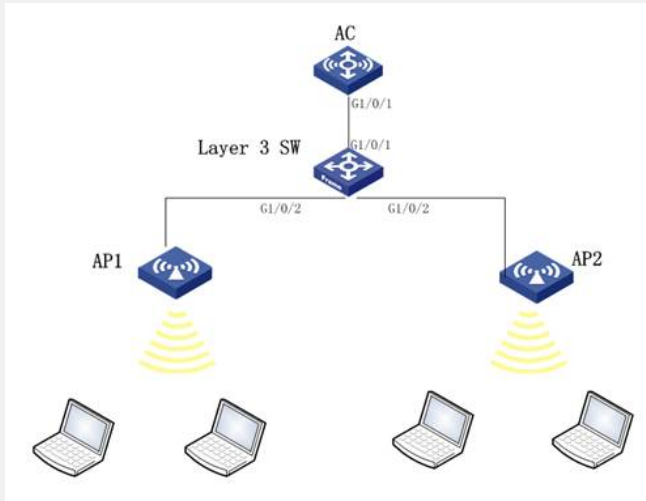


## WX系列AC基于AP射频的负载均衡功能的配置

### 一、组网需求：

- (1) 使用WX系列无线控制器、三层交换机、2个AP实现AP的三层注册。
- (2) AP为终端提供接入服务，并实现基于AP射频的负载均衡。

### 二、组网图：



### 三、配置步骤：

配置无线控制器（以WX6103为例）：

#### (1) 创建vlan：

```
vlan 10
```

```
#
```

```
vlan 20
```

```
#
```

```
vlan 30
```

#### (2) 配置IP地址和路由：

```
#
```

```
interface Vlan-interface1
```

```
ip address 192.168.10.253 255.255.255.0
```

```
#
```

```
ip route-static 0.0.0.0 0.0.0.0 192.168.10.254
```

```
#
```

#### (3) 配置AC板内联接口：

```
#
```

```
interface Ten-GigabitEthernet1/0/1
```

```
port link-type trunk
```

```
port trunk permit vlan all
```

```
#
```

#### (4) 配置DHCP服务器：

```
#
```

```
dhcp server ip-pool 10
```

```
network 192.168.10.0 mask 255.255.255.0
```

```
gateway-list 192.168.10.254
```

```
#
```

```
dhcp server ip-pool 20
```

```
network 192.168.20.0 mask 255.255.255.0
```

```
gateway-list 192.168.20.254
```

```
option 43 hex 80070000 01C0A80A FD
```

```
#
```

```
dhcp server ip-pool 30
```

```
network 192.168.30.0 mask 255.255.255.0
```

```
gateway-list 192.168.30.254
```

```
#
```

```
dhcp enable
```

```
#
```

(5) 配置ESS接口;

```
#
```

```
interface WLAN-ESS1
```

```
#
```

```
interface WLAN-ESS2
```

```
#
```

(6) 配置服务模板:

```
#
```

```
wlan service-template 1 clear
```

```
ssid wlan-test-1
```

```
bind WLAN-ESS 1
```

```
service-template enable
```

```
#
```

```
wlan service-template 2 clear
```

```
ssid wlan-test-2
```

```
bind WLAN-ESS 2
```

```
service-template enable
```

```
#
```

(7) 配置AP模板:

```
wlan ap ap1 model WA2220-AG id 1
```

```
serial-id 210235A29E0083000008
```

```
radio 1
```

```
service-template 1 vlan-id 30
```

```
radio 2
```

```
service-template 1 vlan-id 30
```

```
radio enable
```

```
#
```

```
wlan ap ap2 model WA2620E-AGN id 2
```

```
serial-id 210235A35VB092000074
```

```
radio 1
```

```
channel 149
```

```
service-template 1 vlan-id 30
```

```
service-template 2 vlan-id 30
```

```
radio 2
service-template 1 vlan-id 30
radio enable
#
(8) 配置AP组:
#
wlan load-balance-group 1
ap ap2 radio 2
ap ap1 radio 2
#
(9) 配置负载均衡
#
wlan rrm
dot11a mandatory-rate 6 12 24
dot11a supported-rate 9 18 36 48 54
dot11b mandatory-rate 1 2
dot11b supported-rate 5.5 11
dot11g mandatory-rate 1 2 5.5 11
dot11g supported-rate 6 9 12 18 24 36 48 54
load-balance session 2 gap 1
#
配置WX6103交换板:
(1) 创建vlan:
#
vlan 2 to 254
#
(2) 配置IP地址和缺省路由:
#
interface Vlan-interface1
ip address 192.168.10.252 255.255.255.0
#
ip route-static 0.0.0.0 0.0.0.0 192.168.10.254
#
(3) 配置AC交换板内联接口:
#
interface Ten-GigabitEthernet0/0/1
port link-type trunk
port trunk permit vlan all
stp disable
#
(4) 配置与交换机互联端口G1/0/1:
#
interface GigabitEthernet0/0/1
port link-type trunk
port trunk permit vlan all
#
配置交换机:
```

(1) 创建vlan:

```
#
vlan 1 to 254
#
```

(2) 创建vlan虚接口、配置IP地址、DHCP中继、启用DHCP功能:

```
#
dhcp-server 1 ip 192.168.10.253
#
interface Vlan-interface10
ip address 192.168.10.254 255.255.255.0
#
interface Vlan-interface20
ip address 192.168.20.254 255.255.255.0
dhcp-server 1
#
interface Vlan-interface30
ip address 192.168.30.254 255.255.255.0
dhcp-server 1
#
```

(3) 配置互联端口G1/0/1、G1/0/2、G1/0/3:

```
#
interface GigabitEthernet1/0/13
poe enable
port link-type trunk
port trunk permit vlan all
port trunk pvid vlan 20
#
interface GigabitEthernet1/0/14
poe enable
port link-type trunk
port trunk permit vlan all
port trunk pvid vlan 20
#
interface GigabitEthernet1/0/15
port link-type trunk
port trunk permit vlan all
port trunk pvid vlan 10
#
```

#### 四、验证结果:

在AC上通过display wlan client查看STA的关联情况。

第一个STA关联到AP2的Radio 2上:

```
dis wlan client
```

```
Total Number of Clients      : 1
```

```
Client Information
```

```
SSID: wlan-test-1
```

```
-----
MAC Address  User Name  APID/RID  IP Address
```

```
VLAN
```

```
-----
001e-654c-78ba -NA-      2/2  0.0.0.0          30
```

第二个STA依然关联到了AP2的Radio 2上，此时AP2上已有两个STA：

```
dis wlan client
```

```
Total Number of Clients      : 2
```

```
Client Information
```

```
SSID: wlan-test-1
```

```
-----
MAC Address  User Name  APID/RID IP Address          VLAN
```

```
-----
001e-654c-78ba -NA-      2/2  0.0.0.0          30
```

```
0024-d238-25ac -NA-      2/2  0.0.0.0          30
```

第三个STA需要关联时，由于已经达到了设定的负载均衡阈值，会关联到AP1上：

```
dis wlan client
```

```
Total Number of Clients      : 3
```

```
Client Information
```

```
SSID: wlan-test-1
```

```
-----
MAC Address  User Name  APID/RID IP Address          VLAN
```

```
-----
001e-654c-78ba -NA-      2/2  0.0.0.0          30
```

```
0022-fbba-2888 -NA-      1/2  0.0.0.0          30
```

```
0024-d238-25ac -NA-      2/2  0.0.0.0          30
```

第四、五、六个STA关联上来时，依然会根据AP组的负载均衡条件进行射频负载：

```
dis wlan client
```

```
Total Number of Clients      : 4
```

```
Client Information
```

```
SSID: wlan-test-1
```

```
-----
MAC Address  User Name  APID/RID IP Address          VLAN
```

```
-----
001e-654c-78ba -NA-      2/2  0.0.0.0          30
```

```
0022-fbba-2888 -NA-      1/2  0.0.0.0          30
```

```
0023-8993-2d0c -NA-      1/2  0.0.0.0          30
```

```
0024-d238-25ac -NA-      2/2  0.0.0.0          30
```

```
dis wlan client
```

```
Total Number of Clients      : 5
```

```
Client Information
```

```
SSID: wlan-test-1
```

```
-----
MAC Address  User Name  APID/RID IP Address          VLAN
```

```
-----
001e-654c-78ba -NA-      2/2  0.0.0.0          30
```

```
0022-fbba-2888 -NA-      1/2  0.0.0.0          30
```

```
0023-8993-2d0c -NA-      1/2  0.0.0.0          30
```

```
0024-d238-25ac -NA-      2/2  0.0.0.0          30
```

```
7cdd-9000-9af1 -NA-      2/2  0.0.0.0          30
```

dis wlan client

Total Number of Clients : 6

Client Information

SSID: wlan-test-1

```
-----
```

MAC Address	User Name	APID/RID	IP Address	VLAN
001e-654c-78ba -NA-		2/2	0.0.0.0	30
0021-6a18-b5e6 -NA-		1/2	0.0.0.0	30
0022-fbba-2888 -NA-		1/2	0.0.0.0	30
0023-8993-2d0c -NA-		1/2	0.0.0.0	30
0024-d238-25ac -NA-		2/2	0.0.0.0	30
7cdd-9000-9af1 -NA-		2/2	0.0.0.0	30

```
-----
```

五、验证结果:

配置基于AP射频的均衡负载时, 注意要把所用的AP射频接口加入AP组。