

WPA2-PSK y autenticación abierta con el ejemplo de configuración del WLC de Cisco 5760

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Introducción

Este documento explica las ventajas del uso del acceso protegido Wi-Fi 2 (WPA2) en un Wireless LAN (red inalámbrica (WLAN)). El documento proporciona dos ejemplos de configuración para la implementación del WPA2 en una red inalámbrica (WLAN):

- Configuración de una clave previamente compartida WPA2 (PSK)
- Configuración de la autenticación abierta

Prerequisites

Requisitos

Cisco recomienda que tenga conocimiento sobre estos temas:

- Acceso protegido Tecnología inalámbrica (WPA)
- Soluciones de la Seguridad de WLAN

Componentes Utilizados

La información que contiene este documento se basa en las siguientes versiones de software y hardware.

- Un regulador del Wireless LAN de las Cisco 5700 Series (WLC) con el software del [®] XE del Cisco IOS, versión 3.3
- Lightweight Access Point de las 3600 Series del Cisco Aironet
- Supplicant de la Tecnología inalámbrica del natural de Microsoft Windows 7

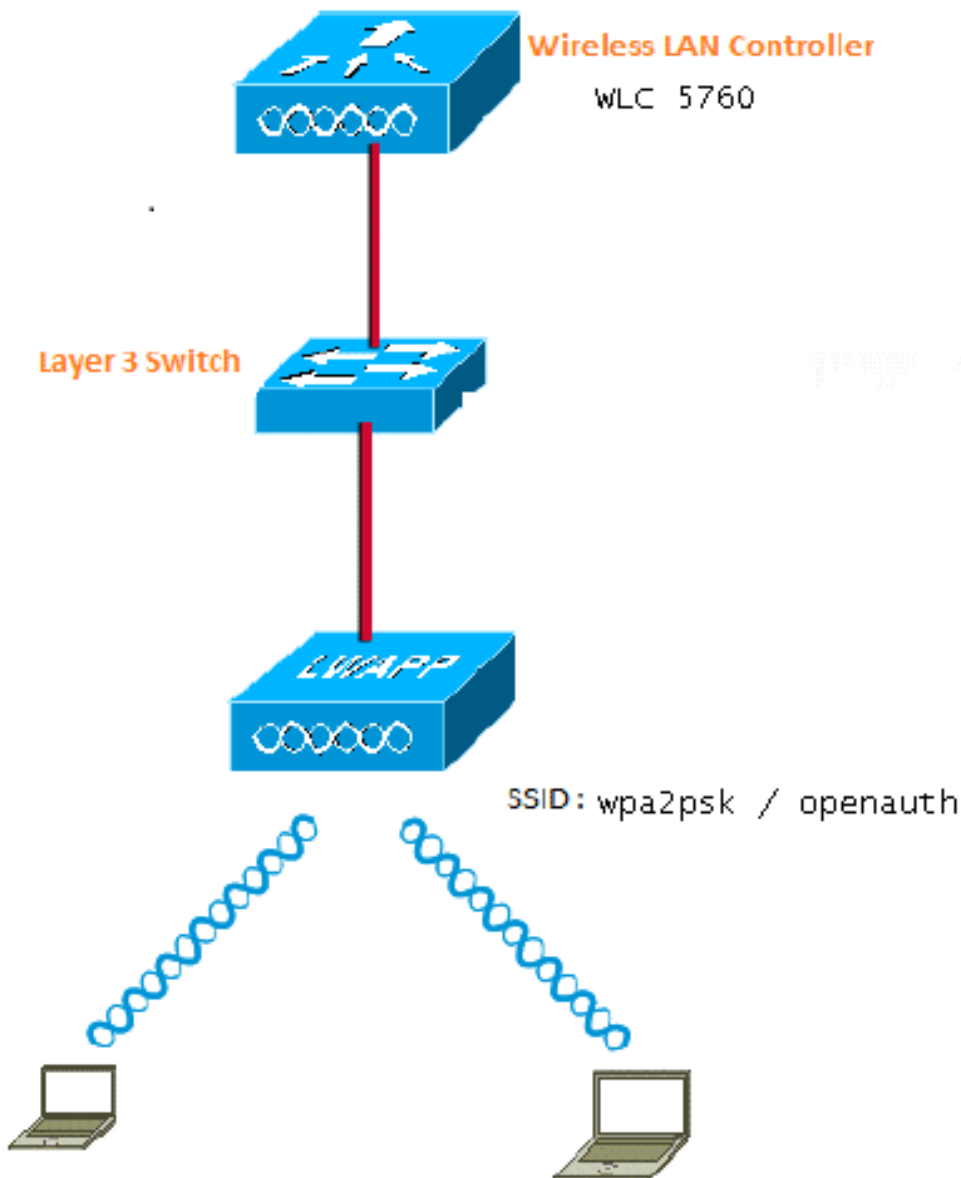
La información que contiene este documento se creó a partir de los dispositivos en un ambiente de laboratorio específico. Todos los dispositivos que se utilizan en este documento se pusieron en funcionamiento con una configuración verificada (predeterminada). Si la red está funcionando, asegúrese de haber comprendido el impacto que puede tener cualquier comando.

Configurar

Note: Use la [Command Lookup Tool](#) ([clientes registrados solamente](#)) para obtener más información sobre los comandos usados en esta sección.

Diagrama de la red

Este ejemplo visualiza el diagrama de la red:



Cuadro 1. diagrama de la red

WPA2-PSK configuración con el CLI

Este ejemplo describe el procedimiento para utilizar el comando line interface(cli) para configurar el snooping del DHCP para los VLAN que se utilizan para los clientes.

El VLAN20 se utiliza para los clientes y el pool se configura en el mismo WLC. El TenGigabitEthernet1/0/1 del WLC de Cisco 5700 está conectado con el Switch del uplink. Si configuran al servidor DHCP en el servidor más allá el WLC o en un servidor DHCP externo, usted debe confiar en el snooping del DHCP y retransmitir la información.

```
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
```

Note: Si su configuración contiene un espacio en la contraseña del PSK, después utilice el formato "PSK de la contraseña". El mismo formato debe ser utilizado si usted configura con el GUI también.

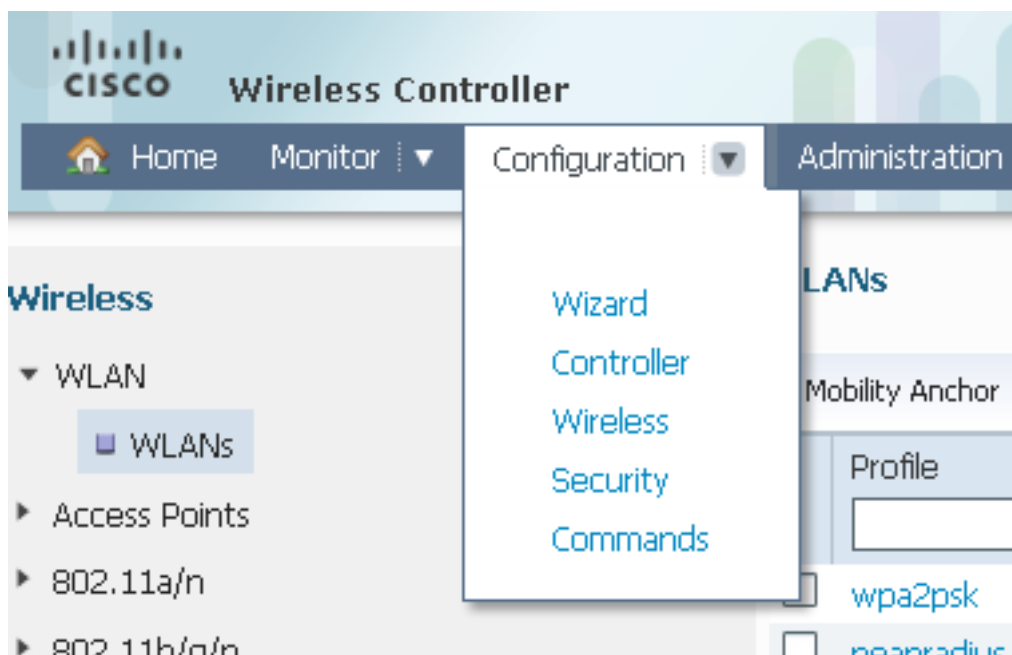
Ejemplo:

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

WPA2-PSK configuración con el GUI

Complete estos pasos para configurar a WPA2PSK en el WLC GUI:

1. Navegue a la **configuración** > a la **Tecnología inalámbrica** > a la **red inalámbrica (WLAN)** > a los **WLAN**, y cree una nueva red inalámbrica (WLAN):



2. Habilite el WPA2, y asócielo a la interfaz deseada:

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. Haga clic la **ficha de seguridad**, marque el checkbox de la **directiva WPA2**, y seleccione el **AES** como el **cifrado WPA2**. En la lista desplegable del **mgmt de la clave del auth**, seleccione el **PSK**. Ingrese el PSK que el cliente utilizará para conectar:

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

••••••••

Configuración de la autenticación abierta con el CLI

Éste es un ejemplo de cómo utilizar el CLI para configurar el snooping del DHCP para los VLAN que se están utilizando para los clientes; en este ejemplo, el VLAN20 se utiliza para los clientes. El pool se configura en el mismo WLC.

TenGigabitEthernet1/0/1 de los 5760 WLC está conectado con el Switch del uplink. Si usted tiene el servidor DHCP configurado en el servidor más allá el WLC o en un servidor DHCP externo, usted debe confiar en el snooping del DHCP y retransmitir la información.

```
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
```

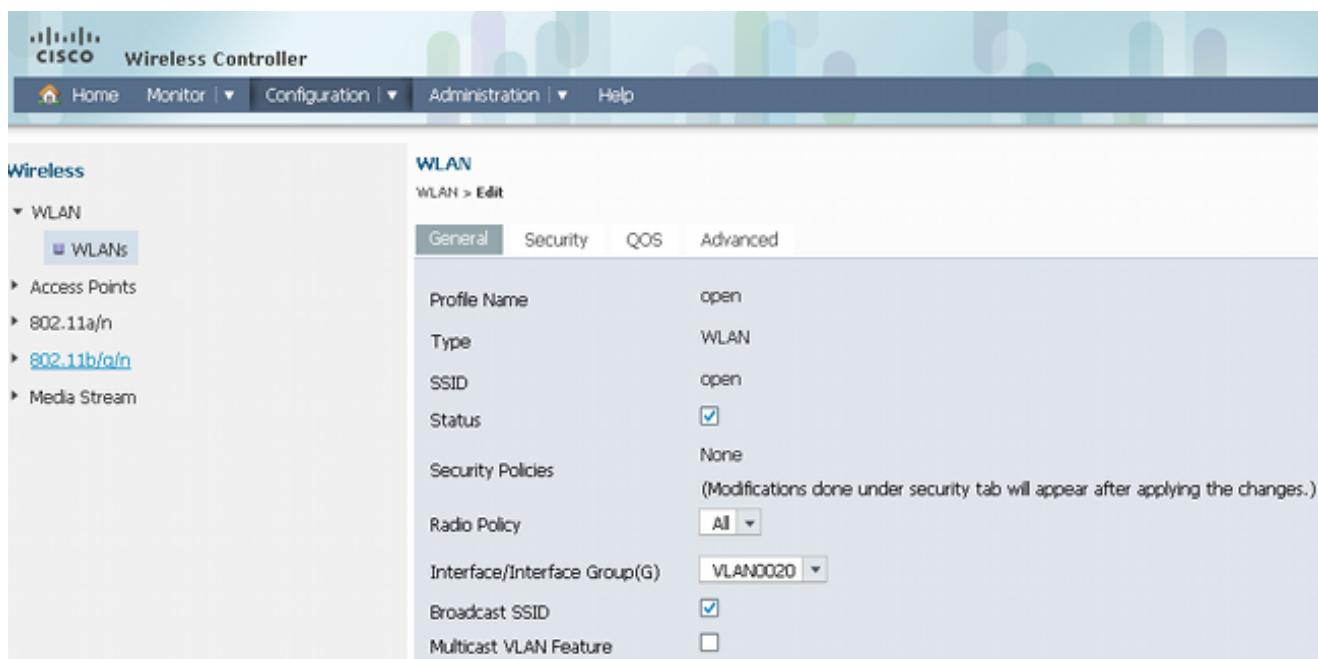
```
switchport trunk native vlan 12
switchport mode trunk
ip dhcp relay information trusted
ip dhcp snooping trust
```

```
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
```

Configuración de la autenticación abierta con el GUI

Este procedimiento describe cómo configurar la autenticación abierta en el WLC GUI:

1. Navegue a la **configuración** > a la **Tecnología inalámbrica** > a la **red inalámbrica (WLAN)** > a los **WLAN**, y cree una nueva red inalámbrica (WLAN):



2. Haga clic en la ficha Security (Seguridad). Bajo la lengüeta **Layer2** y lengüeta **Layer3**, fije todo a ningunos. Éste es un ejemplo de los resultados de la configuración:

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


Verificación


Use esta sección para confirmar que su configuración funciona correctamente.

Confirme que el cliente del WPA2-PSK está conectado:

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	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](#)

Confirme que el cliente está conectado con la autenticación abierta:

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)

Signal Strength	Network Name	Status	Security	Capabilities
Full	open	Connected	None	a, g, n
Full	EAPFAST		Enabled	a, g, n
Full	wpa2psk		Enabled	a, g, n
Full	DVA	Manual	Enabled	a, g, n

Buttons: Disconnect, Properties..., Refresh, Profiles..., WiFi On, Hardware radio switch: ON, Help?, Close

Troubleshooting

En esta sección encontrará información que puede utilizar para solucionar problemas de configuración.

Notas:

[La herramienta del Output Interpreter \(clientes registrados solamente\)](#) apoya los ciertos comandos show. Utilice la herramienta del Output Interpreter para ver una análisis de la

salida del comando show.

Consulte [Información Importante sobre Comandos de Debug](#) antes de usar un comando debug.

Esto es un ejemplo de salida del **debug** y de los **comandos trace** útiles:

```
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 0xbfcfdc00000003a 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

*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: 6818000000038 dst_int 0x0 ackflag 0 reassoc_client 0 llm_notif 0 i\$=6v.0.0.0 it^_Dv^7HnP6v^D6Hl5Ht^_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