Problemas inalámbricos comunes de la chuleta

Contenido

Introducción

Este documento describe una chuleta que analice con las depuraciones (generalmente “cliente de la depuración < >") del MAC address para los problemas inalámbricos comunes. Para analizar con el “cliente de la demostración” y las depuraciones nos requerirá a primero entiende algunos estados PEM y los estados APF.

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Componentes usados

La información en este documemt se basa en todos los reguladores de “AireOS”.

- Reguladores 440x, los 5508, 5520, 75xx,85xx, 2504 y vWLC así como Wisms.
- Aunque muchos conceptos sean idénticos en los reguladores y el Switches convergidos del acceso IOS-XE, este documento no se aplica a ellos pues las salidas y las depuraciones son radicalmente diferentes.

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 su red está viva, asegúrese de que usted entienda el impacto potencial del comando any.

Informe el estado PEM en la salida del cliente de la demostración

- COMIENZO — Estatus inicial para la nueva entrada del cliente.
- AUTHCHECK — La red inalámbrica (WLAN) tiene una política de autenticación L2 a aplicar.
- 8021X_REQD — El cliente debe completar la autenticación del 802.1x.
- L2AUTHCOMPLETE — El cliente ha acabado con éxito la directiva L2. El proceso puede ahora proceder a las directivas L3 (aprendizaje de dirección, red auténtica, etc). El regulador envía aquí el aviso de la movilidad para aprender la información L3 de otros reguladores si esto es un cliente de itinerancia en el mismo grupo de la movilidad.
- WEP_REQD — El cliente debe completar la autenticación WEP.
- DHCP_REQD — El regulador necesita aprender el direccionamiento L3 del cliente, que es hecho por la solicitud ARP, solicitud del DHCP o renueva, o por la información aprendida del otro regulador en el grupo de la movilidad. Si el DHCP requerido se marca en la red inalámbrica (WLAN), sólo se utiliza el DHCP o la información de la movilidad.
- WEBAUTH_REQD — El cliente debe completar la autenticación Web. (Directiva L3)
- CENTRAL_WEBAUTH_REQD -- El cliente debe completar la clave CWA, las esperas WLC para recibir el CoA
- EJECÚTESE — El cliente ha completado con éxito las directivas requeridas L2 y L3 y puede ahora transmitir el tráfico a la red.

La depuración dada de la clave de las demostraciones de los decorados alinea para las configuraciones erróneas más comunes en las disposiciones inalámbricas, ese los parámetros dominantes de los puntos culminantes en intrépido.

Escenario 1: frase de contraseña Mis-configurada para WPA/WPA2 la autenticación PSK en el cliente

```
(Cisco Controller) >show client detail 24:77:03:19:fb:70

Client MAC Address..............................24:77:03:19:fb:70

Client Username ................................ N/A

AP MAC Address.................................. ec:c8:82:a4:5b:c0

AP Name.....................................Shankar_AP_1042
```

```
AP radio slot Id..................................... 1
Client State..................................... Associated
Client NAC OOB State............................. Access
Wireless LAN Id.................................. 5
Hotspot (802.11u)................................ Not Supported
BSSID............................................ ec:c8:82:a4:5b:cb
Connected For ................................... 0 secs
Channel.......................................... 44
IP Address....................................... Unknown
Gateway Address.................................. Unknown
Netmask.......................................... Unknown
Association Id................................... 1
Authentication Algorithm......................... Open System
Reason Code...................................... 1
Status Code...................................... 0
Session Timeout.................................. 0
Client CCX version............................... 4
Client E2E version............................... 1
QoS Level........................................ Silver
Avg data Rate.................................... 0
Burst data Rate.................................. 0
Avg Real time data Rate.......................... 0
Burst Real Time data Rate........................ 0
802.1P Priority Tag.............................. 2
CTS Security Group Tag........................... Not Applicable
KTS CAC Capability............................... No
WMM Support...................................... Enabled
  APSD ACs.....................................  BK  BE  VI  VO
Power Save....................................... OFF
Current Rate..................................... m15
Supported Rates.................................. 6.0,9.0,12.0,18.0,24.0,36.0,
    ............................................ 48.0,54.0
```

Mobility State..... None

Mobility Move Count..... 0

Security Policy Completed..... No

Policy Manager State..... 8021X_REQD
//This proves client is struggling to clear Layer-2 authentication.
It means we have to move to debug to understand where in L-2 we are failing Policy Manager Rule Created..... Yes Audit Session ID..... none AAA Role Type..... none Local Policy Applied..... none IPv4 ACL Name..... none FlexConnect ACL Applied Status..... Unavailable IPv4 ACL Applied Status..... Unavailable IPv6 ACL Name..... none IPv6 ACL Applied Status..... Unavailable Layer2 ACL Name..... none Layer2 ACL Applied Status..... Unavailable mDNS Status..... Enabled mDNS Profile Name..... default-mdns-profile No. of mDNS Services Advertised..... 0 Policy Type..... WPA2 Authentication Key Management..... PSK Encryption Cipher..... CCMP (AES) Protected Management Frame ..... No Management Frame Protection..... No EAP Type..... Unknown Interface..... vlan21 VLAN..... 21 Quarantine VLAN..... 0 Access VLAN..... 21 Client Capabilities: CF Pollable..... Not implemented CF Poll Request..... Not implemented Short Preamble..... Not implemented PBCC..... Not implemented Channel Agility..... Not implemented Listen Interval..... 10 Fast BSS Transition..... Not implemented Client Wifi Direct Capabilities: WFD capable..... No Manged WFD capable..... No Cross Connection Capable..... No Support Concurrent Operation..... No Fast BSS Transition Details: Client Statistics: Number of Bytes Received..... 423 Number of Bytes Sent..... 429 Number of Packets Received..... 3 Number of Packets Sent..... 4 Number of Interim-Update Sent..... 0 Number of EAP Id Request Msg Timeouts..... 0 Number of EAP Id Request Msg Failures..... 0 Number of EAP Request Msg Timeouts..... 0 Number of EAP Request Msg Failures..... 0 Number of EAP Key Msg Timeouts..... 0 Number of EAP Key Msg Failures..... 0 Number of Data Retries..... 0 Number of RTS Retries..... 0 Number of Duplicate Received Packets..... 0 Number of Decrypt Failed Packets..... 0 Number of Mic Failured Packets..... 0 Number of Mic Missing Packets..... 0 Number of RA Packets Dropped..... 0 Number of Policy Errors..... 0 Radio Signal Strength Indicator..... -18 dBm Signal to Noise Ratio..... 40 dB Client Rate Limiting Statistics: Number of Data Packets Recieved..... 0 Number of Data Rx Packets Dropped..... 0 Number of Data Bytes Recieved..... 0 Number of Data Rx Bytes Dropped..... 0 Number of Realtime Packets Recieved..... 0 Number of Realtime Rx Packets Dropped..... 0 Number of Realtime Bytes Recieved..... 0 Number of Realtime Rx Bytes Dropped..... 0 Number of Data Packets Sent..... 0 Number of Data Tx Packets Dropped..... 0 Number of Data Bytes Sent..... 0 Number of Data Tx Bytes Dropped..... 0 Number of Realtime Packets Sent..... 0 Number of Realtime Tx Packets Dropped..... 0 Number of Realtime Bytes Sent..... 0 Number of Realtime Tx Bytes Dropped..... 0 Nearby AP Statistics: Shankar_AP_1602(slot 0) antenna0: 0 secs ago..... -25 dBm antenna1: 0 secs ago..... -40 dBm Shankar_AP_1602(slot 1) antenna0: 1 secs ago..... -41 dBm antenna1: 1 secs ago..... -27 dBm Shankar_AP_3502(slot 0) antenna0: 0 secs ago..... -90 dBm antenna1: 0 secs ago..... -83 dBm Shankar_AP_1042(slot 0) antenna0: 0 secs ago..... -32 dBm antenna1: 0 secs ago..... -41 dBm Shankar_AP_1042(slot 1) antenna0: 0 secs ago..... -50 dBm antenna1: 0 secs ago..... -42 dBm DNS Server details: DNS server IP ..... 0.0.0.0 DNS server IP ..... 0.0.0.0 Assisted Roaming Prediction List details: Client Dhcp Required: False Allowed (URL)IP Addresses ----------

Análisis del cliente de la depuración

```
(Cisco Controller) >debug client 24:77:03:19:fb:70
```

***apfMsConnTask_4: May 07 17:03:56.060: 24:77:03:19:fb:70 Association received from mobile on BSSID 08:cc:68:67:1f:fb //Client has initiated association for AP with BSSID 08:cc:68:67:1f:fb**

```
*apfMsConnTask_4: May 07 17:03:56.060: 24:77:03:19:fb:70 Global 200 Clients are allowed to AP
radio

*apfMsConnTask_4: May 07 17:03:56.060: 24:77:03:19:fb:70 Max Client Trap Threshold: 0  cur: 0

*apfMsConnTask_4: May 07 17:03:56.060: 24:77:03:19:fb:70 Rf profile 600 Clients are allowed to
AP wlan

*apfMsConnTask_4: May 07 17:03:56.060: 24:77:03:19:fb:70 Applying Interface policy on Mobile,
role Unassociated. Ms NAC State 2 Quarantine Vlan 0 Access Vlan 21

*apfMsConnTask_4: May 07 17:03:56.060: 24:77:03:19:fb:70 Re-applying interface policy for client

*apfMsConnTask_4: May 07 17:03:56.060: 24:77:03:19:fb:70 0.0.0.0 START (0) Changing IPv4 ACL
'none' (ACL ID 255) ===> 'none' (ACL ID 255) --- (caller apf_policy.c:2202)

*apfMsConnTask_4: May 07 17:03:56.060: 24:77:03:19:fb:70 0.0.0.0 START (0) Changing IPv6 ACL
'none' (ACL ID 255) ===> 'none' (ACL ID 255) --- (caller apf_policy.c:2223)

*apfMsConnTask_4: May 07 17:03:56.060: 24:77:03:19:fb:70 apfApplyWlanPolicy: Apply WLAN Policy
over PMIPv6 Client Mobility Type

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 In processSsidIE:4795 setting Central
switched to TRUE

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 In processSsidIE:4798 apVapId = 5 and
Split Acl Id = 65535

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 Applying site-specific Local Bridging
override for station 24:77:03:19:fb:70 - vapId 5, site 'default-group', interface 'vlan21'

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 Applying Local Bridging Interface
Policy for station 24:77:03:19:fb:70 - vlan 21, interface id 14, interface 'vlan21'

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 processSsidIE  statusCode is 0 and
status is 0

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 processSsidIE  ssid_done_flag is 0
finish_flag is 0

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 STA - rates (8): 140 18 24 36 48 72 96
108 0 0 0 0 0 0 0 0
```

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 suppRates statusCode is 0 and gotSuppRatesElement is 1

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 Processing RSN IE type 48, length 22 for mobile 24:77:03:19:fb:70

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 pemApfDeleteMobileStation2: APF_MS_PEM_WAIT_L2_AUTH_COMPLETE = 0.

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 0.0.0.0 START (0) Deleted mobile LWAPP rule on AP [ec:c8:82:a4:5b:c0]

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 Updated location for station old AP ec:c8:82:a4:5b:c0-1, new AP 08:cc:68:67:1f:f0-1

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 Updating AID for REAP AP Client 08:cc:68:67:1f:f0 - AID ===> 1

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 0.0.0.0 START (0) Initializing policy

*apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 0.0.0.0 START (0) Change state to AUTHCHECK (2) last state START (0)

***apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 0.0.0.0 AUTHCHECK (2) Change state to 8021X_REQD (3) last state AUTHCHECK (2)//**
Client entering L2 authentication stage *apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 Central switch is TRUE *apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 Not Using WMM Compliance code qosCap 00 *apfMsConnTask_4: May 07 17:03:56.061: 24:77:03:19:fb:70 0.0.0.0 8021X_REQD (3) Plumbed mobile LWAPP rule on AP 08:cc:68:67:1f:f0 vapId 5 apVapId 5 flex-acl-name: *apfMsConnTask_4: May 07 17:03:56.062: 24:77:03:19:fb:70 apfMsAssoStateInc *apfMsConnTask_4: May 07 17:03:56.062: 24:77:03:19:fb:70 apfPemAddUser2 (apf_policy.c:333) Changing state for mobile 24:77:03:19:fb:70 on AP 08:cc:68:67:1f:f0 from Disassociated to Associated *apfMsConnTask_4: May 07 17:03:56.062: 24:77:03:19:fb:70 apfPemAddUser2:session timeout forstation 24:77:03:19:fb:70 - Session Tout 0, apfMsTimeOut '0' and sessionTimerRunning flag is 0 *apfMsConnTask_4: May 07 17:03:56.062: 24:77:03:19:fb:70 Stopping deletion of Mobile Station: (callerId: 48) *apfMsConnTask_4: May 07 17:03:56.062: 24:77:03:19:fb:70 Func: apfPemAddUser2, Ms Timeout = 0, Session Timeout = 0 *apfMsConnTask_4: May 07 17:03:56.062: 24:77:03:19:fb:70 Sending Assoc Response to station on BSSID 08:cc:68:67:1f:fb (status 0) ApVapId 5 Slot 1 *apfMsConnTask_4: May 07 17:03:56.062: 24:77:03:19:fb:70 apfProcessAssocReq (apf_80211.c:8292) Changing state for mobile 24:77:03:19:fb:70 on AP 08:cc:68:67:1f:f0 from Associated to Associated *spamApTask3: May 07 17:03:56.065: 24:77:03:19:fb:70 Sent 1x initiate message to multi thread task for mobile 24:77:03:19:fb:70 *Dot1x_NW_MsgTask_0: May 07 17:03:56.065: 24:77:03:19:fb:70 Creating a PKC PMKID Cache entry for station 24:77:03:19:fb:70 (RSN 2) *Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 Resetting MSCB PMK Cache Entry 0 for station 24:77:03:19:fb:70 *Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 Removing BSSID ec:c8:82:a4:5b:cb from PMKID cache of station 24:77:03:19:fb:70 *Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 Setting active key cache index 0 ---> 8 *Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 Setting active key cache index 8 ---> 0 *Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 Adding BSSID 08:cc:68:67:1f:fb to PMKID cache at index 0 for station 24:77:03:19:fb:70 *Dot1x_NW_MsgTask_0: May 07 17:03:56.066: New PMKID: (16) *Dot1x_NW_MsgTask_0: May 07 17:03:56.066: [0000] d7 57 8e ff 2b 27 01 4e 93 39 0b 1c 1f 46 d2 da *Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 Initiating RSN PSK to mobile 24:77:03:19:fb:70 *Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 EAP-PARAM Debug - eap-params for Wlan-Id :5 is disabled - applying Global eap timers and retries *Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 dot1x - moving mobile 24:77:03:19:fb:70 into Force Auth state *Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 EAPOL Header: *Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 00000000: 02 03 00 5f ..._ *Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 Found an cache entry for BSSID 08:cc:68:67:1f:fb in PMKID cache at index 0 of station 24:77:03:19:fb:70 *Dot1x_NW_MsgTask_0: May 07 17:03:56.066: **24:77:03:19:fb:70 Found an cache entry for BSSID 08:cc:68:67:1f:fb in PMKID cache at index 0 of station 24:77:03:19:fb:70**

***Dot1x_NW_MsgTask_0: May 07 17:03:56.066: Including PMKID in M1 (16)**

***Dot1x_NW_MsgTask_0: May 07 17:03:56.066:   [0000] d7 57 8e ff 2b 27 01 4e 93 39 0b 1c 1f 46 d2 da**

***Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 Starting key exchange to mobile 24:77:03:19:fb:70, data packets will be dropped**

***Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 Sending EAPOL-Key Message to mobile 24:77:03:19:fb:70**

state INITPMK (message 1), replay counter 00.00.00.00.00.00.00.00

***Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 Sending EAPOL-Key Message to mobile 24:77:03:19:fb:70**

state INITPMK (message 1), replay counter 00.00.00.00.00.00.00.00

*Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 Allocating EAP Pkt for retransmission to mobile 24:77:03:19:fb:70

*Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 mscb->apfMsLwappLradNhMac = b0:fa:eb:b8:f5:12 mscb->apfMsLradSlotId = 1 mscb->apfMsLradJumbo = 0 mscb->apfMsintIfNum = 1

*Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 mscb->apfMsBssid = 08:cc:68:67:1f:f0 mscb->apfMsAddress = 24:77:03:19:fb:70 mscb->apfMsApVapId = 5

*Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 dot1xcb->snapOrg = 00 00 00 dot1xcb->eapolWepBit = 0 mscb->apfMsLwappLradVlanId = 0 mscb->apfMsLwappMwarInet.ipv4.addr = 181004965

*Dot1x_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 mscb->apfMsLwappMwarPort = 5246 mscb->apfMsLwappLradInet.ipv4.addr = 181004985 mscb->apfMsLwappLradPort = 36690

*Dot1x_NW_MsgTask_0: May 07 17:03:56.069: 24:77:03:19:fb:70 Received EAPOL-Key from mobile 24:77:03:19:fb:70

*Dot1x_NW_MsgTask_0: May 07 17:03:56.069: 24:77:03:19:fb:70 Ignoring invalid EAPOL version (1) in EAPOL-key message from mobile 24:77:03:19:fb:70

*Dot1x_NW_MsgTask_0: May 07 17:03:56.069: 24:77:03:19:fb:70 Received EAPOL-key in PTK_START state (message 2) from mobile 24:77:03:19:fb:70

*Dot1x_NW_MsgTask_0: May 07 17:03:56.069: 24:77:03:19:fb:70 Received EAPOL-key M2 with invalid MIC from mobile 24:77:03:19:fb:70 version 2

***osapiBsnTimer: May 07 17:03:56.364: 24:77:03:19:fb:70 802.1x 'timeoutEvt' Timer expired for station 24:77:03:19:fb:70 and for message = M2**

!--- MIC error due to wrong preshared key

***dot1xMsgTask: May 07 17:03:56.364: 24:77:03:19:fb:70 Retransmit 1 of EAPOL-Key M1 (length 121) for mobile 24:77:03:19:fb:70**

*dot1xMsgTask: May 07 17:03:56.364: 24:77:03:19:fb:70 mscb->apfMsLwappLradNhMac = b0:fa:eb:b8:f5:12 mscb->apfMsLradSlotId = 1 mscb->apfMsLradJumbo = 0 mscb->apfMsintIfNum = 1

*dot1xMsgTask: May 07 17:03:56.364: 24:77:03:19:fb:70 mscb->apfMsBssid = 08:cc:68:67:1f:f0 mscb->apfMsAddress = 24:77:03:19:fb:70 mscb->apfMsApVapId = 5

*dot1xMsgTask: May 07 17:03:56.365: 24:77:03:19:fb:70 dot1xcb->snapOrg = 00 00 00 dot1xcb->eapolWepBit = 0 mscb->apfMsLwappLradVlanId = 0 mscb->apfMsLwappMwarInet.ipv4.addr = 181004965

```
*dot1xMsgTask: May 07 17:03:56.365: 24:77:03:19:fb:70  mscb->apfMsLwappMwarPort = 5246 mscb-
>apfMsLwappLradInet.ipv4.addr = 181004985 mscb->apfMsLwappLradPort = 36690

*Dot1x_NW_MsgTask_0: May 07 17:03:56.366: 24:77:03:19:fb:70 Received EAPOL-Key from mobile
24:77:03:19:fb:70

*Dot1x_NW_MsgTask_0: May 07 17:03:56.366: 24:77:03:19:fb:70 Ignoring invalid EAPOL version (1)
in EAPOL-key message from mobile 24:77:03:19:fb:70

*Dot1x_NW_MsgTask_0: May 07 17:03:56.366: 24:77:03:19:fb:70 Received EAPOL-key in PTK_START
state (message 2) from mobile 24:77:03:19:fb:70

*Dot1x_NW_MsgTask_0: May 07 17:03:56.366: 24:77:03:19:fb:70 Received EAPOL-key M2 with invalid
MIC from mobile 24:77:03:19:fb:70 version 2

*osapiBsnTimer: May 07 17:03:56.764: 24:77:03:19:fb:70 802.1x 'timeoutEvt' Timer expired for
station 24:77:03:19:fb:70 and for message = M2
!--- MIC error due to wrong preshared key
```

Conclusión extraída

Aunque el “timeoutEvt” para la clave M2 podría también ser debido a los errores driver/NIC, uno de la mayoría del problema frecuente es el usuario que ingresa las credenciales incorrectas para los cahracters de la contraseña PSK (con diferenciación entre mayúsculas y minúsculas faltada/especial etc…) e incapaz de conectar.

Escenario 2: El teléfono inalámbrico Handsets(792x/9971) no puede asociarse a la “área de servicio inalámbrica de las hojas”

Referencia: https://supportforums.cisco.com/document/12068061/7925g-handsets-failing-association-ap-call-failed-tspec-qos-policy-does-not-match

Topología

La red inalámbrica (WLAN) con Cisco unificó los Teléfonos IP inalámbricos

Detalles del problema

AIR-CT5508-50-K9 //actualizó los firmwares para los teléfonos y el regulador inalámbrico no valida los registros de teléfono

Depuraciones y registros

```
apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx Association received from mobile on AP
3x:xx:cx:9x:x0:x0

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx 0.0.0.0 START (0) Changing IPv4 ACL
'none' (ACL ID xxx) ===> 'none' (ACL ID xxx) --- (caller apf_policy.c:1x09)

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx 0.0.0.0 START (0) Changing IPv6 ACL
'none' (ACL ID xxx5) ===> 'none' (ACL ID xxx) --- (caller apf_policy.c:18x6)

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx Applying site-specific Local Bridging
override for station 1x:xx:1x:xx:xx:xx - vapId 1, site 'default-group', interface 'xwirex'

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx Applying Local Bridging Interface Policy
```

```
for station 1x:xx:1x:xx:xx:xx - vlan 510, interface id 12, interface 'xwirex'

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx processSsidIE  statusCode is 0 and
status is 0

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx processSsidIE  ssid_done_flag is 0
finish_flag is 0

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx STA - rates (4): 130 132 139 150 0 0 0 0
0 0 0 0 0 0 0 0

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx suppRates  statusCode is 0 and
gotSuppRatesElement is 1

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx STA - rates (12): 130 132 139 150 12 18
24 36 48 72 96 108 0 0 0 0

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx extSuppRates  statusCode is 0 and
gotExtSuppRatesElement is 1

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx Processing RSN IE type 48, length 22 for
mobile 1x:xx:1x:xx:xx:xx

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx CCKM: Mobile is using CCKM

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx Received RSN IE with 0 PMKIDs from
mobile 1x:xx:1x:xx:xx:xx

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx Setting active key cache index 8 ---> 8

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx unsetting PmkIdValidatedByAp

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx Sending Assoc Response to station on
BSSID 3x:xx:cx:9x:x0:x0 (status 201) ApVapId 1 Slot 0

*apfMsConnTask_1: xx xx xx:50:xx.xxx: 1x:xx:1x:xx:xx:xx Scheduling deletion of Mobile Station:
(callerId: 22) in 3 seconds
```

VoIP Call Failure: '1x:xx:1x:xx:xx:xx' client, detected by 'xx-xx-xx' AP on radio type '802.11b/g'. Reason: 'Call failed: TSPEC QOS Policy does not match'.
Means platinum QoS was not configured on WLAN 1x:xx PM **Client Excluded: MACAddress:1x:xx:1x:xx:xx:xx Base Radio MAC :3x:xx:cx:9x:x0:x0 Slot: 1 User Name: dwpv\mtl7925 Ip Address: xx.xx.x.xx Reason:802.11 Association failed repeatedly. ReasonCode: 2**

Conclusión

La depuración en el WLC muestra que el 7925G falla la asociación como el APreturns un código de estado de la asociación de 201.

Esto es debido a una petición TSPEC (especificación del tráfico) del microteléfono que es rechazado debido a la configuración de la red inalámbrica (WLAN). Las tentativas de la red inalámbrica (WLAN) 7925G de conectar se configuran con un perfil de QoS de la plata (ENCIMA de 0,3), bastante que el platino (ENCIMA de 6,7) como sea necesario. Esto lleva a una discordancía TSPEC para el intercambio del marco del tráfico de voz/de acción del microteléfono vía la red inalámbrica (WLAN), y en última instancia a un rechazo del AP.

Cree una nueva red inalámbrica (WLAN) con un perfil de QoS del platino específicamente para los microteléfonos 7925G y configurado según las mejores prácticas establecidas, y según lo definido en el Guía de despliegue 7925G:

http://www.cisco.com/en/US/docs/voice_ip_comm/cuipph/7925g/7_0/english/deployment/guide/79

25dply.pdf

Una vez que está configurado, se resuelve el problema.

Escenario 3: Cliente configurado para el WPA pero el AP configurados solamente para el WPA2

Addr> del <mac del cliente de la depuración

```
Wed May 7 10:51:37 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile

    Station:  (callerId: 23) in 5 seconds

Wed May 7 10:51:37 2014: xx.xx.xx.xx.xx.xx apfProcessProbeReq

    (apf_80211.c:4057) Changing state for mobile xx.xx.xx.xx.xx.xx on AP

     from Idle to Probe
```

```
Controller adds the new client, moving into probing status Wed May 7 10:51:37 2014:
xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 24) in 5 seconds Wed May 7
10:51:38 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 24) in 5
seconds Wed May 7 10:51:38 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station:
(callerId: 24) in 5 seconds AP is reporting probe activity every 500 ms as configured Wed May 7
10:51:41 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 24) in 5
seconds Wed May 7 10:51:41 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station:
(callerId: 24) in 5 seconds Wed May 7 10:51:41 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of
Mobile Station: (callerId: 24) in 5 seconds Wed May 7 10:51:41 2014: xx.xx.xx.xx.xx.xx
Scheduling deletion of Mobile Station: (callerId: 24) in 5 seconds Wed May 7 10:51:44 2014:
xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 24) in 5 seconds Wed May 7
10:51:44 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 24) in 5
seconds Wed May 7 10:51:44 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station:
(callerId: 24) in 5 seconds Wed May 7 10:51:44 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of
Mobile Station: (callerId: 24) in 5 seconds Wed May 7 10:51:49 2014: xx.xx.xx.xx.xx.xx
apfMsExpireCallback (apf_ms.c:433) Expiring Mobile! Wed May 7 10:51:49 2014: xx.xx.xx.xx.xx.xx
0.0.0.0 START (0) Deleted mobile LWAPP rule on AP [] Wed May 7 10:51:49 2014: xx.xx.xx.xx.xx.xx
Deleting mobile on AP (0) After 5 seconds of inactivity, client is deleted, never moved into
authentication or association phases.
```

Escenario 4: Analice los códigos de la vuelta o de la respuesta AAA.

Depuraciones requeridas A EJECUTARSE para recoger los registros previstos:
(<mac> addr del mac del >debug del regulador de Cisco)
(Permiso de los eventos aaa del >debug del regulador de Cisco)
(O)
(<mac> del cliente del >debug del regulador de Cisco)
(Permiso de los eventos aaa del >debug del regulador de Cisco)
(Permiso de los errores aaa del >debug del regulador de Cisco)

El error de la Conectividad AAA genera un SNMP trap, si se activan los desvíos.

<snipped> de la salida de la depuración del ejemplo

```
*radiusTransportThread: Mar 26 17:54:58.054: 70:f1:a1:69:7b:e7 Invalid RADIUS message
authenticator for mobile 70:f1:a1:69:7b:e7
*radiusTransportThread: Mar 26 17:54:58.054: 70:f1:a1:69:7b:e7 RADIUS message verification
failed from server 10.50.0.74 with id=213. Possible secret mismatch for mobile 70:f1:a1:69:7b:e7
*radiusTransportThread: Mar 26 17:54:58.054: 70:f1:a1:69:7b:e7 Returning AAA Error
'Authentication Failed' (-4) for mobile 70:f1:a1:69:7b:e7
*radiusTransportThread: Mar 26 17:54:58.054: AuthorizationResponse: 0x4259f944
```

Returning AAA Error 'Success' (0) for mobile
Successful Authentication happened, AAA returns access-accept prior to Success (0) to confirm the same.

Returning AAA Error 'Out of Memory' (-2) for mobile
it's the rare reason. CSCud12582 Processing AAA Error 'Out of Memory' **Returning AAA Error 'Authentication Failed' (-4) for mobile**
its the most common reason seen

Razones posibles:

1. Cuenta de usuario y/o contraseña inválidas
2. Ordenador no un miembro del dominio, problema en el lado del ANUNCIO.
3. El certificado mantiene el trabajo correctamente
4. El certificado de servidor expiró o parado
5. RADIUS configurado incorrectamente
6. Tenga acceso a la clave ingresada incorrectamente - ES con diferenciación entre mayúsculas y minúsculas (así que es el SSID)
7. parches de Microsoft de la actualización.
8. Temporizadores EAP.
9. Método incorrecto del eap configurado en el cliente/el servidor.
10. El certificado del cliente es expirado o parado.

Vuelva el error “descanso” AAA (-5) para el móvil

Servidor AAA inalcanzable, seguido por el deauth del cliente.

Ejemplo:

```
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Max retransmission of Access-Request (id 100) to
155.43.129.216 reached for mobile 00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 [Error] Client requested no retries for mobile
00:13:CE:1A:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Returning AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Processing AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Sent Deauthenticate to mobile on BSSID
00:0b:85:76:d3:e0 slot 1(caller 1x_auth_pae.c:1033) Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41
Scheduling deletion of Mobile Station: (callerId: 65) in 10 seconds
```

Vuelva el error “error interno” AAA (-6) para el móvil

Atribuya la discordancía. El AAA envía el atributo incorrecto/inadecuado (longitud incorrecta) que no está entendido/compatible con WLC. WLC envía el mensaje de Deauth seguido por el mensaje del “error interno”. Ex: CSCum83894 AAA “error interno” y atributos auténticos del fall w/unknown en el acceso validan.

Ejemplo:

```
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Max retransmission of Access-Request (id 100) to
155.43.129.216 reached for mobile 00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 [Error] Client requested no retries for mobile
00:13:CE:1A:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Returning AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Processing AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Sent Deauthenticate to mobile on BSSID
00:0b:85:76:d3:e0 slot 1(caller 1x_auth_pae.c:1033) Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41
Scheduling deletion of Mobile Station: (callerId: 65) in 10 seconds
```

Error de vuelta AAA ningún servidor (-7) para el móvil
El radio no se configura correctamente y o configuración no admitida funcionando.

Ejemplo:

```
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Max retransmission of Access-Request (id 100) to
155.43.129.216 reached for mobile 00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 [Error] Client requested no retries for mobile
00:13:CE:1A:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Returning AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Processing AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Sent Deauthenticate to mobile on BSSID
00:0b:85:76:d3:e0 slot 1(caller 1x_auth_pae.c:1033) Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41
Scheduling deletion of Mobile Station: (callerId: 65) in 10 seconds
```

Escenario 5: El cliente no puede asociarse al AP

La depuración se ejecutó

addr> del <mac del cliente de la depuración

Registros a analizar

Envío de la respuesta de Assoc para colocar en el **slot0** BSSID 00:26:cb:94:44:c0 **(estatus 0)** ApVapId 1

- **Slot0** = B/G(2.4) radio

Ranura 1 = A(5) radio

- Enviando estado de respuesta de Assoc **0** = éxito

Cualquier cosa con excepción del estatus 0 es averiado

Los códigos de estado de la respuesta de la asociación común se pueden encontrar en https://supportforums.cisco.com/document/141136/80211-association-status-80211-deauth-reason-codes

Escenario 6: Desasociación del cliente debida estar desocupado

el descanso

La depuración se ejecutó

addr> del <mac del cliente de la depuración

Registros a analizar

Ocioso-descanso recibido de AP 00:26:cb:94:44:c0, slot0 para STA 00:1e:8c:0f:a4:57

móvil del Scheduling del apfMsDeleteByMscb para la cancelacíon con el deleteReason 4, **reasonCode 4**

Cancelacíon del Scheduling de la estación móvil: (callerId: 30) en los segundos 1

¡móvil de expiración del apfMsExpireCallback (apf_ms.c:608)!

Deauthenticate enviado al móvil en la ranura 0(caller apf_ms.c:5094 BSSID 00:26:cb:94:44:c0)

Condiciones

Ocurre después de ningún tráfico recibido del cliente

La duración del valor por defecto es 300 segundos

Workaround

Aumente la forma ociosa WLC GUI>>Controller>>General del descanso o global o por wlan de WLC GUI>>WLAN>>ID>>Advanced

Escenario 7: Desasociación del cliente debido al tiempo de espera de la sesión

La depuración se ejecutó

addr> del <mac del cliente de la depuración

Registros a analizar

```
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Max retransmission of Access-Request (id 100) to
155.43.129.216 reached for mobile 00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 [Error] Client requested no retries for mobile
00:13:CE:1A:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Returning AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Processing AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Sent Deauthenticate to mobile on BSSID
00:0b:85:76:d3:e0 slot 1(caller 1x_auth_pae.c:1033) Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41
Scheduling deletion of Mobile Station: (callerId: 65) in 10 seconds
```

Condiciones

Ocurre en la duración programada (valor por defecto 1800 segundos)

Fuerza al usuario WEBAUTH a WEBAUTH otra vez.

Workaround

Aumente o inhabilite el tiempo de espera de la sesión por wlan de WLC
GUI>>WLAN>>ID>>Advanced

Decorado 8: Desasociación del cliente debido a los cambios de la red inalámbrica (WLAN)

La depuración se ejecutó

addr> del <mac del cliente de la depuración

Registro a analizar

```
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Max retransmission of Access-Request (id 100) to
155.43.129.216 reached for mobile 00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 [Error] Client requested no retries for mobile
00:13:CE:1A:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Returning AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Processing AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Sent Deauthenticate to mobile on BSSID
00:0b:85:76:d3:e0 slot 1(caller 1x_auth_pae.c:1033) Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41
Scheduling deletion of Mobile Station: (callerId: 65) in 10 seconds
```

Condiciones

Para modificar una red inalámbrica (WLAN) en de todos modos las neutralizaciones y la red inalámbrica (WLAN) de los renables

Workaround

Esto es una conducta esperada. Cuando hay cambios wlan realizados, los clientes desasocian y reasocian.

Decorado 9: Desasociación del cliente debido a la Eliminación manual de WLC

La depuración se ejecutó

addr> del <mac del cliente de la depuración

Registro a analizar

```
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Max retransmission of Access-Request (id 100) to
155.43.129.216 reached for mobile 00:13:ce:1a:92:41
```

```
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 [Error] Client requested no retries for mobile
00:13:CE:1A:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Returning AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Processing AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Sent Deauthenticate to mobile on BSSID
00:0b:85:76:d3:e0 slot 1(caller 1x_auth_pae.c:1033) Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41
Scheduling deletion of Mobile Station: (callerId: 65) in 10 seconds
```

Condiciones

Del GUI: Quite al cliente

Del CLI: deauthenticate < MAC address > del cliente de los config

Decorado 10: Desasociación del cliente debido al descanso de la autenticación

La depuración se ejecutó

addr> del <mac del cliente de la depuración

Registro a analizar

```
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Max retransmission of Access-Request (id 100) to
155.43.129.216 reached for mobile 00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 [Error] Client requested no retries for mobile
00:13:CE:1A:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Returning AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Processing AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Sent Deauthenticate to mobile on BSSID
00:0b:85:76:d3:e0 slot 1(caller 1x_auth_pae.c:1033) Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41
Scheduling deletion of Mobile Station: (callerId: 65) in 10 seconds
```

Condiciones

Máximo-retransmisiones de la autenticación o del intercambio de la clave alcanzadas

Workaround

Controle/el driver del cliente de la actualización, los config de la Seguridad, los Certificados etc.

Decorado 11: La desasociación del cliente debido a la radio AP reajustó (potencia/el canal)

La depuración se ejecutó

addr> del <mac del cliente de la depuración

Registro a analizar

```
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Max retransmission of Access-Request (id 100) to
155.43.129.216 reached for mobile 00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 [Error] Client requested no retries for mobile
00:13:CE:1A:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Returning AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Processing AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Sent Deauthenticate to mobile on BSSID
00:0b:85:76:d3:e0 slot 1(caller 1x_auth_pae.c:1033) Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41
Scheduling deletion of Mobile Station: (callerId: 65) in 10 seconds
```

Condiciones

El AP desasocia a los clientes pero WLC no suprime la entrada.

Workaround

Conducta esperada.

Decorado 12: Problemas del cliente de Symantec con el 802.1x “timeoutEvt”

Problema

Los clientes que funciona con el software de Symantec desasocian con el temporizador del “timeoutEvt” del 802.1x del mensaje expiraron para la estación y para el mensaje = el M3

EAP/Eapol procesan los idoes no g completados, con independencia de la radio A/G se utilizan en la Intel/el indicador luminoso LED amarillo de la placa muestra gravedad menor de Broadcom. ningún problema cuando es wep usado, WPA-psk.

Condición

El código WLC no importa.

APs - todo el modelo - todos en el modo local.
3 wlan - WPA2+802.1X PEAP + mshcapv2
se difunde el ssid.
Nps 2008 del servidor de RADIUS
El software del Symantec Antivirus está instalado en todas las PC

usando Asus, Braodcom, Intel - win7, triunfo-XP

OS afectado - ventanas 7 y xp

Adaptador de red inalámbrica afectado - Intel(6205) y Broadcom

Driver/suplicante afectados - 15.2.0.19, usando el suplicante nativo.

Arreglo/Workaround: Inhabilite la protección y el Firewall de la red de Symantec en win7 y el xp. Es un problema de Symantec con el triunfo 7 y el OS de XP.

Salida de la depuración

```
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Max retransmission of Access-Request (id 100) to
155.43.129.216 reached for mobile 00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 [Error] Client requested no retries for mobile
00:13:CE:1A:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Returning AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Processing AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Sent Deauthenticate to mobile on BSSID
00:0b:85:76:d3:e0 slot 1(caller 1x_auth_pae.c:1033) Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41
Scheduling deletion of Mobile Station: (callerId: 65) in 10 seconds
```

Nota:

Hay un síndrome en 15.2 (también visto en las versiones anteriores) que va como:

- el cliente consigue M1 del AP

- el cliente envía el M2

- el cliente consigue el M3 del AP

- el cliente sondea la nueva en parejas clave antes de que envíe M4

- el cliente transmite el M4 cifrado con la nueva clave AP, cae el mensaje M4 como “error del decrypt”

- Del “demostración cliente de la depuración” WLC que estamos midiendo el tiempo hacia fuera en las retransmisiones M3. Evidentemente, esto es un problema entre Microsoft y Symantec, no específico de Intel. El Workaround es quitar Symantec. Éste es realmente un bug que está probablemente en las ventanas, accionado por Symantec. Pellizcar el temporizador EAP no fija este problema

En relación con este problema, el TAC de Cisco remitirá a los clientes afectados a Symantec y a Microsoft.

Decorado 13: El servicio de la impresión del aire no aparece para los clientes con el mDNS que el fisgón giró

Cliente no capaz de ver los dispositivos que proporciona el servicio de AirPrint en los dispositivos cliente del PDA de Apple cuando giran al fisgón del mDNS.

Condiciones

5508 WLC que ejecutan 7.6.100.0.
Con el fisgón del mDNS girado, tenemos los dispositivos que proporciona los servicios de AirPrint enumerados bajo sección de los servicios en el WLC.
El perfil respectivo del mDNS fue asociado correctamente a la red inalámbrica (WLAN) y al interfaz.
Capaz todavía incapaz de ver los dispositivos de AirPrint en el cliente.

La depuración se ejecutó

addr> del <mac del cliente de la depuración

los mdns todos de la depuración activan

```
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Max retransmission of Access-Request (id 100) to
155.43.129.216 reached for mobile 00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 [Error] Client requested no retries for mobile
00:13:CE:1A:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Returning AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Processing AAA Error 'Timeout' (-5) for mobile
00:13:ce:1a:92:41
Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41 Sent Deauthenticate to mobile on BSSID
00:0b:85:76:d3:e0 slot 1(caller 1x_auth_pae.c:1033) Wed Oct 26 20:08:50 2011: 00:13:ce:1a:92:41
Scheduling deletion of Mobile Station: (callerId: 65) in 10 seconds
```

Explicación

El cliente pediría para ". los _ipps _universal. _tcp.local del _sub." o ". _ipp _universal. _tcp.local del _sub." en vez del "_ipp. _tcp.local." o "_ipp. _tcp.local." cadena.
El servicio agregado de AirPrint no trabajaría tan. Fue identificado la cadena pedida del servicio que se asociará a 'HP_Photosmart_Printer_1
El mismo servicio fue agregado en el perfil asociado a la red inalámbrica (WLAN) y no había servicio enumerado para el dispositivo.

Fue encontrado que debido al Domain Name que es añadido al final del fichero y al cliente que pregunta para **"dns-sd. _udp.YVG.local." con el Domain Name añadido al final del fichero el WLC no podía procesar el paquete de Bonjour como "dns-sd. _udp.YVG.local." no existe en la base de datos.**

Identificó el bug dado de la mejora con respecto lo mismo - CSCuj32157

Workaround

El único trabajo alrededor era inhabilitar la opción 15 (Domain Name) del DHCP o quitar el Domain Name del cliente.

Decorado 14: El cliente IOS de Apple "incapaz de unirse a la red" debida inhabilitó el cambio rápido SSID

Condición

La mayoría de los dispositivos IOS de Apple tienen problemas a moverse a partir de una red inalámbrica (WLAN) a otra en mismo Cisco WLC con el valor por defecto "cambio rápido del ssid inhabilitado".

La configuración causa a regulador al deauthenticate el cliente de la red inalámbrica (WLAN) que existe una vez las tentativas del cliente de asociarse a otras.

El resultado típico es "incapaz de unirse a un mensaje de la red" en el dispositivo IOS

Muestre al cliente

resumen de la red del >show (jk-2504-116)

<snip>

El cambio rápido SSID ..... inhabilitó

La depuración se ejecutó

```
(jk-2504-116) >debug client 1c:e6:2b:cd:da:9d
```

```
(jk-2504-116) >*apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Association received
from mobile on BSSID 00:21:a0:e3:fd:be
Apple Client initiating switch from one wlan to another. *apfMsConnTask_7: Jan 30 21:33:14.544:
1c:e6:2b:cd:da:9d Global 200 Clients are allowed to AP radio *apfMsConnTask_7: Jan 30
21:33:14.544: 1c:e6:2b:cd:da:9d Max Client Trap Threshold: 0 cur: 1 *apfMsConnTask_7: Jan 30
21:33:14.544: 1c:e6:2b:cd:da:9d Rf profile 600 Clients are allowed to AP wlan *apfMsConnTask_7:
Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Deleting client immediately since WLAN has changed //WLC
removing apple client from original WLAN

*apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Scheduling deletion of Mobile Station:
(callerId: 50) in 1 seconds

*osapiBsnTimer: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d apfMsExpireCallback (apf_ms.c:625)
Expiring Mobile!

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d apfMsExpireMobileStation (apf_ms.c:6632)
Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Associated to
Disassociated



*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Sent Deauthenticate to mobile on BSSID
00:21:a0:e3:fd:b0 slot 1(caller apf_ms.c:6726)

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Found an cache entry for BSSID
00:21:a0:e3:fd:bf in PMKID cache at index 0 of station 1c:e6:2b:cd:da:9d

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Removing BSSID 00:21:a0:e3:fd:bf from
PMKID cache of station 1c:e6:2b:cd:da:9d

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Resetting MSCB PMK Cache Entry 0 for
station 1c:e6:2b:cd:da:9d

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Setting active key cache index 0 ---> 8

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Deleting the PMK cache when de-
authenticating the client.

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Global PMK Cache deletion failed.

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d apfMsAssoStateDec

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d apfMsExpireMobileStation (apf_ms.c:6764)
Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Disassociated to Idle
```

```
*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d pemApfDeleteMobileStation2:
APF_MS_PEM_WAIT_L2_AUTH_COMPLETE = 0.

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d 192.168.165.31 START (0) Deleted mobile
LWAPP rule on AP [00:21:a0:e3:fd:b0]

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d Deleting mobile on AP
00:21:a0:e3:fd:b0(1)

*pemReceiveTask: Jan 30 21:33:15.377: 1c:e6:2b:cd:da:9d 192.168.165.31 Removed NPU entry.

*apfMsConnTask_7: Jan 30 21:33:23.890: 1c:e6:2b:cd:da:9d Adding mobile on LWAPP AP
00:21:a0:e3:fd:b0(1)
No client activity for > 7 sec due to fast-ssid change disabled *apfMsConnTask_7: Jan 30
21:33:23.890: 1c:e6:2b:cd:da:9d Association received from mobile on BSSID 00:21:a0:e3:fd:bf
*apfMsConnTask_7: Jan 30 21:33:23.890: 1c:e6:2b:cd:da:9d Global 200 Clients are allowed to AP
radio <Snip>  *apfMsConnTask_7: Jan 30 21:33:23.891: 1c:e6:2b:cd:da:9d Sending Assoc Response to
station on BSSID 00:21:a0:e3:fd:bf (status 0) ApVapId 1 Slot 1

*apfMsConnTask_7: Jan 30 21:33:23.892: 1c:e6:2b:cd:da:9d apfProcessAssocReq (apf_80211.c:8292)
Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Associated to
Associated
```

Workaround

Cambio de rápido-SSID del permiso de WLC GUI>>Controller>>General

Decorado 15: Asociación acertada del cliente LDAP

Ayudas seguras LDAP para asegurar la conexión entre el regulador y el servidor LDAP que utiliza TLS. Esta característica se utiliza con la versión de software 7.6 del regulador y arriba.

Hay dos tipos de interrogaciones que se puedan enviar por el regulador al servidor LDAP:

1. Anónimo:

En este tipo el regulador envía una petición de la autenticación al servidor LDAP cuando un cliente necesita conseguir authenticatied. El servidor LDAP responde con el resultado de la interrogación. Durante este intercambio toda la información que incluye el nombre de usuario del cliente/la contraseña se está enviando en el texto claro. El servidor LDAP responderá a una interrogación de cualquier persona mientras se agregue el username del lazo/la contraseña.

2. Autenticado:
   En este método el regulador se configura con un nombre de usuario y contraseña que utilice para autenticar sí mismo con el servidor LDAP. La contraseña se cifra con MD5 SASL y se envía al servidor LDAP durante el proceso de autenticación. Esto ayuda al servidor LDAP correctamente a identificar la fuente de las peticiones de la autenticación. Sin embargo aunque la identidad del regulador se protege envían los detalles del cliente en el texto claro.

La necesidad real del LDAP sobre TLS vino debido a la vulnerabilidad de seguridad planteada por ambos estos dos métodos donde los datos de la autenticación de cliente y el resto de la transacción está sucediendo en el claro.

Requisitos

Versión de software corriente 7.6 WLC y arriba

Servidor de Microsoft que hace el LDAP

La depuración se ejecutó

permiso del ldap aaa de la depuración

```
(jk-2504-116) >debug client 1c:e6:2b:cd:da:9d
```

```
(jk-2504-116) >*apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Association received
from mobile on BSSID 00:21:a0:e3:fd:be
Apple Client initiating switch from one wlan to another. *apfMsConnTask_7: Jan 30 21:33:14.544:
1c:e6:2b:cd:da:9d Global 200 Clients are allowed to AP radio *apfMsConnTask_7: Jan 30
21:33:14.544: 1c:e6:2b:cd:da:9d Max Client Trap Threshold: 0 cur: 1 *apfMsConnTask_7: Jan 30
21:33:14.544: 1c:e6:2b:cd:da:9d Rf profile 600 Clients are allowed to AP wlan *apfMsConnTask_7:
Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Deleting client immediately since WLAN has changed //WLC
removing apple client from original WLAN

*apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Scheduling deletion of Mobile Station:
(callerId: 50) in 1 seconds

*osapiBsnTimer: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d apfMsExpireCallback (apf_ms.c:625)
Expiring Mobile!

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d apfMsExpireMobileStation (apf_ms.c:6632)
Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Associated to
Disassociated


*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Sent Deauthenticate to mobile on BSSID
00:21:a0:e3:fd:b0 slot 1(caller apf_ms.c:6726)

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Found an cache entry for BSSID
00:21:a0:e3:fd:bf in PMKID cache at index 0 of station 1c:e6:2b:cd:da:9d

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Removing BSSID 00:21:a0:e3:fd:bf from
PMKID cache of station 1c:e6:2b:cd:da:9d

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Resetting MSCB PMK Cache Entry 0 for
station 1c:e6:2b:cd:da:9d

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Setting active key cache index 0 ---> 8

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Deleting the PMK cache when de-
authenticating the client.

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Global PMK Cache deletion failed.

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d apfMsAssoStateDec

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d apfMsExpireMobileStation (apf_ms.c:6764)
Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Disassociated to Idle


*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d pemApfDeleteMobileStation2:
APF_MS_PEM_WAIT_L2_AUTH_COMPLETE = 0.

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d 192.168.165.31 START (0) Deleted mobile
```

LWAPP rule on AP [00:21:a0:e3:fd:b0]

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d Deleting mobile on AP 00:21:a0:e3:fd:b0(1)

***pemReceiveTask: Jan 30 21:33:15.377: 1c:e6:2b:cd:da:9d 192.168.165.31 Removed NPU entry.**

*apfMsConnTask_7: Jan 30 21:33:23.890: 1c:e6:2b:cd:da:9d Adding mobile on LWAPP AP 00:21:a0:e3:fd:b0(1)
No client activity for > 7 sec due to fast-ssid change disabled *apfMsConnTask_7: Jan 30 21:33:23.890: 1c:e6:2b:cd:da:9d Association received from mobile on BSSID 00:21:a0:e3:fd:bf
*apfMsConnTask_7: Jan 30 21:33:23.890: 1c:e6:2b:cd:da:9d Global 200 Clients are allowed to AP radio <Snip> ***apfMsConnTask_7: Jan 30 21:33:23.891: 1c:e6:2b:cd:da:9d Sending Assoc Response to station on BSSID 00:21:a0:e3:fd:bf (status 0) ApVapId 1 Slot 1**

*apfMsConnTask_7: Jan 30 21:33:23.892: 1c:e6:2b:cd:da:9d apfProcessAssocReq (apf_80211.c:8292) Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Associated to Associated

Decorado 16: Autenticación de cliente fallada en el LDAP

Funcionamiento de la depuración

permiso del ldap aaa de la depuración

(jk-2504-116) >debug client 1c:e6:2b:cd:da:9d

(jk-2504-116) >***apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Association received from mobile on BSSID 00:21:a0:e3:fd:be**
Apple Client initiating switch from one wlan to another. *apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Global 200 Clients are allowed to AP radio *apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Max Client Trap Threshold: 0 cur: 1 *apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Rf profile 600 Clients are allowed to AP wlan ***apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Deleting client immediately since WLAN has changed //WLC removing apple client from original WLAN**

*apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Scheduling deletion of Mobile Station: (callerId: 50) in 1 seconds

*osapiBsnTimer: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d apfMsExpireCallback (apf_ms.c:625) Expiring Mobile!

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d apfMsExpireMobileStation (apf_ms.c:6632) Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Associated to Disassociated

***apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Sent Deauthenticate to mobile on BSSID 00:21:a0:e3:fd:b0 slot 1(caller apf_ms.c:6726)**

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Found an cache entry for BSSID 00:21:a0:e3:fd:bf in PMKID cache at index 0 of station 1c:e6:2b:cd:da:9d

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Removing BSSID 00:21:a0:e3:fd:bf from PMKID cache of station 1c:e6:2b:cd:da:9d

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Resetting MSCB PMK Cache Entry 0 for station 1c:e6:2b:cd:da:9d

```
*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Setting active key cache index 0 ---> 8

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Deleting the PMK cache when de-
authenticating the client.

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Global PMK Cache deletion failed.

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d apfMsAssoStateDec

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d apfMsExpireMobileStation (apf_ms.c:6764)
Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Disassociated to Idle



*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d pemApfDeleteMobileStation2:
APF_MS_PEM_WAIT_L2_AUTH_COMPLETE = 0.

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d 192.168.165.31 START (0) Deleted mobile
LWAPP rule on AP [00:21:a0:e3:fd:b0]

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d Deleting mobile on AP
00:21:a0:e3:fd:b0(1)

*pemReceiveTask: Jan 30 21:33:15.377: 1c:e6:2b:cd:da:9d 192.168.165.31 Removed NPU entry.

*apfMsConnTask_7: Jan 30 21:33:23.890: 1c:e6:2b:cd:da:9d Adding mobile on LWAPP AP
00:21:a0:e3:fd:b0(1)
No client activity for > 7 sec due to fast-ssid change disabled *apfMsConnTask_7: Jan 30
21:33:23.890: 1c:e6:2b:cd:da:9d Association received from mobile on BSSID 00:21:a0:e3:fd:bf
*apfMsConnTask_7: Jan 30 21:33:23.890: 1c:e6:2b:cd:da:9d Global 200 Clients are allowed to AP
radio <Snip>  *apfMsConnTask_7: Jan 30 21:33:23.891: 1c:e6:2b:cd:da:9d Sending Assoc Response to
station on BSSID 00:21:a0:e3:fd:bf (status 0) ApVapId 1 Slot 1

*apfMsConnTask_7: Jan 30 21:33:23.892: 1c:e6:2b:cd:da:9d apfProcessAssocReq (apf_80211.c:8292)
Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Associated to
Associated
```

Workaround

Controle al servidor LDAP para saber si hay motivos de rechazo.

Decorado 17: Los problemas de la asociación del cliente debido al LDAP mis-se configuran en WLC

La depuración se ejecutó

permiso del ldap aaa de la depuración

```
(jk-2504-116) >debug client 1c:e6:2b:cd:da:9d



(jk-2504-116) >*apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Association received
from mobile on BSSID 00:21:a0:e3:fd:be
Apple Client initiating switch from one wlan to another. *apfMsConnTask_7: Jan 30 21:33:14.544:
1c:e6:2b:cd:da:9d Global 200 Clients are allowed to AP radio *apfMsConnTask_7: Jan 30
21:33:14.544: 1c:e6:2b:cd:da:9d Max Client Trap Threshold: 0 cur: 1 *apfMsConnTask_7: Jan 30
```

21:33:14.544: 1c:e6:2b:cd:da:9d Rf profile 600 Clients are allowed to AP wlan ***apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Deleting client immediately since WLAN has changed //WLC removing apple client from original WLAN**

*apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Scheduling deletion of Mobile Station: (callerId: 50) in 1 seconds

*osapiBsnTimer: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d apfMsExpireCallback (apf_ms.c:625) Expiring Mobile!

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d apfMsExpireMobileStation (apf_ms.c:6632) Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Associated to Disassociated

***apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Sent Deauthenticate to mobile on BSSID 00:21:a0:e3:fd:b0 slot 1(caller apf_ms.c:6726)**

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Found an cache entry for BSSID 00:21:a0:e3:fd:bf in PMKID cache at index 0 of station 1c:e6:2b:cd:da:9d

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Removing BSSID 00:21:a0:e3:fd:bf from PMKID cache of station 1c:e6:2b:cd:da:9d

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Resetting MSCB PMK Cache Entry 0 for station 1c:e6:2b:cd:da:9d

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Setting active key cache index 0 ---> 8

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Deleting the PMK cache when de-authenticating the client.

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Global PMK Cache deletion failed.

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d apfMsAssoStateDec

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d apfMsExpireMobileStation (apf_ms.c:6764) Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Disassociated to Idle

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d pemApfDeleteMobileStation2: APF_MS_PEM_WAIT_L2_AUTH_COMPLETE = 0.

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d 192.168.165.31 START (0) Deleted mobile LWAPP rule on AP [00:21:a0:e3:fd:b0]

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d Deleting mobile on AP 00:21:a0:e3:fd:b0(1)

***pemReceiveTask: Jan 30 21:33:15.377: 1c:e6:2b:cd:da:9d 192.168.165.31 Removed NPU entry.**

*apfMsConnTask_7: Jan 30 21:33:23.890: 1c:e6:2b:cd:da:9d Adding mobile on LWAPP AP 00:21:a0:e3:fd:b0(1)
No client activity for > 7 sec due to fast-ssid change disabled *apfMsConnTask_7: Jan 30 21:33:23.890: 1c:e6:2b:cd:da:9d Association received from mobile on BSSID 00:21:a0:e3:fd:bf
*apfMsConnTask_7: Jan 30 21:33:23.890: 1c:e6:2b:cd:da:9d Global 200 Clients are allowed to AP radio <Snip> ***apfMsConnTask_7: Jan 30 21:33:23.891: 1c:e6:2b:cd:da:9d Sending Assoc Response to station on BSSID 00:21:a0:e3:fd:bf (status 0) ApVapId 1 Slot 1**

*apfMsConnTask_7: Jan 30 21:33:23.892: 1c:e6:2b:cd:da:9d apfProcessAssocReq (apf_80211.c:8292) Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Associated to Associated

Workaround

Verifique las credenciales a través de client/WLC y del servidor LDAP.

Decorado 18: Problemas de la asociación del cliente cuando el servidor LDAP es inalcanzable

La depuración se ejecutó

permiso del ldap aaa de la depuración

```
(jk-2504-116) >debug client 1c:e6:2b:cd:da:9d


(jk-2504-116) >*apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Association received
from mobile on BSSID 00:21:a0:e3:fd:be
Apple Client initiating switch from one wlan to another. *apfMsConnTask_7: Jan 30 21:33:14.544:
1c:e6:2b:cd:da:9d Global 200 Clients are allowed to AP radio *apfMsConnTask_7: Jan 30
21:33:14.544: 1c:e6:2b:cd:da:9d Max Client Trap Threshold: 0 cur: 1 *apfMsConnTask_7: Jan 30
21:33:14.544: 1c:e6:2b:cd:da:9d Rf profile 600 Clients are allowed to AP wlan *apfMsConnTask_7:
Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Deleting client immediately since WLAN has changed //WLC
removing apple client from original WLAN

*apfMsConnTask_7: Jan 30 21:33:14.544: 1c:e6:2b:cd:da:9d Scheduling deletion of Mobile Station:
(callerId: 50) in 1 seconds

*osapiBsnTimer: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d apfMsExpireCallback (apf_ms.c:625)
Expiring Mobile!

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d apfMsExpireMobileStation (apf_ms.c:6632)
Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Associated to
Disassociated


*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Sent Deauthenticate to mobile on BSSID
00:21:a0:e3:fd:b0 slot 1(caller apf_ms.c:6726)

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Found an cache entry for BSSID
00:21:a0:e3:fd:bf in PMKID cache at index 0 of station 1c:e6:2b:cd:da:9d

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Removing BSSID 00:21:a0:e3:fd:bf from
PMKID cache of station 1c:e6:2b:cd:da:9d

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Resetting MSCB PMK Cache Entry 0 for
station 1c:e6:2b:cd:da:9d

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Setting active key cache index 0 ---> 8

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Deleting the PMK cache when de-
authenticating the client.

*apfReceiveTask: Jan 30 21:33:15.375: 1c:e6:2b:cd:da:9d Global PMK Cache deletion failed.

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d apfMsAssoStateDec
```

```
*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d apfMsExpireMobileStation (apf_ms.c:6764)
Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Disassociated to Idle



*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d pemApfDeleteMobileStation2:
APF_MS_PEM_WAIT_L2_AUTH_COMPLETE = 0.

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d 192.168.165.31 START (0) Deleted mobile
LWAPP rule on AP [00:21:a0:e3:fd:b0]

*apfReceiveTask: Jan 30 21:33:15.376: 1c:e6:2b:cd:da:9d Deleting mobile on AP
00:21:a0:e3:fd:b0(1)

*pemReceiveTask: Jan 30 21:33:15.377: 1c:e6:2b:cd:da:9d 192.168.165.31 Removed NPU entry.

*apfMsConnTask_7: Jan 30 21:33:23.890: 1c:e6:2b:cd:da:9d Adding mobile on LWAPP AP
00:21:a0:e3:fd:b0(1)
No client activity for > 7 sec due to fast-ssid change disabled *apfMsConnTask_7: Jan 30
21:33:23.890: 1c:e6:2b:cd:da:9d Association received from mobile on BSSID 00:21:a0:e3:fd:bf
*apfMsConnTask_7: Jan 30 21:33:23.890: 1c:e6:2b:cd:da:9d Global 200 Clients are allowed to AP
radio <Snip>  *apfMsConnTask_7: Jan 30 21:33:23.891: 1c:e6:2b:cd:da:9d Sending Assoc Response to
station on BSSID 00:21:a0:e3:fd:bf (status 0) ApVapId 1 Slot 1

*apfMsConnTask_7: Jan 30 21:33:23.892: 1c:e6:2b:cd:da:9d apfProcessAssocReq (apf_80211.c:8292)
Changing state for mobile 1c:e6:2b:cd:da:9d on AP 00:21:a0:e3:fd:b0 from Associated to
Associated
```

Workaround

Controle WLC y los problemas de conectividad de red del servidor LDAP.

Decorado 19: Problemas de itinerancia del cliente de Apple debido a faltar la configuración de itinerancia Sticky

Condiciones

AIR-CT5508-K9/7.4.100.0

Desconexión de los dispositivos de Apple de la red inalámbrica que utiliza el siguiente:

Directiva WPA2
WPA2 cifrado AES
802.1x de la autenticación activado

Autenticación y autorización vía Cisco ISE

De Apple de los dispositivos desconexiones periódicamente del SSID difundido. Un ejemplo es un Iphone que cae mientras que otro teléfono en la misma ubicación sigue conectado. Por lo tanto, ocurre aleatoriamente (tiempo y teléfono).

Clientes de la computadora portátil sin los problemas. Conectan con el mismo SSID.

Este problema sucede durante el funcionamiento normal, ninguna itinerancia, ningún modo de reserva.

La red inalámbrica (WLAN) ha quitado ya todas las configuraciones posibles que podrían causar

los problemas (extensión del aironet).

La depuración se ejecutó

addr> del <mac del cliente de la depuración

***apfMsConnTask_5: Jun 11 16:12:56.342: f0:d1:a9:bb:2d:fa Received RSN IE with 0 PMKIDs from mobile f0:d1:a9:bb:2d:fa**
At 16:12:56 in the debugs we see a client re-association. From there the AP is expecting the client to present its old PMKID (Pairwise Master Key Identifiers).
At this point it doesn't! From the above message the AP/WLC didn't receive a PMKID from the iPhone.
This is kind of expected from this type of client.
Apple devices do not use the opportunistic key caching which allows clients to use the SAME PMKID at all Aps.
Apple devices use a key cache method of Sticky Key Caching.
This in turn means that the client has to build a PMKID at EACH AP in order to successfully roam to the AP.
As we can see the client didn't present a PMKID to use so we sent it through layer 2 security/EAP again.
The client then hits a snag in the EAP process where the client fails to respond to the EAP ID or request for credentials until the second attempt *dot1xMsgTask: Jun 11 16:12:56.345: f0:d1:a9:bb:2d:fa Sending EAP-Request/Identity to mobile f0:d1:a9:bb:2d:fa (EAP Id 1) *osapiBsnTimer: Jun 11 16:13:26.288: f0:d1:a9:bb:2d:fa 802.1x 'txWhen' Timer expired for station f0:d1:a9:bb:2d:fa and for message = M0 After this snag the client is allowed back onto the network all in approx. 1.5 seconds.
This is going to be normal and EXPECTED behavior currently with Sticky key cache clients.
Workaround

Qué podemos ahora hacer para los clientes que tienen los clientes SKC (clave Sticky que oculta) y también tener código 7.2 WLC y más alto es el permiso vaga por la ayuda para SKC (caché dominante Sticky).
Por abandono el WLC utiliza solamente OKC (clave oportunista que oculta). Para permitir que el cliente utilice su PMKIDs viejo que generó en cada AP tenemos que activarlo vía el WLC CLI.

permiso Sticky del caché del wpa wpa2 de la Seguridad de WLAN de los config <1>

Tenga por favor presente que esto no mejorará la inicial vaga por debido a la naturaleza de SKC; sin embargo, mejorará subsiguiente vaga por a los mismos Aps (hasta 8 por el libro). Imagine que recorre abajo de un vestíbulo con 8 Aps. El primer recorrido consistirá en los assocations llenos en cada AP con alrededor de un segundo retraso 1-2. Cuando usted alcanza el extremo y el paseo detrás el cliente presentará a 8 PMKIDs único como se mueve de nuevo a los mismos Aps y no tendrá que pasar con una autenticación completa si se activa la ayuda SKC. Así la eliminación del retraso y del cliente aparecerá permanecer conectada.

Decorado 20: Verifique la Rápido-Seguro-itinerancia (FSR) con CCKM

http://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/116493-technote-technology-00.html

Funcionamiento de la depuración

addr> del <mac del cliente de la depuración

*apfMsConnTask_2: Jun 25 15:43:33.749: 00:40:96:b7:ab:5c **CCKM: Received REASSOC REQ IE**
*apfMsConnTask_2: Jun 25 15:43:33.749: 00:40:96:b7:ab:5c **Reassociation received from mobile on BSSID 84:78:ac:f0:2a:93**
*apfMsConnTask_2: Jun 25 15:43:33.750: 00:40:96:b7:ab:5c

Processing WPA IE type 221, length 22 for mobile 00:40:96:b7:ab:5c
*apfMsConnTask_2: Jun 25 15:43:33.750: 00:40:96:b7:ab:5c
CCKM: Mobile is using CCKM
The Reassociation Request is received from the client, which provides the CCKM information needed in order to derive the new keys with a fast-secure roam. *apfMsConnTask_2: Jun 25 15:43:33.750: 00:40:96:b7:ab:5c Setting active key cache index 0 ---> 8 *apfMsConnTask_2: Jun 25 15:43:33.750: 00:40:96:b7:ab:5c CCKM: Processing REASSOC REQ IE *apfMsConnTask_2: Jun 25 15:43:33.750: 00:40:96:b7:ab:5c **CCKM: using HMAC MD5 to compute MIC**
WLC computes the MIC used for this CCKM fast-roaming exchange. *apfMsConnTask_2: Jun 25 15:43:33.750: 00:40:96:b7:ab:5c CCKM: Received a valid REASSOC REQ IE *apfMsConnTask_2: Jun 25 15:43:33.751: 00:40:96:b7:ab:5c **CCKM: Initializing PMK cache entry with a new PTK**
The new PTK is derived. *apfMsConnTask_2: Jun 25 15:43:33.751: 00:40:96:b7:ab:5c Setting active key cache index 8 ---> 8 *apfMsConnTask_2: Jun 25 15:43:33.751: 00:40:96:b7:ab:5c Setting active key cache index 8 ---> 8 *apfMsConnTask_2: Jun 25 15:43:33.751: 00:40:96:b7:ab:5c Setting active key cache index 8 ---> 0 *apfMsConnTask_2: Jun 25 15:43:33.751: 00:40:96:b7:ab:5c **Creating a PKC PMKID Cache entry for station 00:40:96:b7:ab:5c (RSN 0) on BSSID 84:78:ac:f0:2a:93**
The new PMKID cache entry is created for this new AP-to-client association. *apfMsConnTask_2: Jun 25 15:43:33.751: 00:40:96:b7:ab:5c CCKM: using HMAC MD5 to compute MIC *apfMsConnTask_2: Jun 25 15:43:33.751: 00:40:96:b7:ab:5c Including CCKM Response IE (length 62) in Assoc Resp to mobile *apfMsConnTask_2: Jun 25 15:43:33.751: 00:40:96:b7:ab:5c **Sending Assoc Response to station on BSSID 84:78:ac:f0:2a:93 (status 0) ApVapId 4 Slot 0**
The Reassociation Response is sent from the WLC/AP to the client, which includes the CCKM information required in order to confirm the new fast-roam and key derivation. *dot1xMsgTask: Jun 25 15:43:33.757: 00:40:96:b7:ab:5c **Skipping EAP-Success to mobile 00:40:96:b7:ab:5c**
EAP is skipped due to the fast roaming, and CCKM does not require further key handshakes. The client is now ready to pass encrypted data frames on the new AP.

Como se muestra, la itinerancia rápido-segura se realiza para evitar los marcos de la autenticación EAP y aún más apretones de manos 4-Way, porque las nuevas claves de encripción todavía se derivan, pero se basa en el esquema de la negociación CCKM. Esto se completa con los marcos de itinerancia de la reasociación y la información anterior-ocultados por el cliente y el WLC.

Decorado 21: Verifique la Rápido-Seguro-itinerancia (FSR) con el caché WPA2 PMKID

La depuración se ejecutó

addr> del <mac del cliente de la depuración

*apfMsConnTask_0: Jun 22 00:26:40.787: ec:85:2f:15:39:32 **Reassociation received from mobile on BSSID 84:78:ac:f0:68:d2**
This is the Reassociation Request from the client. *apfMsConnTask_0: Jun 22 00:26:40.787: ec:85:2f:15:39:32 **Processing RSN IE type 48, length 38 for mobile ec:85:2f:15:39:32**
The WLC/AP finds an Information Element that claims PMKID Caching support on the Association request that is sent from the client. *apfMsConnTask_0: Jun 22 00:26:40.787: ec:85:2f:15:39:32 **Received RSN IE with 1 PMKIDs from mobile ec:85:2f:15:39:32**
The Reassociation Request from the client comes with one PMKID. *apfMsConnTask_0: Jun 22 00:26:40.787: Received PMKID: (16) *apfMsConnTask_0: Jun 22 00:26:40.788: [0000] c9 4d 0d 97 03 aa a9 0f 1b c8 33 73 01 f1 18 f5 This is the PMKID that is received *apfMsConnTask_0: Jun 22 00:26:40.788: ec:85:2f:15:39:32 **Searching for PMKID in MSCB PMKID cache for mobile ec:85:2f:15:39:32**
WLC searches for a matching PMKID on the database. *apfMsConnTask_0: Jun 22 00:26:40.788:

ec:85:2f:15:39:32 Found an cache entry for BSSID 84:78:ac:f0:68:d2 in PMKID cache at index 0 of station ec:85:2f:15:39:32 *apfMsConnTask_0: Jun 22 00:26:40.788: ec:85:2f:15:39:32 **Found a valid PMKID in the MSCB PMKID cache for mobile ec:85:2f:15:39:32**
The WLC validates the PMKID provided by the client, and confirms that it has a valid PMK cache for this client-and-AP pair. *apfMsConnTask_0: Jun 22 00:26:40.788: ec:85:2f:15:39:32 Setting active key cache index 1 ---> 0 *apfMsConnTask_0: Jun 22 00:26:40.788: ec:85:2f:15:39:32 **Sending Assoc Response to station on BSSID 84:78:ac:f0:68:d2(status 0) ApVapId 3 Slot 0**
The Reassociation Response is sent to the client, which validates the fast-roam with SKC. *dot1xMsgTask: Jun 22 00:26:40.795: ec:85:2f:15:39:32 **Initiating RSN with existing PMK to mobile ec:85:2f:15:39:32**
WLC initiates a Robust Secure Network association with this client-and-AP pair based on the cached PMK found. Hence, EAP is avoided as per the next message. *dot1xMsgTask: Jun 22 00:26:40.795: ec:85:2f:15:39:32 Skipping EAP-Success to mobile ec:85:2f:15:39:32 *dot1xMsgTask: Jun 22 00:26:40.795: ec:85:2f:15:39:32 Found an cache entry for BSSID 84:78:ac:f0:68:d2 in PMKID cache at index 0 of station ec:85:2f:15:39:32 *dot1xMsgTask: Jun 22 00:26:40.795: **Including PMKID in M1(16)**
The hashed PMKID is included on the Message-1 of the WPA/WPA2 4-Way handshake. *dot1xMsgTask: Jun 22 00:26:40.795: [0000] c9 4d 0d 97 03 aa a9 0f 1b c8 33 73 01 f1 18 f5 The PMKID is hashed. The next messages are the same WPA/WPA2 4-Way handshake messages described thus far that are used in order to finish the encryption keys generation/installation. *dot1xMsgTask: Jun 22 00:26:40.795: ec:85:2f:15:39:32 Sending EAPOL-Key Message to mobile ec:85:2f:15:39:32 state INITPMK (message 1), replay counter 00.00.00.00.00.00.00.00 *Dot1x_NW_MsgTask_2: Jun 22 00:26:40.811: ec:85:2f:15:39:32 Received EAPOL-Key from mobile ec:85:2f:15:39:32 *Dot1x_NW_MsgTask_2: Jun 22 00:26:40.812: ec:85:2f:15:39:32 Received EAPOL-key in PTK_START state (message 2) from mobile ec:85:2f:15:39:32 *Dot1x_NW_MsgTask_2: Jun 22 00:26:40.812: ec:85:2f:15:39:32 PMK: Sending cache add *Dot1x_NW_MsgTask_2: Jun 22 00:26:40.812: ec:85:2f:15:39:32 Sending EAPOL-Key Message to mobile ec:85:2f:15:39:32 state PTKINITNEGOTIATING (message 3), replay counter 00.00.00.00.00.00.00.01 *Dot1x_NW_MsgTask_2: Jun 22 00:26:40.820: ec:85:2f:15:39:32 Received EAPOL-Key from mobile ec:85:2f:15:39:32 *Dot1x_NW_MsgTask_2: Jun 22 00:26:40.820: ec:85:2f:15:39:32 Received EAPOL-key in PTKINITNEGOTIATING state (message 4) from mobile ec:85:2f:15:39:32

Decorado 22: Verificar la itinerancia Rápido-segura con el caché dominante dinámico

La depuración se ejecutó

addr> del <mac del cliente de la depuración

*apfMsConnTask_2: Jun 21 21:48:50.562: 00:40:96:b7:ab:5c **Reassociation received from mobile on BSSID 84:78:ac:f0:2a:92**
This is the Reassociation Request from the client. *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c Processing RSN IE type 48, length 38 for mobile 00:40:96:b7:ab:5c The WLC/AP finds and Information Element that claims PMKID Caching support on the Association request that is sent from the client. *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c Received RSN IE with 1 PMKIDs from mobile 00:40:96:b7:ab:5c The Reassociation Request from the client comes with one PMKID. *apfMsConnTask_2: Jun 21 21:48:50.563:Received PMKID: (16) *apfMsConnTask_2: Jun 21 21:48:50.563: [0000] 91 65 c3 fb fc 44 75 48 67 90 d5 da df aa 71 e9 *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c Searching for PMKID in MSCB PMKID cache for mobile 00:40:96:b7:ab:5c *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c No valid PMKID found in the MSCB PMKID cache for mobile 00:40:96:b7:ab:5 As the client has never authenticated with this new AP, the WLC cannot find a valid PMKID to match the one provided by the client. However, since the client performs PKC/OKC and not SKC (as per the following messages), the WLC computes a new PMKID based on the information gathered (the cached PMK,the client MAC address, and the new AP MAC address). *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c Trying to compute a PMKID from MSCB PMK cache for mobile 00:40:96:b7:ab:5c *apfMsConnTask_2: Jun 21 21:48:50.563: CCKM: Find PMK in cache: BSSID = (6) *apfMsConnTask_2: Jun 21 21:48:50.563: [0000] 84 78 ac f0 2a 90 *apfMsConnTask_2: Jun 21 21:48:50.563: CCKM: Find PMK in cache: realAA = (6) *apfMsConnTask_2: Jun 21 21:48:50.563: [0000] 84 78 ac f0 2a 92 *apfMsConnTask_2: Jun 21 21:48:50.563: CCKM: Find PMK in cache: PMKID = (16) *apfMsConnTask_2: Jun 21 21:48:50.563:

[0000] 91 65 c3 fb fc 44 75 48 67 90 d5 da df aa 71 e9 *apfMsConnTask_2: Jun 21 21:48:50.563: CCKM: AA (6) *apfMsConnTask_2: Jun 21 21:48:50.563: [0000] 84 78 ac f0 2a 92 *apfMsConnTask_2: Jun 21 21:48:50.563: CCKM: SPA (6) *apfMsConnTask_2: Jun 21 21:48:50.563: [0000] 00 40 96 b7 ab 5c *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c Adding BSSID 84:78:ac:f0:2a:92 to PMKID cache at index 0 for station 00:40:96:b7:ab:5c *apfMsConnTask_2: Jun 21 21:48:50.563: New PMKID: (16) *apfMsConnTask_2: Jun 21 21:48:50.563:[0000] 91 65 c3 fb fc 44 75 48 67 90 d5 da df aa 71 e9 *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c Computed a valid PMKID from MSCB PMK cache for mobile 00:40:96:b7:ab:5c The new PMKID is computed and validated to match the one provided by the client, which is also computed with the same information. Hence, the fast-secure roam is possible. *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c Setting active key cache index 0 ---> 0 *apfMsConnTask_2: Jun 21 21:48:50.564: 00:40:96:b7:ab:5c Sending Assoc Response to station on BSSID 84:78:ac:f0:2a:92 (status 0) ApVapId 3 Slot The Reassociation response is sent to the client, which validates the fast-roam with PKC/OKC. *dot1xMsgTask: Jun 21 21:48:50.570: 00:40:96:b7:ab:5c Initiating RSN with existing PMK to mobile 00:40:96:b7:ab:5c WLC initiates a Robust Secure Network association with this client-and AP pair with the cached PMK found. Hence, EAP is avoided, as per the the next message. *dot1xMsgTask: Jun 21 21:48:50.570: 00:40:96:b7:ab:5c Skipping EAP-Success to mobile 00:40:96:b7:ab:5c *dot1xMsgTask: Jun 21 21:48:50.570: 00:40:96:b7:ab:5c Found an cache entry for BSSID 84:78:ac:f0:2a:92 in PMKID cache at index 0 of station 00:40:96:b7:ab:5c *dot1xMsgTask: Jun 21 21:48:50.570: Including PMKID in M1 (16) The hashed PMKID is included on the Message-1 of the WPA/WPA2 4-Way handshake. *dot1xMsgTask: Jun 21 21:48:50.570: [0000] 91 65 c3 fb fc 44 75 48 67 90 d5 da df aa 71 e9 The PMKID is hashed. The next messages are the same WPA/WPA2 4-Way handshake messages described thus far, which are used in order to finish the encryption keys generation/installation. *dot1xMsgTask: Jun 21 21:48:50.570: 00:40:96:b7:ab:5c Sending EAPOL-Key Message to mobile 00:40:96:b7:ab:5c state INITPMK (message 1), replay counter 00.00.00.00.00.00.00.00 *Dot1x_NW_MsgTask_4: Jun 21 21:48:50.589: 00:40:96:b7:ab:5 Received EAPOL-Key from mobile 00:40:96:b7:ab:5c *Dot1x_NW_MsgTask_4: Jun 21 21:48:50.589: 00:40:96:b7:ab:5c Received EAPOL-key in PTK_START state (message 2) from mobile 00:40:96:b7:ab:5c *Dot1x_NW_MsgTask_4: Jun 21 21:48:50.589: 00:40:96:b7:ab:5cPMK: Sending cache add *Dot1x_NW_MsgTask_4: Jun 21 21:48:50.590: 00:40:96:b7:ab:5c Sending EAPOL-Key Message to mobile 00:40:96:b7:ab:5c state PTKINITNEGOTIATING (message 3), replay counter 00.00.00.00.00.00.00.01 *Dot1x_NW_MsgTask_4: Jun 21 21:48:50.610: 00:40:96:b7:ab:5c Received EAPOL-Key from mobile 00:40:96:b7:ab:5c *Dot1x_NW_MsgTask_4: Jun 21 21:48:50.610: 00:40:96:b7:ab:5c Received EAPOL-key in PTKINITNEGOTIATING state (message 4) from mobile 00:40:96:b7:ab:5c

Como se muestra al principio de las depuraciones, el PMKID debe ser computado después de que la petición de la reasociación del cliente se reciba. Esto es necesario para validar el PMKID y confirmar que el PMK ocultado está utilizado con el apretón de manos WPA2 4-Way para derivar las claves de encripción y para acabar la itinerancia rápido-segura. No confunda las entradas CCKM en las depuraciones; esto no se utiliza para realizar CCKM, sino PKC/OKC, según lo explicado previamente. CCKM aquí es simplemente un nombre usado por el WLC para esas salidas, tales como el nombre de una función que maneje los valores para computar el PMKID.

Decorado 23: Verifique la Rápido-Seguro-itinerancia (FSR) con 802.11r

Ponga a punto el funcionamiento

ponga a punto el addr> del <mac del cliente

*apfMsConnTask_2: Jun 21 21:48:50.562: 00:40:96:b7:ab:5c **Reassociation received from mobile on BSSID 84:78:ac:f0:2a:92**
This is the Reassociation Request from the client. *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c Processing RSN IE type 48, length 38 for mobile 00:40:96:b7:ab:5c The WLC/AP finds and Information Element that claims PMKID Caching support on the Association request that is sent from the client. *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c Received RSN IE with 1 PMKIDs from mobile 00:40:96:b7:ab:5c The Reassociation Request from the client comes with one PMKID. *apfMsConnTask_2: Jun 21 21:48:50.563:Received PMKID: (16) *apfMsConnTask_2: Jun 21 21:48:50.563: [0000] 91 65 c3 fb fc 44 75 48 67 90 d5 da df aa 71 e9 *apfMsConnTask_2: Jun 21

21:48:50.563: 00:40:96:b7:ab:5c Searching for PMKID in MSCB PMKID cache for mobile 00:40:96:b7:ab:5c *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c No valid PMKID found in the MSCB PMKID cache for mobile 00:40:96:b7:ab:5 As the client has never authenticated with this new AP, the WLC cannot find a valid PMKID to match the one provided by the client. However, since the client performs PKC/OKC and not SKC (as per the following messages), the WLC computes a new PMKID based on the information gathered (the cached PMK,the client MAC address, and the new AP MAC address). *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c Trying to compute a PMKID from MSCB PMK cache for mobile 00:40:96:b7:ab:5c *apfMsConnTask_2: Jun 21 21:48:50.563: CCKM: Find PMK in cache: BSSID = (6) *apfMsConnTask_2: Jun 21 21:48:50.563: [0000] 84 78 ac f0 2a 90 *apfMsConnTask_2: Jun 21 21:48:50.563: CCKM: Find PMK in cache: realAA = (6) *apfMsConnTask_2: Jun 21 21:48:50.563: [0000] 84 78 ac f0 2a 92 *apfMsConnTask_2: Jun 21 21:48:50.563: CCKM: Find PMK in cache: PMKID = (16) *apfMsConnTask_2: Jun 21 21:48:50.563: [0000] 91 65 c3 fb fc 44 75 48 67 90 d5 da df aa 71 e9 *apfMsConnTask_2: Jun 21 21:48:50.563: CCKM: AA (6) *apfMsConnTask_2: Jun 21 21:48:50.563: [0000] 84 78 ac f0 2a 92 *apfMsConnTask_2: Jun 21 21:48:50.563: CCKM: SPA (6) *apfMsConnTask_2: Jun 21 21:48:50.563: [0000] 00 40 96 b7 ab 5c *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c Adding BSSID 84:78:ac:f0:2a:92 to PMKID cache at index 0 for station 00:40:96:b7:ab:5c *apfMsConnTask_2: Jun 21 21:48:50.563: New PMKID: (16) *apfMsConnTask_2: Jun 21 21:48:50.563:[0000] 91 65 c3 fb fc 44 75 48 67 90 d5 da df aa 71 e9 *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c Computed a valid PMKID from MSCB PMK cache for mobile 00:40:96:b7:ab:5c The new PMKID is computed and validated to match the one provided by the client, which is also computed with the same information. Hence, the fast-secure roam is possible. *apfMsConnTask_2: Jun 21 21:48:50.563: 00:40:96:b7:ab:5c Setting active key cache index 0 ---> 0 *apfMsConnTask_2: Jun 21 21:48:50.564: 00:40:96:b7:ab:5c Sending Assoc Response to station on BSSID 84:78:ac:f0:2a:92 (status 0) ApVapId 3 Slot The Reassociation response is sent to the client, which validates the fast-roam with PKC/OKC. *dot1xMsgTask: Jun 21 21:48:50.570: 00:40:96:b7:ab:5c Initiating RSN with existing PMK to mobile 00:40:96:b7:ab:5c WLC initiates a Robust Secure Network association with this client-and AP pair with the cached PMK found. Hence, EAP is avoided, as per the the next message. *dot1xMsgTask: Jun 21 21:48:50.570: 00:40:96:b7:ab:5c Skipping EAP-Success to mobile 00:40:96:b7:ab:5c *dot1xMsgTask: Jun 21 21:48:50.570: 00:40:96:b7:ab:5c Found an cache entry for BSSID 84:78:ac:f0:2a:92 in PMKID cache at index 0 of station 00:40:96:b7:ab:5c *dot1xMsgTask: Jun 21 21:48:50.570: Including PMKID in M1 (16) The hashed PMKID is included on the Message-1 of the WPA/WPA2 4-Way handshake. *dot1xMsgTask: Jun 21 21:48:50.570: [0000] 91 65 c3 fb fc 44 75 48 67 90 d5 da df aa 71 e9 The PMKID is hashed. The next messages are the same WPA/WPA2 4-Way handshake messages described thus far, which are used in order to finish the encryption keys generation/installation. *dot1xMsgTask: Jun 21 21:48:50.570: 00:40:96:b7:ab:5c Sending EAPOL-Key Message to mobile 00:40:96:b7:ab:5c state INITPMK (message 1), replay counter 00.00.00.00.00.00.00.00 *Dot1x_NW_MsgTask_4: Jun 21 21:48:50.589: 00:40:96:b7:ab:5 Received EAPOL-Key from mobile 00:40:96:b7:ab:5c *Dot1x_NW_MsgTask_4: Jun 21 21:48:50.589: 00:40:96:b7:ab:5c Received EAPOL-key in PTK_START state (message 2) from mobile 00:40:96:b7:ab:5c *Dot1x_NW_MsgTask_4: Jun 21 21:48:50.589: 00:40:96:b7:ab:5cPMK: Sending cache add *Dot1x_NW_MsgTask_4: Jun 21 21:48:50.590: 00:40:96:b7:ab:5c Sending EAPOL-Key Message to mobile 00:40:96:b7:ab:5c state PTKINITNEGOTIATING (message 3), replay counter 00.00.00.00.00.00.00.01 *Dot1x_NW_MsgTask_4: Jun 21 21:48:50.610: 00:40:96:b7:ab:5c Received EAPOL-Key from mobile 00:40:96:b7:ab:5c *Dot1x_NW_MsgTask_4: Jun 21 21:48:50.610: 00:40:96:b7:ab:5c Received EAPOL-key in PTKINITNEGOTIATING state (message 4) from mobile 00:40:96:b7:ab:5c