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Introduction

C'est un aide-mémoire pour analyser met au point (habituellement « mettez au point le client < le >") de MAC address pour les questions Sans fil communes. Analyser ? affichez le client ? et met au point nous exigera à d'abord comprennent quelques états PEM et états APF.

Composants utilisés

Ce document s'applique également à tous les contrôleurs de « AireOS ». Ceux ont lieu, à la période d'écrire ce document, le 440x, les 5508, 5520, 75xx,85xx, 2504 et vWLC aussi bien que

Wisms. Bien que beaucoup de concepts soient identiques dans les contrôleurs et des Commutateurs convergés d'Access IOS-XE, ce document ne s'applique pas à eux comme sorties et met au point sont radicalement différent.

Bref état PEM sur la sortie de client d'exposition

- **DÉBUT** ? État initial pour la nouvelle entrée de client.
- **AUTHCHECK** ? Le WLAN a une stratégie d'authentification L2 à imposer.
- **8021X_REQD**?Client doit se terminer l'authentification de 802.1x.
- **L2AUTHCOMPLETE**?Client a avec succès terminé la stratégie L2. Le processus peut maintenant poursuivre aux stratégies L3 (autoapprentissage d'adresse, Web authentique, etc.). Le contrôleur envoie ici l'annonce de mobilité pour apprendre les informations L3 d'autres contrôleurs si c'est un client d'itinérance au même groupe de mobilité.
- **WEP_REQD** ? Le client doit se terminer l'authentification WEP.
- **DHCP_REQD** ? Le contrôleur doit apprendre l'adresse L3 du client, qui est fait par demande d'ARP, requête DHCP ou renouvelle, ou par les informations apprises de l'autre contrôleur au groupe de mobilité. Si le DHCP exigé est marqué sur le WLAN, seulement les informations DHCP ou de mobilité sont utilisées.
- **WEBAUTH_REQD** ? Le client doit se terminer l'authentification Web. (Stratégie L3)
- **CENTRAL_WEBAUTH_REQD** -- Le client doit se terminer la procédure de connexion CWA, WLC attend de recevoir le CoA
- **EXÉCUTEZ-VOUS** ? Le client s'est avec succès terminé les stratégies L2 et L3 priées et peut maintenant transmettre le trafic au réseau.

Les scénarios suivants afficheront que la clé mettent au point des lignes pour des mauvaises configurations communes en configurations sans fil, mettant en valeur les paramètres principaux en gras.

Scénario 1 : mot de passe SIG-configuré pour l'authentification WPA/WPA2 PSK sur le client

```
(Cisco Controller) >show client detail 24:77:03:19:fb:70Client MAC
Address..... 24:77:03:19:fb:70Client Username
..... N/AAP MAC Address.....
ec:c8:82:a4:5b:c0AP Name..... Shankar_AP_1042 AP radio
slot Id..... 1 Client State.....
Associated Client NAC OOB State..... AccessWireless LAN
Id..... 5 Hotspot (802.11u)..... Not
SupportedBSSID..... ec:c8:82:a4:5b:cb Connected For
..... 0 secsChannel..... 44IP
Address..... UnknownGateway
Address.....
UnknownNetmask..... UnknownAssociation
Id..... 1 Authentication Algorithm..... Open
SystemReason Code..... 1 Status
Code..... 0 Session Timeout..... 0
Client CCX version..... 4 Client E2E
version..... 1 QoS Level.....
SilverAvg data Rate..... 0Burst data
Rate..... 0Avg Real time data Rate..... 0Burst
Real Time data Rate..... 0802.1P Priority Tag.....
2CTS Security Group Tag..... Not ApplicableKTS CAC
Capability..... NoWMM Support.....
```

```

Enabled APSD ACs..... BK BE VI VOPower
Save..... OFFCurrent Rate.....
ml5Supported Rates..... 6.0,9.0,12.0,18.0,24.0,36.0,
..... 48.0,54.0Mobility
State..... NoneMobility Move Count.....
0Security Policy Completed..... NoPolicy 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 failingPolicy Manager Rule
Created..... YesAudit Session ID..... noneAAA Role
Type..... noneLocal Policy Applied.....
noneIPv4 ACL Name..... noneFlexConnect ACL Applied
Status..... UnavailableIPv4 ACL Applied Status.....
UnavailableIPv6 ACL Name..... noneIPv6 ACL Applied
Status..... UnavailableLayer2 ACL Name.....
noneLayer2 ACL Applied Status..... UnavailablemDNS
Status..... EnabledmDNS Profile
Name..... default-mdns-profileNo. of mDNS Services
Advertised..... 0Policy Type.....
WPA2Authentication Key Management..... PSKEncryption
Cipher..... CCMP (AES)Protected Management Frame
..... NoManagement Frame Protection..... NoEAP
Type.....
UnknownInterface.....
vlan21VLAN..... 21Quarantine
VLAN..... 0Access VLAN.....
21Client 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 implementedClient Wifi Direct Capabilities:
WFD capable..... No Manged WFD capable..... No
Cross Connection Capable..... No Support Concurrent Operation.....
NoFast 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 Failed 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 dBClient 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..... 0Nearby AP Statistics: Shankar_AP_1602(slot 0) antenna0: 0 secs
ago..... -25 dBm antennal: 0 secs ago..... -40 dBm
Shankar_AP_1602(slot 1) antenna0: 1 secs ago..... -41 dBm antennal: 1 secs
ago..... -27 dBm Shankar_AP_3502(slot 0) antenna0: 0 secs
ago..... -90 dBm antennal: 0 secs ago..... -83 dBm
Shankar_AP_1042(slot 0) antenna0: 0 secs ago..... -32 dBm antennal: 0 secs
ago..... -41 dBm Shankar_AP_1042(slot 1) antenna0: 0 secs
ago..... -50 dBm antennal: 0 secs ago..... -42 dBmDNS Server
details: DNS server IP ..... 0.0.0.0 DNS server IP
..... 0.0.0.0Assisted Roaming Prediction List details: Client Dhcp
Required: FalseAllowed (URL)IP Addresses-----

```

Analyse de client de debug

```
(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 lx initiate message to
multi thread task for mobile 24:77:03:19:fb:70*DotlX_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)*DotlX_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*DotlX_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*DotlX_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 Setting active key
cache index 0 ---> 8*DotlX_NW_MsgTask_0: May 07 17:03:56.066: 24:77:03:19:fb:70 Setting active
key cache index 8 ---> 0*DotlX_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*DotlX_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

```

Conclusion tirée

Bien que ? timeoutEvt ? pour le m2 la clé pourrait également être due aux erreurs driver/NIC, un de la plupart de problème courant ne peut pas utilisateur entrant dans les qualifications incorrectes pour le mot de passe PSK (manqué cahacters distinguant majuscules et minuscules/spéciaux etc...) et se connecter.

Scénario 2 : Téléphone Sans fil Handsets(792x/9971) ne pas s'associer avec la radio ? laisser la zone de service ?

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

Topologie

WLAN avec des Téléphones IP de Cisco Unified Wireless

Détails de problème

AIR-CT5508-50-K9 //a mis le micrologiciel à jour pour des téléphones et le contrôleur sans-fil ne recevra pas des enregistrements de téléphone

Debugs et logs

```
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 secondsVoIP 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 WLAN1x:xx PMClient Excluded:

```
MACAddress:1x:xx:1x:xx:xx:xx Base Radio MAC :3x:xx:cx:9x:x0:x0 Slot: 1 User Name: dwpv\mt17925
Ip Address: xx.xx.x.xx Reason:802.11 Association failed repeatedly. ReasonCode: 2
```

Conclusion

Le debug sur le WLC a prouvé que le 7925G était association manquante car AP renvoyait code d'état d'association de 201.

C'est dû à une demande TSPEC (spécification du trafic) du combiné téléphonique étant dû refusé à la configuration WLAN. Le WLAN que le 7925G tentait de se connecter à a été configuré avec un profil de QoS d'argent (VERS LE HAUT de 0,3), plutôt que le platine (VERS LE HAUT de 6,7) au besoin. Ceci mènent à une non-concordance TSPEC pour le trafic vocal/l'échange vidéotex à

partir du combiné téléphonique par l'intermédiaire du WLAN, et finalement à un rejet à partir d'AP.

Créez un nouveau WLAN avec un profil de QoS du platine spécifiquement pour les combinés téléphoniques 7925G et configuré selon des pratiques recommandées établies, et comme défini dans le guide du déploiement 7925G :

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

Une fois que configurée, la question devrait être résolue.

Scénario 3 : Client configuré pour le WPA mais l'AP configurés seulement pour le WPA2

Addr> de <mac de client de debug

```
Wed May 7 10:51:37 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 23) in 5 secondsWed 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 secondsWed May 7 10:51:38 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 24) in 5 secondsWed 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 secondsWed May 7 10:51:41 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 24) in 5 secondsWed May 7 10:51:41 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 24) in 5 secondsWed May 7 10:51:41 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 24) in 5 secondsWed May 7 10:51:41 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 24) in 5 secondsWed May 7 10:51:44 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 24) in 5 secondsWed May 7 10:51:44 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 24) in 5 secondsWed May 7 10:51:44 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 24) in 5 secondsWed May 7 10:51:44 2014: xx.xx.xx.xx.xx.xx Scheduling deletion of Mobile Station: (callerId: 24) in 5 secondsWed 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.
```

Scénario 4 : Analyser des codes de retour ou de réponse d'AAA.

Requis met au point POUR ÊTRE EXÉCUTÉ pour collecter les logs prévus :

<mac> d'adr de MAC de >debug (de contrôleur de Cisco)

Enable d'événements d'AAA de >debug (de contrôleur de Cisco)

(OU)

<mac> de client de >debug (de contrôleur de Cisco)

Enable d'événements d'AAA de >debug (de contrôleur de Cisco)

Enable d'erreurs d'AAA de >debug (de contrôleur de Cisco)

La panne de Connectivité d'AAA génèrera un déroutement SNMP, si des déroutements sont activés.

<snipped> de sortie de débogage d'exemple

```
*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 mobileSuccessful Authentication happened, AAA returns
access-accept prior to Success (0) to confirm the same. Returning AAA Error 'Out of Memory' (-2)
for mobileit's the rare reason. CSCud12582 Processing AAA Error 'Out of Memory' Returning AAA
Error 'Authentication Failed' (-4) for mobileits the most common reason seen**

Possibles raison :

1. Compte utilisateur non valide et/ou mot de passe
2. Ordinateur pas un membre de domaine, question de côté d'AD.
3. Le certificat entretient ne pas fonctionner correctement
4. Le certificat de serveur a expiré ou non utilisable
5. RAYON inexactement configuré
6. Raccourci inexactement écrit - il DISTINGUE LES MAJUSCULES ET MINUSCULES (ainsi est le SSID)
7. correctifs de Microsoft de mise à jour.
8. Temporisateurs d'EAP.
9. Méthode incorrecte d'eap configurée sur le client/serveur.
10. Le certificat client est expiré ou non utilisable.

Erreur de renvoi d'AAA « délai d'attente » (-5) pour le mobile
Serveur d'AAA inaccessible, suivi du deauth de client.

Exemple :

```
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:92:41Wed 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
```

Erreur de renvoi d'AAA « erreur interne » (-6) pour le mobile

Non-concordance d'attribut. Attribut incorrect/inadéquat d'envoi d'AAA (longueur fausse) que n'est pas compris/compatible avec WLC. WLC envoie le message de Deauth suivi du message de « erreur interne ». Ex : [CSCum83894](#) l'AAA « erreur interne » et attributs authentiques de l'échouer w/unknown dans l'accès reçoivent

Exemple :

```
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:92:41Wed 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
```

Erreur de renvoi d'AAA aucun serveur (-7) pour le mobile

Le rayon n'est pas correctement configuré et ou configuration sans support en service

Exemple :

```
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:92:41Wed 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
```

Scénario 5 : Client ne pas s'associer à AP

Le debug a fonctionné

mettez au point l'addr> de <mac de client

Logs à analyser

Envoi de la réponse d'Assoc pour poster sur BSSID 00:26:cb:94:44:c0 (état 0) ApVapId 1 emplacement 0

- **Emplacement 0** = B/G(2.4) radio

Emplacement 1 = A(5) radio

- Envoyant l'**état 0** de réponse d'Assoc = succès

Quelque chose autre que l'état 0 est défectueux

Codes d'état de réponse d'association commune peuvent être trouvés chez

<https://supportforums.cisco.com/document/141136/80211-association-status-80211-deauth-reason-codes>

Scénario 6 : Dissociation de client devant tourner au ralenti le délai d'attente

Le debug a fonctionné

mettez au point l'addr> de <mac de client

Logs à analyser

L'Inactif-délai d'attente reçu d'AP 00:26:cb:94:44:c0, raintent 0 pour STA 00:1e:8c:0f:a4:57

mobile de Scheduling d'apfMsDeleteByMscb pour la suppression avec le deleteReason 4, reasonCode 4

Suppression de Scheduling du poste mobile : (callerId : 30) en quelques secondes 1

mobile de expiration de l'apfMsExpireCallback (apf_ms.c:608) !

Envoyé désauthentifiez au mobile sur l'emplacement 0(caller apf_ms.c:5094 BSSID

00:26:cb:94:44:c0)

Conditions

Se produit après aucun trafic reçu du client

La durée par défaut est de 300 secondes

Contournement

Augmentez la forme de veille de délai d'attente ou globalement WLC GUI>>Controller>>General ou par wlan de WLC GUI>>WLAN>>ID>>Advanced

Scénario 7 : Dissociation de client due à la Session Timeout

Le debug a fonctionné

mettez au point l'addr> de <mac de client

Logs à analyser

```
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:92:41Wed 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
```

Conditions

Se produit à la durée programmée (par défaut 1800 secondes)

Forcera l'utilisateur WEBAUTH à WEBAUTH de nouveau

Contournement

Augmentez ou désactivez le délai d'attente de session par wlan de WLC GUI>>WLAN>>ID>>Advanced

Scénario 8 : Dissociation de client due aux modifications WLAN

Le debug a fonctionné

mettez au point l'addr> de <mac de client

Connectez-vous pour analyser

```
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:92:41Wed 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
```

Conditions

Modifier un WLAN dans de toute façon les débranchements et le Renables WLAN

Contournement

C'est un comportement prévu. Quand il y a les modifications wlan apportées, les clients les dissocieront et rassocieront.

Scénario 9 : Dissociation de client due à la suppression manuelle de WLC

Le debug a fonctionné

mettez au point l'addr> de <mac de client

Connectez-vous pour analyser

```
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:92:41Wed 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
```

Conditions

Du GUI : Retirez le client

Du CLI : config client deauthenticate < MAC address >

Scénario 10 : Dissociation de client due au délai d'attente d'authentification

Le debug a fonctionné

mettez au point l'addr> de <mac de client

Connectez-vous pour analyser

```
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:92:41Wed 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
```

Conditions

Maximum-retransmissions d'authentification ou de Key Exchange atteintes

Contournement

Vérifiez/pilote client de mise à jour, config de Sécurité, Certificats etc.

Scénario 11 : La dissassociation de client due à la radio AP a remis à l'état initial (alimentation/Manche)

Le debug a fonctionné

mettez au point l'addr> de <mac de client

Connectez-vous pour analyser

```
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:92:41Wed 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
```

Conditions

AP dissocie des clients mais WLC ne supprime pas l'entrée

Contournement

Comportement prévu.

Scénario 12 : Questions de client de Symantec avec le 802.1X « timeoutEvt »

Question

Les clients exécutant le logiciel de Symantec dissocié avec le temporisateur de « timeoutEvt » de 802.1X de message ont expiré pour la station et pour le message = le M3

Le processus EAP/Eapol n'est pas obtenir terminé, indépendamment de la radio A/G est utilisé sur Intel/carte de Broadcom. aucune question en utilisant le wep, wpa-psk.

Condition

Le code WLC n'importe pas.

Aps - tout le modèle - tous sur le mode local.

3 wlan - WPA2+802.1X PEAP + mshcapv2

le ssid est annoncé.

Nps 2008 de serveur de rayon

Le logiciel anti-virus de Symantec est installé sur tous les PC

utilisant Asus, Braodcom, Intel - win7, victoire-XP

SYSTÈME D'EXPLOITATION affecté - fenêtres 7 et xp

Adaptateur Sans fil affecté - Intel(6205) et Broadcom

Gestionnaire/suppliant affectés - 15.2.0.19, utilisant le suppliant indigène.

Difficulté/contournement : Désactivez la protection du réseau et le Pare-feu de Symantec sur win7 et xp. C'est une question de Symantec avec la victoire 7 et le SYSTÈME D'EXPLOITATION de XP.

Sortie de débogage

```
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:92:41Wed 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
```

Remarque:

Il y a un syndrome en 15.2 (également vu dans les versions antérieures) qu'va comme :

- le client obtient M1 d'AP
- le client envoie le m2
- le client obtient le M3 d'AP
- le client met d'aplomb la nouvelle par paires clé avant qu'elle envoie M4
- le client transmet le M4 chiffré avec la nouvelle clé AP, relâche le message M4 comme « erreur de déchiffrement »
- Exposition « mettez au point client » WLC que nous chronométrons sur les retransmissions M3. Évidemment, c'est un problème entre Microsoft et Symantec, pas particularité d'Intel. Le contournement est de retirer Symantec. C'est vraiment une bogue qui est probablement dans les fenêtres, déclenchée par Symantec. Tordant le temporisateur d'EAP ne répare pas cette question

Concernant cette question, Cisco TAC expédiera les clients affectés à Symantec et à Microsoft.

Scénario 13 : Aérez le service d'impression n'apparaissant pas pour des clients avec piller de mdn activé

Client non capable voir des périphériques fournir le service d'AirPrint sur les périphériques tenus dans la main de client d'Apple quand piller de mdn est activé.

Conditions

5508 WLC exécutant 7.6.100.0.

Piller de mdn étant activé, nous avons les périphériques fournissant des services d'AirPrint répertoriés sous la section de services sur le WLC.

Le profil respectif de mdn a été tracé correctement au WLAN et à l'interface.

Capable encore incapable voir les périphériques d'AirPrint sur le client.

Le debug a fonctionné

mettez au point l'addr> de <mac de client

mettez au point les mdn tout l'enable

```
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:92:41Wed 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
```

Explication

Le client demanderait pour « . les _ipps _universal. _tcp.local de _sub. » ou « . _ipp _universal. _tcp.local de _sub. » au lieu du « _ipp. _tcp.local. » ou « _ipp. _tcp.local. » chaîne.

Ajouter ainsi le service d'AirPrint ne fonctionnerait pas. C'a été identifié la chaîne demandée de service à tracer à 'HP_Photosmart_Printer_1

Le même service a été ajouté dans le profil tracé au WLAN et il ne restait aucun service répertorié pour le périphérique.

On l'a constaté qu'en raison du nom de domaine étant ajouté et du client questionnant pour le « dn-écart-type. _udp.YVG.local. » le nom de domaine étant ajouté le WLC ne pouvait pas traiter le paquet de Bonjour en tant que « dn-écart-type. _udp.YVG.local. » n'existe pas dans la base de données.

A identifié la bogue suivante d'amélioration concernant la même chose - [CSCuj32157](#)

Contournement

Le seul travail était autour de désactiver l'option DHCP 15 (nom de domaine) ou retirer le nom de domaine du client.

Scénario 14 : Les handicapés dus de joindre réseau de client IOS

d'Apple « incapable » jeûnent modification SSID

Condition

La plupart des périphériques IOS d'Apple ont des questions se déplaçant d'une wlan à l'autre sur le même Cisco WLC avec le par défaut ? modification rapide de ssid désactivée ?.

La configuration fait désauthentifier le contrôleur le client du wlan existant une fois que les tentatives de client de s'associer à l'autre.

Le résultat typique est ? incapable de joindre le réseau ? message sur le périphérique IOS

Affichez le client

résumé de réseau du >show (jk-2504-116)

<snip>

La modification rapide SSID a désactivé

Le debug a fonctionné

```
(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 fat-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
```

Contournement

Modification de rapide-SSID d'enable de WLC GUI>>Controller>>General

Scénario 15 : Association réussie de LDAP de client

Le LDAP sécurisé aide à sécuriser la connexion entre le contrôleur et le serveur LDAP utilisant le TLS. Cette caractéristique est prise en charge avec la version 7.6 et ultérieures de logiciel contrôleur.

Il y a deux types de requêtes qui peuvent être envoyées par le contrôleur au serveur LDAP :

1. Anonyme :

Dans ce type le contrôleur envoie une demande d'authentification au serveur LDAP quand un client doit obtenir authentifié. Le serveur LDAP répondra alors avec le le résultat de la requête. Pendant cet échange toutes les informations comprenant le nom d'utilisateur/mot de passe de client sont introduites le texte clair. Le serveur LDAP répondra à une requête de n'importe qui tant que le nom d'utilisateur/mot de passe de grappage sont ajoutés.

1. Authentifié :

Dans cette méthode le contrôleur est configuré avec un nom d'utilisateur et mot de passe qu'il l'utilise pour authentifier lui-même avec le serveur LDAP. Le mot de passe est chiffré avec le MD5 SASL et est envoyé au serveur LDAP pendant la procédure d'authentification. Ceci aide le serveur LDAP correctement à identifier la source des demandes d'authentification. Cependant quoique l'identité du contrôleur soit protégée les petits groupes de client sont introduits le texte clair.

Le besoin réel de LDAP au-dessus de TLS a été livré en raison de la faille de la sécurité posée par ces deux deux méthodes où les données d'authentification client et le reste de la transaction se produisent en clair.

Conditions requises

Version de logiciel courante 7.6 WLC et en haut

Serveur de Microsoft faisant le LDAP

Le debug a fonctionné

enable de LDAP de debug aaa

```
(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 fat-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
```

Scénario 16 : L'authentification client a manqué sur le LDAP

Passage de debug

enable de LDAP de debug aaa

```
(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 fat-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
```

Contournement

Serveur LDAP de contrôle pour des raisons d'anomalie.

Scénario 17 : Des questions d'association de client dues au LDAP SIG-est configurées sur WLC

Le debug a fonctionné

enable de LDAP de debug aaa

```
(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 fat-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
```

Contournement

Vérifiez les qualifications à travers client/WLC et serveur LDAP.

Scénario 18 : Questions d'association de client quand le serveur LDAP est inaccessible

Le debug a fonctionné

enable de LDAP de debug aaa

```
(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 fat-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
```

Contournement

Questions de connexion réseau du contrôle WLC et du serveur LDAP.

Scénario 19 : Questions d'itinérance de client d'Apple dues à manquer la configuration Rémanente d'itinérance

Conditions

AIR-CT5508-K9/7.4.100.0

Les périphériques d'Apple déconnectent du réseau Sans fil utilisant ce qui suit :

Stratégie WPA2

Chiffrement WPA2 AES

802.1X d'authentification activé

Authentification et autorisation par l'intermédiaire de Cisco ISE

Les périphériques d'Apple démonteront périodiquement du SSID annoncé. Un exemple est un iPhone relâchera tandis qu'un autre téléphone dans le même emplacement demeurera connecté. , Se produit par conséquent aléatoirement (temps et téléphone)

Les clients d'ordinateur portable n'ont pas des questions. Ils se connectent au même SSID

Cette question se produit pendant le fonctionnement normal, aucune itinérance, aucun mode standby.

Le WLAN a déjà retiré toutes les configurations possibles qui pourraient entraîner les questions (l'ext. d'Aironet)

Le debug a fonctionné

mettez au point l'addr> de <mac de client

```
*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.

Contournement

Ce que nous pouvons maintenant faire pour les clients qui ont des clients SKC (mise en cache principale Rémanente) et avoir également le code 7.2 WLC et plus élevé est l'enable errant le

soutien de SKC (cache principal Rémanent).

Par défaut le WLC prend en charge seulement OKC (Key Caching opportuniste). Afin de permettre au client pour utiliser son vieux PMKIDs qu'il a généré à chaque AP nous devons l'activer par l'intermédiaire du WLC CLI.

enable Rémanent <1> de cache du wpa wpa2 de Sécurité WLAN de config

Maintenez s'il vous plaît dans l'esprit que ceci n'améliorera pas l'initiale erre en raison de la nature de SKC ; cependant, il améliorera ultérieur erre aux mêmes aps (jusqu'à 8 par l'ouvrage). Imagine descendant un couloir avec 8 aps. La première revue du projet se composera de pleins associations à chaque AP avec environ un seconde retard 1-2. Quand vous atteignez l'extrémité et l'inspection de retour le client présentera à 8 seul PMKIDs pendant qu'il se déplace de nouveau aux mêmes aps et ne devra pas passer par une pleine authentification si le support SKC est activé. De ce fait retirer le condamné et le client semblera rester connecté.

Scénario 20 : Vérifier la Rapide-Sécurisé-itinérance (FSR) avec CCKM

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

Passage de debug

mettez au point l'addr> de <mac de client

```
*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 CCKMThe 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
MICWLC 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 PTKThe 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:93The 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 0The 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:5cEAP 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.
```

En tant qu'itinérance affichée et rapide-sécurisée est exécuté tout en évitant les trames d'authentification EAP et bien plus de prises de contact 4-Way, parce que les nouvelles clés de chiffrement sont encore dérivées, mais est basé sur le schéma de négociation CCKM. Ceci est terminé avec les trames de reassociation d'itinérance et les informations précédent-cachées par le

client et le WLC.

Scénario 21 : Vérifier la Rapide-Sécurisé-itinérance (FSR) avec la mise en cache WPA2 PMKID

Le debug a fonctionné

mettez au point l'addr> de <mac de client

```
*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:d2This 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:15:39:32The 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:15:39:32The 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 f5This 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:15:39:32WLC
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:15:39:32The 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 0The 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:15:39:32WLC 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 f5The 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
```

Scénario 22 : Vérifier l'itinérance Rapide-sécurisée avec le Key Caching proactif

Le debug a fonctionné

mettez au point l'addr> de <mac de client

```

*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:92This 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:5cThe 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:5cThe 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:5cAs 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:5cThe 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 SlotThe 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:5cWLC
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 e9The 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

```

Comme affiché au début du met au point, le PMKID doit être calculé après que la demande de reassociation du client soit reçue. C'est nécessaire afin de valider le PMKID et le confirmer que le PMK caché est utilisé avec la prise de contact WPA2 4-Way pour dériver les clés de chiffrement et pour terminer l'itinérance rapide-sécurisée. Ne confondez pas les entrées CCKM sur met au point ; ceci n'est pas utilisé afin d'exécuter CCKM, mais PKC/OKC, comme précédemment expliqué. CCKM ici est simplement un nom utilisé par le WLC pour ces sorties, telles que le nom d'une fonction qui manipule les valeurs afin de calculer le PMKID.

Scénario 23 : Vérifier la Rapide-Sécurisé-itinérance (FSR) avec 802.11r

Passage de debug

mettez au point l'addr> de <mac de client

```
*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:92This 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:5cThe 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:5cThe 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:5cAs 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:5cThe 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 SlotThe Reassociation
response is sent to the client, which validates the fast-roam with PKC/OKC.*dotlxBMsgTask: Jun 21
21:48:50.570: 00:40:96:b7:ab:5c Initiating RSN with existing PMK to mobile 00:40:96:b7:ab:5cWLC
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.*dotlxBMsgTask: Jun 21 21:48:50.570:
00:40:96:b7:ab:5c Skipping EAP-Success to mobile 00:40:96:b7:ab:5c*dotlxBMsgTask: 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*dotlxBMsgTask: 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.*dotlxBMsgTask:
Jun 21 21:48:50.570: [0000] 91 65 c3 fb fc 44 75 48 67 90 d5 da df aa 71 e9The 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.*dotlxBMsgTask: 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*DotlxBMsgTask_4: Jun 21
21:48:50.589: 00:40:96:b7:ab:5 Received EAPOL-Key from mobile
00:40:96:b7:ab:5c*DotlxBMsgTask_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*DotlxBMsgTask_4: Jun 21
21:48:50.589: 00:40:96:b7:ab:5cPMK: Sending cache add*DotlxBMsgTask_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 00.00.00.00.00.00.01*DotlxBMsgTask_4: Jun 21 21:48:50.610:
00:40:96:b7:ab:5c Received EAPOL-Key from mobile 00:40:96:b7:ab:5c*DotlxBMsgTask_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