Questions Sans fil communes d'aide-mémoire

Contenu

Introduction

Ce document décrit un aide-mémoire qui analyse met au point (habituellement « mettez au point le client < le >") de MAC address pour les questions Sans fil communes. Pour analyser par le « client d'exposition » et met au point nous exigera à d'abord comprennent quelques états PEM et états APF.

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Composants utilisés

Les informations dans ce documemt sont basées sur tous les contrôleurs de « AireOS ».

- Contrôleurs 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.

Les informations contenues dans ce document ont été créées à partir des périphériques d'un environnement de laboratoire spécifique. Tous les périphériques utilisés dans ce document ont démarré avec une configuration effacée (par défaut). Si votre réseau est vivant, assurez-vous que vous comprenez l'impact potentiel de n'importe quelle commande.

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** — Le client doit se terminer l'authentification de 802.1x.
- **L2AUTHCOMPLETE** — Le 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, des attentes WLC pour 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.

La clé donnée d'expositions de scénarios mettent au point des lignes pour des mauvaises configurations communes en configurations sans fil, ces les paramètres principaux de points culminants 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: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 ----------

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 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
```

Conclusion tirée

Bien que le « timeoutEvt » pour la clé m2 pourrait également être dû aux erreurs driver/NIC, un de la plupart de problème courant est l'utilisateur qui entre dans les qualifications incorrectes pour le mot de passe PSK (manqué cahracters distinguant majuscules et minuscules/spéciaux etc…) et incapable de se connecter.

Scénario 2 : Le téléphone Sans fil Handsets(792x/9971) ne s'associe pas avec Sans fil la « zone de service de feuilles »

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 reçoit 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 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**

Conclusion

Le debug sur le WLC prouve que le 7925G échoue association comme APreturns 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. Les tentatives WLAN 7925G de se connecter est configurées 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 mène 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 est 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 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.
```

Scénario 4 : Analysez les codes de retour ou de réponse d'AAA.

Requis met au point POUR S'EXÉCUTER 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 génère 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 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

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. RADIUS 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.

Renvoyez l'erreur 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:92:41
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
```

Renvoyez l'erreur d'AAA « erreur interne » (-6) pour le mobile

Non-concordance d'attribut. L'AAA envoie attribut incorrect/inadéquat (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:92:41
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
```

Erreur de renvoi d'AAA aucun serveur (-7) pour le mobile
Radius n'est pas correctement configuré et ou configuration non vérifiée 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:92:41
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
```

Scénario 5 : Le client ne s'associe pas 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 : Dissassociation 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, rainent 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 : Dissassociation 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:92:41
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
```

Conditions

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

Il force 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 : Dissassociation 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:92:41
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
```

Conditions

Pour modifier un WLAN dans de toute façon les débronchements et les renables WLAN

Contournement

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

Scénario 9 : Dissassociation 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:92:41
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

Conditions

Du GUI : Retirez le client

Du CLI : config client deauthenticate < MAC address >

Scénario 10 : Dissassociation 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:92:41
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

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:92:41
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

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 qui exécute 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

EAP/Eapol traitent les idoes pas g terminés, indépendamment de la radio A/G sont utilisés sur Intel/carte de Broadcom. aucune question quand c'est wep utilisé, 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 Radius
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:92:41
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

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 déchiffrage »

- 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 : Le service d'impression d'air ne prouve pas pour des clients avec des mdn que le fureteur s'est activé

Le client non capable voir des périphériques qui fournit le service d'AirPrint sur les périphériques tenus dans la main de client d'Apple quand les mdn pillent est activé.

Conditions

5508 WLC exécutant 7.6.100.0.
Avec des mdn pillons activé, nous avons les périphériques qui fournit 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:92:41
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
```

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.
Ainsi le service ajouté 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 donnée d'amélioration en ce qui concerne la même chose - CSCuj32157

Contournement

Le seul travail était autour de désactiver l'option 15 (nom de domaine) DHCP ou de 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 à déplacer d'un WLAN à l'autre sur le même Cisco WLC avec transfèrent « la modification rapide de ssid désactivée ».

La configuration fait désauthentifier le contrôleur le client du WLAN qui existent une fois les tentatives de client de s'associer à l'autre.

Le résultat typique est « incapable un message de joindre réseau » 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 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
```

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 qui utilise 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 authenticatied. Le serveur LDAP répond avec le le résultat de la requête. Pendant cet échange toutes les informations qui incluent 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 grippage sont ajoutés.

2. **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.

Exigences

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 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

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 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
```

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 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
```

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 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
```

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

Démonter de périphériques d'Apple du réseau Sans fil qui utilise ce qui suit :

Stratégie WPA2
Chiffrement WPA2 AES
802.1X d'authentification activé

Authentification et autorisation par l'intermédiaire de Cisco ISE

D'Apple de périphériques démonter périodiquement du SSID annoncé. Un exemple est un Iphone qui relâche tandis qu'un autre téléphone dans le même emplacement demeure connecté. , Se produit par conséquent aléatoirement (temps et téléphone).

Clients d'ordinateur portable sans 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 (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 errent 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 assocations 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 : Vérifiez 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 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.

En tant qu'itinérance affichée et rapide-sécurisée est exécuté pour éviter 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 rassociation d'itinérance et les informations précédent-cachées par le client et le WLC.

Scénario 21 : Vérifiez la Rapide-Sécurisé-itinérance (FSR) avec le 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: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

Scénario 22 : Vérifier l'itinérance Rapide-sécurisée avec le cache principal 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: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

Comme affiché au début du met au point, le PMKID doit être calculé après que la demande de rassociation 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 : Vérifiez 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: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