

欺诈行为图表共同性无线问题

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Introduction

本文描述通过调试的欺诈行为图表(通常“调试客户端解析<普通的无线问题的MAC地址>”)。要解析通过“请显示客户端”和调试将需要我们对首先了解一些PEM状态和APF状态。

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使用的组件

在此document的信息根据所有“AireOS”控制器。

- 控制器440x，5508，5520，75xx,85xx，2504和vWLC以及Wisms。
- 虽然许多概念是相同的在聚合的访问IOS-XE控制器和交换机，本文不适用于他们作为输出，并且调试是完全不同的。

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. 如果您的网络处于活动状态，请确保您了解所有命令的潜在影响。

简报PEM状态显示客户端输出

- **开始**—新的客户端条目的最初的状态。
- **AUTHCHECK** — WLAN有强制执行一个L2的认证策略。
- **8021X_REQD** —客户端必须完成802.1x认证。
- **L2AUTHCOMPLETE** —客户端顺利地完成了L2策略。进程能当前进行到L3策略(地址学习、Web auth等等)。如果这是同样移动组的，一个漫游的客户端控制器发送这里移动性公告了解L3从其他控制器的信息。
- **WEP_REQD** —客户端必须完成WEP身份验证。
- **DHCP_REQD** —控制器需要了解从客户端的L3地址，由ARP请求完成，DHCP请求或由从在移动组的其他控制器了解的信息更新，或者。如果需要的DHCP在WLAN被标记，只有使用DHCP或移动性信息。
- **WEBAUTH_REQD** —客户端必须完成Web认证。(L3策略)
- **CENTRAL_WEBAUTH_REQD**—客户端必须完成CWA登录，WLC等待接受CoA
- **RAN** —客户端成功地完成必需的L2和L3策略，并且能当前传输数据流到网络。

提供的方案在无线设置显示普通的误配置的关键调试线路，该在**粗体**的高亮度显示关键参数。

情形 1 : WPA/WPA2 PSK认证的不正确的配置密码短语在客户端

```
(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 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 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 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 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 -----

```

调试客户端分析

```
(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

*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 *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

被总结的结论

虽然“timeoutEvt’ M2键的可能也归结于driver/NIC错误，一个多数常见问题是进入PSK密码的用户(丢失的区分大小写/特殊characters的不正确证件等等)和无法连接。

方案 2：无线电话Handsets(792x/9971)不能与无线“分支服务地区”产生关联

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

拓扑

与Cisco Unified无线IP电话的WLAN

问题详细资料

AIR-CT5508-50-K9 //升级了电话的固件，并且无线控制器不接受电话注册

调试和日志

```
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
```

结论

在WLC的调试表示，7925G失效关联作为APreturns关联状态码201。

这归结于自的电话听筒的一个TSPEC (数据流规格)请求被拒绝的归结于WLAN配置。WLAN 7925G尝试连接配置有银QoS配置文件(0,3)，而不是白金(6,7)如所需求。这导致语音流量/动作帧交换的TSPEC不匹配从电话听筒通过WLAN和根本地拒绝从AP。

用白金QoS配置文件特别地创建一新的WLAN 7925G电话听筒的和配置根据设立的最佳实践和如对7925G部署指南定义：

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

一旦配置，问题是解决的。

情形 3：WPA的为WPA2仅配置的客户机中配置，但是AP

调试客户端<mac addr>

```
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 10:51:44 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.

场景 4：解析AAA回归或回应代码。

对收集期待的日志的RAN的必需的调试：

(Cisco控制器) >debug MAC地址<mac>

(Cisco控制器) >debug aaa事件enable (event)

(或)

(Cisco控制器) >debug客户端<mac>

(Cisco控制器) >debug aaa事件enable (event)

(Cisco控制器) >debug aaa错误enable (event)

如果陷阱是启用的，AAA连通性故障形成一个SNMP陷阱。

示例调试输出<snipped>

```
*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

可能的来源：

1. 无效用户帐户和密码
2. 计算机域的不是成员，在AD边发出。
3. 不适当地工作的证书服务
4. 到期的服务器证明或不在使用中
5. 不正确地被配置的RADIUS

6. 访问不正确地被输入的键-区分大小写(因此是SSID)
7. 更新Microsoft补丁程序。
8. EAP计时器。
9. 在客户端/服务器配置的不正确eap方法。
10. 客户端证书是过期或不在使用中的。

返回AAA错误‘超时’ (-5)移动的

不可得到的AAA服务器，跟随由客户端death。

示例：

```
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
```

返回AAA错误‘内部错误’ (-6)移动的

AAA()/WLCWLC“Death [CSCum83894](#) AAA “authw/unknown

示例：

```
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
```

返回的AAA错误没有服务器(-7)的移动

没有适当地配置Radius和或不支持的配置在使用中。

示例：

```
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
```

场景 5 : 客户端不能联合到AP

调试运行了

调试客户端<mac addr>

解析的日志

发送Assoc回应驻防在BSSID 00:26:cb:94:44:c0 (状态0) ApVapId 1 Slot 0

- Slot 0 = B/G(2.4)无线电

Slot 1 = A(5)无线电

- 发送Assoc回应状态0 =成功

任何除状态0之外是故障

同盟会回应状态码可以在<https://supportforums.cisco.com/document/141136/80211-association-status-80211-deauth-reason-codes>找到

场景 6 : 客户端分离由于空闲超时

调试运行了

调试客户端<mac addr>

解析的日志

从AP 00:26:cb:94:44:c0的接收的Idle-timeout , STA的00:1e:8c:0f:a4:57 slot 0

apfMsDeleteByMscb删除的安排移动与deleteReason 4 , reasonCode 4

便携位置的安排删除 : (callerId : 30)以1秒

apfMsExpireCallback (apf_ms.c:608)到期的移动!

对移动的被发送的Deauthenticate在BSSID 00:26:cb:94:44:c0 slot 0(caller apf_ms.c:5094)

条件

在从客户端收到的没有数据流以后发生

默认期限是300秒

解决方法

从WLC GUI>>WLAN>>ID>>Advanced增加空闲超时或者全局表WLC GUI>>Controller>>General或每WLAN

场景 7 : 客户端分离由于会话超时

调试运行了

调试客户端<mac addr>

解析的日志

```
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
```

条件

发生在被安排的期限(默认值1800秒)

它再迫使WEBAUTH用户对WEBAUTH。

[解决方法](#)

增加或禁用会话超时每从WLC GUI>>WLAN>>ID>>Advanced的WLAN

方案8：客户端分离由于WLAN更改

调试运行了

调试客户端<mac addr>

解析的日志

```
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
```

条件

无论如何修改在功能失效和renables WLAN的一WLAN

[解决方法](#)

这是预料之中的行为。当有做时的WLAN变动，客户端分离并且重新关联。

方案9：客户端分离由于从WLC的手工的删除

调试运行了

调试客户端<mac addr>

解析的日志

```
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
```

条件

从GUI：去除客户端

从CLI：设置客户端deauthenticate <MAC地址>

方案10：客户端分离由于认证超时

调试运行了

调试客户端<mac addr>

解析的日志

```
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
```

条件

被到达的认证或密钥交换最大重新传输

[解决方法](#)

检查/更新客户端驱动程序、安全设置，证书等。

方案11 : 客户端分离由于被重置的AP无线电(功率/信道)

调试运行了

调试客户端<mac addr>

解析的日志

```
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
```

条件

AP分离客户端，但是WLC没有Delete条目。

[解决方法](#)

期望的工作情况。

方案12 : Symantec 802.1X 'timeoutEvt的'客户端问题

问题

客户端运行的Symantec软件用消息802.1X '为消息= M3到期的为位置和timeoutEvt'计时器分离

EAP/Eapol进程idoes没有g完成，不考虑A/G无线电在Intel/Broadcom卡没有使用。没有问题，当它是使用的wep，WPA-PSK。

条件

WLC代码不重要。

APs -所有型号-所有在本地传送方式。

WLAN 3 - WPA2+802.1X PEAP + mshcapv2

播放ssid。

RADIUS服务器nps 2008年

Symantec抗病毒软件在所有个人计算机上安装

使用Asus，Braodcom，Intel - win7，成功XP

受影响的OS -窗口7和xp

受影响的无线适配器- Intel(6205)和Broadcom

受影响的驱动程序/请求方- 15.2.0.19，使用本地请求方。

修正/解决方法：禁用Symantec网络保护和防火墙在win7和xp。它是Win 7和XP OS的Symantec问题。

调试输出

```
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
```

注意：

在15.2有综合症状(也看到在更早版本)去类似：

-客户端从AP获得M1

-客户端发送M2

-客户端从AP获得M3

在派出M4前，-客户端成对地测量深度新的键

-客户端传输用新密钥AP加密的M4，丢弃M4消息作为“解密错误”

-WLC‘调试客户端’表示，我们在M3重新传输计时。明显，这是在Microsoft和Symantec之间的一个问题，不是Intel特定。解决方法是去除Symantec。这确实是很可能在窗口的Bug，触发由Symantec。调整EAP计时器不调整此问题

关于此问题，Cisco TAC将转发受影响的用户到Symantec和Microsoft。

方案13：空气打印服务不为有mDNS的客户端表示，监听打开了

在Apple手持式客户端设备提供AirPrint服务不能的客户端发现设备，当mDNS监听打开。

条件

运行7.6.100.0的5508 WLC。

当mDNS监听打开，我们有设备提供AirPrint服务列出了在关于WLC的服务部分下。

各自mDNS配置文件正确地被映射对WLAN &接口。

无法能发现在客户端的AirPrint设备。

调试运行了

调试客户端<mac addr>

调试mdns所有enable (event)

```
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
```

说明

客户端为‘_universal._sub._ipps._tcp.local会要求’。或者‘_universal._sub._ipp._tcp.local’。而不是‘_ipp._tcp.local’。或者‘_ipp._tcp.local’。字符串。没因此被添加的AirPrint服务将运作。它被识别将被映射的请求的服务字符串对‘HP_Photosmart_Printer_1

同一项服务在被映射的配置文件被添加了到WLAN，并且仍有为设备列出的没有服务。

发现由于域名被添附的和查询‘dns SD._udp.YVG.local的客户端’。当域名被添附WLC没有能处理Bonjour信息包作为‘dns SD._udp.YVG.local’。不存在于数据库。

识别特定增进Bug关于同样- [CSCuj32157](#)

解决方法

唯一的工作是禁用DHCP选项15 (域名)或从客户端去除域名。

方案14 : Apple无法IOS的客户端‘加入由于的网络’禁用快速的SSID更改

条件

多数Apple IOS设备有问题移动从一WLAN到另一个在与默认值“被禁用的快速的ssid更改的同样Cisco WLC’。

设置导致控制器deauthenticate从一次存在客户端尝试联合到另一个的WLAN的客户端。

典型的结果是在IOS设备的一个“无法加入网络’消息

显示客户端

(jk-2504-116) >show网络汇总

<snip>

快速的SSID更改.....禁用

调试运行了

(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
```

解决方法

Enable (event)从WLC GUI>>Controller>>General的迅速ssid更改

方案15 : 成功的客户端LDAP关联

巩固控制器和使用TLS的LDAP服务器之间的连接的安全的LDAP帮助。此功能用控制器软件版本7.6支持以上。

有可以由控制器发送到LDAP服务器查询的两种类型 :

1.匿名 :

在此类型,当客户端需要获得authenticated时,控制器发送认证请求到LDAP服务器。LDAP服务器回应查询的结果。在此交换期间包括客户端用户名/密码的所有信息在明文被发送。只要捆绑用户名/密码被添加,LDAP服务器将回应从任何人的一次查询。

2.验证 :

在此方法控制器配置有使用用LDAP服务器验证本身的用户名和密码。密码用MD5 SASL加密和被发送到LDAP服务器在认证过程中。这正确地帮助LDAP服务器识别认证请求的来源。然而,即使控制器的身份保护客户端详细资料在明文被发送。

LDAP的实际需求在TLS来由于客户端验证数据和处理其余无危险发生的两个这两个方法摆在的安全漏洞。

Requirements

运行软件版本7.6的WLC以上

执行LDAP的Microsoft服务器

调试运行了

debug aaa ldap enable (event)

```
(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

方案16 : 在LDAP失效的客户端验证

调试运行

debug aaa ldap enable (event)

```
(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

[解决方法](#)

检查LDAP服务器拒绝原因。

方案17：客户端关联问题由于LDAP在WLC被不正确配置

调试运行了

debug aaa ldap enable (event)

```
(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
```

[解决方法](#)

验证在client/WLC和LDAP服务器间的证件。

方案18：当LDAP服务器是不可得到的，客户端关联发出

调试运行了

debug aaa ldap enable (event)

```
(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
```

[解决方法](#)

检查WLC和LDAP服务器网络连通性问题。

方案19 : Apple客户端漫游的问题由于错过粘贴漫游的配置

条件

AIR-CT5508-K9/7.4.100.0

Apple从使用以下的无线网络的设备断开：

WPA2策略

WPA2加密AES

被启用的认证802.1X

认证和授权通过Cisco ISE

Apple设备从被播放的SSID周期地断开。示例是丢弃的IP电话，当另一个电话在同一个位置保持接通时。所以，随机地发生(时间和电话)。

没有问题的膝上型计算机客户端。他们连接到同样SSID。

此问题在正常运行时发生，没有漫游，没有备用方式。

WLAN已经去除了可能导致问题的所有可能的设置(Aironet ext)。

调试运行了

调试客户端<mac addr>

```
*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 = MO 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.

解决方法

什么我们能为有SKC的用户当前执行(粘贴关键缓存)客户端并且有WLC代码7.2和更高是enable (event)漫游SKC (粘贴关键高速缓冲存储器)的技术支持。

默认情况下仅WLC技术支持OKC (机会主义的关键缓存)。为了允许客户端使用它生成在每个AP的其老PMKIDs我们通过WLC CLI必须enable (event)它。

设置WLAN安全WPA wpa2高速缓冲存储器粘贴enable (event) <1>

请记住此不会改进首字母漫游由于SKC的本质;然而,它将改进随后漫游对同样Aps (8由书)。步行沿着向下与8 Aps的一楼道的Imagine。第一个初排将包括充分的associations在与大约1-2秒滞后的每个AP。当您到达末端并且走客户端将提交8唯一PMKIDs,当移动回到同样Aps,并且不会必须通过一个充分的认证,如果SKC技术支持是启用的。因而去除滞后和客户端将看上去坚持连接。

方案20 : 验证迅速安全漫游(FSR)与CCKM

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

调试运行

调试客户端<mac addr>

```
*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.

如显示的，迅速安全漫游执行避免EAP验证帧和更加4方式握手，因为新的加密密钥仍然派生，但是根据CCKM协商方案。这完成与客户端和WLC和信息早先缓存的漫游的再聚集帧。

方案21：验证迅速安全漫游(FSR)与WPA2 PMKID高速缓冲存储器

调试运行了

调试客户端<mac addr>

```
*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 00.00.00.00.00.00.00.00.00 *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
```

方案22：验证迅速安全漫游与积极的关键高速缓冲存储器

调试运行了

调试客户端<mac addr>

```
*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
```

PMKID，在自客户端的再聚集请求收到后，如显示在调试初，必须计算。这是需要的为了验证PMKID和确认被缓存的PMK与WPA2 4方式握手一起使用派生加密密钥和完成迅速安全漫游。请勿

混淆在调试的CCKM条目;这没有用于为了执行CCKM，然而PKC/OKC，如以前解释。这里CCKM是WLC的名字用于那些输出，例如处理值为了计算PMKID功能的名字。

方案23：验证迅速安全漫游(FSR)与802.11r

调试运行

调试客户端<mac addr>

```
*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
*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