

Esempio di configurazione WPA2-PSK e Open Authentication con Cisco 5760 WLC

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Introduzione

Questo documento spiega i vantaggi dell'uso di WPA2 (Wi-Fi Protected Access 2) in una rete LAN wireless (WLAN). Nel documento vengono forniti due esempi di configurazione per l'implementazione di WPA2 su una WLAN:

- Configurazione di una chiave già condivisa WPA2 (PSK)
- Configurazione dell'autenticazione aperta

Prerequisiti

Requisiti

Cisco raccomanda la conoscenza dei seguenti argomenti:

- WPA (Wireless Protected Access)
- Soluzioni per la sicurezza WLAN

Componenti usati

Le informazioni fornite in questo documento si basano sulle seguenti versioni software e hardware:

- Cisco serie 5700 Wireless LAN Controller (WLC) con software Cisco IOS® XE, versione 3.3
- Cisco Aironet serie 3600 Lightweight Access Point
- Supplicant wireless nativo di Microsoft Windows 7

Le informazioni discusse in questo documento fanno riferimento a dispositivi usati in uno specifico ambiente di emulazione. Su tutti i dispositivi menzionati nel documento la configurazione è stata ripristinata ai valori predefiniti. Se la rete è operativa, valutare attentamente eventuali conseguenze derivanti dall'uso dei comandi.

Configurazione

Nota: per ulteriori informazioni sui comandi menzionati in questa sezione, usare lo [strumento di ricerca dei comandi \(solo utenti registrati\)](#).

Esempio di rete

Nella figura viene visualizzato il diagramma di rete:

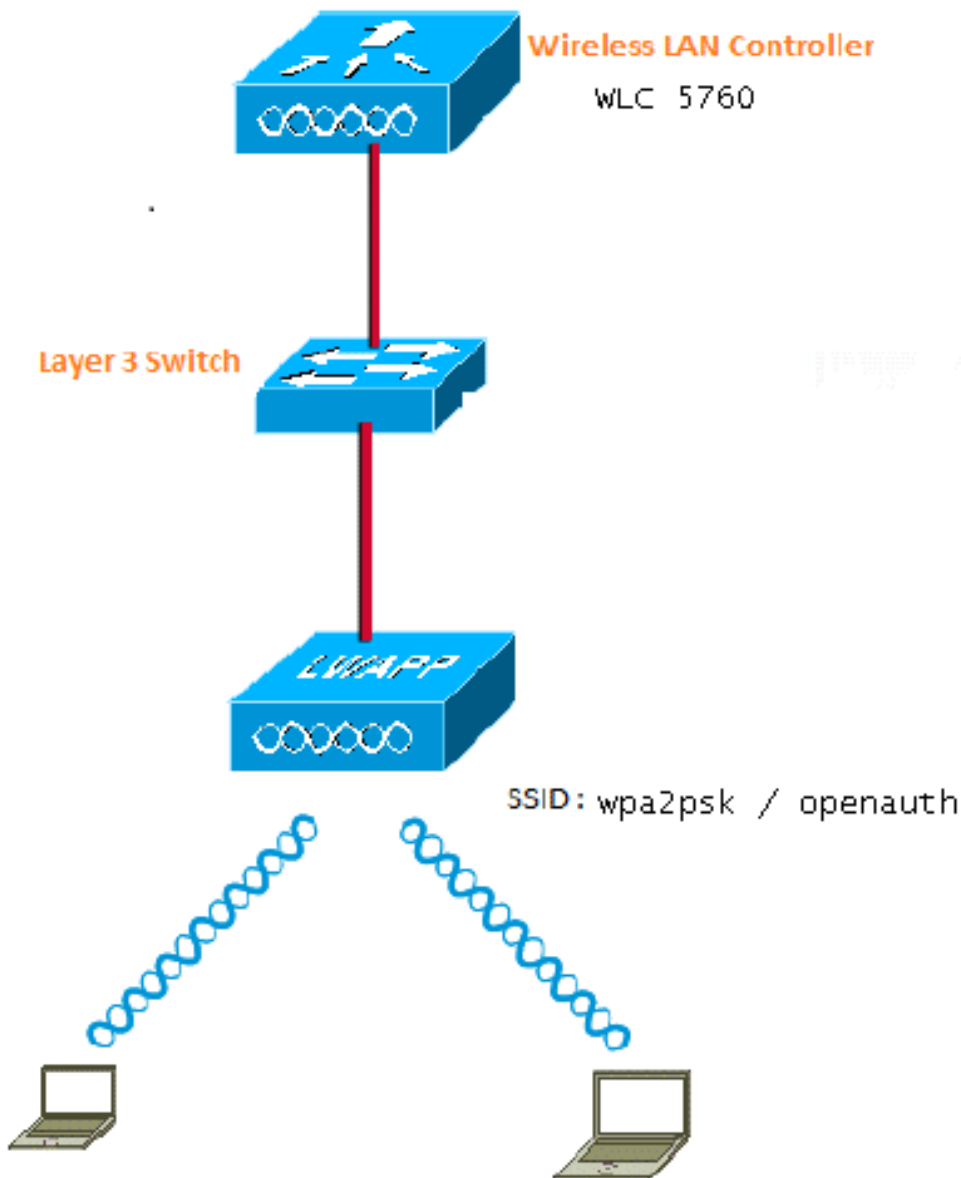


Figura 1. Esempio di rete

Configurazione WPA2-PSK con CLI

In questo esempio viene descritto come usare l'interfaccia della riga di comando (CLI) per configurare lo snooping DHCP per le VLAN usate per i client.

La VLAN20 viene utilizzata per i client e il pool è configurato sullo stesso WLC. La porta 10 Gigabit Ethernet 1/0/1 del Cisco 5700 WLC è collegata allo switch uplink. Se il server DHCP è configurato sul server oltre il WLC o su un server DHCP esterno, le informazioni sullo snooping e l'inoltro devono essere considerate attendibili.

```
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
```

Nota: Se la configurazione contiene uno spazio nella password PSK, utilizzare il formato "password PSK". Lo stesso formato deve essere utilizzato se si configura anche con la GUI.

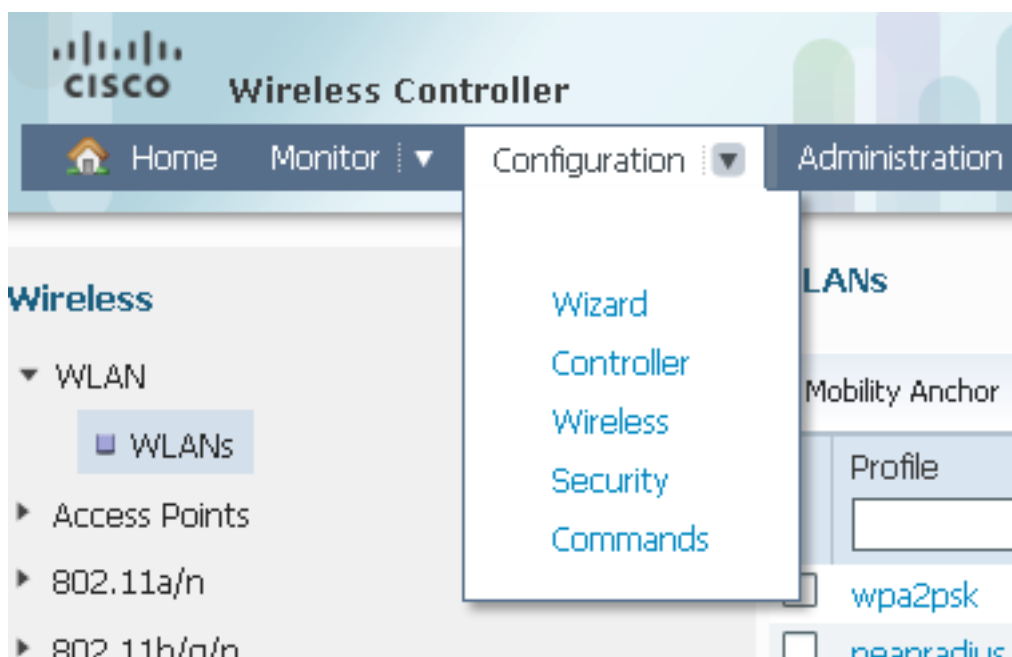
Esempio

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

Configurazione WPA2-PSK con GUI

Completare questi passaggi per configurare una chiave già condivisa WPA2 nell'interfaccia utente del WLC:

1. Selezionare **Configuration > Wireless > WLAN > WLAN** e creare una nuova WLAN:



2. Abilitare WPA2 e mapparlo all'interfaccia desiderata:

WLAN
WLAN > Edit

General Security QOS Advanced

Profile Name	wpa2psk
Type	WLAN
SSID	wpa2psk
Status	<input checked="" type="checkbox"/>
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	<input checked="" type="checkbox"/>
Multicast VLAN Feature	<input type="checkbox"/>

3. Fare clic sulla scheda **Protezione**, selezionare la casella di controllo **Criterio WPA2** e selezionare **AES** come **crittografia WPA2**. Nell'elenco a discesa **Auth Key Mgmt**, selezionare **PSK**. Immettere il PSK che il client utilizzerà per connettersi:

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

••••••••

Open Authentication Configuration con CLI

Questo è un esempio di come usare la CLI per configurare lo snooping DHCP per le VLAN che vengono usate per i client; nell'esempio, viene usata la VLAN20 per i client. Il pool è configurato sullo stesso WLC.

10 Gigabit Ethernet 1/0/1 dal WLC 5760 sia collegato allo switch uplink. Se il server DHCP è configurato sul server oltre il WLC o su un server DHCP esterno, le informazioni sullo snooping e l'inoltro devono essere considerate attendibili.

```
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
```

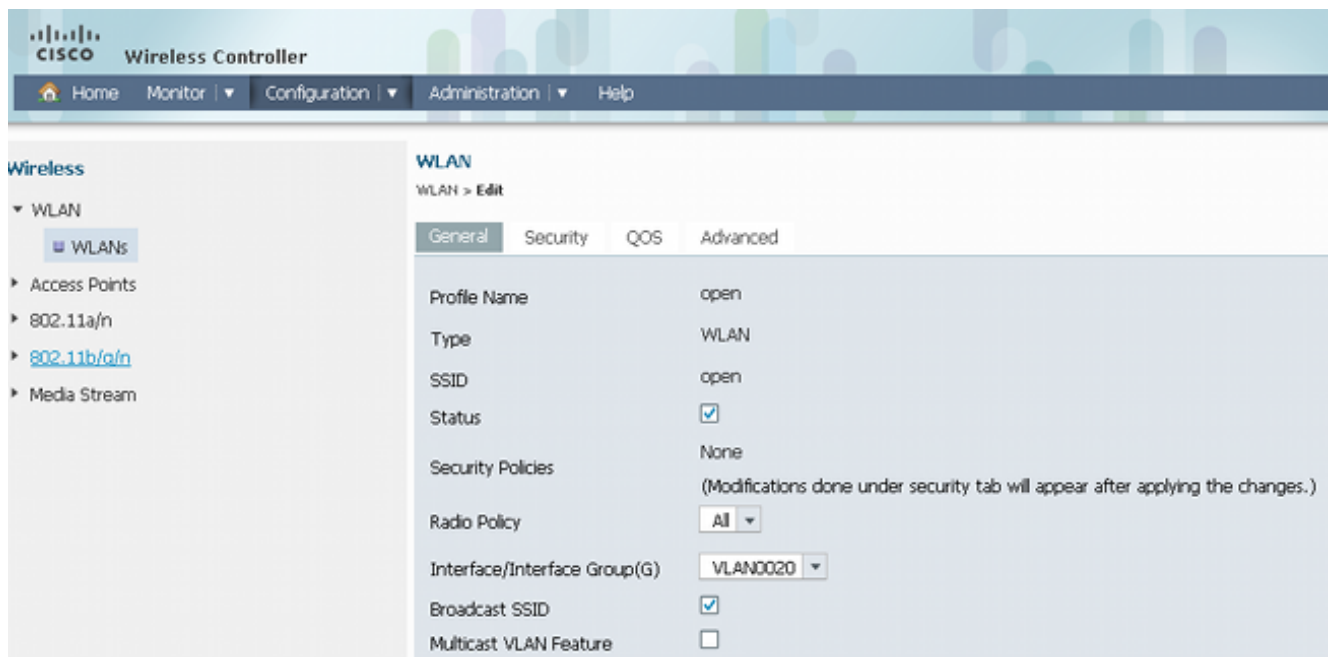
```
switchport trunk native vlan 12
switchport mode trunk
ip dhcp relay information trusted
ip dhcp snooping trust
```

```
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
```

Open Authentication Configuration con GUI

In questa procedura viene descritto come configurare l'autenticazione aperta nell'interfaccia utente grafica del WLC:

1. Selezionare **Configuration > Wireless > WLAN > WLAN** e creare una nuova WLAN:



2. Fare clic sulla scheda **Protezione**. Nelle schede **Layer2** e **Layer3**, impostare tutti gli elementi su Nessuno. Questo è un esempio dei risultati della configurazione:

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

Verifica

Per verificare che la configurazione funzioni correttamente, consultare questa sezione.

Verificare che il client WPA2-PSK sia connesso:

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)

	wpa2psk This network has security enabled	Connected	
	EAPFAST This network has security enabled		
	DVA This network has security enabled	Manual	
	peapradius This network has security enabled	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](#)

Confermare che il client sia connesso all'autenticazione aperta:

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

Risoluzione dei problemi

Le informazioni contenute in questa sezione permettono di risolvere i problemi relativi alla configurazione.

Note:

Lo [strumento Output Interpreter \(solo utenti registrati\) supporta alcuni comandi show](#). Usare lo strumento Output Interpreter per visualizzare un'analisi dell'output del comando `show`.

consultare le [informazioni importanti sui comandi di debug prima di usare i comandi di debug](#).

Questo è un esempio di output da comandi utili di **debug e trace**:

```
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: mJ^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 recv 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 0xbfcdc00000003a 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: \2105HmJ^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
*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
0xbfcfc00000003a, 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 0xbfcfc00000003a 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 0xbfcfc00000003a 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 0xbfc0c00000003a 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