 🕲 🛱
	Account
Time Zone: (GMT+10:3)	Tenant
	Sub Account
Ū	Logout

2) Add a sub-account and associate to designated group.

	Add Account			×		
ALL \checkmark — XYZ \checkmark — XYZ-Sub \checkmark	Group :	XYZ-Sub			ABC_Corp	×
Account List	Username :		•		1	·
Username,Full Name,Mol	Password :		•			
Username	Language :	English	*	- 8	Email	Action
	Full Name :		•			
	Expired :	2999-01-01			1	0 🔺 0 in tota
	Mobile :					
	Email :					
	Type :	Admin	v 0			
			Save	ancel		
				_		

3) Login to MACC using this newly created account.

6.2. MACC-BASE License Key

Up to 10 devices are supported by default. You can add licenses as follows:

1) Click the Add button.	
 2) Enter the authorization code, and click ".dat" file. 	to generate and download the
Add License ×	
1. Create '.dat' File V-01000020-1002039992212 Create '.dat' File	
2. Get License File Send the '.dat' file to the after-sales, he will return a license file.	
3. Import License File	
'.lic' File	
Cancel	

Note: After you have bought the authorized MACC-BASE, the authorization code will be automatically sent to your mailbox.

3) Import the ".dat" file to PA system to generate a ".lic" file, and download the".lic" file. (PA system address: http://pa.ruijie.com.cn:8001/main_software.jsf)

	Apply Authorization			
Location : Inquiry >				
• Add				
* Customer :	test			
* Email:	test@ruijienetworks.com	Please make sure your Email	is correct, receive license files.	
Contact Number:				
* Upload DAT:	🕂 Add	× Clear		
	V-10220235-0000000029362120.dat Success			
A Note: The uplo	ad file not be rename, at most 20.			
			Complete	Cancel

4) Import the "lic" file to MACC.

Add Licens	se				×
1. Create '.	dat' File				
License	Кеу	Cre	ate '.dat' File		_
📀 Open					×
\leftarrow \rightarrow \checkmark \uparrow \square \Rightarrow Thi	is PC > OS (C:) > lic	ٽ ~	Search lic		Q
Organize 🔻 New folde	er				□ 0
	Name	Date modified	Туре	Size	
> 🖈 Quick access	V-10220236-0000000053244250.lic	6/29/2017 5:09 PM	LIC File		0 KB
> 🝊 OneDrive					
> 💻 This PC					
> 💣 Network					
> 🔩 Homegroup					
File <u>n</u> a	ame: V-10220236-0000000053244250.lic		✓ All Files		~
			<u>O</u> pen	C	ancel
				Can	cel

After the import operation is complete, please refresh the page. (The default AP license number in MACC-BASE is 10. After 100 licenses are imported, the total license number will be 110)

License					÷	# - S
	License Key	Product Code	Remark		Import Time	Action
	V-10220236-0000000053244250	RG-MACC-LIC-1000	One RG-MACC license (private cloud) supports up to 1000 APs.		2016-08-23 11:39	Û
		First Previou	is Page 1 of 1 Next Last		10 🔺	1 in total
				(License Limit:	1010 Devices, Total Devices:3)	Add

6.3. Getting Devices Online

6.3.1. Adding Devices

AP/Switch

- 1) Go to **Configuration** > **Groups**
- 2) Click on Add Group on lower right corner
- 3) Select **General** Scenario and follow the Wizard to import **Serial Number (SN)** of APs and Switches.

Add Group	A	Add Group Add [Device ——— Finish X
Basic		Group Basic Inf	ormation
Group Name	APandSwitch	Group Name	APandSwitch
Time Zone	(GMT+8:00)PRC •	Time Zone	(GMT+8:00)PRC
Scenario	General 4G WIFI	Scenario	General
Bind Location	Ruijie Network, Heng'er Ro	Location	Bound
Jitudinal 2nd Rd Hengyi Rd	China Merchants Bank 24-hour Self Drag Merchants Drag Merchants	SSID	AP and Switch
	Cancel		

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Add Device		+ Add Gr	oup 🔶 Add	Device+ Fin	ish X
AP Switch			Equipment ha	s been added	
7 Enter an SN	Enter an Alias	ញ	AP	0	
2 Enter an SN	Enter an Alias		Switch	0	
<i>3</i> Enter an SN	Enter an Alias	 Ū	<u>View Details</u>		
4 Enter an SN	Enter an Alias	前 十			
Batch Import		Cancel Save & Next			

MTFI

- 1) Go to **Configuration** > **Groups**
- 2) Click on Add Group on lower right corner
- 3) Select **4G WIFI** Scenario and follow the Wizard to import **SIM Card** info and **MTFI's Serial Number (SN).**

Add Group	-	Add Group	Add Sub Gro	oup ——— Add	I Asset ——— Finish
Basic				Group Basic In	formation
Group Name :	MTFI			Group Name	MTFI
Time Zone :	(GMT+8:00)PRC		Ŧ	Time Zone	(GMT+8:00)PRC
Scenario :	General 4G WIFI			Scenario	4G WIFI
				SSID	
Add Asset	Wife Wife +	Cancel	Next	roup ——•Ade	d Asset ──◆Finish
Add Manually (AP)				Equipment has	s been added
Alias Name: It is recon write down the plate r	nmended to write down the installation umber if it is installed on a car; and p	on location. For example, please write down the roo	please m number if	SIM Card	0
it is installed in a roor Group Name: Please	n. Inter the full path of you want to add t	the device to a sub group	please	AP	0
enter [®] Group Name\Su corresponding group	b Group Name". If the group does no irst.	t exist, please create the	〕 	<u>View Details</u>	
Peter Image					

6.3.2. Configuring Devices

Device can access MACC-BASE through three methods: DHCP server allocation, CLI configuration and Web configuration.

A Please make sure that the device version can meet the requirements of MACC-BASE. For details, please refer to MACC-BASE 3.1 Release Note.



Please check the connectivity between device and MACC-BASE to make sure that the device can go online.

Allocating CWMP from DHCP Server (Apply to AP/ Switch)

1) Run the following commands to configure the DHCP server.

DHCP-Server#conf t	
DHCP-Server(config)#service dhcp	
DHCP-Server(config)#ip dhcp pool AP	
DHCP-Server(config)#network 10.10.10.0 255.255.255.0	//IP address of device
DHCP-Server(config)#network dns-server 8.8.8.8 8.8.4.4	
DHCP-Server(config)#network default-router 10.10.10.254	
DHCP-Server(config)#option 43 ascii http://A.B.C.D/service/tr069serv	let //A.B.C.D represents the URL
or domain name of MACC-BASE	

A Switches cannot obtain IP address automatically by default. Please create an SVI and run the ip add dhcp command to obtain dynamic IP address.

 After the dynamic IP address is obtained, the device will send a request to MACC-BASE for going online.

Please check the connectivity between device and MACC-BASE to make sure that the device can go online.

Configuring CWMP on CLI (Apply to AP/Switch)

Before configuration, please run command **ap-mode macc** to set the running mode of AP to MACC mode.

1) Run the following commands on CLI page to configure CWMP.

Ruiiie#conf t Ruijie(config)#cwmp Ruijie(config-cwmp)#acs url http://A.B.C.D/service/tr069servlet //A.B.C.D represents the IP address or domain name of MACC-BASE

2) Configure a static IP address, gateway and DNS server for the device.

Ruijie#conf t Ruijie(config)#int bvi vlan-id //AP configuration Ruijie(config)#int vlan *vlan-id* //switch configuration Ruijie(config-if-VLAN-id)#ip add A.B.C.D mask //A.B.C.D represents the IP address of device Ruijie(config)#ip domain-lookup //enable DNS lookup Ruijie(config)#ip name-server 8.8.8.8 8.8.4.4 Ruijie(config)#ip route 0.0.0.0 0.0.0.0 X.X.X.X //indicates the gateway address of device

3) After basic configuration, the device will send a request to MACC-BASE for going online.

Configuring CWMP on Web UI (Apply to AP/MTFi)

1) Log in to device Web UI with wired connection.

MTFi:192.168.1.1:8888; Password: admin-mtfi

AP:192.168.110.1:80; Username/Password: admin

2) Configure the CWMP URL (<u>http://A.B.C.D/service/tr069servlet</u>) on **Advanced > CWMP**.

AP:

RL	IJIE AP	WEB Model: AP720-L Detail Cuick Settings & Online Service	ce
	VLAN	CWMP	
Monitor	Port		
(Ø Network	Route	Note: The server implements the CPE WAN Management Protocol (CWMP) to manage, configure and monitor APs, routers and switches.	
(!)	DHCP	CWMP: ON	
Security	Ebag	Server URL: http://47.89.49.215/service/tr06: *	
Advanced	Multicast/Unicast	Server Username:	
ත	Port Mapping	Server Password	
System	CWMP		

MTFi:

CWMP		
	ACS URL	http://120.35.11.139:81/service/tr0
Period	lic Inform Interval	180
		seconds, Range:(Min:30 seconds, Max:3600 seconds)
		Save & Apply

6.3.3. Online Verification

Log in to MACC-BASE and click **Access Point** and **Switch** on **MONITOR** > **DEVICE** to check whether the device is online.

Status	SN	Config Status	MAC	Device Alias	MGMT IP	Public IP	Clients	Group	Firmware Version	Down	Model	Description	Action
Online	G1KDA0T003926	Not Synced	5869.6cb9.7926	Indoor AP740-I	172.16.15.79	172.16.15.79	1	Holiday_Hotel	AP_RGOS 11.1(5)B9P2, Release(04151613)		AP740-I		Ū
Online	G1KD84P049831	Not Synced	5869.6c98.4341	Indoor AP130(L)	172.16.15.83	172.16.15.101	-	Holiday_Hotel	AP_RGOS 11.1(5)B9P2, Release(04162719)		AP130(L)		Û
First Previous Page 1 of 1 Next Last 10 A 2 in tota								total					

7. Configuration Guidance

MACC-BASE 3.1 can manage wireless and switch device as listed in release note. And this chapter will introduce configuration examples for each function.

7.1. Wireless Devices

7.1.1. WIFI Configuration

In this section will introduce how to create SSID for AP and MTFI device.

Access Point

In WiFi Setting page, MACC-BASE support wireless basic functions as follow:

- Authentication: Open, PSK, Dot1x with 3rd party radius server, WiFidog authentication
- **SSID Advanced Setting**: SSID QOS, Bridge/NAT working mode, Band Steering, Seamless authentication
- Radio Setting: Maximum Connectors
- Security: Web Login Password, Wireless Attack Defence
- Advanced Features: Whitelist, CLI Command Batch Delivery

1) Choose **CONFIGURATION -> WIRELESS->Basic** in designated device group

	MONITORING	CONFIGURATION	MAINTENANCE	Sa Chinese			S 🖉 🖉
க் GROUPS	Beijing_Ruijie 🗸 📿					Time Zone: (GMT+	10:30)Australia/LHI
WIRELESS Basic	Beijing_Ruijie					Im	port Save
Layout Load Balance RF Planning	Wireless Configu	ration					~
Roaming BlueTooth	WLAN ID	SSID Encrypt	ion Mode Hidden No matching	Forward Mode records found	Radio	Auth Mode	Action
-	Padia O	First	Previous Page 0 of	Next Last		10	. 0 in total

2) Click "+" to create a SSID for the devices under this group

GROUPS	Beijing_Ruijie ~ Q			Time Zone: (GMT+10:30)A	ustralia/L
WIRELESS	Beijing_Ruijie			Import	Save
Layout Load Balance RF Planning	Wireless Configuration				^
Roaming	WLAN ID SSID Encryption	n Mode Hidden	Forward Mode Radio	Auth Mode Ad	tion
BlueTooth	.	No matching records	s found		
	First	Previous Page 0 of 0	Next Last	10 . 0	in total
	Radio 🗢				
	Radio1	Radio2			
	ON/OFF	ON/OFF			
	Max Clients 64	Max Clients 64			
	Security				V
	Security				Ť

3) In SSID setting page, user can create an SSID and fill in related parameters based on customer requirements.

SSID					×
WLAN ID	Please enter the SSID	¥	Hidden	No	¥
SSID	Ruijie-Demo		Forward Mode @	NAT	•
				[NAT Address Pool Configuration]	
Encryption Mode	OPEN	v	Radio	🗸 Radio1 🗸 Radio2 🗌 Radio3	
	OPEN				
Band Steering	WPA-PSK				
Rate limit per Client	WPA2-PSK				
Rate limit by SSID	WPA2-Enterprise(802.1X)				
Auth					
		ОК	Cancel		

WLAN ID: Sequence number to represent SSID ID (Up to 32 SSID is supported, there may be differences between diverse models)

Hidden: Choose disable broadcasting SSID or not

SSID: WiFi Name

Forward Mode:

NAT mode or bridge mode. NAT mode: AP will work as a router and DHCP pool to provide IP address for terminal stations.

Bridge mode: AP will work as a switch and passthrough all traffic. It requires the user to fill in specific VLAN ID for STA.

(If not familiar with existed network design, NAT mode is recommended)

Encryption Mode:

OPEN: Open SSID and password is not required

WPA-PSK: Use WPA algorithm to encrypt SSID and password is required

WPA2-PSK: Use WPA2 algorithm to encrypt SSID and password is required

WPA2-Enterprise(802.1x): Dot1x authentication and external radius server is required

Radio: generally, Radio 1 represent 2.4Ghz and Radio 2 represent 5Ghz.

Band Steering: detect clients capable of 5 GHz operation and steers them to that frequency which leaves the more crowded 2.4 GHz band available for legacy clients. (Please ensure 5G Radio Interface is enabled)

Rate limit per Client: Upload and download speed limitation for each client on this SSID

Rate limit by SSID: Total throughput (upload & download) on this SSID

Auth:

Portal Server URL: external wifidog portal server URL for user login

Portal IP: Portal server IP address

Portal Port: Port number for landing page redirection. Default is 80

Gateway ID: Gateway ID value for wifidog

Seamless Online: Seamless auth on STA connected to SSID second time. Authentication server supports seamless feature is required.

Idle Client Timeout: User will be kicked if low traffic or no traffic passthrough in specific period

4) Turn on the RF and fill in Max Clients value as required

Radio 🕒

Radio1	Radio2
ON/OFF	ON/OFF
Max Clients 64	Max Clients 64

A The Max Clients of each Radio Interface is 32 by default.

5) Click Save on the top right corner to save all changes and take effect

Beijing_Ruijie ∨ (2					Time Zone: (GMT+1	10:30)Australia/LHI
	1 1 1 1 C						
Beijing_Ruijie						Im	port Save
Wireless Config	uration						
WLAN ID	SSID	Encryption Mode	Hidden	Forward Mode	Radio	Auth Mode	Action
			No matching re	cords found			
		First	Page 0 of 0	Next		10	 0 in total
Radio							
Radio1			Radio2				
ON/OFF Max Clients	64		ON/OFF Max Clients	64			

Advanced Setting

Web Password

This setting enables user to edit WEB UI and increase security level.

Web Password



Tip: The password for AP web login.

Isolation

Client Isolation is to isolate all traffic (unicast, multicast, broadcast) for each user.

Client Isolation

AP-based Client Isolation (Clients on the same AP are isolated)

AP&SSID-based Client Isolation (Clients on the same AP with the same SSID are isolated)

Wireless Intrusion Detection

Wireless Intrusion Detection can monitor STA behavior and prevent damage to network caused by anonymous hacker.

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Wireless Intrusion Detection
DDOS Attack Detection 🤍
Flooding Attack Detaction
Flooding Attack Detection
AP Spoof Attack Detection 🛛 🦲
Weak IV Attack Detection
Attack sources will be added to the dynamic blacklist and their packets will be discarded
Clients will be in the blacklist for seconds(Optional. Range:60-86400. Default: 300)

Whitelist

Whitelist feature can bypass those addresses or traffic on the list before STA completes authentication process.

Whitelist 🖨				Fackbook		
Address		Des	Action			
	No matching records found					
	First	Page O of 0	Next	5 🔺 0 in total		

CLI Command

CLI Command provides a window for user to exec cli setting which not be support in MACC-BASE UI.

CLI Command 🕀							
Model	Description	Action					
	No matching records found						
Fi	rst Previous Page O of 0 Next Last	10 🔺 0 in total					

MTFI

Please refer "RG-MTFI Implementation Cookbook" on official website.

7.1.2. Layout Planning

Layout Planning allows user to import floor plan to MACC-BASE and binds AP to specific location as deployment.

Choose CONFIGUARTION->Layout and click Config Layout to add floor plan to MACC-BASE



1) Drag the AP from un-bond AP list to floor plan to bind AP to specific location



7.1.3. Load Balance

MACC-BASE load balance feature can dynamic allocate STA to each AP equally in high density scenario.

1) Click Add on CONFIGUARTION->Load Balance to create load balance group



2) Click edit icon to add access point into load balance group and turn on group status.

	MONITORING CONFIGURATION MAINTENANCE	8 🤊 🗙 🍟
ക് GROUPS	Beijing_Ruijie × Q	Time Zone: (GMT+10:30)Australia/LHI
🙁 WIRELESS	Load Balance Group List	0 # - 11
Basic Layout Load Balance BF Planning	Group Status + O RuijieDemo	Action
Roaming		
BlueTooth	Historical Record	
	No Data	

7.1.4. RF Setting

The RF Setting provides a global setting of wireless country code, bandwidth and intelligent channel/power planning.

Radio Setting

Country code enables you to specify a particular country of operation and it ensures each radio's broadcast frequency bands, interfaces, channels, and transmit power levels are compliant with country-specific regulations. Frequency bandwidth determine how many non-overlap channels can be used for your AP to reduce RF interference.

The best practice for user experience is 2.4GHz in 20MHz, 5GHz in 40MHz.



802.11ac Channel Allocation (N America)

Auto Planning

Auto Planning works as a smart RRM function. It can help user to evaluate network channel and power status and provides recommended parameters by its intelligent algorithm.

	ٹے ۲۵۹۵	MONITORING CONFIGURATIO	N MAINTENANCE	🔮 🛛 😫
கீ	GROUPS	Beijing_Ruijie 🗸 📿		Time Zone: (GMT+10:30)Australia/LHI
٩	WIRELESS	Radio Settings		\sim
	Basic		Martin Contraction of the local division of	
	Layout	Auto Planning	Custom Ch	annel 🔄 🗉 Recent RF Scan History 🕓 Schedule Settings
	Load Balance		Scan Mode: O In-Service Scan @	Out-of-Service Scan 🕑
	RF Planning Roaming BlueTooth		Control Device: Control Devic	All signals in the current network will be covered. ③ The network may be disconnected and interference signals may not be scanned.

Custom Channel: Allows user to select specific channel for channel planning

Recent RF Scan History: Records all scanning history and recommended value after scanning

Schedule Settings: Periodic scanning setting for access point

In-Service Scan (Quick Scan):

- The WiFi service won't be interrupted during scanning process.
- The scanning result may not include all interference.

Out-of-Service Scan (Deep Scan):

- The result will cover almost all WiFi interference.
- The WiFi service will be interrupted during scanning process (disconnect and reconnect) and it will take around 30 minutes

Sync to Device: Whether sync the recommended setting to APs after scanning

Manual Planning

Manual Planning enables user to select designated AP and change the channel and power setting.



A Only AP740-I can support Radio 3 setting

7.1.5. Roaming

MACC-BASE roaming function allows STA from AP-1 subnet A roaming to AP-2 subnet B (L3 roaming) seamlessly. Once user turns on the roaming button, L3 roaming ability will be enabled.

	MONITORING	CONFIGURATION	MAINTENANCE	e Ø Ø
க் groups	Beijing_Ruijie ~ C			Time Zone: (GMT+10:30)Australia/LHI
WIRELESS Basic Layout Load Balance RF Planning Roaming Blue Tooth	Beijing_Ruijie Roar Roaming : With roaming fund	ning Setting ction enabled, users can achie Network	eve zero-handoff roaming within the WiFi coverage area. Example: $\begin{array}{c} \hline \\ \hline $	

L2 roaming is enabled by default (OPEN, PPSK). For web authentication, seamless authentication function should be turned on to improving roaming user experience.

7.1.6. BlueTooth

BlueTooth is used for the AP which supports iBeacon feature to broadcast iBeacon signal.

1) Click "Add" to iBeacon parameters to designated AP. Or click "Import" for batch configure.

	MONITORING	CONFIGURATION	MAINTE	ENANCE				🔓 🛛 🕲 e
க் groups	ALL ~ > Beijin	g_Ruijie ~ Q					Time Zone: (GMT	+10:30)Australia/LHI
S WIRELESS	Device Info							0 # - X
Basic	SN	Q Search						
Load Balance	De	vice SN Status	UUID	MAJOR	MINOR	Group	AP Name	Action
RF Planning	-			No matching re-	cords found			
Roaming		Firs	t Previous	Page 0 of 0	Next	ist		10 🔺 0 in total
BlueTooth	2							Add Import
			1.1.1. A.M.	Contraction of the local division of the loc	the second		1	
	Ene Duble	A DECK	and and	Arrest		- termine	- 1	

2) Fill in AP serial number (needs to be online) and iBeacon parameters which are provided by iBeacon service provider.

Bluetooth	×
Device SN :	*
Status :	
UUID :	*
MAJOR :	*
MINOR :	*
	Save Close

3) Verify by using "nRF Master Control Pannel" APP on Android phone.

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7.2. Switch Device

1) Click designated switch on **MONITOR** > **Switch**.

	MONITORING CONFIGURATION MAINTENANCE ur account	e Ø ¤ 🕲
DASHBOARD		
! ALARM	Switch List	⊕ # - K
	Add Switch More - 1 Selected	SN, Device Alias, Descrit Q
Quality	Status SN MAC Device Alias MGMT IP Public IP Down Group I	Model Firmware Version Description Action
Access Point	© Online G1J71HS003584 58:69:6C:33:D0:11 <u>\$2910C</u> 172:29:2:10 172:29:2:10 2018-01-1917:09 LAB \$2910C-	24GT2XS-P-E S2910_RGOS 11.4(1)B1P3 Ш
Switch	First Previous Page 1 of 1 Next Last	10 A 1 in total
Client		
DEVICE		
Access Point	The second	The Art of the
CLIENT		

2) Click General or Advanced to configure the switch.

1	Ruíjie	MONI	TORI	NG	CONF	IGURAI	ION	MAINT	ENAN	CE				Please check voi	ur account		00
	Powind by Bacc	Device De	tails (S2910) (C										×		
	DASHBOARD															Ruijie	× *
		Active	Inac	tive 📄	Disable								Т	Trunk Port 🗌 Co	opper SFP		
	ALARM	1 3	5	7 9	11 13	15 17 1	9 21 23	25								Ð	# - 8
IF.	ANALYSIS			8	- 8											Device Ali	as, Descrij Q
	Quality	2 4	6	8 10	12 14	16 18 2	20 22 24	26									
	Quality						1									ion De	scription Action
		Overview	Ge	neral	Advanc	ed										IJBTP3	11
	Access Point			K												10 -	1 in total
	Switch	Port	t List												~	A ATALANA	
	Client	L C Main															
(DEVICE													Q 14			
	Access Point			Port ID	POE Enable	POE Status	Port Enable	Port Status	Speed	Speed Setting	Mode	Port Type	VLAN	Description IP Acti	on	-	
	Switch			Gi0/1	Enable	On	Enable	Up	1000M	1000M	Duplex	TRUNK	native:50 allowed:ALL	Ľ		100	
0.	OUTNE			Gi0/2	Enable	Off	Enable	Down		Auto	auto	ACCESS	66			-	-
.	CLIENT			Gi0/3	Enable	Off	Enable	Down		1000M	Duplex	TRUNK	native:50 allowed:ALL			-	
				Gi0/4	Enable	Off	Enable	Down		Auto	auto	ACCESS	1			-	
				Gi0/5	Enable	Off	Enable	Down		Auto	auto	ACCESS	2				
				Gi0/6	Enable	Off	Enable	Down		Auto	auto	TRUNK	native:1 allowed:ALL	Ľ			
				Gi0/7	Enable	On	Enable	Up	1000M	Auto	auto	ACCESS	2				
				Gi0/8	Enable	Off	Enable	Up	1000M	Auto	auto	ACCESS	66				
				Gi0/9	Enable	Off	Enable	Down		Auto	auto	ACCESS	2				
				Gi0/10	Enable	Off	Enable	Down		Auto	auto	ACCESS	1	P			

7.2.1. Port Setting

Port setting enables user to manage switch interface, including port status, speed, VLAN and SVI.

×

1) Click edit button on **General** page of device detail.

Device Details (2910)

Active 🗋 Inactive 💼 Disable		T Trunk Port Copper SFF
1 3 5 7 9 11 13 15 17 19 21 2 4 6 8 10 12 14 16 18 20 22	23 25 27 24 26 28	

Overview General Advanced

										€
Port ID	POE Enable	POE Status	Port Enable	Port Status	Speed	Speed Setting	Mode	Port Type	VLAN	Description IP Action
Gi0/1	Enable	Off	Enable	Up	100M	Auto	auto	TRUNK	native:1 allowed:ALL	
Gi0/2	Enable	Off	Enable	Down		Auto	auto	ACCESS	1	
Gi0/3	Enable	Off	Enable	Down		Auto	auto	ACCESS	1	
Gi0/4	Enable	Off	Enable	Down		Auto	auto	ACCESS	1	
Gi0/5	Enable	Off	Enable	Down		Auto	auto	ACCESS	11	
Gi0/6	Enable	Off	Enable	Down		Auto	auto	ACCESS	1	
Gi0/7	Enable	Off	Enable	Down		Auto	auto	ACCESS	1	
Gi0/8	Enable	Off	Enable	Down		Auto	auto	ACCESS	1	
Gi0/9	Enable	Off	Enable	Down		Auto	auto	ACCESS	1	
Gi0/10	Enable	Off	Enable	Down		Auto	auto	ACCESS	1	Z

2) Modify interface setting as required.

Edit Gi0/1

POE Enable	Enable v
Port Enable	Enable v
Speed Setting	auto 🔻
Duplex Mode	auto 🔻
Туре	Trunk v
Native VLAN	1 *
Allowed VLAN	ALL
Description	
L3 Port	Click to set as L3 port

OK Cancel

Х

7.2.2. VLAN Setting

1) Click Add VLAN to create VLAN/SVI.

45

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Device Details (2910)

Tive] Inact	tive Dis	able									T Trunk	k Port 🔛 Copp	er
	5] (] (6	7 9 11 	13 15 	17 19 17 0 19 19 19 19 19 19 19 19 19 19	21 23	25 27 26 28								
view	Gei	neral A	dvanced											
		Gi0/5	Enable	Off	Enable	Down		Auto	auto	ACCESS	11		Z	
		Gi0/6	Enable	Off	Enable	Down		Auto	auto	ACCESS	1		Z	
		Gi0/7	Enable	Off	Enable	Down		Auto	auto	ACCESS	1		\square	
		Gi0/8	Enable	Off	Enable	Down		Auto	auto	ACCESS	1		\Box	
		Gi0/9	Enable	Off	Enable	Down		Auto	auto	ACCESS	1			
		Gi0/10	Enable	Off	Enable	Down		Auto	auto	ACCESS	1			
			First	Prev	ious F	Page 1	of 3	Ne	xt	Last	ſ	10 🔺	28 in total	
	N List Add VL	AN Batc	h Delete VLAł	4									₽	\sim
											_			
		VLAN ID	VLAN N	ame	0.00	Port ID	T-0/05 0			II	P		Action	
		VLAN ID 1 10	VLAN N VLAN0001 VLAN0010	ame	Gi0/1	Port ID -4,Gi0/6-24, Gi0/1	,Te0/25-28	8	I IP	II Pv4 Address: /4 Netmask:	P 192.168.1 255.255.2	.25 !55.0	Action	
		VLAN ID 1 10 11	VLAN N VLAN0001 VLAN0010 VLAN0011	ame	Gi0/1	Port ID -4,Gi0/6-24, Gi0/1 Gi0/1,Gi0	,Te0/25-28 /5	8	IP [.]	II Pv4 Address: /4 Netmask:	P 192.168.1 255.255.2	25 255.0	Action	

2) Fill in VLAN info and bind to corresponding interface.

×

Add/Edit	×
1、Fill Base Information	
VLAN ID : • Range(1-4094)	
VLAN Name :	
IP:	
Netmask :	
>>> Advanced Settings	
2. Select Port	
1 3 5 7 9 11 13 15 17 19 21 23	
·····································	
Note:Click and hold the left button as you drag the pointer across the section to select multiple ports. All Invert Deselect	
ОК	Cancel

7.2.3. Advanced Setting

The advanced setting for switch includes system log, SNMP, NTP, DNS, NFPP and IGMP snooping.

Device Details (2910)	×
Active Inactive Disable	\$FP
Overview General Advanced	
SYSTEM SYSLOG Setting: Logging Level: Informational(6) Server IP: Save SNMP Setting SNMP Setting SNMP Version: V2 NMP Password: Trap Password: * The Trap password is same with the SNMP password.	
Trap Recipient Address: You can configure up to 9 Trap recipients. Please use ',' or press the *Enter key to separate addresses. Save	

8. Maintenance & Upgrade

8.1. HTTPS Certification Import

Login MACC-BASE back-end system(<u>HTTP://MACC-IP:8090</u>) and click **HTTPS** to import custom HTTPS certification to HTTPS access.

Language: English -

		5
Username	admin	
Password		
Verify Code	4YB3F	24vb3f

Upgrade	HTTPS	Backup				Language:	English 🗸
Upgrade							
Select Keystore Fi	le : Choose File	No file chosen	Key :	Port : 443	Save & Restart Tomcat		
	1	\	/				^
							¥

🛕 The key value is the private key of SSL certificate.

8.2. MACC-BASE Firmware Upgrade

Login MACC-BASE back-end system(<u>*HTTP://MACC-IP:8090*</u>) and click **Upgrade** to import tag.gz format file to upgrade MACC-BASE. It will take around 30 minutes to finish upgrade process.

Upgrade	HTTPS	Backup	Language:	English 🗸							
Upgrade											
Select Upgrade Package(tar.gz File) : Choose File No file chosen Upgrade											
				Â							
				~							

AP Firmware Upgrade

MACC-BASE can manage all devices firmware version (Access Point, Switch) through WEB UI and enables admin user maintain devices software easily.

<u></u>	Click Up		MAINTENANCEFI	IIIwale		
	ے 🗠 🎞	MONITORING CONFIG	JRATION MAINTENANCE	A CONTRACTOR		e 🕑 🖬 🎽
	LOGS Operation Log	Firmware List	arch			0 #- 8
	Config Log	Firmware Version	Filename	Filesize(MB)	Supported	Uploaded
	Upgrade Log	AP_RGOS 11.1(5)B9P2, Release(0-	4170312) AP_RGOS11.1_5_B9P2_S1C4-01_04170312_ins	stall.bin 28.40 AP740-1::1.00	_	2017-08-01 20:12:30 20
	Client Log		First Previous Page 1 of 1	Next		10 A 1 in total
	Connection Log	-			0 Coloria	
•	UPGRADE				0 Selected	Upload Firmware Delete
	Upgrade				-34-	/
	Firmware		Sand and the sand	-		
۵	SYSTEM	En la	and the first of the second		- /	
	Disk Cleanup	-		the second second		The
	Database Backup		and the second		and and	

1) Click Upload Firmware on MAINTENANCE->Firmware

2) Select designated device to upgrade firmware version on Upgrade page and click **Upgrade**.

LOGS	$ALL \lor$	Beijing_Ruijie	× Q			Time Zo	one: (GMT+10:30)Aust	tralia/L
Operation Log Config Log	Top 5 Ver	sions			I	Firmware Version List	Firmware Version	Q
Upgrade Log						Firmware Version		AP
Client Log				AP_RGOS 11.1(5)B		AP_RGOS 11.1(5)B40, Release(04193011)		1
Connection Log	-			AF_1003 11:1(3)0	-	AP_RGOS 11.1(5)B9P2, Release(04170305)		1
UPGRADE						Presidente Page 1 of 1	Next	
						<u>-</u>		
Upgrade	1							
Upgrade Firmware	1				-			
Upgrade Firmware	10.49							
Upgrade Firmware SYSTEM	The second second						THE	
Upgrade Firmware SYSTEM Disk Cleanup								-
Upgrade Firmware SYSTEM Disk Cleanup Database Backup	Device Lis	st					•	
Upgrade Firmware SYSTEM Disk Cleanup Database Backup	Device Lis	st Upgrade All	1 Selected			SN, Description	Q Advanced Se	t - earch
Upgrade Firmware SYSTEM Disk Cleanup Database Backup	Device Lis	st Upgrade All	1 Selected	SN	Model	SN, Description	Q Advanced Se	earch
Upgrade Firmware SYSTEM Disk Cleanup Database Backup	Device Lis	st Upgrode All Status Offline	1 Selected , Group Beijing_Ruijie	5N G1L068P003245	Model AP720-I	SN, Description Firmware Version AP, BGOS 11.1(5)B9P2, Release(04170305	C Advanced Se	₽ + earch
Upgrade Firmware SYSTEM Disk Cleanup Database Backup	Device Lis	st Upgrade All Status Offline Offline	1 Selected Croup Beijing_Ruije Floor-1	5N G1L068P003245 G1L07BF018855	Model AP720-1 AP720-L	SN, Description Firmware Version AP, BGOS 11.1(5)B40, Release(04170305 AP, BGOS 11.1(5)B40, Release(04193011)	Q Advanced Se Desc	earch cription
Upgrade Firmware SYSTEM Disk Cleanup Database Backup	Device Lis	st Upgrade All Status Offline	1 Selected Group Beijing.Ruije Floor-1	SN G1LQ68P003245 G1LQ7BF018855	Model AP720-1 AP720-L	SN, Description Firmware Version AP_RGOS 11.1(5)B9P2, Release(04170305 AP_RGOS 11.1(5)B40, Release(0419301)	Advanced Se	ear

3) Choose schedule upgrade or execute the upgrade immediately.

Select Firmware version

1. Select Version		
Firmware Version	Supported	Description
AP_RGOS 11.1(5)B9P2, Release(04170312)	AP740-I::1.00	
First Previou	s Page 1 of 1 Next Last	10 🔺 1 in total
2. Time Right Now Later Begin Date:	Started: 00 • : 00 • Ended time: 00 • : 00 •	PRetry Times: 5 ▼

×

8.3. Monitoring

8.3.1. AP/MTFI Status

Click Access Point serial number to monitor AP running status, including AP info, CPU & Memory usage, connectivity record, traffic, RF setting and interference.

RG-MACC-BASE Cookbook V1.0

ے عکم	MONITORING CONFIGURATION MAINTENANCE uring the update, the Ruijie Cloud service will be stopped.	8
DASHBOARD	ALL \checkmark) demo_1 \checkmark Q Time Zone: (GMT+8:00)PR	c
! ALARM	AP List	ç
LI ANALYSIS	Add AP More - 1 Selected SN, Device Alias, Description C	2]
Quality	Status SN Sonfig Status MAC Device Alias MGMT IP Public IP Clients Group Firmware Version	с
Traffic	Online G1K09HH02861B Synced 58:69:6C:99:08:F5 Ruijie 172.17.185.122 111.204.215.182 - QA_lab AP_RGOS 11.1(5)B01 2011	8.
Access Point	Online GIKGC2D010806 Synced 58.69.6C.BEAB.10 7.40 172.17.207.82 111.204.215.184 - demo_1 AP_RGOS 11.1(5)B9P5, Release(04180410) 2011	8-
Switch Client	First Previous Page 1 of 1 Next Last 10 - 2 in total	
BEVICE		
Access Point Switch		
A CONTRACTOR OF	And Annual Annua	-

×

Device Details

AP Info								
SN: G1KD9H	H02861B	MAC: 5869.	6c99.08f5	MGMT I	P: 172.17.185.122			
Model : AP52	0(W2)	Config Status	onfig Status : Synced to the latest					
Hardware Version : 1.00								
Software Version: AP_RGOS 11.1(5)B01 Alias Name: Ruijie 🖍								
								Description :
ssid : hote	elssid coffeebars	sid surveyssid tila tes	t roctestiner					
Status								
OnlineOnline ClientClients with	ts: 0 Weak Signal : 0	Memory Usage	CPU Usage	10.0%	Alarms : 0			
Connectivity	Connectivity Last 24 Hours Last 7 Days							
14:00	18:00	22:00	2:00	6:00	10:00			

Traffic Summary 🕜 Last 24 Hours Last 7 Days -O- Uplink -O- Downlink Traffic(MB) 14-12 10-8-6-4 2 -0 -15:00:00 17:00:00 19:00:00 21:00:00 23:00:00 01:00:00 03:00:00 05:00:00 07:00:00 09:00:00 11:00:00 13:00:00

Radio List

·⊖ # •

RF Type	Channel	Power	Bandwidth (MHz)	Channel Usage(%)
2.4G	1	20%	20	59%
5G	149	20%	40	19%

Client List

Client List									Ð ₽ -
IP	MAC	SSID	RSSI	Band	Traffic (MB)	OS	Manufacturer	Up	Down
					No matching records fo	und			
			First	Previous	Page 0 of 0	Next		10 🔺	0 in total

Adjacent RF Signal

Triggered: 2016-11-21 16:00 Ended: 2016-11-21 16:11 Status: Complete

BSSID	Radio	Adjacent SSID	Adjacent Channel	RSSI	Adjacent SN	Adjacent MAC	Uploaded			
0669.6c5b.5034	Radio2(5G)	zxkart	149	81	G1KD14G002056	5869.6c5b.5031	2016-11-21 16:11			
0669.6c54.8d17	Radio1(2.4G)	Eweb_8D151	1	76	G1JDB1P031399	5869.6c54.8d15	2016-11-21 16:11			
0669.6c5b.4fd7	Radio1(2.4G)	Ruijie_FREE.WiFi-Leon	1	75	G1KD14G001828	5869.6c5b.4fd5	2016-11-21 16:11			
0a69.6c5b.4fd7	Radio1(2.4G)	Staff	1	75	G1KD14G001828	5869.6c5b.4fd5	2016-11-21 16:11			
0669.6c7a.5dd2	Radio1(2.4G)	Eweb_5DD01	1	73	G1KD84Y017646	5869.6c7a.5dd0	2016-11-21 16:11			
0669.6c99.2b67	Radio1(2.4G)	New-1	1	71	G1KD9HH050650	5869.6c99.2b65	2016-11-21 16:11			
1669.6c99.2b67	Radio1(2.4G)	test-5	1	71	G1KD9HH050650	5869.6c99.2b65	2016-11-21 16:11			
0669.6c85.82d5	Radio1(2.4G)	SanTest1	6	69	G1KD54Z00410B	5869.6c85.82d2	2016-11-21 16:11			
0669.6c7a.5dd3	Radio2(5G)	Eweb_5DD01	149	68	G1KD84Y017646	5869.6c7a.5dd0	2016-11-21 16:11			
0669.6c5b.4fd8	Radio2(5G)	Ruijie_FREE.WiFi-Leon	149	66	G1KD14G001828	5869.6c5b.4fd5	2016-11-21 16:11			
	First Previous Page 1 of 8 Next Last 10 - 77 in total									

Scan Adjacent RF

L	Device Log			€
	All Days V Q S	Search		
	Туре	Updated On	Content	
	Online/Offline	2018-02-07 10:13:00	Device online	
	Online/Offline	2018-02-07 10:04:00	Device offline	
	Online/Offline	2018-02-07 10:02:23	Device online	
	Online/Offline	2018-02-07 09:53:00	Device offline	

8.3.2. Switch Status

Click Switch serial number on switch list to monitor AP running status, including switch info, port status, CPU & Memory usage, connectivity record, traffic, device log.



8.3.3. STA Status

Click client mac address to view client details, including client info, traffic, delay, RSSI and connect record.

	MONITORING C	ONFIGURATION MAIN	TENANCE	-						e 🛛 a 🕯
DASHBOARD	ALL ~							Time Zone: (GMT+8	:00)Asia/Shanghai demo_1	x •
! ALARM	Client List									0 # - 8
LI ANALYSIS									Online Clients T Adv	anced Search \vee
Quality	IP	MAC	SSID	RSSI	Band	Traffic(MB)	OS	Manufacturer	Up	Down
Traffic	10 233 22 2	EC 51 BC 38 4C C1	testing_inner_portal	-42	2.4G	1.140	Others	oppo	2018-02-07 13:38:09	
Access Point Switch		1	First Previous	Page 1	ef 1	Next			1(10 . 1 in total
Client	and the second second	- Contena	-			-		-		
DEVICE	100.00		and the second second	-		-				
Access Point Switch		Charles Charles			-	-		-Zar	and a ser	
CLIENT				-			-	-		
				-	-			-		

×

Client Details

Ľ	Client Info		
	Alias : 🖍	Status : Online	MAC: ec51.bc3b.4cc1
	Up : 2018-02-07 13:38:09	Down :	Uptime : 1h 32m 55s
	IP: 10.233.22.2	Terminal : Others	OS: Others
	Manufacturer : oppo		
	AP SN : G1LW91000086	SSID : testing_inner_portal	AP Name : Ruijie

Performance

_	_		_
- Delay	Pkt Loss Rate -	🔶 RSSI – 🔶 Unli	nk 🕂 🕞 Downlin



8.4. Alarm Setting

MACC supports AP exception alarm function, when AP offline, working on high channel utilization, AP state unstable, it will trigger the mail alarm function on MACC-BASE.

1) Fill in the mail server setting on **System Setting** page.

and the second se						Aidiiii	0
Basic Settings						Syster	n Setting
MACC Server L	JRL: http://172.29.2.20:80		Save			Licens	e
Max Upgraded Devices Concurren	ntly : 100		Save			Persor	nalize
						Conta	et
CDN U	JRL : http://127.0.0.1:80		Save			Notific	ation
с	:DN :					About	
Public Cloud Serv	vice :						
Advanced Settings							Ð
	Description			Value		Defau	it
Cluster redirection function			Disable		• 📀	Disabl	e
Discard bootstrap			No		• 📀	No	
End Advertisement on			2017/05/	31	\odot	2017/05	/31
Start Advertisement on			2017/04/	16	\odot	2017/04	/16
Email status			Enable		• 💿	Enabl	2
SMTP server address of Email			enty tak		0	smtp.doma	n.com
Password of Email			les;*****		\odot	passwo	rd
Username of Email			lani			username@do	main.com
Load-balance: Max clients when AP is idle			20		\odot	20	
			20				
Load-balance: step value of parameter adjustment within of Enable the alarm fund	overage areas(dbm) First Previous ction and turn	Page 3 of 5	Next Last	on on A	o Iarm Se	2 tting.	0 .
Load-balance: step value of parameter adjustment within of Enable the alarm fund	Pirst Previous	Page 3 of 5 on the ma	Next Last	on on A	o Iarm Se	2 T tting . Beijng,Ruijie	0 *
Load-balance: step value of parameter adjustment within of Enable the alarm function of Beijing, Ruije ~	Pirst Previous	Page 3 of s	Next Last	on on A	larm Se	2 tting. Bejog.Rujje	0 . *
Load-balance: step value of parameter adjustment within of Enable the alarm function of the set of	Overage areas(dbm) First Previous Ction and turn	Page 3 of 5 on the ma	Next Last	on on A	Send Alarm Over Err	2 tting. Beying.Ruije	0 • · · · · · · · · · · · · · · · · · ·
Load-balance: step value of parameter adjustment within of Enable the alarm function Beijong.Rulpie ~ Alarm Settings Device goes offline	overage areas(dbm) First Previous Ction and turn	Page 3 of 5 on the ma	Next Last Alarm Threshold	on on A	Send Alarm Over Err	2 tting. Pegrag, Ruijie	0 x
Load-balance: step value of parameter adjustment within of Enable the alarm function Bejorg,Ruije ~ Alarm Settings Device goes offline Device goes online and offline continually	overage areas(dbm) First Previous Ction and turn	Page 3 of 5 on the ma	Next Last Alam Threshold	on on A	Send Alarm Over Err	2 tting. Bepro, Aujor	0
Load-balance: step value of parameter adjustment within or Enable the alarm function Beijing, Ruije ~ Alarm Settings Device goes offline Device goes offline Device goes online and offline continually STUB charge continuity	verage areas(dbm) First Previous Ction and turn	Page 3 of 5 on the ma	Alarm Threshold	on on A	Send Alarm Over Ear	2 Itting. Depres Aujer	0
Load-balance: step value of parameter adjustment within or Enable the alarm fund Beijrog,Ruije ~ Alarm Settings Perice goes offline Device goes orline and offline continually STUR change continually STUR change continually Channet utilization	verage areas(dbm) First Previous ction and turn Image: state st	Page 3 of 5 on the ma	Alarm Threshold	on on A	Seed Alarm Over Err	2 Itting. Begrap.Rajee	0 * × pdated
Load-balance: step value of parameter adjustment within of Enable the alarm fund Beijng,Ruije ~ Alarm Settings Device goes offline Device goes offline Device goes offline and offline continually STUN change continually Channet utilization Create contacts and off	ction and turn	Page 3 of 5 on the ma	Atem Threshold	on on A alarm o	Iarm Ser	tting.	0 * ×
Load-balance: step value of parameter adjustment within of Enable the alarm fund Beijrog,Ruije ~ Alarm Settings Device goes offline Device goes offline Device goes offline Device goes offline and offline continually STUR change continuity Channel utilization	ction and turn	Page 3 of 5 on the ma	Atem Threadoud a times the second a times th	on on A alarm o	Sed Alam Over Dr	2 tting. Berro, Auje at U tt Page Alarm Setting	0 • ×
Load-balance: step value of parameter adjustment within of Enable the alarm fund Beijing,Ruije ~ Alarm Settings Device goes office Device goes off	ction and turn	Page 3 of 5 on the ma Status C C C C C C C C C C C C C C C C C C C	Atem Threshold a term thresho	on on A alarm o	Seed Alarm See	2 tting. Beyrg, Rulje at U Alarn Setting System Setting System Setting	0 A X
Load-balance: step value of parameter adjustment within of Enable the alarm function Brong,Ruje ~ Alarm Settings Parker open office Device goes of	Ction and turn	Page 3 of 5 on the ma	Alam Threshold	on on A alarm o	Send Alarm See	2 tting. erycy.Ruje w u tting erycy.Ruje w u tting system Setting System Setting License	0 . ×
Load-balance: step value of parameter adjustment within of Enable the alarm fune Bring,Ruije ~ Alarm Settings Porce goes office Device goes	verage areas(dbm) First Previous ction and turn group for those Mobile 1224678 service	Page 3 of 5 on the ma Status Control of 5 Status Control of 5 Control	Alarm Threshold	on on A alarm o	e Seed Alarm See	2 tting. Beyrg, Naje al u Ct Page Alarn Setting License Personalize	× ×
Load-balance: step value of parameter adjustment within of Enable the alarm fune Bring,Ruige ~ Alarm Settings Porce goes office Device goes	Verage areas(dbm)	Page 3 of 5 on the ma Status Control of 5 Status Control of 5 Status Control of 5 Control of	Alarm Threshold Alarm Threshold Alarm Threshold Alarm Threshold Alarm Threshold Alarm Threshold Bread Prest Last	on on A alarm o	Seed Alarm See	2 tting. Brycz.Ruje M Ct Page Alam Setting System Setting License Personalize Contact	0 . ×
Lead-balance: step value of parameter adjustment within or Enable the alarm function Beijing, Ruije ~ Alarm Settings Device goes ordine and offine continually STUB change continuity STUB change continuity STUB change continuity Channel utilization Create contacts and g	verage areas(dbm) First Previous Ction and turn Group for those Mobile 12345678 service]grup First Previous	Page 3 of 5 on the ma Status C C C C C C C C C C C C C C C C C C C	Atam Threshold	on on A alarm o	Send Alarm Sec Send Alarm Over Err Con Description te	2 tting. beyrg.fujr at u Ct Page Alarn Setting System Setting Uicense Personalize Personalize Contact Notification	• • • • • • • • • • • • • • • • • • •
Laad-balance: step value of parameter adjustment within of Emable the alarm function Beijing, Ruije ~ Alarm Settings Perice goes offline Device	verage areas(dbm) First Previous ction and turn group for those tookie 12345678 servicej@rup First Previous	Page 3 of5 on the ma Status Control of 1 Status Control of 1 Status Control of 1 Page 1 of 1	Atam Threshold	on on A alarm o	Send Alarm Sec Send Alarm Over Err Con Description Ie	2 tting. byp.c.fuje at u Alam Setting System Setting System Setting Contact Notification About	x
Laad-balance: step value of parameter adjustment within of Enable the alarm function Beijong,Ruije ~ Alarm Settings Device goes adfine Device	verage areas(dbm) First Previous ction and turn group for those toole 1224678 service.gl@rup Prsz Previous	Page 3 of 5 on the ma Status e who reco	Next Last	on on A alarm o	Seed Alarm Over Err Seed Alarm Over Err Conta Description te	2 tting. bygg, Maje at u Alam Setting System Setting System Setting Contact Notification About	• • • • • • • • • • • • • • • • • • •
Load-balance: step value of parameter adjustment within of Employee of the alarm function of Beijing_Ruije ~ Alarm Settings Parkee goes offline Device goes offl	verage areas(dbm) First Previous Ction and turn Group for those Mobile 12345678 service.rj@rup First Previous	Page 3 of 5 on the ma Status C C C C C C C C C C C C C C C C C C C	Atam Threshold Atam Threshold 2 Atam Threshold 2 2 Atam Threshold 2 3 4 3 4 4 5 6 6 6 6 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7	on on A alarm o	Seed Alarm See Seed Alarm Over Err Conta Description ie	2 tting. Bryong. Major Marris Setting System Setting System Setting Discose Personalize Contact Notification About	x x x y y y y y y y y y y y y y y y y y
Load-balance: step value of parameter adjustment within of Email Control Con	verage areas(dbm) First Previous ction and turn group for those Mobile 12345078 service.rj@ruip First Previous Por Ruipie internel	Page 3 of 5 on the ma Status Control of 1 Control of 1 Control of 1 Page 1 of 1 Des	Atem Threshold a ling function Atem Threshold a smesh @ eiving mail renal renal	on on A alarm o	Seed Alarm See Seed Alarm Over Err Conta Description ie	2 tting. Beyrg.Rulpe at U Alarm Setting System Setting License Personalize Contact Notification About	x x
Load-balance: step value of parameter adjustment within of Emable the alarm function Bring,Ruije ~ Alarm Settings Vpr Alarm Settings Device goes offlire Group Contacts Group Ruije staff	verage areas(dbm) First Previous Ction and turn Group for those Mobile 12345678 servicej@ruip First Previous For Ruije internet	Page 3 of 5 on the ma States e who reco enetworks com Page 1 of 1 Des	Alam Theshold 2 Next Last Alam Theshold 2 2 Alam Theshold 2 2 2 2 2 2 2 2 2	on on A alarm o	Seed Alarm See	2 tting. Peryog.Rulpe at U Alarm Setting System Setting License Personalize Contact Notification About	0 a

4) Edit the **Group Contacts** and Add the contacts into this group.

Name .	Ruijie Staff		
Description :	For Ruijie internel		
oup Contacts		All Contacts Ruijieoversea	

5) Binding the Contact Group to this organization on alarm settings and save the setting.

Alarm Settings				A N
Туре	Status	Alarm Threshold	Send Alarm Over Email	Updated
Device goes offline				
Device goes online and offline continually		> 20 % @		
STUN change continully		> 3 times/h ④		
Channel utilization				
Contact Group List				0 2
Group		Description		Action
Ruijie Staff	For Ruijie internel			Û
	First Previous Page 1 of 1	Next Last		10 . 1 in total

8.5. Customization

User can customize MACC-BASE background image and notification message on MACC-BASE.

1) Click **Personalize** on the top right corner to modify the background image.

۵ ۵۹۵۳ ۲۰	MONITORING	CONFIGURATION	MAINTEN	ANCE			🗳 🔒	3
							Alarm Settings	
Background Image							System Settings	
		-					License	
				1. The format of the picture must be	ipg.		Personalize	
				gir, jpeg, omp or png. 2. Size 1920px * 1080px			Contact	
							Notification	
			Please select im	age Bestore to Default		/	About	
							Change Log	
-							-	
				and the second	and the statement of		The Al	19 A. 19

2) Add a prompt message on **Notification** page.

	MONITORING	CONFIGURATION	MAINTENANCE	Hi, this is MACC-BASE	🗳 🖌	•
Natification					Alarm Settings	
Notification					System Settings	* 2S
	Created		Content	Expired	License	n
20	18-02-07 16:30:40	Hi, this is MACC-BASE		2018-02-22 00:00:00	Personalize	
					Contact	nounce
			MON.	and a los	Notification	
		-			About	
					Change Log	
	and the second s					
	7 martin	-				
	-		-		-	

8.6. Log

8.6.1. Operation Log

Operation Log records all operation info.

			MONITORING	CC	NFIGURAT	ON MAINTENANCE CC-BASE		۵	6	
		F								
	LOGS	I	Operation Log				Ð	. +	*	20
ſ	Operation Log		Started	0	Ended	III Q Search				
	Config Log		Time	User	Туре	Description	Resu	ilt F	Resul	lt De
	Upgrade Log		2018-02-07 14:07:55	admin	Login	Log in successfully	Succe	155		01
	Client Log		2018-02-07 10:48:54	admin	Login	Log in successfully	Succe	ISS		OI
	Connection Log		2018-02-06 18:47:45	admin	Load Balance	Load balance is enabled for group 【RuijieDemo】.	Succe	iss		OI
_			2018-02-06 18:47:40	admin	Load Balance	Add device 【G1LQ68P003245, G1LQ7BF018855】 to load balance group 【RuijieDemo】.	Succe	iss		OI
÷	UPGRADE		2018-02-06 18:44:04	admin	Load Balance	Add load balance group [RuijieDemo]: max clients associated with an AP is [null]; min AP coverage power is [null] dbm.	Succe	155		01
	Upgrade		2018-02-06 18:38:33	admin	Load Balance	Delete load balance group 【12】.	Succe	188		01
	Firmware		2018-02-06 18:38:18	admin	Load Balance	Add load balance group [12] : max clients associated with an AP is [null]; min AP coverage power is [null] dbm.	Succe	ISS		OI
ø	SYSTEM		2018-02-06 18:37:45	admin	Load Balance	Delete load balance group 【Group_B_LB】.	Succe	188		OI
	Disk Cleanup		2018-02-06 18:37:33	admin	Load Balance	Delete load balance group 【Group_A_LB】.	Succe	iss		OI
	Database Backup		2018-02-06 18:32:49	admin	Load Balance	Delete load balance group 【qwe】.	Succe	288		01
					(First Previous Page 1 of 15 Next Last 10		45 i	n to	tal

8.6.2. Config Log

Config Log lists down the status of device configuration. If the device stucks on not sync state, user can check the configuration delivery status by clicking the detail button.

	ے 🗠 ععمہ	MON	NITORING	CONFIGURATI	ON MAINTE	NANCE			💕 🛱 😵	8
0	LOGS Operation Log Config Log Upgrade Log Client Log	Cor	nfig Log	Li o Device	© View					
•	Connection Log UPGRADE Upgrade	Acti	ion View		🗔 📿 Se	arch			⊖ ∎ - X	
	Firmware		Operation Type	Started	Ended	Status	Devices	Result	Description	
		+	Change Group	2018-02-06 17:47:34	-	Incomplete	Total/Offline/Not Online Yet: 1/1/0	Success/Failure: 0/0 In progress/Scheduled/Complete: 0/0/0	Device: G1LQ7BF018855. (
a	SYSTEM Disk Cleanup	+	Change Group	2018-02-06 17:47:09		Incomplete	Total/Offline/Not Online Yet: 1/1/0	Success/Failure: 0/0 In progress/Scheduled/Complete: 0/0/0	Device: G1LQ68P003245. (
	Database Backup	+	Change Group	2018-02-06 17:47:09	2018-02-06 17:47:34	Complete	Total/Offline/Not Online Yet: 1/0/0	Success/Failure: 0/0 In progress/Scheduled/Complete: 0/0/1	Device: G1LQ7BF018855. (
		+	Edit Config	2018-02-06 09:59:11	2018-02-06 09:59:11	Complete	Total/Offline/Not Online Yet: 0/0/0	Success/Failure: 0/0 In progress/Scheduled/Complete: 0/0/0	Config: Beijing_Ruijie_Auto	
		+	Edit Config	2018-02-06 09:59:11	2018-02-06 09:59:11	Complete	Total/Offline/Not Online Yet: 0/0/0	Success/Failure: 0/0 In progress/Scheduled/Complete: 0/0/0	Config: Beijing_Ruijie_Auto	
		+	Edit Config	2018-02-06 09:59:11	2018-02-06 09:59:11	Complete	Total/Offline/Not Online Yet: 0/0/0	Success/Failure: 0/0 In progress/Scheduled/Complete: 0/0/0	Config: Beijing_Ruijie_Auto	
		+	Edit Config	2018-02-06 09:59:10	2018-02-06 09:59:11	Complete	Total/Offline/Not Online Yet: 0/0/0	Success/Failure: 0/0 In progress/Scheduled/Complete: 0/0/0	Config: Beijing_Ruijie_Auto	
		+	Device First Online	2018-01-24 02:29:24	2018-01-24 02:30:10	Complete	Total/Offline/Not Online Yet: 1/0/0	Success/Failure: 1/0 In progress/Scheduled/Complete: 0/0/0	Device: G1LQ7BF018855;C	6
								Succase/Esilura 1/0		

8.6.3. Upgrade Log

Devices firmware upgrade history will be listed on this page.

	ڭ ۲۲۸۳	MONITORING CONFIGURATION MAINTENANCE Hi, this is MACC-BASE	000
	LOGS Operation Log	Upgrade Log Select upgrade mode ▼ Started Image: Constraint of the select upgrade mode ■	11 - 26
	Config Log	Operator Description Target Version Process Time Result (Success/Failure/Aborted)	Action
	Upgrade Log	admin Upgrade selected1 device(s) AP_R603 11.1(5)99P2, Release(04170312) 1/1 2017-08-01 20:14:03 1/0/0 g	
	Client Log	admin Upgrade selected1 device(s) AP_RGOS 11.1(5)89P2, Release(04170312) 2017-08-01 20.12.52 1/0/0	160
	Connection Log	First Previous Page 1 of 1 Next Last 10 .	2 in total
•	UPGRADE		and the second se
	Upgrade		
	Firmware		5.9
٥	SYSTEM		
	Disk Cleanup		ature.
	Database Backup		

8.6.4. Client Log

Client History logs in client log page, and user can export client info base on days, traffic, hours.

ے ۳۵۹۲	MONITORING CO	NFIGURATION MAI	NTENANCE Hi,	this is MACC-BASE		🔮 🗅 😵
8 1065	Filter Criteria					
Operation Log Config Log Upgrade Log Client Log	T Daily Clients	Daily Traffic	U Hourly Client			
Connection Log	Daily Clients					₫ # - X
Upgrade	Total Clients • : :	· • • • •	C Search	Tatal Tas(6+(10)	Testing of Anthropolicate (MD)	
Firmware	2	2018-01-05	Active Clients	5 00	5 00	LAB
	3	2018-01-08	1	3.00	3.00	LAB
SYSTEM	4	2018-01-09	1	4.00	4.00	LAB
Disk Cleanup	6	2018-01-10	3	10.00	10.00	LAB
Database Backup	2	2018-01-11	2	13.00	13.00	LAB
	6	2018-01-12	1	12.00	12.00	LAB
	1	2018-01-13	-	-	-	LAB
	2	2018-01-14	12	0.00	12 C	LAB
	2	2018-01-15	1	2.00	2.00	LAB
	5	2018-01-16	3	435.00	435.00	LAB
						10 - 19 in total
		Firs	Previous Page	I JOT 2 Next Last		io - Io in total

8.6.5. Connection Log

Connection Log is the connection record between MACC-BASE and managed devices. If the device is abnormal, it's recommended to check connection history on this page.

			MONITORING	CONFIGURATION	MAINTENANCE	-				🦉 🛛 🕲 🔒
	LOGS Operation Log	1	Connection Log	Q Search						⊖ ∉ ∎• X
	Config Log		SN	RPC Type	Operation Type	Status	Content	Failure Cause	Started	Ended
	Upgrade Log		G1LW910000086	SET_PARAMETER_VALUES	roam-sync	FINISH	[Device.X_WWW-RUIJIE-COM-CN		2018-02-07 16:23:59	2018-02-07 16:23:59
	Client Log		G1LW910000086	SET_PARAMETER_VALUES	roam-sync	FINISH	[Device.X_WWW-RUIJIE-COM-CN		2018-02-07 16:02:57	2018-02-07 16:02:57
	Connection Log	15	G1LW910000086	SET_PARAMETER_VALUES	roam-sync	FINISH	[Device.X_WWW-RUIJIE-COM-CN		2018-02-07 15:42:55	2018-02-07 15:42:55
_			G1LW910000086	SET_PARAMETER_VALUES	roam-sync	FINISH	[Device.X_WWW-RUIJIE-COM-CN		2018-02-07 15:21:53	2018-02-07 15:21:53
•	UPGRADE	- 20	G1LW91000086	GET_PARAMETER_VALUES	get radio values	FINISH	{Device.WiFi.Radio.2.X_WWW-RUIJI		2018-02-07 15:15:13	2018-02-07 15:15:14
	Upgrade	2	G1LW91000086	EXECUTE_CLI_COMMAND	TIMEZONE-UPD	FINISH	mode:CONFIG command.[clock tim		2018-02-07 15:15:13	2018-02-07 15:15:14
	Firmware		G1LW910000086	SET_PARAMETER_VALUES	roam-config	FINISH	[Device X_WWW-RUIJIE-COM-CN		2018-02-07 15:15:13	2018-02-07 15:15:15
			G1LW910000086	GET_PARAMETER_VALUES	get bssid values	FINISH	{Device WiFi SSID 2 MACAddress=0		2018-02-07 15:15:13	2018-02-07 15:15:13
			G1LW910000086	SET_PARAMETER_VALUES	roam-sync	FINISH	[Device.X_WWW-RUIJIE-COM-CN		2018-02-06 19:07:26	2018-02-06 19:07:26
			G1LW910000086	SET_PARAMETER_VALUES	roam-sync	FINISH	[Device.X_WWW-RUIJIE-COM-CN		2018-02-06 18:46:11	2018-02-06 18:46:11
					First	revious Page	1 of 55 Next Last			10 * 550 in total

8.7. Diagnosis Tool

MACC supports Advanced troubleshooting, CLI access to devices to perform advanced debugging.

1) Go to **Monitoring Page** > Access Point /Switch. Click **More** and select **Diagnosis Tool**.

	MONITORING CO	NFIGURATION MAI	NTENANCE	-	e Ø 🕯 🔒
 OVERVIEW Global 	wahana 🗸			wahar	na x ¥
Quality Alarm DEVICES	AP List	Q Search	Davies Alias MGMT IP	Public IP Clients Conn	⊕ #* X
Access Point Switch	Online G1KDCGE0	04678 Not Synced 5869.6cbd.	56a5 <u>520i(marketing)</u> 192.168.7.201	110.136.14.248 - WahanaBuilding	Move To Delete Restart
CLIENTS Client List Experience		Frendus	i i i i i i i i i i i i i i i i i i i	1 Selected	Import More +

2) Use "General->Running Config" to verify the AP setting.

SN:G1LW30T00	00769	Background color:
General >	Version	web-auth portal wifidog_4 webauth
Connecti >	Running Config	! wlansec 5
Running >	Startup Config	web-auth portal wifidog_5 webauth
User >	Log	! ntp server cn.pool.ntp.org
WLAN >	Current Mode	ntp server 0.cn.pool.ntp.org ntp server asia.pool.ntp.org
Wireless >	Current Time	! ip nat inside source list 2 interface BVI 1
Web Cli >		! no offline-detect
		! line console 0 login password admin line vty 0 4 privilege level 15 login password admin ! end

3) Use "Connection->Ping tool" to check the Internet connectivity.

SN:G1LW30T000769	Background color: 🗾 🔲 🗌 Clear
General > Interface IP	
Connecti > Interface Status	Please wait
Running > ARP	
User > MAC	Ping Tool: Sending 5, 100-byte ICMP Echoes to 8.8.8.8, timeout is 2 seconds:
WLAN > DNS	< press Ctrl+C to break >
Wireless > Route	Success rate is 0 percent (0/5).
Web Cli > ruijienetworks.com Send	Please wait
	Ping Tool:
	Translating "ruijienetworks.com"[OK]
	Sending 5, 100-byte ICMP Echoes to 139.198.10.166, timeout is 2 seconds:
	< press Ctrl+C to break >
	$\frac{1111}{5}$
	Success face is for percent (3/3), found the minyavg/max = 00/00/00 ms.

4) Use "WLAN->MBSSID" to verify the broadcast SSID

Web Cli ×						
SN:G1LW30T000769	Background color : 🔤 🔲 🗌 Clear					
General > MBSSID	name: Dot11radio 2/0.1 wlan id: 1					
Connecti > WLAN Details	ssid: Social_Login bssid: 0669.6c88.695b					
Running > Roaming Group Neighbor	name: Dot11radio 2/0.2					
User >	włan id: 2 ssid: RuijieOversea					
WLAN >	bssid: 0a69.6c88.695b					
Wireless >	name: Dot11radio 2/0.3 wlan id: 3					
Web Cli >	ssid: Free Wifi Hotel-Guest bssid: 0e69.6c88.695b					
	name: Dot11radio 2/0.4					
	ssid: Free Wifi Hotel-VIP					
	bssid: 1269.6c88.695b					
	name: Dot11radio 2/0.5 wlan id: 5					
	ssid: Survey					

5) Use "User->Associated Client" to check the online user.

Web Cli	×					
SN:G1LW30T000769 Background color : 🗖 🖬 🗌						
General > Associated Client Connecti > User IP(DHCP Server)	0669.6c88.6950 5869.6c88.6957 0 NA1 10.10.10.109 Free With Hotel-Guest 1269.6c88.695a 5869.6c88.6957 0 NAT 10.10.10.109 Free With Hotel-Guest 1269.6c88.695b 5869.6c88.6957 0 NAT 10.10.10.109 Free With Hotel-VIP 1269.6c88.695b 5869.6c88.6957 0 NAT 10.10.10.109 Free With Hotel-VIP 1669.6c88.695a 5869.6c88.6957 0 NAT 10.10.10.109 Survey 1669.6c88.695b 5869.6c88.6957 0 NAT 10.10.10.109 Survey					
User > WLAN >	Please wait					
Wireless > Web Cli >	Associated Client: None					
	Please wait Associated Client: RADIO-ID WLAN-ID ADDR AID CHAN RATE_DOWN RATE_UP RSSI ASSOC_TIME IDLE TXSEQ RXSEQ ERP STATE CAPS HTCAPS VHT_MU_CAP 2 3 cc:08:8d:e8:31:52 1 52 87.0M 6.0M 14 0:00:03 0 27 256 0x0 0x3 E WS SU					

9. FAQ-Frequency Asked Questions

Deployment

What should I check if MACC-BASE service is not running after installation?

Follow below checklist to ensure each item meet the requirement.

- Centos OS version: CentOS-7-x86_64-Minimal-1511.iso
- Physical/Virtual platform meet minimum hardware resource
- Port Mapping is required in NAT environment, refer MACC-BASE installation guide
- Disable built-in firewall on Cent OS: systemctl disable firewalld.service
- Restart follow services with Linux commands on console or restart the server

tomcat: ./macc/install/tomcat/bin/startup.sh				
mysqld: service mysql start				
mongod: mongod -f /etc/mongod.conf				
redis:	redis-server /etc/redis/redis.conf			
zookeeper	./macc/install/zookeeper-3.4.9/bin/zkServer.sh start			
activemq:	./macc/install/apache-activemq-5.13.1/bin/activemq start			

• Collect services running log on server. Folder path is /tmp/ServiceMonitor.log

If above checklist cannot solve your problem, please contact Ruijie support.

How can I change the system time on MACC-BASE?

User can select designated time zone when creating device group, but the system time in MACC-BASE is relied on CentOS system. The following link will show you how to change the system time under CentOS.

http://www.putorius.net/2015/04/setting-time-and-date-in-red-hat-7.html

The URL of MACC-BASE will redirect to intranet IP with SSO when I access from Internet.

MACC-BASE is enabled SSO by default and which only allow user access the WEB service from unique entrance. We provide a script to change related settings If user needs to NAT WEB service to Internet or modify SSO URL/IP address.

1) Download the script from below link. https://unifi.ruijiecloud.com/index.php/s/rQ2RVLFGrL4g1X3

2) Upload to CentOS server and authorize exec permission.

```
Troot@localhost_maccl# ls
Groot@localhost_maccl# ls
Gas.log_cdata_config_sso_final.sh_config_sso.sh_data_img_install_logback_logs_mysql_perfStats.log
Eroot@localhost_maccl#_chmod_777_config_sso.sh
Eroot@localhost_maccl#_
```

Command: chmod 777 config_sso.sh

3) Execute the script and follow the prompts to complete SSO setting.

[root@localhost_macc]# [root@localhost_macc]# ./config_sso.sh config_SSO... If you want to open_SSO, Please enter "y", else enter "n" not use SSO, Cancel enter other letter.

Command: ./config_sso.sh

Why my AP cannot go online on MACC-BASE?

- Verify the MACC server URL on **System Setting->Basic Settings** with super admin account. The URL should point to MACC-BASE server IP address.
- Ensure devices (AP and Switch)'s versions are up to date.
- Connectivity between APs and MACC-BASE (Port:80/443), internet access and DNS setting are required.
- Verify whether the device's serial number was added to MACC-BASE or not.
- Use command "show cwmp config" on device's CLI and check whether the CWMP URL and CWMP Interval(180s) are correct.

Configuration

The AP is online but stuck on "Not Synced" status.

- Ensure devices (AP and Switch)'s versions are up to date.
- Use command "show cwmp config" on device's CLI and check whether the CWMP URL and CWMP Interval(180s) are correct.
- Check the setting push status on **MAINTENANCE->Config Log**. And click detail for execution status.

Construction of the second						
Config Log	EO	1100				
Upgrade Log	Action View	Device View				
Client Log		DURCTRO				
Connection Log	Action View			1.00		o
UPGRADE		(max	(Construction)			0 #* X
Upprade	110	-0	Q Search			
Eirmune	Operation Type S	tarted Ended	Status	Devices	Result	Description
Filliware	- Change Group 2018-02	-06 17:47:34 -	incomplete	Total/Offline/Not Online Yet: 1/1/0	Success/Failure 0/0 In progress/Scheduled/Complete 0/0/0	Device: G1LQ78F018855. Group is
SYSTEM						
Disk Cleanup	SN			Q Search		
Database Backup	SN	Started Ended	Result	4	Config	Action
	G1L07BF018855		Offline			8
		F	rat Previous Pag	e 1 of 1 Next L	ast	10

If above steps cannot solve the problem, you can use command perform factoryreset for testing.

Command: AP(config)#apm factory-reset

Wireless STA shows IP address "0.0.0.0" on Client List

There are 2 possibilities may cause this problem:

- No traffic flow upload to AP after client connected
- It will take around 5 minutes to refresh the data on MACC-BASE

Could MACC-BASE support multi-tenant?

By default, the multi-tenant function on MACC-BASE is disabled, customer can contact Ruijie Support to enable this feature if needs. And MACC-BASE supports multi-account to manage organization.

How to choose 2.4GHz and 5GHz Radio interface for Access Point?

SSID				×
WLAN ID	1	Hidden	No	▼
SSID		Forward Mode Ø	NAT	▼
Encryption Mode	OPEN V	Radio	🗹 Radio1 🗹 Radio2 🗌 Radio3	

- Radio 1 represent 2.4GHz
- Radio 2 represent 5GHz

How to disable WEB portal page after user roaming to other APs?

In WEB authentication scenario, user can enable "Seamless Online" function on SSID page for seamless roaming.

Wireless STA cannot roam to other APs.

The MACC-BASE is enabled L2(same subnet) roaming by default.

For SSID in NAT mode or L3 roaming, it's required to select "**NAT Roaming Address Pool Configuration**" for roaming DHCP pool and enable Roaming feature on **Wireless-Roaming** page.

	MONITORING CONFIGURATION MAINTENANCE Hi, this is MACC-BASE
க் GROUPS	Beijing_Ruijie ~ 🔍
WIRELESS Basic Layout Load Balance RF Planning Reaming Blue Tooth	Beijing_Ruijie Roaming Setting Numing : Oth reaming function enabled, users can achieve zero-handoff roaming within the WFI coverage area. Example: Image: Coupled of the couple of the coverage area. Example: Image: Coverage area. Example:

From AP's log, reaching the maximum online number of radio and STA cannot go online.

*Mar	1 11:33:34:	\$WLAN-6-OUTPUT:	STA(b8bc.1b6a.fa5b)	actives in BSSID(0a69.6cb9.7a43): Auth succeed.
*Mar	1 11:33:34:	\$WLAN-6-80211N:	STA(b8bc.1b6a.fa5b)	fails to active in BSSID(0a69.6cb9.7a43): STA is rejected by access control, status code(17).
*Mar		<pre>\$WLAN-6-OUTPUT:</pre>	STA(6476.bab5.9fb4)	actives in BSSID(0a69.6cb9.7a43): Auth succeed 20 times in 45 seconds.
*Mar		\$WLAN-6-80211N:	STA(6476.bab5.9fb4)	fails to active in BSSID(0a69.6cb9.7a43): STA is rejected by access control, and STA attamp to ass
20 t	imes in 45 s	econds, status c	ode(17).	
*Mar	1 11:33:36:	<pre>\$WLAN-6-OUTPUT:</pre>	STA(3cb6.b70d.14a6)	actives in BSSID(0a69.6cb9.7a43): Auth succeed.
*Mar	1 11:33:36:	<pre>\$WLAN-6-OUTPUT:</pre>	STA(3cb6.b70d.14a6)	actives in BSSID(0a69.6cb9.7a43): Reasso succeed.
*Mar		<pre>\$WLAN-6-OUTPUT:</pre>	STA(a888.0867.4e56)	actives in BSSID(0a69.6cb9.7a43): Auth succeed.
*Mar		\$WLAN-6-80211N:	STA(a888.0867.4e56)	fails to active in BSSID(0a69.6cb9.7a43): STA is rejected by access control, status code(17).
*Mar	1 11:33:39:	<pre>%WLAN-6-OUTPUT:</pre>	STA(842e.270b.8a50)	actives in BSSID(0a69.6cb9.7a43): Auth succeed.
*Mar	1 11:33:39:	%WLAN-6-80211N:	STA(842e.270b.8a50)	fails to active in BSSID(0a69.6cb9.7a43): STA is rejected by access control, status code(17).
*Mar	1 11:33:43:	<pre>%WLAN-6-OUTPUT:</pre>	STA(b8bc.1b6a.fa5b)	actives in BSSID(0a69.6cb9.7a43): Auth succeed.
*Mar	1 11:33:43:	%WLAN-6-80211N:	STA(b8bc.1b6a.fa5b)	fails to active in BSSID(0a69.6cb9.7a43): STA is rejected by access control, status code(17).
*Mar	1 11:33:53:	<pre>%WLAN-6-OUTPUT:</pre>	STA(a888.0867.4e56)	actives in BSSID(0a69.6cb9.7a43): Auth succeed.
*Mar	1 11:33:53:	%WLAN-6-80211N:	STA(a888.0867.4e56)	fails to active in BSSID(0a69.6cb9.7a43): STA is rejected by access control, status code(17).
*Mar	1 11:33:53:	<pre>%WLAN-6-OUTPUT:</pre>	STA(b8bc.1b6a.fa5b)	actives in BSSID(0a69.6cb9.7a43): Auth succeed.
*Mar		%WLAN-6-80211N:	STA(b8bc.1b6a.fa5b)	fails to active in BSSID(0a69.6cb9.7a43): STA is rejected by access control, status code(17).
*Mar	1 11:33:54:	<pre>%WLAN-6-OUTPUT:</pre>	STA(b8bc.1b6a.fa5b)	actives in BSSID(0a69.6cb9.7a43): Auth succeed.
*Mar	1 11:33:54:	%WLAN-6-80211N:	STA(b8bc.1b6a.fa5b)	fails to active in BSSID(0a69.6cb9.7a43): STA is rejected by access control, status code(17).

Adjust the Max Client value on MACC-BASE to support more users on radio interface.

Radio 🕀			
Radio1		Radio2	
ON/OFF Max Clients	64	ON/OFF Max Clients	64

Maintenance

User cannot receive mail alarm from MACC-BASE

It needs to verify below setting:

- Configure SMTP server on System Settings-Advanced Settings
- Ensure the connectivity between MACC-BASE server and SMTP service
- Verify whether the mail address of user account is correct or not

How to use WEB CLI for device on MACC-BASE?

ALL ~ > demo_1 ~ Q Time Zone: (GMT+8:00)PRC DASHBOARD ! ALARM AP List 0 11 - 20 Add AP More - 1 Selected SN, Device Alias, Description Q I ANALYSIS Move To Sta Config Status MAC Device Alias MGMT IP Public IP Clients Group Firmware Version Delete Traffic 00 Synced 58:69:6C:BE:AB:10 740 172:17:207:82 111:204:215:184 - demo_1 AP_RGOS 11:1(5)B9P5; Release(04180410) 2018-Restart Oiagnosis Tool
 Diagnosis Tool
 Oiagnosis
 Statemark
 Statemark
 Statemark
 Diagnosis
 Tool
 Statemark
 St Not Synced 58:69:6C:99:08:F5 Ruijie 172.17.185.122 111.204.215.182 - QA_lab AP_RGOS 11.1(5)801 2018-10 - 2 in total Page 1 of 1 Next E DEVICE

Choose designated device and click More->Diagnosis Tool

How to configure the function which MACC-BASE doesn't support?

Click **CLI Command** on **CONFIGUATION**->**Basic** and add the command that needs to be configured.

ت ععم ال	MONITORING CONFIGURATION MAINTENANCE H, this is MARCHARE	🔮 O 🔮
க் groups	Beijng Auje ~ Q	Time Zone: (GMT+10:30)Australia/L
Basic	Beijng,Ruje	Inguirt Save
Layout Load Balance	Fest Previous Page 0 dr0 List	10 . 0 in total
RF Planning Roaming BlueTooth	Radio P Radio1 Radio2 ONOFF ONOFF ONOFF O	
	Security Advanced Settings(Optional)	×
	Whitelist O Address Description	Fackbook Action
	No matching records found	
	Fest Process Page @ dr0 hest Last	5 ∡ 0 in total
	CLI Command C Description	Action
	No matching records found	
	Fast Previous Page 0 of 0 Next Last	10 0 in total