

# WPA2-PSK 和开放式身份验证 ( 以思科 5760 WLC 配置为例 )

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## 简介

本文档介绍在无线局域网 (WLAN) 中使用 Wi-FiProtected Access 2 (WPA2) 的优势。本文档提供两个在 WLAN 上实施 WPA2 的配置示例：

- 配置 WPA2 预共享密钥 (PSK)
- 开放式身份验证配置

## 先决条件

### 要求

Cisco 建议您了解以下主题：

- 无线保护访问 (WPA)
- WLAN 安全解决方案

### 使用的组件

本文档中的信息基于以下软件和硬件版本：

- 思科 5700 系列无线局域网控制器 (WLC) 与思科 IOS® XE 软件版本 3.3

- Cisco Aironet 3600 系列轻型接入点
- Microsoft Windows 7 本地无线请求方

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您使用的是真实网络，请确保您已经了解所有命令的潜在影响。

## 配置

注意：使用[命令查找工具（仅限注册用户）](#)可获取有关本部分所使用命令的详细信息。

## 网络图

此图显示了网络图：

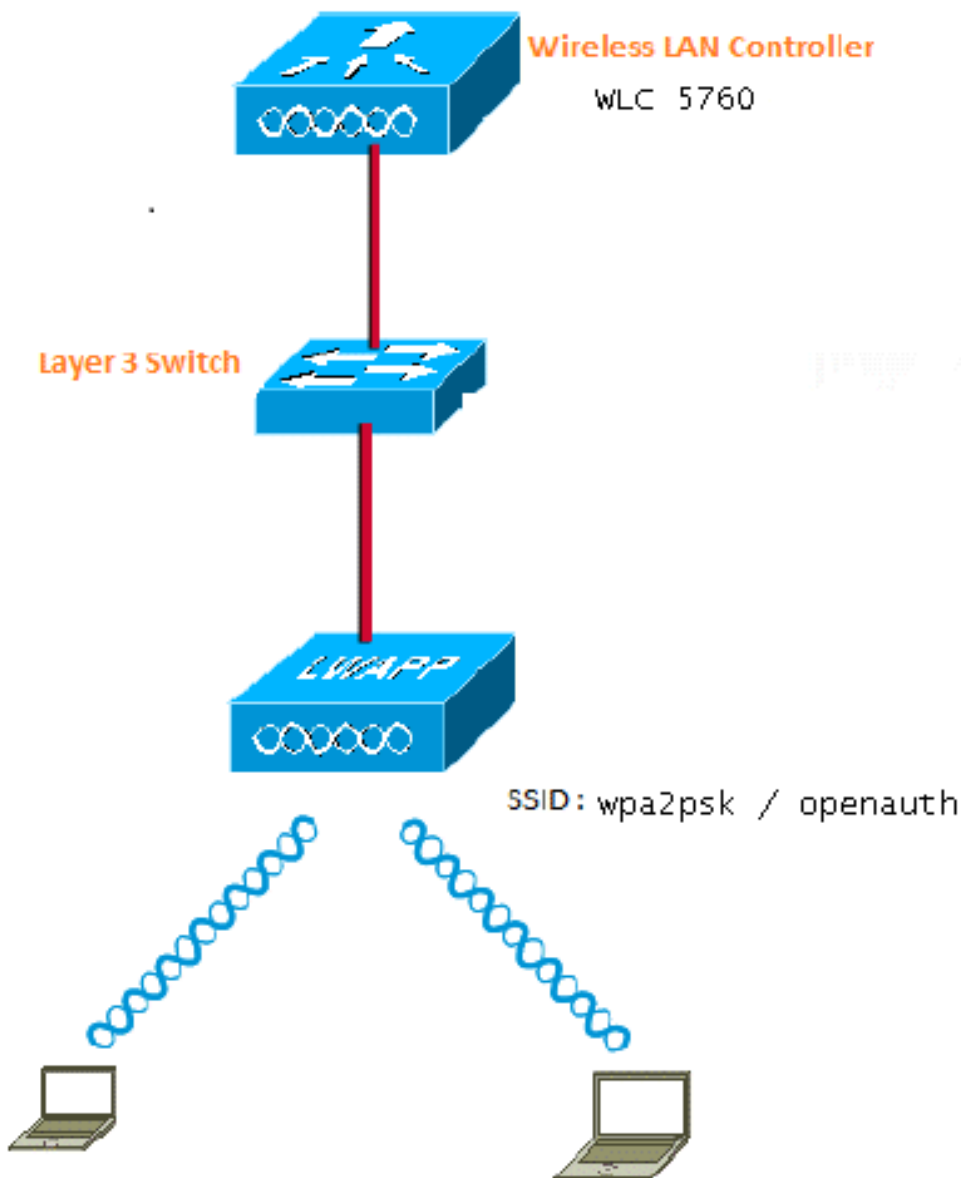


图 1. 网络图

## 使用 CLI 进行 WPA2-PSK 配置

本示例描述了使用命令行界面 (CLI) 为用于客户端的 VLAN 配置 DHCP 监听的过程。

VLAN20用于客户端，池配置在同一WLC上。Cisco 5700 WLC的TenGigabitEthernet1/0/1连接到上行链路交换机。如果在 WLC 之外的服务器上或外部 DHCP 服务器上配置了 DHCP 服务器，则必须信任 DHCP 监听和中继信息。

```
ip device tracking
ip dhcp snooping vlan 12,20,30,40
ip dhcp snooping
!
ip dhcp pool vlan20
 network 20.20.20.0 255.255.255.0
 default-router 20.20.20.1

interface Vlan20
 ip address 20.20.20.1 255.255.255.0

interface TenGigabitEthernet1/0/1
 switchport trunk native vlan 12
 switchport mode trunk
 ip dhcp relay information trusted
 ip dhcp snooping trust

wlan wpa2psk 1 wpa2psk
 client vlan 20
 no security wpa akm dot1x
 security wpa akm psk set-key ascii 0 Cisco123
 no shutdown
```

**注意：**如果您的配置在 PSK 密码中包含空格，请使用“密码 PSK”格式。如果还使用 GUI 进行配置，则应使用相同的格式。

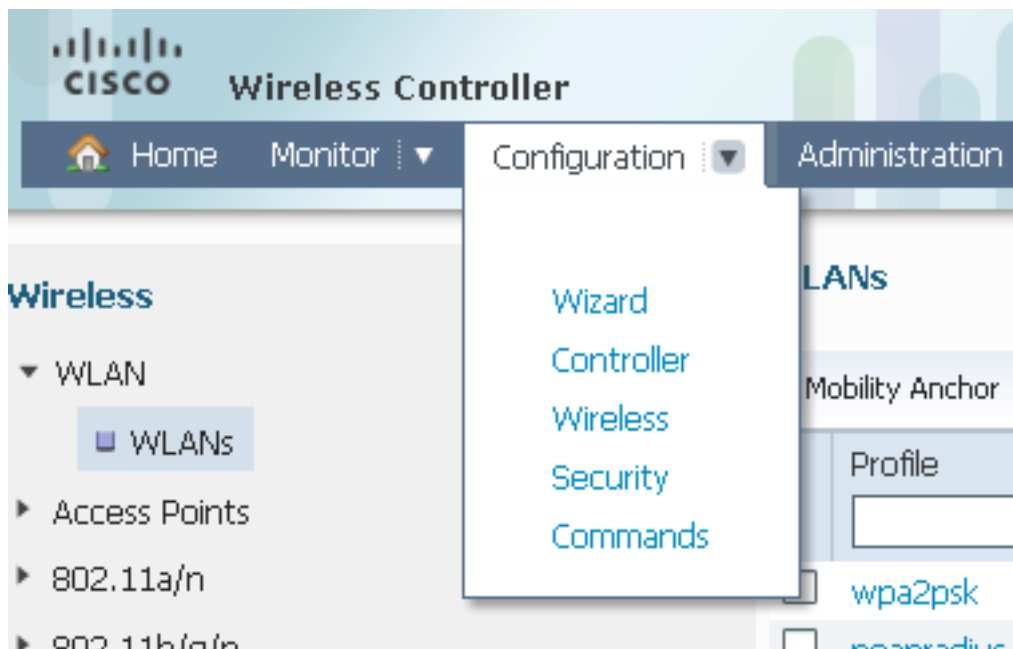
### 示例

```
security wpa akm psk set-key ascii 0 "Cisco 123"
```

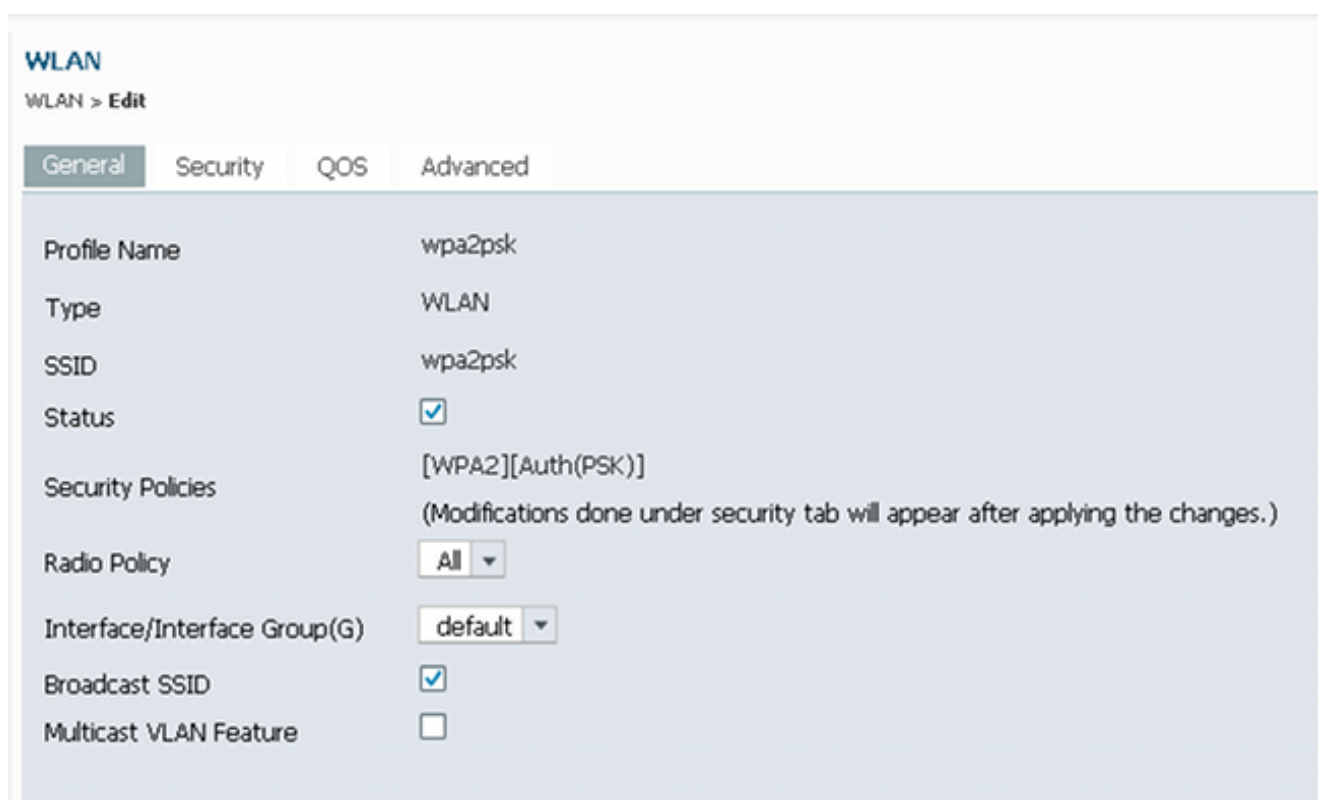
## 使用 GUI 进行 WPA2-PSK 配置

完成以下步骤以在 WLC GUI 中配置 WPA2 PSK：

1. 导航到**配置 > 无线 > WLAN > WLANs**，并创建新的 WLAN：



2. 启用 WPA2，并将其映射到所需接口：



3. 点击安全选项卡，选中 WPA2 策略复选框，然后选择 AES 作为 WPA2 加密。在身份验证密钥管理下拉列表中，选择 PSK。输入客户端将使用的 PSK 以进行连接：

## WLAN

WLAN > Edit

General Security QOS Advanced

Layer2 Layer3 AAA Server

Layer 2 Security WPA + WPA2

MAC Filtering

### WPA+WPA2 Parameters

WPA Policy

WPA2 Policy

WPA2 Encryption  AES  TKIP

Auth Key Mgmt PSK

PSK Format ASCII

••••••••

## 使用 CLI 进行开放式身份验证配置

这是如何使用 CLI 为用于客户端的 VLAN 配置 DHCP 探听的示例；在本示例中，VLAN20 用于客户端。池在同一 WLC 上配置。

5760 WLC 的 TenGigabitEthernet1/0/1 连接到上行链路交换机。如果在 WLC 之外的服务器上或外部 DHCP 服务器上配置了 DHCP 服务器，则必须信任 DHCP 探听和中继信息。

```
ip device tracking
ip dhcp snooping vlan 12,20,30,40
ip dhcp snooping
!
ip dhcp pool vlan20
 network 20.20.20.0 255.255.255.0
 default-router 20.20.20.1

interface Vlan20
 ip address 20.20.20.1 255.255.255.0

interface TenGigabitEthernet1/0/1
 switchport trunk native vlan 12
 switchport mode trunk
```

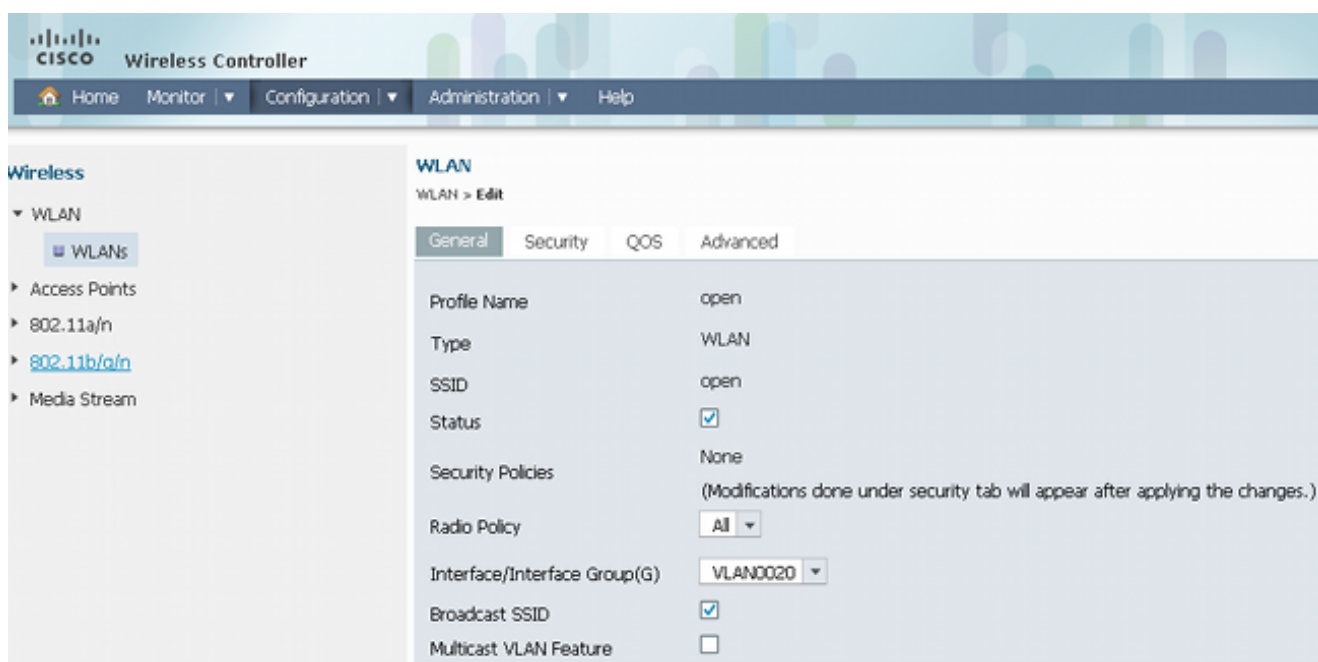
```
ip dhcp relay information trusted
ip dhcp snooping trust
```

```
wlan open 5 open
client vlan VLAN0020
no security wpa
no security wpa akm dot1x
no security wpa wpa2
no security wpa wpa2 ciphers aes
session-timeout 1800
no shutdown
```

## 使用 GUI 进行开放式身份验证配置

本程序介绍如何在 WLC GUI 中配置开放式身份验证：

1. 导航到**配置 > 无线 > WLAN > WLANs**，并创建新的 WLAN：



2. 单击“Security”选项卡。在第 2 层选项卡和第 3 层选项卡上，将所有内容都设置为 none。这是配置结果的示例：

|                          |      |   |      |    |         |
|--------------------------|------|---|------|----|---------|
| <input type="checkbox"/> | open | 5 | open | 20 | Enabled |
|--------------------------|------|---|------|----|---------|


## 验证


使用本部分可确认配置能否正常运行。

确认 WPA2-PSK 客户端已连接：

**Intel® PROSet/Wireless WiFi Connection Utility**

File Tools Advanced Profiles Help



























 **You are connected to wpa2psk.**

Network Name: wpa2psk  
Speed: 78.0 Mbps  
Signal Quality: Excellent  
IP Address: 20.20.20.3

[Details...](#)

WiFi Networks (59)

|   |                          |   |   |   |   |   |
|---|--------------------------|---|---|---|---|---|
|    | <b>wpa2psk</b> Connected |    |    |    |    |    |
|   | <b>EAPFAST</b>           |    |    |    |    |    |
|  | <b>DVA</b> Manual        |  |  |  |  |  |
|  | <b>peapradius</b> Manual |  |  |  |  |  |

[Disconnect](#) [Properties...](#) [Refresh](#)


To manage profiles of previously connected WiFi networks, click the Profiles button. [Profiles...](#)


[WiFi On](#) Hardware radio switch: ON [Help?](#) [Close](#)

确认客户端已连接到开放式身份验证：

**Intel® PROSet/Wireless WiFi Connection Utility**



























File Tools Advanced Profiles Help



 **You are connected to open.**

Network Name: open **Details...**  
Speed: 78.0 Mbps  
Signal Quality: Excellent  
IP Address: 20.20.20.3

WiFi Networks (56)

|   |                |           |  |
|---|----------------|-----------|--|
|    | <b>open</b>    | Connected |   <br>               |
|   | <b>EAPFAST</b> |           |  <br>    |
|  | <b>wpa2psk</b> |           |  <br>     |
|  | <b>DVA</b>     | Manual    |   <br>   |

**Disconnect** **Properties...** **Refresh**

To manage profiles of previously connected WiFi networks, click the Profiles button. **Profiles...**

**WiFi On** Hardware radio switch: ON [Help?](#) **Close**

## 故障排除

本部分提供的信息可用于对配置进行故障排除。

**注意：**

[命令输出解释程序工具 \(仅限注册用户\)](#) 支持某些 **show** 命令。使用输出解释器工具来查看 **show** 命令输出的分析。



使用 debug 命令之前，请参阅有关 Debug 命令的重要信息。

这是有用的调试和跟踪命令的输出示例：

```
debug client mac XXXX.XXXX.XXXX
```

```
Controller#sh debugging
```

```
Nova Platform:
```

```
dot11/state debugging is on
pem/events debugging is on
client/mac-addr debugging is on
dot11/detail debugging is on
mac/ filters[string 0021.5c8c.c761] debugging is on
dot11/error debugging is on
dot11/mobile debugging is on
pem/state debugging is on
```

```
set trace group-wireless-client filter mac XXXX.XXXX.XXXX
set trace wcm-dot1x event filter mac XXXX.XXXX.XXXX
set trace wcm-dot1x aaa filter mac XXXX.XXXX.XXXX
set trace aaa wireless events filter mac XXXX.XXXX.XXXX
set trace access-session core sm filter mac XXXX.XXXX.XXXX
set trace access-session method dot1x filter XXXX.XXXX.XXXX
```

```
*Sep 1 05:55:01.321: 0021.5C8C.C761 Association received from mobile on AP
C8F9.F983.4260 1 wcm: i.D^Iw for client
*Sep 1 05:55:01.321: 0021.5C8C.C761 qos upstream policy is unknown and
downstream policy is unknown 1 wcm: r client
*Sep 1 05:55:01.321: 0021.5C8C.C761 apChanged 0 wlanChanged 1 mscb ipAddr
20.20.20.3, apf RadiusOverride 0x0, numIPv6Addr=0 1 wcm: •nJ^Iwy_status 0
attr len^G$8\227v^K
*Sep 1 05:55:01.321: 0021.5C8C.C761 Applying WLAN policy on MSCB. 1 wcm:
ipAddr 20.20.20.3, apf RadiusOverride 0x0, numIPv6Addr=0
*Sep 1 05:55:01.321: 0021.5C8C.C761 Scheduling deletion of Mobile Station: 1
wcm: (callerId: 50) in 1 seconds
*Sep 1 05:55:01.321: 0021.5C8C.C761 Disconnecting client due to switch of
WLANS from 6(wep) to 5(open) 1 wcm:
*Sep 1 05:55:02.193: 0021.5C8C.C761 apfMsExpireCallback (apf_ms.c: 1 wcm: 664)
Expiring Mobile!
*Sep 1 05:55:02.193: 0021.5C8C.C761 apfMsExpireMobileStation (apf_ms.c: 1 wcm:
6953) Changing state for mobile 0021.5C8C.C761 on AP C8F9.F983.4260 from
Associated to Disassociated
*Sep 1 05:55:02.193: 0021.5C8C.C761 Sent Deauthenticate to mobile on BSSID
C8F9.F983.4260 slot 1(caller apf_ms.c: 1 wcm: 7036)
*Sep 1 05:55:02.193: 0021.5C8C.C761 apfMsExpireMobileStation (apf_ms.c: 1 wcm:
7092) Changing state for mobile 0021.5C8C.C761 on AP C8F9.F983.4260 from
Disassociated to Idle
*Sep 1 05:55:02.193: 0021.5C8C.C761 20.20.20.3 RUN (20) Deleted mobile LWAPP
rule on AP [ C8F9.F983.4260 ] 1 wcm: 5C8C.C761 on AP C8F9.F983.4260 from
Disassociated to Idle
*Sep 1 05:55:02.193: 0021.5C8C.C761 20.20.20.3 RUN (20) FastSSID for the
client [ C8F9.F983.4260 ] NOTENABLED 1 wcm: C.C761 on AP C8F9.F983.4260
from Disassociated to Idle
*Sep 1 05:55:02.193: 0021.5C8C.C761 Incrementing the Reassociation Count 1 for
client (of interface VLAN0020) 1 wcm: D
*Sep 1 05:55:02.193: 0021.5C8C.C761 Clearing Address 20.20.20.3 on mobile 1
wcm: for client (of interface VLAN0020)
*Sep 1 05:55:02.193: PEM rcv processing msg Del SCB(4) 1 wcm: 0.20.3 on
mobile
*Sep 1 05:55:02.193: 0021.5C8C.C761 20.20.20.3 RUN (20) Skipping TMP rule
add 1 wcm: lient (of interface VLAN0020)
```

\*Sep 1 05:55:02.193: 0021.5C8C.C761 20.20.20.3 RUN (20) Change state to DHCP\_REQD (7) last state RUN (20) 1 wcm:

\*Sep 1 05:55:02.193: 0021.5C8C.C761 WCDB\_CHANGE: 1 wcm: Client 1 m\_vlan 20 Radio iif id 0xbfcd00000003a bssid iif id 0x8959800000004a, bssid C8F9.F983.4260

\*Sep 1 05:55:02.193: 0021.5C8C.C761 WCDB\_AUTH: 1 wcm: Adding opt82 len 0

\*Sep 1 05:55:02.193: 0021.5C8C.C761 WCDB\_CHANGE: 1 wcm: Suppressing SPI (client pending deletion) pemstate 7 state LEARN\_IP(2) vlan 20 client\_id 0xac70800000004b mob=Local(1) ackflag 2 dropd 0, delete 1

\*Sep 1 05:55:02.193: 0021.5C8C.C761 Sending SPI spi\_epm\_epm\_terminate\_session successfull 1 wcm: pemstate 7 state LEARN\_IP(2) vlan 20 client\_id 0xac70800000004b mob=Local(1) ackflag 2 dropd 0, delete 1

\*Sep 1 05:55:02.194: 0021.5C8C.C761 Sending SPI spi\_epm\_epm\_terminate\_session successfull 1 wcm: pemstate 7 state LEARN\_IP(2) vlan 20 client\_id 0xac70800000004b mob=Local(1) ackflag 2 dropd 0, delete 1

\*Sep 1 05:55:02.194: 0021.5C8C.C761 Deleting wireless client; Reason code 0, Preset 1, AAA cause 1 1 wcm: 7 state LEARN\_IP(2) vlan 20 client\_id 0xac70800000004b mob=Local(1) ackflag 2 dropd 0, delete 1

\*Sep 1 05:55:02.194: 0021.5C8C.C761 WCDB\_DEL: 1 wcm: Successfully sent

\*Sep 1 05:55:02.194: 0021.5C8C.C761 Expiring mobile state delete 1 wcm: on code 0, Preset 1, AAA cause 1

\*Sep 1 05:55:02.194: 0021.5C8C.C761 0.0.0.0 DHCP\_REQD (7) Handling pemDelScb Event skipping delete 1 wcm: state LEARN\_IP(2) vlan 20 client\_id 0xac70800000004b mob=Local(1) ackflag 2 dropd 0, delete 1

\*Sep 1 05:55:02.197: 0021.5C8C.C761 WCDB SPI response msg handler client code 1 mob state 1 1 wcm: g delete

\*Sep 1 05:55:02.197: 0021.5C8C.C761 apfProcessWcdbClientDelete: 1 wcm: Delete ACK from WCDB.

\*Sep 1 05:55:02.197: 0021.5C8C.C761 WCDB\_DELACK: 1 wcm: wcdbAckRecvdFlag updated

\*Sep 1 05:55:02.197: 0021.5C8C.C761 WCDB\_DELACK: 1 wcm: Client IIF Id dealloc SUCCESS w/ 0xac70800000004b.

\*Sep 1 05:55:02.197: 0021.5C8C.C761 Invoked platform delete and cleared handle 1 wcm: w/ 0xac70800000004b.

\*Sep 1 05:55:02.197: 0021.5C8C.C761 Deleting mobile on AP C8F9.F983.4260 (1) 1 wcm: w/ 0xac70800000004b.

\*Sep 1 05:55:02.197: 0021.5C8C.C761 Unlinked and freed mscb 1 wcm: 8F9.F983.4260 (1)

\*Sep 1 05:55:02.197: WCDB\_IIF: 1 wcm: Ack Message ID: 0xac70800000004b code 1003

\*Sep 1 05:55:02.379: 0021.5C8C.C761 Adding mobile on LWAPP AP C8F9.F983.4260 (1) 1 wcm: xac7080000.D^Iwb.

\*Sep 1 05:55:02.379: 0021.5C8C.C761 Creating WL station entry for client - rc 0 1 wcm:

\*Sep 1 05:55:02.379: 0021.5C8C.C761 Association received from mobile on AP C8F9.F983.4260 1 wcm: 0.D^Iwb.

\*Sep 1 05:55:02.379: 0021.5C8C.C761 qos upstream policy is unknown and downstream policy is unknown 1 wcm:

\*Sep 1 05:55:02.379: 0021.5C8C.C761 apChanged 0 wlanChanged 0 mscb ipAddr 0.0.0.0, apf RadiusOverride 0x0, numIPv6Addr=0 1 wcm: \2105H.nJ^Iwlient\_id 0xac708000^G\$8\227v^K

\*Sep 1 05:55:02.379: 0021.5C8C.C761 Applying WLAN policy on MSCB. 1 wcm: ipAddr 0.0.0.0, apf RadiusOverride 0x0, numIPv6Addr=0

\*Sep 1 05:55:02.379: 0021.5C8C.C761 Applying WLAN ACL policies to client 1 wcm: 0.0.0.0, apf RadiusOverride 0x0, numIPv6Addr=0

\*Sep 1 05:55:02.379: 0021.5C8C.C761 No Interface ACL used for Wireless client in WCM(NGWC) 1 wcm: usOverride 0x0, numIPv6Addr=0

\*Sep 1 05:55:02.379: 0021.5C8C.C761 Applying site-specific IPv6 override for station 0021.5C8C.C761 - vapId 5, site 'default-group', interface 'VLAN0020' 1 wcm:

\*Sep 1 05:55:02.379: 0021.5C8C.C761 Applying local bridging Interface Policy for station 0021.5C8C.C761 - vlan 20, interface 'VLAN0020' 1 wcm: erface 'VLAN0020'

\*Sep 1 05:55:02.379: 0021.5C8C.C761 STA - rates (8): 1 wcm:

140 18 152 36 176 72 96 108 0 0 0 0 0 0 0 0

\*Sep 1 05:55:02.379: 0021.5C8C.C761 new capwap\_wtp\_iif\_id b6818000000038,  
sm capwap\_wtp\_iif\_id 0 1 wcm: 8C.C761 - vlan 20, interface 'VLAN0020'

\*Sep 1 05:55:02.379: 0021.5C8C.C761 WCDB\_ADD: 1 wcm: Radio IIFID  
0xbfc0c00000003a, BSSID IIF Id 0xbb30c000000046, COS 4

\*Sep 1 05:55:02.379: Load Balancer: 1 wcm: Success, Resource allocated are:  
Active Switch number: 1, Active Asic number : 0, Reserve Switch number 0  
Reserve Asic number 0. AP Asic num 0

\*Sep 1 05:55:02.379: 0021.5C8C.C761 WCDB\_ADD: 1 wcm: Anchor Sw 1, Doppler 0

\*Sep 1 05:55:02.380: 0021.5C8C.C761 WCDB\_ALLOCATE: 1 wcm: Client IIF Id alloc  
SUCCESS w/ client 8e7bc00000004d (state 0).

\*Sep 1 05:55:02.380: 0021.5C8C.C761 iifid Clearing Ack flag 1 wcm: F Id alloc  
SUCCESS w/ client 8e7bc00000004d (state 0).

\*Sep 1 05:55:02.380: 0021.5C8C.C761 WCDB\_ADD: 1 wcm: Adding opt82 len 0

\*Sep 1 05:55:02.380: 0021.5C8C.C761 WCDB\_ADD: 1 wcm: Cleaering Ack flag

\*Sep 1 05:55:02.380: 0021.5C8C.C761 WCDB\_ADD: 1 wcm: ssid open bssid  
C8F9.F983.4260 vlan 20 auth=ASSOCIATION(0) wlan(ap-group/global) 5/5  
client 0 assoc 1 mob=Unassoc(0) radio 1 m\_vlan 20 ip 0.0.0.0 src  
0xb6818000000038 dst 0x0 cid 0x8e7bc00000004d glob rsc id 14dhcpsrv  
0.0.0.0 ty

\*Sep 1 05:55:02.380: 0021.5C8C.C761 WCDB\_ADD: 1 wcm: msch iifid  
0x8e7bc00000004d msinfo iifid 0x0

\*Sep 1 05:55:02.380: 0021.5C8C.C761 0.0.0.0 START (0) Initializing policy 1  
wcm: info iifid 0x0

\*Sep 1 05:55:02.380: 0021.5C8C.C761 0.0.0.0 START (0) Change state to  
AUTHCHECK (2) last state AUTHCHECK (2) 1 wcm: -group/global) 5/5 client 0  
assoc 1 mob=Unassoc(0) radio 1 m\_vlan 20 ip 0.0.0.0 src 0xb6818000000038  
dst 0x0 cid 0x8e7bc00000004d glob rsc id 14dhcpsrv 0.0.0.0 ty

\*Sep 1 05:55:02.380: 0021.5C8C.C761 0.0.0.0 AUTHCHECK (2) Change state to  
L2AUTHCOMPLETE (4) last state L2AUTHCOMPLETE (4) 1 wcm: 5/5 client 0 assoc  
1 mob=Unassoc(0) radio 1 m\_vlan 20 ip 0.0.0.0 src 0xb6818000000038 dst 0x0  
cid 0x8e7bc00000004d glob rsc id 14dhcpsrv 0.0.0.0 ty

\*Sep 1 05:55:02.380: 0021.5C8C.C761 WCDB\_CHANGE: 1 wcm: Client 1 m\_vlan 20  
Radio iif id 0xbfc0c00000003a bssid iif id 0xbb30c000000046, bssid  
C8F9.F983.4260

\*Sep 1 05:55:02.380: 0021.5C8C.C761 WCDB\_AUTH: 1 wcm: Adding opt82 len 0

\*Sep 1 05:55:02.380: 0021.5C8C.C761 WCDB\_LLM: 1 wcm: NoRun Prev Mob 0, Curr  
Mob 0 llmReq 1, return False

\*Sep 1 05:55:02.380: 0021.5C8C.C761 auth state 1 mob state 0 setWme 0 wme 1  
roam\_sent 0 1 wcm: rn False

\*Sep 1 05:55:02.380: 0021.5C8C.C761 WCDB\_CHANGE: 1 wcm: auth=L2\_AUTH(1) vlan  
20 radio 1 client\_id 0x8e7bc00000004d mobility=Unassoc(0) src\_int  
0xb6818000000038 dst\_int 0x0 ackflag 0 reassoc\_client 0 llm\_notif 0 ip  
0.0.0.0 ip\_learn\_type UNKNOWN

\*Sep 1 05:55:02.380: 0021.5C8C.C761 WCDB\_CHANGE: 1 wcm: In L2 auth but l2ack  
waiting lfag not set,so set

\*Sep 1 05:55:02.380: 0021.5C8C.C761 0.0.0.0 L2AUTHCOMPLETE (4) DHCP Not  
required on AP C8F9.F983.4260 vapId 5 apVapId 5for this client 1 wcm:  
68180000000038 dst\_int 0x0 ackflag 0 reassoc\_client 0 llm\_notif 0 i\$=6v.0.0.0  
it^\_Dv^\7HnP6v^D6H15Ht^\_Dv\$6H8^ r^D6H>&5v8^ r^D6H>&5v^D6Ht^M^Lw^\7H8^ r

\*Sep 1 05:55:02.380: WCDB\_IIF: 1 wcm: Ack Message ID: 0x8e7bc00000004d code  
1001

\*Sep 1 05:55:02.380: 0021.5C8C.C761 Not Using WMM Compliance code qosCap 00 1  
wcm: quired on AP C8F9.F983.4260 vapId 5 apVapId 5for this client

\*Sep 1 05:55:02.380: 0021.5C8C.C761 0.0.0.0 L2AUTHCOMPLETE (4) Plumbed  
mobile LWAPP rule on AP C8F9.F983.4260 vapId 5 apVapId 5 1 wcm: client

\*Sep 1 05:55:02.380: 0021.5C8C.C761 0.0.0.0 L2AUTHCOMPLETE (4) Change state  
to DHCP\_REQD (7) last state DHCP\_REQD (7) 1 wcm: apVapId 5

\*Sep 1 05:55:02.380: 0021.5C8C.C761 WCDB\_CHANGE: 1 wcm: Client 1 m\_vlan 20  
Radio iif id 0xbfc0c00000003a bssid iif id 0xbb30c000000046, bssid  
C8F9.F983.4260

\*Sep 1 05:55:02.380: 0021.5C8C.C761 WCDB\_AUTH: 1 wcm: Adding opt82 len 0

\*Sep 1 05:55:02.380: 0021.5C8C.C761 WCDB\_CHANGE: 1 wcm: Suppressing SPI  
(Mobility state not known) pemstate 7 state LEARN\_IP(2) vlan 20 client\_id

0x8e7bc00000004d mob=Unassoc(0) ackflag 1 dropd 0  
\*Sep 1 05:55:02.380: 0021.5C8C.C761 Incrementing the Reassociation Count 1 for client (of interface VLAN0020) 1 wcm: EARN\_IP(2) vlan 20 client\_id  
0x8e7bc00000004d mob=Unassoc(0) ackflag 1 dropd 0  
\*Sep 1 05:55:02.380: 0021.5C8C.C761 apfPemAddUser2 (apf\_policy.c: 1 wcm: 161) Changing state for mobile 0021.5C8C.C761 on AP C8F9.F983.4260 from Idle to Associated  
\*Sep 1 05:55:02.380: 0021.5C8C.C761 Scheduling deletion of Mobile Station: 1 wcm: (callerId: 49) in 1800 seconds  
\*Sep 1 05:55:02.380: 0021.5C8C.C761 Ms Timeout = 1800, Session Timeout = 1800 1 wcm: llerId: 49) in 1800 seconds  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 Sending Assoc Response to station on BSSID C8F9.F983.4260 (status 0) ApVapId 5 Slot 1 1 wcm: .F983.4260 from Idle to Associated  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 apfProcessAssocReq (apf\_80211.c: 1 wcm: 5260) Changing state for mobile 0021.5C8C.C761 on AP C8F9.F983.4260 from Associated to Associated  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 0.0.0.0 DHCP\_REQD (7) pemAdvanceState2: 1 wcm: MOBILITY-INCOMPLETE with state 7.  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 0.0.0.0 DHCP\_REQD (7) pemAdvanceState2: 1 wcm: MOBILITY-INCOMPLETE with state 7.  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 0.0.0.0 DHCP\_REQD (7) pemAdvanceState2: 1 wcm: MOBILITY-COMPLETE with state 7.  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 0.0.0.0 DHCP\_REQD (7) State Update from Mobility-Incomplete to Mobility-Complete, mobility role=Local, client state=APF\_MS\_STATE\_ASSOCIATED 1 wcm: 1 dropd 0  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 0.0.0.0 DHCP\_REQD (7) pemAdvanceState2 3611, Adding TMP rule 1 wcm: o Mobility-Complete, mobility role=Local, client state=APF\_MS\_STATE\_ASSOCIATED  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 0.0.0.0 DHCP\_REQD (7) Adding Fast Path rule on AP C8F9.F983.4260 , slot 1 802.1P = 0 1 wcm: role=Local, client state=APF\_MS\_STATE\_ASSOCIATED  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 0.0.0.0 DHCP\_REQD (7) Successfully plumbed mobile rule 1 wcm: F9.F983.4260 , slot 1 802.1P = 0^M  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 WCDB\_CHANGE: 1 wcm: Client 1 m\_vlan 20 Radio iif id 0xbfcfdc00000003a bssid iif id 0xbb30c000000046, bssid C8F9.F983.4260  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 WCDB\_AUTH: 1 wcm: Adding opt82 len 0  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 WCDB\_LLM: 1 wcm: NoRun Prev Mob 0, Curr Mob 1 llmReq 1, return False  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 WCDB\_CHANGE: 1 wcm: Suppressing SPI (ACK message not recvd) pemstate 7 state LEARN\_IP(2) vlan 20 client\_id  
0x8e7bc00000004d mob=Local(1) ackflag 1 dropd 1  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 Error updating wcdb on mobility complete 1 wcm: not recvd) pemstate 7 state LEARN\_IP(2) vlan 20 client\_id  
0x8e7bc00000004d mob=Local(1) ackflag 1 dropd 1  
\*Sep 1 05:55:02.381: PEM recv processing msg Epm spi response(12) 1 wcm: complete  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 aaa attribute list length is 79 1 wcm: complete  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 Sending SPI spi\_epm\_epm\_session\_create successfull 1 wcm: ) pemstate 7 state LEARN\_IP(2) vlan 20 client\_id  
0x8e7bc00000004d mob=Local(1) ackflag 1 dropd 1  
\*Sep 1 05:55:02.381: PEM recv processing msg Add SCB(3) 1 wcm: pm\_session\_create successfull  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 0.0.0.0, auth\_state 7 mmRole Local !!! 1 wcm: successfull  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 0.0.0.0, auth\_state 7 mmRole Local, updating wcdb not needed 1 wcm: 7 state LEARN\_IP(2) vlan 20 client\_id  
0x8e7bc00000004d mob=Local(1) ackflag 1 dropd 1  
\*Sep 1 05:55:02.381: 0021.5C8C.C761 Tclas Plumb needed: 1 wcm: 0  
\*Sep 1 05:55:02.384: EPM: 1 wcm: Session create resp - client handle  
8e7bc00000004d session b8000020  
\*Sep 1 05:55:02.384: EPM: 1 wcm: Netflow session create resp - client handle

8e7bc00000004d sess b8000020  
\*Sep 1 05:55:02.384: PEM rcv processing msg Epm spi response(12) 1 wcm:  
le 8e7bc00000004d sess b8000020  
\*Sep 1 05:55:02.384: 0021.5C8C.C761 Received session\_create\_response for  
client handle 40105511256850509 1 wcm: LEARN\_IP(2) vlan 20 client\_id  
0x8e7bc00000004d mob=Local(1) ackflag 1 dropd 1  
\*Sep 1 05:55:02.384: 0021.5C8C.C761 Received session\_create\_response with EPM  
session handle 3087007776 1 wcm:  
\*Sep 1 05:55:02.384: 0021.5C8C.C761 Send request to EPM 1 wcm: ate\_response  
with EPM session handle 3087007776  
\*Sep 1 05:55:02.384: 0021.5C8C.C761 aaa attribute list length is 5 1 wcm: e  
with EPM session handle 3087007776  
\*Sep 1 05:55:02.384: 0021.5C8C.C761 Sending Activate request for session  
handle 3087007776 successful 1 wcm: 6  
\*Sep 1 05:55:02.384: 0021.5C8C.C761 Post-auth policy request sent! Now wait  
for post-auth policy ACK from EPM 1 wcm: N\_IP(2) vlan 20 client\_id  
0x8e7bc00000004d mob=Local(1) ackflag 1 dropd 1  
\*Sep 1 05:55:02.384: 0021.5C8C.C761 WCDB SPI response msg handler client code  
0 mob state 0 1 wcm: licy ACK from EPM  
\*Sep 1 05:55:02.384: 0021.5C8C.C761 WcdbClientUpdate: 1 wcm: L2 Auth ACK from  
WCDB  
\*Sep 1 05:55:02.384: 0021.5C8C.C761 WCDB\_L2ACK: 1 wcm: wcdbAckRecvdFlag  
updated  
\*Sep 1 05:55:02.384: 0021.5C8C.C761 WCDB\_CHANGE: 1 wcm: Client 1 m\_vlan 20  
Radio iif id 0xbfcfdc00000003a bssid iif id 0xbb30c000000046, bssid  
C8F9.F983.4260  
\*Sep 1 05:55:02.384: 0021.5C8C.C761 WCDB\_AUTH: 1 wcm: Adding opt82 len 0  
\*Sep 1 05:55:02.384: 0021.5C8C.C761 WCDB\_LLM: 1 wcm: NoRun Prev Mob 0, Curr  
Mob 1 llmReq 1, return False  
\*Sep 1 05:55:02.385: 0021.5C8C.C761 auth state 2 mob state 1 setWme 0 wme 1  
roam\_sent 0 1 wcm: rn False  
\*Sep 1 05:55:02.385: 0021.5C8C.C761 WCDB\_CHANGE: 1 wcm: auth=LEARN\_IP(2) vlan  
20 radio 1 client\_id 0x8e7bc00000004d mobility=Local(1) src\_int  
0xb6818000000038 dst\_int 0x0 ackflag 2 reassoc\_client 0 llm\_notif 0 ip  
0.0.0.0 ip\_learn\_type UNKNOWN  
\*Sep 1 05:55:02.385: EPM: 1 wcm: Init feature, client handle 8e7bc00000004d  
session b8000020 authz ec00000e  
\*Sep 1 05:55:02.385: EPM: 1 wcm: Activate feature client handle  
8e7bc00000004d sess b8000020 authz ec00000e  
\*Sep 1 05:55:02.385: PEM rcv processing msg Epm spi response(12) 1 wcm: 004d  
sess b8000020 authz ec00000e  
\*Sep 1 05:55:02.385: 0021.5C8C.C761 Received activate\_features\_resp for client  
handle 40105511256850509 1 wcm: 004d mobility=Local(1) src\_int  
0xb6818000000038 dst\_int 0x0 ackflag 2 reassoc\_client 0 llm\_notif 0  
ip\$=6v0.0.0 ipt^\_Dv^\\7HnP6v^D6Hl5Ht^\_Dv\$6H8^ r^D6H>&5v8^  
r^D6H>&5v^D6Ht^M^Lw^\\7H8^ r  
\*Sep 1 05:55:02.385: 0021.5C8C.C761 Received activate\_features\_resp for EPM  
session handle 3087007776 1 wcm: 9  
\*Sep 1 05:55:02.385: EPM: 1 wcm: Policy enforcement - client handle  
8e7bc00000004d session 2800000e authz ec00000e  
\*Sep 1 05:55:02.385: EPM: 1 wcm: Netflow policy enforcement - client handle  
8e7bc00000004d sess 2800000e authz ec00000e msg\_type 0 policy\_status 0 attr  
len 0  
\*Sep 1 05:55:02.385: PEM rcv processing msg Epm spi response(12) 1 wcm: e  
8e7bc00000004d sess 2800000e authz ec00000e msg\_type 0 policy\_status 0 attr  
len 0  
\*Sep 1 05:55:02.385: 0021.5C8C.C761 Received policy\_enforcement\_response for  
client handle 40105511256850509 1 wcm: 00e msg\_type 0 policy\_status 0 attr  
len 0  
\*Sep 1 05:55:02.385: 0021.5C8C.C761 Received policy\_enforcement\_response for  
EPM session handle 671088654 1 wcm: 09  
\*Sep 1 05:55:02.385: 0021.5C8C.C761 Received response for  
\_EPM\_SPI\_ACTIVATE\_FEATURES request sent for client 1 wcm: 00e msg\_type 0  
policy\_status 0 attr len 0

\*Sep 1 05:55:02.385: 0021.5C8C.C761 Received \_EPM\_SPI\_STATUS\_SUCCESS for request sent for client 1 wcm: for client

\*Sep 1 05:55:02.385: 0021.5C8C.C761 Post-auth policy ACK recvd from EPM, unset flag on MSCB 1 wcm: ient

\*Sep 1 05:55:02.400: 0021.5C8C.C761 WCDB\_IP\_BIND: 1 wcm: w/ IPv4 20.20.20.3 ip\_learn\_type DHCP add\_delete 1,options\_length 0

\*Sep 1 05:55:02.400: 0021.5C8C.C761 WcdbClientUpdate: 1 wcm: IP Binding from WCDB ip\_learn\_type 1, add\_or\_delete 1

\*Sep 1 05:55:02.400: 0021.5C8C.C761 IPv4 Addr: 1 wcm: 20:20:20:3

\*Sep 1 05:55:02.400: 0021.5C8C.C761 MS got the IP, resetting the Reassociation Count 0 for client 1 wcm: \_delete 1

\*Sep 1 05:55:02.400: 0021.5C8C.C761 20.20.20.3 DHCP\_REQD (7) Change state to RUN (20) last state RUN (20) 1 wcm: length 0

\*Sep 1 05:55:02.400: 0021.5C8C.C761 WCDB\_CHANGE: 1 wcm: Client 1 m\_vlan 20 Radio iif id 0xbfcfdc00000003a bssid iif id 0xbb30c000000046, bssid C8F9.F983.4260

\*Sep 1 05:55:02.400: 0021.5C8C.C761 WCDB\_AUTH: 1 wcm: Adding opt82 len 0

\*Sep 1 05:55:02.401: 0021.5C8C.C761 WCDB\_LLM: 1 wcm: prev Mob state 1 curr Mob State 1 llReq flag 0

\*Sep 1 05:55:02.401: 0021.5C8C.C761 auth state 4 mob state 1 setWme 0 wme 1 roam\_sent 0 1 wcm: g 0

\*Sep 1 05:55:02.401: 0021.5C8C.C761 WCDB\_CHANGE: 1 wcm: auth=RUN(4) vlan 20 radio 1 client\_id 0x8e7bc00000004d mobility=Local(1) src\_int 0xb6818000000038 dst\_int 0x0 ackflag 2 reassoc\_client 0 llm\_notif 0 ip 20.20.20.3 ip\_learn\_type DHCP

\*Sep 1 05:55:02.401: 0021.5C8C.C761 20.20.20.3 RUN (20) Reached PLUMBFASPATH: 1 wcm: from line 4430

\*Sep 1 05:55:02.401: 0021.5C8C.C761 20.20.20.3 RUN (20) Replacing Fast Path rule on AP C8F9.F983.4260 , slot 1 802.1P = 0

1 wcm: 0xb6818000000038 dst\_int 0x0 ackflag 2 reassoc\_client 0 llm\_notif 0 ip 20.\$=6v0.3 ip\_lt^\_Dv^\7HnP6v^D6Hl5Ht^\_Dv\$6H8^ r^D6H>&5v8^ r^D6H>&5v^D6Ht^M^Lw^\7H8^ r

\*Sep 1 05:55:02.401: 0021.5C8C.C761 20.20.20.3 RUN (20) Successfully plumbed mobile rule 1 wcm: C8F9.F983.4260 , slot 1 802.1P = 0^M

\*Sep 1 05:55:02.401: 0021.5C8C.C761

Sending IPv4 update to Controller 10.105.135.176 1 wcm: e

\*Sep 1 05:55:02.401: 0021.5C8C.C761 Assigning Address 20.20.20.3 to mobile 1 wcm: 05.135.176

\*Sep 1 05:55:02.401: PEM recv processing msg Add SCB(3) 1 wcm: 20.20.3 to mobile

\*Sep 1 05:55:02.401: 0021.5C8C.C761 20.20.20.3, auth\_state 20 mmRole Local !!! 1 wcm: 135.176

\*Sep 1 05:55:02.401: 0021.5C8C.C761 20.20.20.3, auth\_state 20 mmRole Local, updating wcdb not needed 1 wcm: 3.4260 , slot 1 802.1P = 0^M

\*Sep 1 05:55:02.401: 0021.5C8C.C761 Tclas Plumb needed: 1 wcm: 0

\*Sep 1 05:55:20.083: 0021.5C8C.C761

Client stats update: 1 wcm: Time now in sec 1378014920, Last Acct Msg Sent at 1378014902 sec