

Cisco 5760 WLC 구성을 사용한 WPA2-PSK 및 개방형 인증 예

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소개

이 문서에서는 WLAN(무선 LAN)에서 WPA2(Wi-Fi Protected Access 2)를 사용할 때의 장점을 설명합니다. 이 문서에서는 WLAN에서 WPA2를 구현하기 위한 두 가지 구성 예를 제공합니다.

- WPA2 사전 공유 키(PSK) 구성
- 개방형 인증 구성

사전 요구 사항

요구 사항

다음 주제에 대한 지식을 보유하고 있으면 유용합니다.

- 무선 보호 액세스(WPA)
- WLAN 보안 솔루션

사용되는 구성 요소

이 문서의 정보는 다음 소프트웨어 및 하드웨어 버전을 기반으로 합니다.

- Cisco IOS® XE Software가 포함된 Cisco 5700 Series WLC(Wireless LAN Controller)¹, 릴리스

3.3

- Cisco Aironet 3600 Series Lightweight Access Point
- Microsoft Windows 7 기본 무선 신청자

이 문서의 정보는 특정 랩 환경의 디바이스를 토대로 작성되었습니다. 이 문서에 사용된 모든 디바이스는 초기화된(기본) 컨피그레이션으로 시작되었습니다. 현재 네트워크가 작동 중인 경우, 모든 명령어의 잠재적인 영향을 미리 숙지하시기 바랍니다.

구성

참고: 이 [섹션](#)에 사용된 명령에 대한 자세한 내용을 보려면 [Command Lookup Tool](#)([등록된 고객만 해당](#))을 사용합니다.

네트워크 다이어그램

다음 그림은 네트워크 다이어그램을 표시합니다.

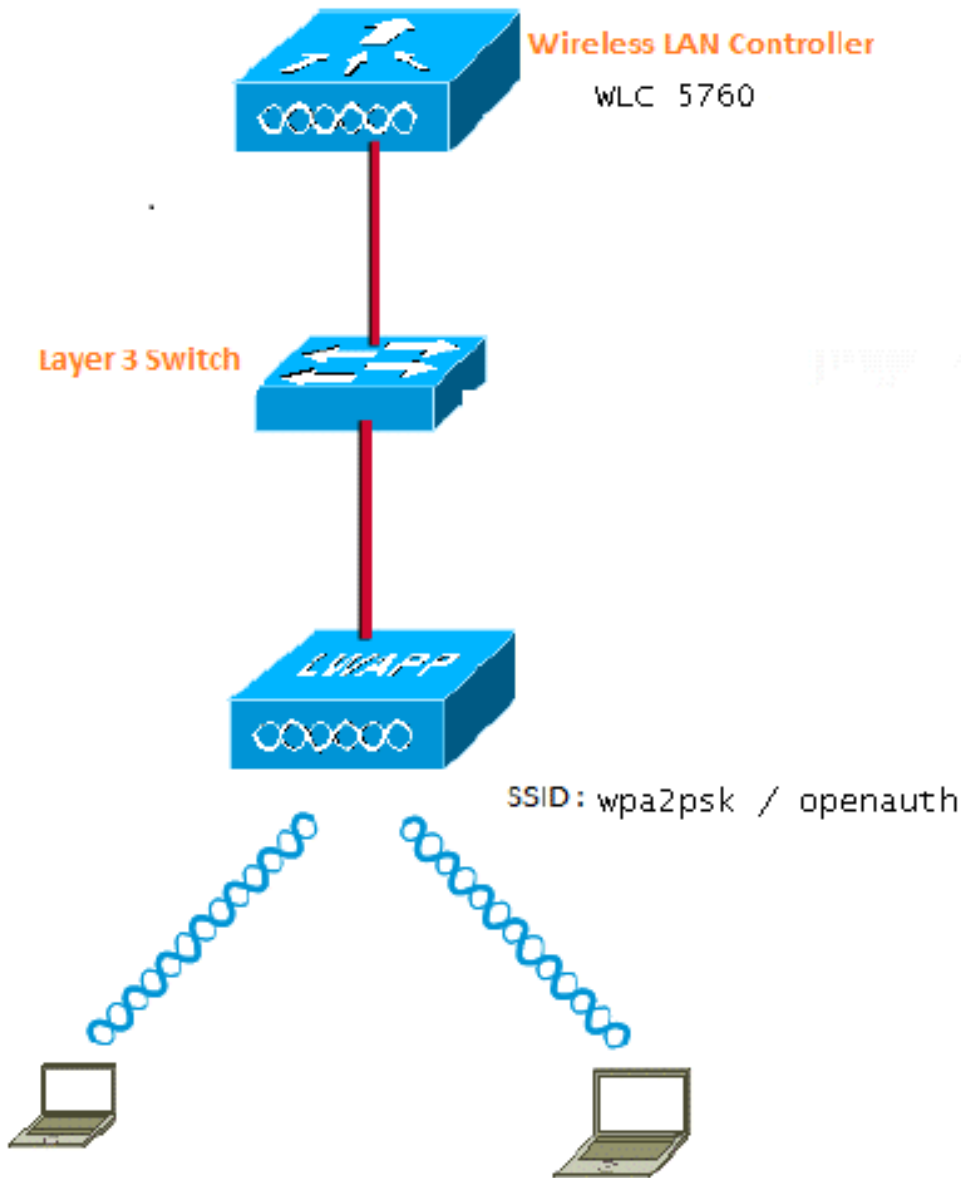


그림 1. 네트워크 다이어그램

CLI를 사용한 WPA2-PSK 구성

이 예에서는 클라이언트에 사용되는 VLAN에 대해 DHCP 스누핑을 구성하기 위해 CLI(Command Line Interface)를 사용하는 절차에 대해 설명합니다.

VLAN20은 클라이언트에 사용되며 풀은 동일한 WLC에 구성됩니다. Cisco 5700 WLC의 TenGigabitEthernet1/0/1은 업링크 스위치에 연결됩니다. DHCP 서버가 WLC 이외의 서버 또는 외부 DHCP 서버에 구성된 경우 DHCP 스누핑 및 릴레이 정보를 신뢰해야 합니다.

```
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

```

참고: 구성에 PSK 비밀번호에 공백이 있는 경우 "password PSK" 형식을 사용합니다. GUI를 사용하여 구성하는 경우에도 동일한 형식을 사용해야 합니다.

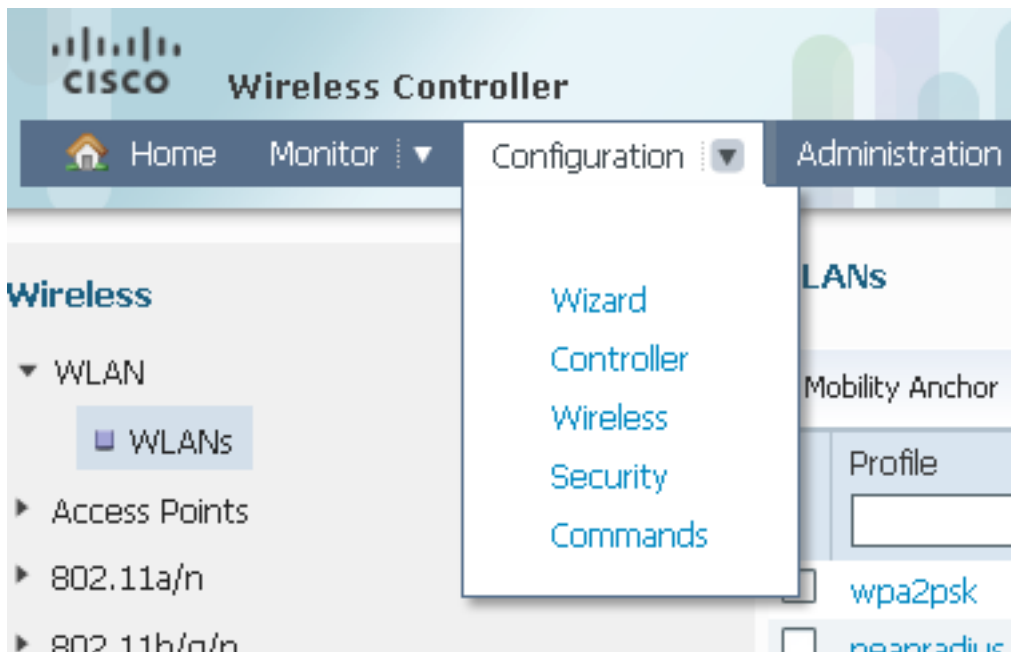
예

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

GUI를 사용하는 WPA2-PSK 구성

WLC GUI에서 WPA2 PSK를 구성하려면 다음 단계를 완료합니다.

1. Configuration(컨피그레이션) > Wireless(무선) > WLAN > WLANs(WLAN)로 이동하고 새 WLAN을 생성합니다.



2. WPA2를 활성화하고 원하는 인터페이스에 매핑합니다.

WLAN
WLAN > Edit

General Security QOS Advanced

Profile Name wpa2psk

Type WLAN

SSID wpa2psk

Status

Security Policies [WPA2][Auth(PSK)]
(Modifications done under security tab will appear after applying the changes.)

Radio Policy All ▾

Interface/Interface Group(G) default ▾

Broadcast SSID

Multicast VLAN Feature

3. 보안 탭을 클릭하고 **WPA2 정책** 확인란을 선택한 다음 AES를 **WPA2 암호화**로 선택합니다 .Auth **Key Mgmt** 드롭다운 목록에서 PSK를 선택합니다.클라이언트가 연결하는 데 사용할 PSK를 입력합니다.

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

••••••••

CLI를 사용하여 인증 구성 열기

다음은 클라이언트에 사용 중인 VLAN에 대해 DHCP 스누핑을 구성하기 위해 CLI를 사용하는 방법의 예입니다. 이 예에서 VLAN20은 클라이언트에 사용됩니다. 폴은 동일한 WLC에 구성됩니다.

5760 WLC의 TenGigabitEthernet1/0/1이 업링크 스위치에 연결됩니다. WLC 이외의 서버 또는 외부 DHCP 서버에 DHCP 서버를 구성한 경우 DHCP 스누핑 및 릴레이 정보를 신뢰해야 합니다.

```
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
```

GUI를 사용하여 인증 구성 열기

다음 절차에서는 WLC GUI에서 개방 인증을 구성하는 방법에 대해 설명합니다.

1. Configuration(컨피그레이션) > Wireless(무선) > WLAN > WLANs(WLAN)로 이동하고 새 WLAN을 생성합니다.



2. 보안 탭을 클릭합니다.레이어 2 탭 및 레이어 3 탭 아래에서 모든 항목을 none으로 설정합니다 .다음은 구성 결과의 예입니다.

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


다음을 확인합니다.


이 섹션을 사용하여 컨피그레이션이 제대로 작동하는지 확인합니다.

WPA2-PSK 클라이언트가 연결되어 있는지 확인합니다.

Intel® PROSet/Wireless WiFi Connection Utility









































File Tools Advanced Profiles Help



 **You are connected to wpa2psk.**

Network Name: wpa2psk [Details...](#)
 Speed: 78.0 Mbps
 Signal Quality: Excellent
 IP Address: 20.20.20.3

WiFi Networks (59)

	wpa2psk Connected						
	This network has security enabled						
	EAPFAST						
	This network has security enabled						
	DVA Manual						
	This network has security enabled						
	peapradius Manual						
	This network has security enabled						

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

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

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

클라이언트가 열린 인증에 연결되어 있는지 확인합니다.

Intel® PROSet/Wireless WiFi Connection Utility

File Tools Advanced Profiles Help

You are connected to open.

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

WiFi Networks (56)

Network Name	Status	Security	Capabilities
open	Connected	None	a, g, n
EAPFAST		This network has security enabled	a, g, n
wpa2psk		This network has security enabled	a, g, n
DVA	Manual	This network has security enabled	a, g, n

Buttons: Disconnect, Properties..., Refresh, Profiles...

WiFi On | Hardware radio switch: ON | Help? | Close

문제 해결

이 섹션에서는 컨피그레이션 문제를 해결하는 데 사용할 수 있는 정보를 제공합니다.

참고:

Output [Interpreter 도구](#)([등록된](#) 고객만 해당)는 특정 **show** 명령을 지원합니다. **show** 명령 출력의 분석을 보려면 [출력 인터프리터 도구]를 사용합니다.

debug 명령을 사용하기 전에 [디버그 명령에 대한 중요 정보](#)를 참조하십시오.

다음은 유용한 debug 및 trace 명령의 출력의 예입니다.

```
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