

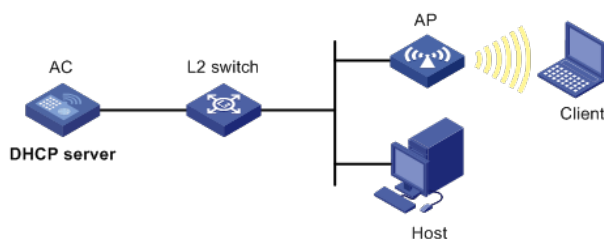
本文档介绍AP与AC间通过二层网络完成注册的配置举例。

本文档适用于使用Comware V7软件版本的无线控制器和接入点产品，不严格与具体硬件版本对应，如果使用过程中与产品实际情况有差异，请参考相关产品手册，或以设备实际情况为准。

本文档中的配置均是在实验室环境下进行的配置和验证，配置前设备的所有参数均采用出厂时的缺省配置。如果您已经对设备进行了配置，为了保证配置效果，请确认现有配置和以下举例中的配置不冲突。

本文档假设您已了解WLAN接入相关特性。

如图1所示，集中式转发架构下，无线客户端Client、有线客户端Host通过L2 switch和AC相连，L2 switch通过PoE方式给AP供电，AC做为DHCP server为AP、Client和Host分配IP地址。需要实现无线客户端Client通过AP连接到AC上，并能与有线客户端Host互相访问。



1.1 配置思路

- 在AC上开启DHCP server功能，AP、无线客户端Client和有线客户端Host都能通过DHCP server自动获取IP地址。
- 在L2 switch上开启PoE功能，为AP设备供电。
- 在AC上配置无线服务，确保Client可以通过配置的无线服务接入网络，并访问Host。

1.2 配置步骤

1.2.1 配置AC

(1) 配置DHCP server

开启DHCP server功能。

```
system-view
```

```
[AC] dhcp enable
```

配置DHCP地址池1为AP分配地址范围为192.168.201.0/24，网关地址为192.168.201.1。

```
[AC] dhcp server ip-pool 1
```

```
[AC-dhcp-pool-1] network 192.168.201.0 mask 255.255.255.0
```

```
[AC-dhcp-pool-1] gateway-list 192.168.201.1
```

```
[AC-dhcp-pool-1] quit
```

配置DHCP地址池2为Client分配地址范围为192.168.202.0/24，网关地址为192.168.202.1。

```
[AC] dhcp server ip-pool 2
```

```
[AC-dhcp-pool-2] network 192.168.202.0 mask 255.255.255.0
```

```
[AC-dhcp-pool-2] gateway-list 192.168.202.1
```

```
[AC-dhcp-pool-2] quit
```

配置DHCP地址池3为Host分配地址范围为192.168.203.0/24，网关地址为192.168.203.1。

```
[AC] dhcp server ip-pool 3
```

```
[AC-dhcp-pool-3] network 192.168.203.0 mask 255.255.255.0
```

```
[AC-dhcp-pool-3] gateway-list 192.168.203.1
```

```
[AC-dhcp-pool-3] quit
```

(2) 配置AC的接口

创建VLAN 100及其对应的VLAN接口，并为该接口配置IP地址。AP将获取该IP地址与AC建立CAPWAP隧道。

```
[AC] vlan 100
```

```
[AC-vlan100] quit
```

```
[AC] interface vlan-interface 100
```

```
[AC-Vlan-interface100] ip address 192.168.201.1 255.255.255.0
```

```
[AC-Vlan-interface100] quit
# 创建VLAN 200及其对应的VLAN接口，并为该接口配置IP地址。Client使用该VLAN接入无线网络。
```

```
[AC] vlan 200
```

```
[AC-vlan200] quit
```

```
[AC] interface vlan-interface 200
```

```
[AC-Vlan-interface200] ip address 192.168.202.1 24
```

```
[AC-Vlan-interface200] quit
```

```
# 创建VLAN 300及其对应的VLAN接口，并为该接口配置IP地址。Host使用该VLAN与AC建立连接。
```

```
[AC] vlan 300
```

```
[AC-vlan300] quit
```

```
[AC] interface vlan-interface 300
```

```
[AC-Vlan-interface300] ip address 192.168.203.1 24
```

```
[AC-Vlan-interface300] quit
```

```
# 配置AC和L2 switch相连的接口GigabitEthernet1/0/1为Trunk类型，禁止VLAN 1报文通过，允许VLAN 100、VLAN 200和VLAN 300通过，当前Trunk口的PVID为100。
```

```
[AC] interface gigabitEthernet 1/0/1
```

```
[AC-GigabitEthernet1/0/1] port link-type trunk
```

```
[AC-GigabitEthernet1/0/1] undo port trunk permit vlan 1
```

```
[AC-GigabitEthernet1/0/1] port trunk permit vlan 100 200 300
```

```
[AC-GigabitEthernet1/0/1] port trunk pvid vlan 100
```

```
[AC-GigabitEthernet1/0/1] quit
```

(3) 配置无线服务

```
# 创建无线服务模板1，并进入无线服务模板视图。
```

```
[AC] wlan service-template 1
```

```
# 配置SSID为service。
```

```
[AC-wlan-st-1] ssid service
```

```
# 使能服务模板。
```

```
[AC-wlan-st-1] service-template enable
```

```
[AC-wlan-st-1] quit
```

(4) 配置AP

```
# 创建手工AP，名称为officeap，型号名称为WA4320i-ACN。
```

```
[AC] wlan ap officeap model WA4320i-ACN
```

```
# 设置AP的序列号为210235A1Q2C159000018。
```

```
[AC-wlan-ap-officeap] serial-id 210235A1Q2C159000018
```

```
# 进入AP的Radio 1视图，将无线服务模板1绑定到Radio 1上，并指定客户端上线的VLAN为VLAN 200。
```

```
[AC-wlan-ap-officeap] radio 1
```

```
[AC-wlan-ap-officeap-radio-1] service-template 1 vlan 200
```

```
# 开启Radio 1的射频功能。
```

```
[AC-wlan-ap-officeap-radio-1] radio enable
```

```
[AC-wlan-ap-officeap-radio-1] return
```

1.2.2 配置L2 switch

```
# 创建VLAN 100、VLAN 200和VLAN 300，其中VLAN 100用于转发AC和AP间CAPWAP隧道内的流量，VLAN 200为无线客户端接入的VLAN，VLAN 300为Host接入的VLAN。
```

```
system-view
```

```
[L2 switch] vlan 100
```

```
[L2 switch-vlan100] quit
```

```
[L2 switch] vlan 200
```

```
[L2 switch-vlan200] quit
```

```
[L2 switch] vlan 300
```

```
[L2 switch-vlan300] quit
```

```
# 配置L2 switch和AC相连的接口GigabitEthernet1/0/1为Trunk类型，允许VLAN 100、VLAN 200和VLAN 300通过，当前Trunk口的PVID为100。
```

```
[L2 switch] interface gigabitEthernet 1/0/1
```

```
[L2 switch-GigabitEthernet1/0/1] port link-type trunk
```

```

[L2 switch-GigabitEthernet1/0/1] port trunk permit vlan 100 200 300
[L2 switch-GigabitEthernet1/0/1] port trunk pvid vlan 100
[L2 switch-GigabitEthernet1/0/1] quit
# 配置L2 switch和AP相连的接口GigabitEthernet1/0/2为Trunk类型, 禁止VLAN 1报文通过, 允许VLAN 100和VLAN 200通过, 当前Trunk口的PVID为100, 并开启PoE远程供电功能。
[L2 switch] interfac gigabitEthernet 1/0/2
[L2 switch-GigabitEthernet1/0/2] port link-type trunk
[L2 switch-GigabitEthernet1/0/2] undo port trunk permit vlan 1
[L2 switch-GigabitEthernet1/0/2] port trunk permit vlan 100 200
[L2 switch-GigabitEthernet1/0/2] port trunk pvid vlan 100
[L2 switch-GigabitEthernet1/0/2] poe enable
[L2 switch-GigabitEthernet1/0/2] quit
# 配置L2 switch和Host相连的接口GigabitEthernet1/0/3为Access类型, 允许VLAN 300通过。
[L2 switch] interfac gigabitEthernet 1/0/3
[L2 switch-GigabitEthernet1/0/3] port access vlan 300
[L2 switch-GigabitEthernet1/0/3] quit

```

1.3 验证配置

(1) 在AC上查看AP注册信息

在AC上使用命令display wlan ap all查看AP, 可以看到AP的状态是R/M, 表明AP已经成功注册到AC。

```

display wlan ap all
Total number of APs: 1
Total number of connected APs: 1
Total number of connected manual APs: 1
Total number of connected auto APs: 0
Total number of connected anchor APs: 0
Maximum supported APs: 3072
Remaining APs: 3071
Fit APs activated by license: 512
Remaining fit APs: 511
WTUs activated by license: 2500
Remaining WTUs: 2500

```

AP information

State : I = Idle, J = Join, JA = JoinAck, IL = ImageLoad
C = Config, DC = DataCheck, R = Run, M = Master, B = Backup

AP name	AP ID	State	Model	Serial ID
officeap	1	R/M	WA4320i-ACN	210235A1Q2C159000018

(2) 在AC上查看Client信息

在AC上使用命令display wlan client查看在线Client, 可以看到Client已经连接到AP的radio1。

```

display wlan client
Total number of clients: 1

MAC address  Username      APID/RID  IP address      VLAN ID
109a-dd9d-fc68  N/A          1/1      192.168.202.4    200

```

(3) Host与Client可以相互ping通

Client通过DHCP server获取到IP地址192.168.202.4, 在Host上ping Client的IP地址可以ping通。同理, 在Client上ping Host的IP地址也能ping通, 不再赘述。

```
C:\Users\system32>ping 192.168.202.4 -t
```

```

Pinging 192.168.202.4 with 32 bytes of data:
Reply from 192.168.202.4: bytes=32 time=8ms TTL=255
Reply from 192.168.202.4: bytes=32 time<1ms TTL=255
Reply from 192.168.202.4: bytes=32 time<1ms TTL=255
Reply from 192.168.202.4: bytes=32 time<1ms TTL=255
Reply from 192.168.202.4: bytes=32 time<1ms TTL=255

```

```
Reply from 192.168.202.4: bytes=32 time<1ms TTL=255
Reply from 192.168.202.4: bytes=32 time<1ms TTL=255
Reply from 192.168.202.4: bytes=32 time<1ms TTL=255
Reply from 192.168.202.4: bytes=32 time<1ms TTL=255
Reply from 192.168.202.4: bytes=32 time<1ms TTL=255
Reply from 192.168.202.4: bytes=32 time<1ms TTL=255
```

Ping statistics for 192.168.202.4:

Packets: Sent = 11, Received = 11, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 8ms, Average = 0ms

Control-C

^C

C:\Users\system32>

1.4 配置文件

```
· AC
#
dhcp enable
#
vlan 1
#
vlan 100
#
vlan 200
#
vlan 300
#
dhcp server ip-pool 1
gateway-list 192.168.201.1
network 192.168.201.0 mask 255.255.255.0
#
dhcp server ip-pool 2
gateway-list 192.168.202.1
network 192.168.202.0 mask 255.255.255.0
#
dhcp server ip-pool 3
gateway-list 192.168.203.1
network 192.168.203.0 mask 255.255.255.0
#
wlan service-template 1
ssid service
service-template enable
#
interface Vlan-interface1
#
interface Vlan-interface100
ip address 192.168.201.1 255.255.255.0
#
interface Vlan-interface200
ip address 192.168.202.1 255.255.255.0
#
interface Vlan-interface300
ip address 192.168.203.1 255.255.255.0
#
interface GigabitEthernet1/0/1
port link-type trunk
undo port trunk permit vlan 1
port trunk permit vlan 100 200 300
```

```
port trunk pvid vlan 100
#
wlan ap officeap model WA4320i-ACN
serial-id 210235A1Q2C159000018
vlan 1
radio 1
radio enable
service-template 1 vlan 200
radio 2
#
· L2 switch
#
vlan 100
#
vlan 200
#
vlan 300
#
interface GigabitEthernet1/0/1
port link-type trunk
undo port trunk permit vlan 1 100 200 300
port trunk pvid vlan 100
#
interface GigabitEthernet1/0/2
port link-type trunk
undo port trunk permit vlan 1
port trunk permit vlan 100 200
port trunk pvid vlan 100
poe enable
#
interface GigabitEthernet1/0/3
port access vlan 300
#
· 配置AP的序列号时请确保该序列号与AP唯一对应，AP的序列号可以通过AP设备背面的标签获取。
· 配置L2 switch和AP相连的接口禁止VLAN 1报文通过，以防止VLAN 1内报文过多。
```