

知 LA3608E GE口业务回传功能典型配置

3G/4G拨号 陈丹威 2014-07-22 发表

一、组网需求

LA3608E GE口回传业务主要应用于远程监控场景。在一些偏远地区等不方便有线传输的场合，LA3608E可以通过LTE移动网络回传GE口业务数据。监控设备Camera通过以太网口接入LA3608E，LA3608E再将Camera虚拟成无线客户端，将Camera的监控信息通过CAPWAP隧道集中转发到AC，由AC处理并转发数据到企业内部服务器。

在该组网情况中，要实现以下功能：

- 1) LA3608E上行通过Cellular-Ethernet接口接入运营商LTE移动网络，通过广域网链路注册到AC；
- 2) LA3608E下行通过GE接口连接监控设备Camera，监控设备要能够支持DHCP或者静态配置IP地址，作为虚拟无线客户端接入AC；
- 3) Server位于企业的内部，监控设备与Server之间以二层或者三层通信，实现GE口业务的回传。

设备清单：LA 3608E系列路由器1台，AC无线控制器1台

二、组网图

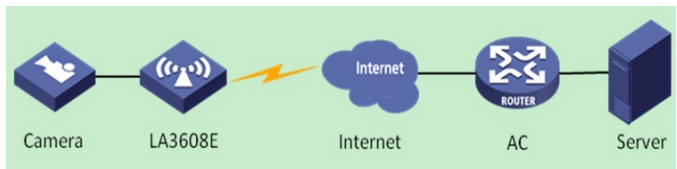


图1 LA3608E GE口业务回传功能典型组网图

三、配置步骤

1、设备版本要求

AC版本

_ v

H3C Comware Platform Software

Comware Software, Version 5.20, Release 2507P26

Comware Platform Software Version COMWAREV500R002B109D026

LSU3WCMD0 Software Version V200R005B09D026

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Compiled Jun 21 2014 11:32:42, RELEASE SOFTWARE

LSU3WCMD0 uptime is 0 week, 1 day, 23 hours, 49 minutes

LSU3WCMD0 with 1 RMI XLR732 950MHz Processor

2048M bytes DDR2

4M bytes Flash Memory

1047M bytes CFCard Memory

Hardware Version is Ver.B

FPGA Hardware Version is Ver.A

CPLD Version is 005

FPGA Logic Version is 316

Basic Bootrom Version is 2.03

Extend Bootrom Version is 2.03

[Subslot 0]LSU3WCMD0 Hardware Version is Ver.B

AP版本：

_ v

H3C Comware Platform Software

Comware Software, Version 5.20, Release 0008P02

Comware Platform Software Version COMWAREV500R002B109D026

H3C LA3608E Software Version V500R013B02D010

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Compiled Jun 23 2014 10:57:40, RELEASE SOFTWARE

H3C LA3608E uptime is 0 week, 0 day, 0 hour, 5 minutes

Last reboot 2014/06/25 15:32:40

System returned to ROM By Command.

CPU ID: 0xa

256M bytes DDR3 SDRAM Memory

2M bytes Flash Memory

PCB Version: 2.0

Logic Version: 2.0

Basic BootWare Version: 1.02

Extended BootWare Version: 1.02

[SLOT 0]CON (Hardware)2.0, (Driver)1.0, (CPLD)2.0

[SLOT 0]GE0/0 (Hardware)2.0, (Driver)1.0, (CPLD)2.0

[SLOT 1]WLAN (Hardware)2.0, (Driver)1.0, (CPLD)2.0

[SLOT 2]CELLULAR-ETHERNET2/ (Hardware)2.0, (Driver)1.0, (CPLD)2.0

2、AC配置

划分VLAN10为管理VLAN，VLAN20为业务VLAN，开启DHCP服务为接入的虚拟无线客户端分配IP地址，开启Client IP地址学习功能

#

wlan client learn-ipaddr enable

#

vlan 10

#

vlan 20

#

dhcp server ip-pool vlan20 extended

network ip range 192.168.20.100 192.168.20.200

network mask 255.255.255.0

gateway-list 192.168.20.1

dns-list 192.168.20.1

#

interface Vlan-interface10

ip address 60.191.123.87 255.255.255.0

#

interface Vlan-interface20

ip address 192.168.20.1 255.255.255.0

dhcp server apply ip-pool vlan20

#

interface WLAN-ESS20

```
port access vlan 20

#

ip route-static 0.0.0.0 0.0.0.0 60.191.123.1

#

dhcp enable

#

创建WLAN服务模板，启用wired-service，Beacon帧隐藏SSID
```

```
#

wlan service-template 20 clear

ssid 20-wired

beacon ssid-hide

bind WLAN-ESS 20

wired-service enable

service-template enable
```

```
#

在AC上配置WLAN AP模板，使用手工输入序列号方式添加AP，并为AP配置相应的MAP文件，以便Fit AP上线后，使能GE接口混杂模式，并开启虚拟GE口回传业务的功能。MAP文件内容如下：
```

```
#

virtual-station enable

#

interface GigabitEthernet0/0

shutdown

port link-mode route

promiscuous

undo shutdown

#
```

AC上配置WLAN AP模板，使能虚拟无线服务，为方便虚拟无线客户端快速上线，建议采用固定信道

```
#

wlan ap ap2 model LA3608E id 5

map-configuration virtual-station.txt

serial-id 219801A0J2M13A000006

radio 1

channel 1

service-template 20

radio enable
```

```
#
```

3、AP配置

AP配置Cellular-ethernet，设备通过LTE移动网络拨号上网，接入互联网

```
#

dialer-rule 1 ip permit

#

interface Cellular-Ethernet2/0

ip address cellular-allocated

dialer enable-circular

dialer-group 1

dialer timer idle 0
```

```
dialer timer wait-carrier 15

dialer timer autodial 20

dialer number *99# autodial

#

ip route-static 0.0.0.0 0.0.0.0 Cellular-Ethernet2/0

#

Fit AP采用直接配置AC IP地址的方式主动发现AC

#

wlan ac ip 60.191.123.87

#
```

4、Server配置

内网Server使用固定IP地址，接入AC的VLAN20，保证与虚拟无线客户端二层能够互通。配置略。

四、验证配置

1. 在AC上查看AP上线

```
display wlan ap all

Total Number of APs configured      : 5

Total Number of configured APs connected  : 1

Total Number of auto APs connected    : 0

Total Number of APs connected       : 1

Maximum AP capacity                 : 32

Remaining AP capacity               : 31

AP Profiles

State : I = Idle, J = Join, JA = JoinAck, IL = ImageLoad

C = Config, R = Run, KU = KeyUpdate, KC = KeyCfm

M = Master, B = Backup
```

AP Name	State	Model	Serial-ID
ap1	I	LA3608E	Not Configured
la3608	I	LA3608E	auto
la2608	I	LA2608	auto
zyw	I	LA3608E	219801A0J2M13C000057
ap2	R/M	LA3608E	219801A0J2M13A000006

2. 在AC上查看虚拟的无线客户端（监控设备）上线

```
display wlan client

Total Number of Clients      : 1

Client Information

SSID: 20-wired

MAC Address  User Name  APID/RID  IP Address  VLAN

0024-e8d8-efb4  -NA-      5 /1     192.168.20   20
```

3. 在AP上查看虚拟无线客户端的状态

```
system-view
```

System View: return to User View with Ctrl+Z.

[ap2]_h

Now you enter a hidden command view for developer's testing, some commands may affect operation by wrong use, please carefully use it with our engineer's direction.

[ap2-hidecmd]display virtual-station status

Station state : run //三种状态 1 idle、2 wait、3 run。其中run状态说明已经添加station成功

Station mac : 0024-e8d8-efb4 //成功上线的MAC地址

Current mac : 0024-e8d8-efb4 //如果有新的源MAC的报文过来，这里会显示。但如果之前的MAC在线，此MAC不会上线。目前只支持一个STATION在线

Virtual station : enable //虚拟无线客户端功能开启/关闭状态

Station add timer : 6000 ms //目前默认是6000，station添加超时6秒之后会重新添加

4. 检查网络的连通性

虚拟无线客户端与内网Server可以互相Ping通。

五、配置关键点

1. 目前该功能仅适用于LA3608E设备；
2. GE口业务回传功能暂时仅支持一个客户端，GE接口仅支持直连虚拟无线客户端，不能通过交换机连接多个虚拟无线客户端；
3. 从LA3608E设备上电到设备作为Fit AP接入AC，这段时间内LA3608E的GE接口会一直处于UP的状态。在这段时间内，连接的虚拟无线客户端可能因DHCP超时，而长时间获取不到IP地址。为防止该状况的发生，建议用户在实际使用时，虚拟无线客户端采用静态IP地址或者在MAP文件中shut/unshutdown一下GE接口，以重新触发虚拟无线客户端的DHCP流程，以保证虚拟无线客户端能够快速上线。