Problem beim Join-Problem mit dem Converged Access Controller/NGWC AP mit Ablaufverfolgungen beheben

Inhalt

Einführung
Voraussetzungen
Anforderungen
Verwendete Komponenten
Zugehörige Produkte
AP-Join-Sequenz
Fehlerbehebung
Grundlegende Schritte
Ablaufverfolgung vom Controller
Häufige Gründe für den Ausfall der AP-Join-Funktion
Problem 1: Der Access Point des Catalyst Switches der Serie 3850 befindet sich nicht im WLAN-Management-VLAN.
Problem 2: Das AP-Modell wird nicht unterstützt.
Problem 3: Die Lizenz für die AP-Zählung ist auf dem Controller nicht aktiviert.
Problem 4: Der regulatorische Bereich ist uneinheitlich.
Problem 5: Der Wireless Mobility Controller ist nicht definiert.
Problem 6: Der Access Point hat einen Mesh-Code.
Problem 7: Der AP3700 ist mit einem Catalyst Switch der Serie 3850 verbunden, der 3.3.0SE ausführt.
Problem 6: Die Controller-Zeit liegt außerhalb des Gültigkeitsintervalls für das AP-Zertifikat.
Problem 9: Die AP-Autorisierungsliste ist auf dem WLC aktiviert. der Access Point ist nicht in der Autorisierungsliste enthalten.
Problem 10: Die MIC AP-Richtlinie ist deaktiviert.
Allgemeine technische Tipps

Einführung

Dieses Dokument beschreibt die Ablaufverfolgungsbefehle, die zur Fehlerbehebung bei Verbindungsproblemen von Access Points (APs) auf konvergenten Access Controllern verwendet werden, und beschreibt einige häufige Ursachen für den Ausfall der Access Point-Verbindung.

Voraussetzungen

Anforderungen

Cisco empfiehlt, über grundlegende Kenntnisse in folgenden Bereichen zu verfügen:

- LWAPP (Lightweight Access Point Protocol)/CAPWAP (Control and Provisioning of Wireless Access Points)
- Lightweight Access Point (LAP)- und Wireless LAN Controller (WLC)-Konfigurationen für den Basisbetrieb

Verwendete Komponenten

Die Informationen in diesem Dokument basieren auf einem Cisco Catalyst Switch der Serie 3850, auf dem die Software Version 3.3.0 SE ausgeführt wird.

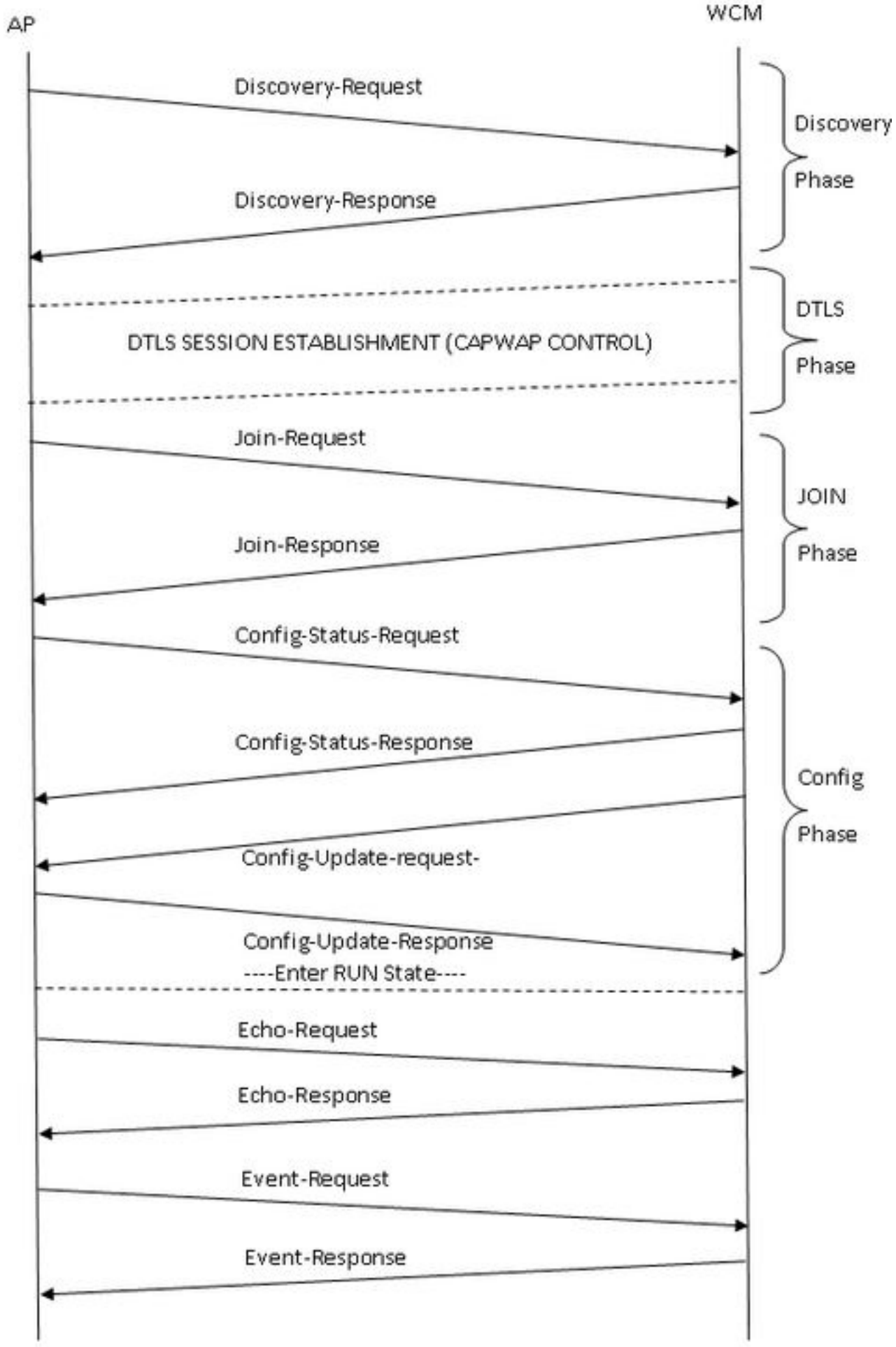
Die Informationen in diesem Dokument wurden von den Geräten in einer bestimmten Laborumgebung erstellt. Alle in diesem Dokument verwendeten Geräte haben mit einer leeren (Standard-)Konfiguration begonnen. Wenn Ihr Netzwerk in Betrieb ist, stellen Sie sicher, dass Sie die potenziellen Auswirkungen eines Befehls verstehen.

Zugehörige Produkte

Dieses Dokument gilt für alle konvergenten Access Controller.

- Cisco Wireless Controller der Serie 5760
- Cisco Catalyst Switches der Serie 3560
- Cisco Catalyst Switches der Serie 3850

AP-Join-Sequenz


AP
WCM
Discovery-Request
Discovery-Response
Discovery
Phase
DTLS SESSION ESTABLISHMENT (CAPWAP CONTROL)
DTLS
Phase
Join-Request
Join-Response
JOIN
Phase
Config-Status-Request
Config-Status-Response
Config-Update-request-
Config-Update-Response
----Enter RUN State----
Config
Phase
Echo-Request
Echo-Response
Event-Request
Event-Response

Fehlerbehebung

Grundlegende Schritte

Gehen Sie wie folgt vor, um das Problem der AP-Verbindung bei konvergenten Access Controllern zu beheben:

1. Bestätigen Sie, dass der Access Point eine IP-Adresse abrufen kann. Geben Sie auf dem Switch, an dem der Access Point angeschlossen ist, Folgendes ein:

   ```
   #show cdp neighbor detail
   ```

   Hinweis: Für den Catalyst Switch der Serie 3850 muss der Access Point direkt mit dem Catalyst Switch der Serie 3850 verbunden sein, und die Switch-Port-Konfiguration muss wie folgt lauten:

   Interface Gig <>
   Switchport-Moduszugriff
   Switch-Port-Access-VLAN x >>, wobei x das auf dem Catalyst Switch der Serie 3850 konfigurierte Wireless-Management-Interface-VLAN x ist.

2. Stellen Sie sicher, dass der WLC einen Ping an die IP-Adresse senden kann und umgekehrt.

3. Überprüfen Sie, ob ein Wireless Mobility Controller (MC) im Netzwerk konfiguriert ist. Wenn Sie bei einem Mobility Agent angemeldet sind, stellen Sie sicher, dass der Tunnel Mobility Controller aktiv ist.

   ```
   #show wireless mobility summary
   ```

4. Stellen Sie sicher, dass die AP-Lizenz auf dem MC aktiviert ist:

   ```
   #show license right-to-use summary
   ```

5. Bestätigen Sie, dass der korrekte Ländercode aktiviert ist:

   ```
   #show wireless country configured
   ```

Ablaufverfolgung vom Controller

Wenn die richtige Konfiguration vorhanden ist und der Access Point ausfällt, können Ablaufverfolgungsbefehle zur weiteren Diagnose verwendet werden. Diese Ablaufverfolgungsbefehle sind auf dem Controller verfügbar, um die Fehlerbehebung für CAPWAP und AP Join durchzuführen:

- #Trace-Capwap festlegen
- #Trace-Capwap-Karte festlegen

- #Trace-Gruppenap festlegen

Basierend auf der Überprüfung der Ablaufverfolgungsausgaben lieferten die Group-ap-Ablaufverfolgungen relevantere Ergebnisse für die Fehlerbehebung bei Access Points. Daher wird diese Ablaufverfolgung (ungefiltert) in diesem Dokument ausführlich behandelt. Weitere Informationen zu Filteroptionen und Einschränkungen dieser Ablaufverfolgung finden Sie im Abschnitt "Allgemeine technische Tipps" dieses Dokuments.

> **Hinweis**: Die Beispielausgabe (gefiltert und ungefiltert) für Capwap und Capwap ap ist als Referenz enthalten.

- Um die Standardeinstellungen der Ablaufverfolgung anzuzeigen, geben Sie Folgendes ein:

```
#show trace settings group-ap
Buffer Properties:
Feature-Name
Size        Level
-------------------------------------------------------------------------------------------
------------
capwap/ap/event
                                                    0           warning
dtls/ap/event
0           warning
iosd-wireless/capwap
0           warning

Feature-Name: capwap/ap/event
     Filters: None
Feature-Name: dtls/ap/event
     Filters: None
Feature-Name: iosd-wireless/capwap
     Filters: None
```

> **Hinweis**: Standardmäßig gibt es keine Filter für eine der Traces.

- Um den Ablaufverfolgungspuffer zu löschen, der der Gruppenap-Ablaufverfolgung entspricht, geben Sie

```
#set trace control group-ap clear
```

- Geben Sie Folgendes ein, um die Ablaufverfolgungsebene für die Gruppenap-Ablaufverfolgung festzulegen:

```
#set trace group-ap level ?
 debug    Debug-level messages (7)
 default  Unset Trace Level Value
 err      Error conditions (3)
 info     Informational (6)
 warning  Warning conditions (4)
```

Verwenden Sie während der Fehlerbehebung das Debuggen für die **Ablaufverfolgungsgruppenzuordnungsebene #set**.

- Um die Ablaufverfolgungsebene zu überprüfen, geben Sie Folgendes ein:

```
# show trace settings group-ap
Buffer Properties:
Feature-Name
Size        Level
-------------------------------------------------------------------------------------------
------------
capwap/ap/event
0           debug
dtls/ap/event
0           debug
iosd-wireless/capwap
0           debug

Feature-Name: capwap/ap/event
     Filters: None
Feature-Name: dtls/ap/event
     Filters: None
Feature-Name: iosd-wireless/capwap
     Filters: None
```

- Um die Ablaufverfolgungsausgabe anzuzeigen, geben Sie Folgendes ein:

```
# show trace messages group-ap
```

Analyse-Anfrage/Respose

```
[11/14/13 14:50:17.484 UTC 702f4a 8528] f84f.57ca.3860 Discovery Request from
10.201.234.24:18759

[11/14/13 14:50:17.484 UTC 702f4b 8528] f84f.57ca.3860 Discovery apType = 0,
apModel = AIR-CAP2602I-A-K9, Discovery supportedRadios = 0, incomingRadJoinPriority
= 1, Discovery versionNum = 167863296

[11/14/13 14:50:17.484 UTC 702f4c 8528] f84f.57ca.3860 Join Priority Processing
status =0, Incoming Ap's Priority 1, MaxLrads = 50, joined Aps =0

[11/14/13 14:50:17.484 UTC 702f4d 8528] f84f.57ca.3860 Validated Discovery request
with dest ip : 255.255.255.255 from AP  10.201.234.24. Response to be sent using
ip : 10.201.234.4

[11/14/13 14:50:17.484 UTC 702f4e 8528] Encode static AP manager 10.201.234.4,
AP count 0

[11/14/13 14:50:17.484 UTC 702f4f 8528] acEncodeMwarTypePayload encode mwarType = 0
in capwapMwarTypePayload.

[11/14/13 14:50:17.484 UTC 702f50 8528] f84f.57ca.3860 Discovery Response sent to
10.201.234.24:18759

[11/14/13 14:50:27.484 UTC 57 8528] Connection not found in hash table - Table empty.
```

DTLS-Handshake

Hinweis: Dies ist aus der AP-Sicht, sodass nur Nachrichten, die von AP gesendet werden, angezeigt werden.

```
[11/14/13 14:50:27.484 UTC 702f51 8528] DTLS connection not found, creating new
connection for 10:201:234:24 (18759) 10:201:234:4 (5246)

[11/14/13 14:50:27.484 UTC 702f52 8528] acDtlsCallback: entering...

[11/14/13 14:50:27.484 UTC 702f53 8528] acDtlsCallback: cb->code 10

[11/14/13 14:50:27.484 UTC 58 8528] Certificate installed for PKI based
authentication.

[11/14/13 14:50:27.484 UTC 59 8528] Incremented concurrent handshaking count 1

[11/14/13 14:50:27.484 UTC 5a 8528] f84f.57ca.3860 record=Handshake epoch=0
seq=0

[11/14/13 14:50:27.484 UTC 5b 8528] f84f.57ca.3860   msg=ClientHello len=44 seq=0
frag_off=0 frag_len=44

[11/14/13 14:50:27.485 UTC 5c 8528] f84f.57ca.3860 Handshake in progress...

[11/14/13 14:50:27.489 UTC 5d 8528] f84f.57ca.3860 record=Handshake epoch=0 seq=1

[11/14/13 14:50:27.489 UTC 5e 8528] f84f.57ca.3860   msg=ClientHello len=76
seq=1 frag_off=0 frag_len=76 (with cookie)

[11/14/13 14:50:27.490 UTC 5f 8528] f84f.57ca.3860 Handshake in progress...

[11/14/13 14:50:27.670 UTC 60 8528] f84f.57ca.3860 record=Handshake epoch=0 seq=2

[11/14/13 14:50:27.670 UTC 61 8528] f84f.57ca.3860   msg=Certificate len=1146
seq=2 frag_off=0 frag_len=519

[11/14/13 14:50:27.670 UTC 62 8528] f84f.57ca.3860 Handshake in progress...

[11/14/13 14:50:27.670 UTC 63 8528] f84f.57ca.3860 record=Handshake epoch=0 seq=3

[11/14/13 14:50:27.670 UTC 64 8528] f84f.57ca.3860   msg=Certificate len=1146
seq=2 frag_off=519 frag_len=519

[11/14/13 14:50:27.670 UTC 65 8528] f84f.57ca.3860 Handshake in progress...

[11/14/13 14:50:27.670 UTC 66 8528] f84f.57ca.3860 record=Handshake epoch=0 seq=4

[11/14/13 14:50:27.670 UTC 67 8528] f84f.57ca.3860   msg=Certificate len=1146
seq=2 frag_off=1038 frag_len=108

[11/14/13 14:50:27.671 UTC 702f54 8528] acDtlsCallback: entering...

[11/14/13 14:50:27.671 UTC 702f55 8528] acDtlsCallback: cb->code 3

[11/14/13 14:50:27.672 UTC 68 8528] Verify X.509 certificate from wtp
7c69.f604.9460

[11/14/13 14:50:27.673 UTC 702f56 8528] acDtlsCallback Cert validation PENDING

[11/14/13 14:50:27.673 UTC 69 8528] f84f.57ca.3860 Certificate verification -
pending...
```

[11/14/13 14:50:27.673 UTC 6a 8528] f84f.57ca.3860 Handshake in process..
awaiting certificate verification result..

[11/14/13 14:50:27.673 UTC 6b 8528] f84f.57ca.3860 record=Handshake epoch=0 seq=5

[11/14/13 14:50:27.673 UTC 6c 8528] f84f.57ca.3860 **msg=ClientKeyExchange**
len=130 seq=3 frag_off=0 frag_len=130

[11/14/13 14:50:27.673 UTC 702f57 8528] acDtlsCallback: entering...

[11/14/13 14:50:27.673 UTC 702f58 8528] acDtlsCallback: cb->code 3

[11/14/13 14:50:27.674 UTC 6d 8528] Verify X.509 certificate from wtp
7c69.f604.9460

[11/14/13 14:50:27.675 UTC 702f59 8528] acDtlsCallback Cert validation PENDING

[11/14/13 14:50:27.675 UTC 6e 8528] f84f.57ca.3860 Certificate verification -
pending...

[11/14/13 14:50:27.675 UTC 6f 8528] f84f.57ca.3860 Handshake in process..
awaiting certificate verification result..

[11/14/13 14:50:27.675 UTC 70 8528] f84f.57ca.3860 record=Handshake epoch=0 seq=6

[11/14/13 14:50:27.675 UTC 71 8528] f84f.57ca.3860 **msg=CertificateVerify**
len=258 seq=4 frag_off=0 frag_len=258

[11/14/13 14:50:27.675 UTC 702f5a 8528] acDtlsCallback: entering...

[11/14/13 14:50:27.675 UTC 702f5b 8528] acDtlsCallback: cb->code 3

[11/14/13 14:50:27.676 UTC 72 8528] Verify X.509 certificate from wtp 7c69.f604.9460

[11/14/13 14:50:27.676 UTC 702f5c 8528] acDtlsCallback Cert validation PENDING

[11/14/13 14:50:27.676 UTC 73 8528] f84f.57ca.3860 Certificate verification -
pending...

[11/14/13 14:50:27.676 UTC 74 8528] f84f.57ca.3860 Handshake in process..
awaiting certificate verification result..

[11/14/13 14:50:27.677 UTC 75 8528] f84f.57ca.3860 **record=ChangeCipherSpec**
epoch=0 seq=7

[11/14/13 14:50:27.677 UTC 702f5d 8528] acDtlsCallback: entering...

[11/14/13 14:50:27.677 UTC 702f5e 8528] acDtlsCallback: cb->code 3

[11/14/13 14:50:27.677 UTC 76 8528] Verify X.509 certificate from wtp 7c69.f604.9460

[11/14/13 14:50:27.678 UTC 702f5f 8528] acDtlsCallback Cert validation PENDING

[11/14/13 14:50:27.678 UTC 77 8528] f84f.57ca.3860 Certificate verification -
pending...

[11/14/13 14:50:27.678 UTC 78 8528] f84f.57ca.3860 Handshake in process..
awaiting certificate verification result..

[11/14/13 14:50:27.678 UTC 79 8528] f84f.57ca.3860 record=Handshake epoch=1 seq=0

[11/14/13 14:50:27.678 UTC 7a 8528] f84f.57ca.3860 **msg=Unknown or Encrypted**

[11/14/13 14:50:27.679 UTC 702f60 8528] acDtlsCallback: entering...

[11/14/13 14:50:27.679 UTC 702f61 8528] acDtlsCallback: cb->code 3

[11/14/13 14:50:27.679 UTC 7b 8528] Verify X.509 certificate from wtp 7c69.f604.9460

[11/14/13 14:50:27.680 UTC 702f62 8528] acDtlsCallback Cert validation PENDING

[11/14/13 14:50:27.680 UTC 7c 8528] f84f.57ca.3860 Certificate verification - pending...

[11/14/13 14:50:27.680 UTC 7d 8528] f84f.57ca.3860 Handshake in process.. awaiting certificate verification result..

[11/14/13 14:50:27.681 UTC 7e 8528] Tickling the connection: 10.201.234.4:5246 <-> 10.201.234.24:18759.

[11/14/13 14:50:27.681 UTC 702f63 8528] acDtlsCallback: entering...

[11/14/13 14:50:27.681 UTC 702f64 8528] acDtlsCallback: cb->code 3

[11/14/13 14:50:27.682 UTC 7f 8528] **Verify X.509 certificate from wtp 7c69.f604.9460 >> AP Ethernet mac**

[11/14/13 14:50:27.683 UTC 702f65 8528] acDtlsCallback Cert validation SUCCESS.

[11/14/13 14:50:27.683 UTC 80 8528] f84f.57ca.3860 **Certificate verification - passed!**

[11/14/13 14:50:27.706 UTC 81 8528] f84f.57ca.3860 **Connection established!**

[11/14/13 14:50:27.706 UTC 702f66 8528] acDtlsCallback: entering...

[11/14/13 14:50:27.706 UTC 702f67 8528] acDtlsCallback: cb->code 0

[11/14/13 14:50:27.706 UTC 82 8528] f84f.57ca.3860 **DTLS Connection 0x5789a5e0 established on local port 5246**

[11/14/13 14:50:27.706 UTC 83 8528] f84f.57ca.3860 Setting DTLS MTU for link to peer 10.201.234.24:18759

[11/14/13 14:50:27.706 UTC 84 8528] Load Balancer: Platform Not supported, Exiting from ctrl_tunnel_lb

[11/14/13 14:50:27.706 UTC 85 8528] Capwap Control DTLS key plumbing: Get SA resources from LB for AP IP 10.201.234.24, rc = 4

[11/14/13 14:50:27.706 UTC 86 8528] Plumbing DTLS keys for local 10.201.234.4:5246 and peer 10.201.234.24:18759, anc_sw_id 0, anc_asic_id 0, res_sw_id 0, res_asic_id 0

[11/14/13 14:50:27.706 UTC 87 8528] Created CAPWAP control DTLS engine session 10.201.234.4:5246 <-> 10.201.234.24:18759.

[11/14/13 14:50:27.706 UTC 88 8528] f84f.57ca.3860 Sending Finished using epoch 1

[11/14/13 14:50:27.706 UTC 702f68 8528] DTLS Session established server (10.201.234.4:5246), client (10.201.234.24:18759)

[11/14/13 14:50:27.706 UTC 702f69 8528] Starting wait join timer for AP: 10.201.234.24:18759

[11/14/13 14:50:27.707 UTC 30e2 267] %DTLS: entering dtls_add_dtls_session_db_entry

[11/14/13 14:50:27.707 UTC 30e3 267] %DTLS: sip = 0xac9ea04 dip = 0xac9ea18 sport =5246 dport=18759

[11/14/13 14:50:27.707 UTC 30e4 267] %DTLS: dtls_add_dtls_session_db_entry: anchor_port iifd : 1088ec00000003b : capwap_iifd : 0 : session type : 0 : sw_num : 0 : asic : 0

[11/14/13 14:50:27.707 UTC 30e5 267] %DTLS: bk_sw_num : 0 bk_asic : 0

[11/14/13 14:50:27.710 UTC 89 8528] Received DTLS engine action feedback for CAPWAP connection

[11/14/13 14:50:27.711 UTC 8a 8528] DTLS Engine Add Success received for connection 10.201.234.4:5246 / 10.201.234.24:18759

[11/14/13 14:50:27.711 UTC 8b 8528] Key plumb succeeded

[11/14/13 14:50:27.711 UTC 8c 8528] Decrement concurrent handshaking count 0

[11/14/13 14:50:27.711 UTC 8d 8528] Updating state for wtp f84f.57ca.3860 ip 10.201.234.24

[11/14/13 14:50:27.711 UTC 8e 8528] CAPWAP WTP entry not yet created.

[11/14/13 14:50:27.712 UTC 702f6a 8528] Unable to find the First RCB index. Return Value: 2

Beitreten zu Request Response

[11/14/13 14:50:27.712 UTC 702f6b 8528] f84f.57ca.3860 **Join Request** from 10.201.234.24:18759

[11/14/13 14:50:27.712 UTC 702f6c 8528] f84f.57ca.3860 For phy port iif id 0x01088ec00000003b, control session - anc sw id 0, anc asic id 0, res sw id 0, res asic id 0 in RCB for AP 10.201.234.24

[11/14/13 14:50:27.712 UTC 8f 8528] Creating WTP 0x3823a0f0 for AP f84f.57ca.3860 with hardware encryption flag = TRUE

[11/14/13 14:50:27.712 UTC 702f6d 8528] f84f.57ca.3860 Deleting AP entry 10.201.234.24:18759 from temporary database.

[11/14/13 14:50:27.712 UTC 702f6e 8528] CAPWAP Interface-Name CAPWAP WCM Client f84f57ca3860 used for IIF ID allocation

[11/14/13 14:50:27.712 UTC 702f6f 8528] **CAPWAP IIF ID Allocation Successful! ID:0x00d2a98000000796** for AP 10.201.234.24, AP hash 1 **[This indicates generation of a capwapx interface seen in show ip interface brief]**

[11/14/13 14:50:27.712 UTC 702f70 8528] Adding Node to AVL Tree with IIF Id:0xd2a98000000796

[11/14/13 14:50:27.712 UTC 702f71 8528] WTP IIF ID Type: 0

[11/14/13 14:50:27.712 UTC 702f72 8528] Timer created successfully for WTP IIF ID: 0xd2a98000000796

[11/14/13 14:50:27.712 UTC 702f73 8528] Added IIF ID to AVL Tree Database 0xd2a98000000796

[11/14/13 14:50:27.712 UTC 702f74 8528] f84f.57ca.3860 Join Version: = 167863296

[11/14/13 14:50:27.712 UTC 702f75 8528] Encode static AP manager 10.201.234.4, AP count 0

[11/14/13 14:50:27.712 UTC 702f76 8528] f84f.57ca.3860 Join resp: CAPWAP Maximum Msg element len = 87

[11/14/13 14:50:27.712 UTC 702f77 8528] f84f.57ca.3860 **Join Response sent** to 10.201.234.24:18759

[11/14/13 14:50:27.712 UTC 702f78 8528] f84f.57ca.3860 **CAPWAP State: Join**

[11/14/13 14:50:27.712 UTC 702f79 8528] f84f.57ca.3860 capwap_ac_platform.c:767 - Operation State 0 ===> 4

[11/14/13 14:50:27.713 UTC 702f7a 8528] f84f.57ca.3860 Register LWAPP event for AP f84f.57ca.3860 slot 0

[11/14/13 14:50:27.713 UTC 702f7b 8528] capwap_iif_client_action_func: myid = 1, myid_len=1

[11/14/13 14:50:27.713 UTC 702f7c 8528] CAPWAP Interface ID Acked Id-0x00d2a98000000796 by IIF - IIF status = 0x1001, for AP 10.201.234.24, rcb->ap_registered = 1

[11/14/13 14:50:27.713 UTC 702f7d 8528] f84f.57ca.3860 Not ready to send Config Status Response to AP 10.201.234.24 as SPI ACK is not received

[11/14/13 14:50:27.713 UTC 702f7e 8528] Unable to find entry for PhyIifId: 0x1088ec00000003b from AVL Tree

[11/14/13 14:50:27.713 UTC 702f7f 8528] Adding Node to Physical Iif Id AVL Tree with PhyIifId:0x1088ec00000003b

[11/14/13 14:50:27.713 UTC 702f80 8528] Unable to find entry for PhyIifId: 0x1088ec00000003b from AVL Tree

[11/14/13 14:50:27.713 UTC 702f81 8528] f84f.57ca.3860 Register LWAPP event for AP f84f.57ca.3860 slot 1

[11/14/13 14:50:27.713 UTC 702f82 8528] Added PhyIifId: 0x1088ec00000003b to AVL Tree Database

[11/14/13 14:50:27.714 UTC 702f83 8528] Get the Interface name from the Phy-Port-IIF-ID:0x1088ec00000003b

[11/14/13 14:50:27.714 UTC 702f84 8528]

---Phy-IIF-ID = 0x1088ec00000003b------

[11/14/13 14:50:27.714 UTC 702f85 8528] f84f.57ca.3860 Not ready to send Config Status Response to AP 10.201.234.24 as SPI ACK is not received

[11/14/13 14:50:27.714 UTC 702f86 8528] CSM-SPAM:Input monitor name after copying from vapcb to vap data is wireless-avc-basic

[11/14/13 14:50:27.714 UTC 702f87 8528] CSM-SPAM:Output monitor name after copying from vapcb to vapdata is wireless-avc-basic

[11/14/13 14:50:27.714 UTC 702f88 8528] CSM-SPAM:Input monitor name after copying from vapcb to vap data is wireless-avc-basic

[11/14/13 14:50:27.714 UTC 702f89 8528] CSM-SPAM:Output monitor name after copying from vapcb to vapdata is wireless-avc-basic

```
[11/14/13 14:50:27.714 UTC 702f8a 8528] RSN Capabilities: (26)

[11/14/13 14:50:27.714 UTC 702f8b 8528]      [0000] 30 18 01 00 00 0f ac 02 02
00 00 0f ac 02 00 0f

[11/14/13 14:50:27.714 UTC 702f8c 8528]      [0016] ac 04 01 00 00 0f ac 02 28 00

[11/14/13 14:50:27.714 UTC 702f8d 8528] WARP IEs: (12)

[11/14/13 14:50:27.714 UTC 702f8e 8528]      [0000] dd 0a 00 c0 b9 01 00 00
00 08 01 01

[11/14/13 14:50:27.714 UTC 702f8f 8528] f84f.57ca.3860 Not ready to send Config
Status Response to AP 10.201.234.24 as SPI ACK is not received

[11/14/13 14:50:27.715 UTC 702f90 8528] Physical interface Info: IIF-ID =
0x1088ec00000003b, Message Code = 0x802, Interface Name ->gigabitethernet1/0/24,
Interface Type = 0x92, Client N<truncated>

[11/14/13 14:50:27.715 UTC 702f91 8528] Updated AVL entry for phyIifid:
0x1088ec00000003b macAddr:f84f.57ca.3860, phyIfName: gigabitethernet1/0/24 Number
of APs on this Phy <truncated>

[11/14/13 14:50:27.725 UTC 702f92 8528] capwap opaque data f84f.57ca.3860
length = 0

[11/14/13 14:50:27.725 UTC 702f93 8528] No update; will insert f84f.57ca.3860
```

Konfigurationsstatusanforderung - Antwort-/Aktualisierungsanfrage

```
[11/14/13 14:50:27.869 UTC 702f94 8528] f84f.57ca.3860 Configuration Status
from 10.201.234.24:18759

[11/14/13 14:50:27.870 UTC 702f95 8528] f84f.57ca.3860 CAPWAP State: Configure

[11/14/13 14:50:27.870 UTC 702f96 8528] f84f.57ca.3860 New unsupported Payload
254 in message from AP f84f.57ca.3860, Return SUCCESS

[11/14/13 14:50:27.870 UTC 702f97 8528] f84f.57ca.3860 Decoding new unsupported
Payload 254 in message from AP f84f.57ca.3860, Return SUCCESS

[11/14/13 14:50:27.870 UTC 702f98 8528] Invalid channel 11 spacified for the AP
AP2602I-1, slotId = 0

[11/14/13 14:50:27.870 UTC 702f99 8528] Invalid channel 56 spacified for the AP
AP2602I-1, slotId = 1

[11/14/13 14:50:27.870 UTC 702f9a 8528] f84f.57ca.3860 Updating IP info for AP
f84f.57ca.3860  -- static 0, 10.201.234.24/255.255.255.224, gtw 10.201.234.2

[11/14/13 14:50:27.870 UTC 702f9b 8528] f84f.57ca.3860 Updating IP
10.201.234.24 ===> 10.201.234.24 for AP  f84f.57ca.3860

|

[11/14/13 14:50:27.870 UTC 702fab 8528] f84f.57ca.3860 LWAPP message validation
failed for SPAM Vendor Specific Payload(104) in message of len=7 from AP
f84f.57ca.3860
```

[11/14/13 14:50:27.870 UTC 702fac 8528] f84f.57ca.3860 Failed to validate vendor specific message element

[11/14/13 14:50:27.871 UTC 702fad 8528] f84f.57ca.3860 **Setting MTU to 1485**

[11/14/13 14:50:27.871 UTC 702fae 8528] f84f.57ca.3860 Platform not Supported, exiting Load Balancer function

[11/14/13 14:50:27.871 UTC 702faf 8528] load balancer rc=4 for AP 10.201.234.24, IIF ID:0x00d2a98000000796

[11/14/13 14:50:27.871 UTC 702fb0 8528] opaque data size 0 with capwap interface create f84f.57ca.3860

[11/14/13 14:50:27.871 UTC 702fb1 8528] spiCapwapParams-> data_tunnel.opaque_data.opaque_data_len: 0

[11/14/13 14:50:27.871 UTC 702fb2 8528] f84f.57ca.3860 Data Tunnel Create timer started for 240 seconds timeout

[11/14/13 14:50:27.871 UTC 702fb3 8528] f84f.57ca.3860 **Data Tunnel created - tunnel type NON_CRYPTO**, load balancer support Not supported, tunnel mtu 1449,

anc_sw_id 0, anc_asic_id 0, res_sw_id 0, res_asic_id 0

anc_wp_iif_id 0x0000000000000000, res_wp_iif_id 0x0000000000000000

[11/14/13 14:50:27.871 UTC 702fb4 8528] f84f.57ca.3860 Not ready to send Config Status Response to AP 10.201.234.24 as SPI ACK is not received

[11/14/13 14:50:27.871 UTC 702fb5 8528] f84f.57ca.3860 AP f84f.57ca.3860 associated. Last AP failure was due to Configuration changes,reason: controller reboot command

[11/14/13 14:50:27.871 UTC 30e6 260] [CAPWAP]: CAPWAP data tunnel create message.

[11/14/13 14:50:27.871 UTC 30e7 260] [CAPWAP]: capwap_data_tunnel_create called

[11/14/13 14:50:27.871 UTC 30e8 260] [CAPWAP]: Data tunnel id = 0xd2a98000000796

[11/14/13 14:50:27.871 UTC 30e9 260] [CAPWAP]: Tunnel Entry not found for AP (10.201.234.24, 18759)

[11/14/13 14:50:27.873 UTC 30ea 260] [CAPWAP]: CAPWAP IDB init complete

[11/14/13 14:50:27.882 UTC 30eb 260] [CAPWAP]: capwap_interface_status_update: tunnel 0xd2a98000000796 status 0

[11/14/13 14:50:27.882 UTC 30ec 260] [CAPWAP]: csb pd flag 0 opaque_data_len 0 attr opaque_data 0x00000000

[11/14/13 14:50:27.882 UTC 30ed 260] [CAPWAP]: Send capwap_data_tunnel_status_update 0 Slot-Unit 1 Unit 1 for iif_id 0xd2a98000000796 to WCM.

[11/14/13 14:50:27.882 UTC 30ee 260] [CAPWAP]: (capwap_process_fed_results) CAPWAP FED result (0) for IIF ID: 0xd2a98000000796

[11/14/13 14:50:27.882 UTC 702fb6 8528

Received CAPWAP Tunnel SPI update opaque size 0

[11/14/13 14:50:27.882 UTC 702fb7 8528] opaque data len 0 with capwap server update

[11/14/13 14:50:27.883 UTC 702fb8 8528] f84f.57ca.3860 SPI ACK : Capwap Data

Tunnel create successful for iifid:0x00d2a98000000796 AP:10.201.234.24

[11/14/13 14:50:27.883 UTC 702fb9 8528]

Received CAPWAP interface update opaque len 0

[11/14/13 14:50:27.883 UTC 702fba 8528] **SPI IifId ACK: Capwap Data Tunnel Created Successfully for IifId: 0x00d2a98000000796 AP: 10.201.234.24**

[11/14/13 14:50:27.883 UTC 702fbb 8528] f84f.57ca.3860 **OK to send Config Status Response to AP** 10.201.234.24

[11/14/13 14:50:27.888 UTC 30ef 260] [CAPWAP]: Notify PM (done).

[11/14/13 14:50:27.888 UTC 30f0 260] [CAPWAP]: SNMP Register: Ca1 HWIDB 32f44570

[11/14/13 14:50:27.888 UTC 30f1 260] [CAPWAP]: capwap_port_hashitem added: slot 1 slotunit 24 vlan 1104

[11/14/13 14:50:27.888 UTC 30f2 260] [CAPWAP]: 7c69.f604.9460 is AP's mac addr

[11/14/13 14:50:27.932 UTC 702fbc 8528] Sending multicast payload to ap AP2602I-1, mcast_mode 0, mcast group 0.0.0.0

[11/14/13 14:50:27.933 UTC 702fbd 8528] f84f.57ca.3860 Config status response sent to 10.201.234.24:18759

[11/14/13 14:50:27.933 UTC 702fbe 8528] f84f.57ca.3860 Configuration Status Response sent to 10:201:234:24

[11/14/13 14:50:27.933 UTC 702fbf 8528] f84f.57ca.3860 Configuration update request for Band Select Cfg sent to 10.201.234.24:18759

[11/14/13 14:50:27.933 UTC 702fc0 8528] f84f.57ca.3860 Configuration update request for HaConfig message sent to 10.201.234.24:18759

[11/14/13 14:50:27.934 UTC 702fc1 8528] f84f.57ca.3860 Configuration update request for AP NGWC Qos sent to 10.201.234.24:18759

[11/14/13 14:50:28.121 UTC 702fc2 8528] f84f.57ca.3860 Change State Event Request from 10.201.234.24:18759

[11/14/13 14:50:28.122 UTC 702fc3 8528] f84f.57ca.3860 Received LWAPP Up event for AP f84f.57ca.3860 slot 0!

[11/14/13 14:50:28.122 UTC 702fc4 8528] f84f.57ca.3860 Radio state change for slot: 0 state: 2 cause: 0 detail cause: 0

[11/14/13 14:50:28.122 UTC 702fc5 8528] f84f.57ca.3860 Change State Event Response sent to 10.201.234.24:18759

[11/14/13 14:50:28.122 UTC 702fc6 8528] f84f.57ca.3860 CAPWAP State: Run

[11/14/13 14:50:28.122 UTC 702fc7 8528] f84f.57ca.3860 Sending the remaining config to AP 10.201.234.24:18759

[11/14/13 14:50:28.122 UTC 702fc8 8528] f84f.57ca.3860 AP Going to RUN 10.201.234.24: ConcurrentJoins: 0

[11/14/13 14:50:28.122 UTC 702fc9 8528] f84f.57ca.3860 **Configuration update request** for Init VAP-DATA for slot 1 sent to 10.201.234.24:18759

[11/14/13 14:50:28.122 UTC 702fca 8528] f84f.57ca.3860 Configuration update request for configuring association limit params sent to 10.201.234.24:18759

[11/14/13 14:50:28.122 UTC 702fcb 8528] f84f.57ca.3860 Configuration update request for Band Select Cfg sent to 10.201.234.24:18759

[11/14/13 14:50:28.122 UTC 702fcc 8528] f84f.57ca.3860 Configuration update request for HaConfig message sent to 10.201.234.24:18759

[11/14/13 14:50:28.123 UTC 702fcd 8528] CAPWAP: No update, will insert f84f.57ca.3860

[11/14/13 14:50:28.123 UTC 702fce 8528] capwap opaque data f84f.57ca.3860 length = 0

[11/14/13 14:50:28.124 UTC 702fcf 8528] CAPWAP HA insert f84f.57ca.3860

[11/14/13 14:50:28.124 UTC 702fd0 8528] CAPWAP HA insert f84f.57ca.3860

[11/14/13 14:50:28.124 UTC 702fd1 8528] f84f.57ca.3860 Configuration update request for PHY payload sent to 10:201:234:24

[11/14/13 14:50:28.126 UTC 702fd2 8528] f84f.57ca.3860 **Configuration Update Response** from 10.201.234.24:18759

[11/14/13 14:50:28.126 UTC 702fd3 8528] f84f.57ca.3860 Configuration update request for RrmInterferenceCtrl payload sent to 10:201:234:24

[11/14/13 14:50:28.126 UTC 702fd4 8528] f84f.57ca.3860 Configuration update request for RrmNeighbourCtrl payload sent to 10.201.234.24

[11/14/13 14:50:28.126 UTC 702fd5 8528] f84f.57ca.3860 Configuration update request for RrmReceiveCtrl payload sent to 10:201:234:24

[11/14/13 14:50:28.126 UTC 702fd6 8528] f84f.57ca.3860 Configuration update request for CcxRmMeas payload sent to 10.201.234.24

[11/14/13 14:50:28.132 UTC 702fd7 8528] f84f.57ca.3860 Change State Event Request from 10.201.234.24:18759

[11/14/13 14:50:28.132 UTC 702fd8 8528] f84f.57ca.3860 Radio state change for slot: 1 state: 2 cause: 0 detail cause: 0

[11/14/13 14:50:28.132 UTC 702fd9 8528] f84f.57ca.3860 Change State Event Response sent to 10.201.234.24:18759

[11/14/13 14:50:28.132 UTC 702fda 8528] f84f.57ca.3860 CAPWAP State: Run

[11/14/13 14:50:28.132 UTC 702fdb 8528] f84f.57ca.3860 Sending the remaining config to AP 10.201.234.24:18759

[11/14/13 14:50:28.133 UTC 702fdc 8528] f84f.57ca.3860 Configuration update request for qos pm payload payload sent to 10.201.234.24:18759

[11/14/13 14:50:28.133 UTC 702fdd 8528] f84f.57ca.3860 Received LWAPP Up event for AP f84f.57ca.3860 slot 1!

[11/14/13 14:50:28.133 UTC 702fde 8528] f84f.57ca.3860 Configuration update request for PHY payload sent to 10:201:234:24

[11/14/13 14:50:28.133 UTC 702fdf 8528] f84f.57ca.3860 Configuration update request for RrmInterferenceCtrl payload sent to 10:201:234:24

[11/14/13 14:50:28.133 UTC 702fe0 8528] f84f.57ca.3860 Configuration update request for RrmNeighbourCtrl payload sent to 10.201.234.24

```
[11/14/13 14:50:28.134 UTC 702fe1 8528] f84f.57ca.3860 Configuration update
request for RrmReceiveCtrl payload sent to 10:201:234:24

[11/14/13 14:50:28.134 UTC 702fe2 8528] f84f.57ca.3860 Configuration update
request for CcxRmMeas payload sent to 10.201.234.24

[11/14/13 14:50:28.188 UTC 702fe3 8528] f84f.57ca.3860 Configuration Update
Response from 10.201.234.24:18759

[11/14/13 14:50:28.188 UTC 702fe4 8528] f84f.57ca.3860 Change State Event
Request from 10.201.234.24:18759

[11/14/13 14:50:28.188 UTC 702fe5 8528] f84f.57ca.3860 Change State Event
Response sent to 10.201.234.24:18759

[11/14/13 14:50:28.188 UTC 702fe6 8528] f84f.57ca.3860 CAPWAP State: Run

[11/14/13 14:50:28.188 UTC 702fe7 8528] f84f.57ca.3860 Sending the remaining
config to AP 10.201.234.24:18759

[11/14/13 14:50:28.194 UTC 702fe8 8528] f84f.57ca.3860 Configuration Update
Response from 10.201.234.24:18759

[11/14/13 14:50:28.194 UTC 702fe9 8528] f84f.57ca.3860 WTP Event Request
from 10.201.234.24:18759

[11/14/13 14:50:28.194 UTC 702fea 8528] f84f.57ca.3860 WTP Event Response
sent to 10.201.234.24:18759
```

Häufige Gründe für den Ausfall der AP-Join-Funktion

In diesem Abschnitt werden häufige Ursachen für den Ausfall der AP-Verbindung beschrieben.

Problem 1: Der Access Point des Catalyst Switches der Serie 3850 befindet sich nicht im WLAN-Management-VLAN.

#show run interface gig1/0/22

```
interface GigabitEthernet1/0/22
 description AP
 switchport access vlan 25
 switchport mode access
```

#show run | inklusive Wireless

```
wireless mobility controller
wireless management interface Vlan1104
```

#Anzeigeprotokoll

```
*%CAPWAP-3-DISC_WIRELESS_INTERFACE_ERR1: 1 wcm:  Unable to process discovery
request from AP 0019.0737.f630 , VLAN (25) scrIp (10.10.25.13) dstIp
(255.255.255.255), could not get wireless interface belonging to this network
```

Der Access Point befindet sich im VLAN 25, und für VLAN 25 gibt es keine Konfiguration der Wireless-Management-Schnittstelle.

Problem 2: Das AP-Modell wird nicht unterstützt.

Dies ist ein Test von AP1131.

#Anzeigeprotokoll

```
*%CAPWAP-3-JOIN_UNSUPP_AP: 1 wcm:  Received a join request from an unsupported AP
0019.0737.f630 AP8-1131AG-eb:66 (model AIR-AP1131AG-A-K9)
```

Problem 3: Die Lizenz für die AP-Zählung ist auf dem Controller nicht aktiviert.

#show license right-to-use summ

```
  License Name    Type     Count   Period left

-----------------------------------------------

 ipservices   permanent   N/A      Lifetime

 apcount      base        0        Lifetime

 apcount      adder       0        Lifetime

-----------------------------------------------

License Level In Use: ipservices

License Level on Reboot: ipservices

Evaluation AP-Count: Disabled

Total AP Count Licenses: 0

AP Count Licenses In-use: 0

AP Count Licenses Remaining: 0
```

#Anzeigeprotokoll

```
*%LWAPP-3-AP_LICENSE_REQUEST_ERR: 1 wcm:  License request failed for AP
0c:68:03:eb:9b:20 - Check for Controller Licenses

*%CAPWAP-3-AP_DB_ALLOC: 1 wcm:  Unable to alloc AP entry in database for
10.201.234.xx:29817
```

Problem 4: Der regulatorische Bereich ist uneinheitlich.

#konfiguriertes Wireless-Land anzeigen

```
Configured Country.............................: BE  - Belgium


 Configured Country Codes
```

```
       BE  - Belgium : 802.11a Indoor,Outdoor/ 802.11b / 802.11g
```

#Anzeigeprotokoll

```
*%LWAPP-3-RD_ERR8: 1 wcm:  Country code (US ) not configured for AP 0c:68:03:eb:9b:20

*%LWAPP-3-RD_ERR4: 1 wcm:  Invalid regulatory domain 802.11bg:-E
802.11a:-E for AP 0c:68:03:eb:9b:20
```

Problem 5: Der Wireless Mobility Controller ist nicht definiert.

#Übersicht zur Wireless-Mobilität anzeigen

```
Mobility Agent Summary:
Mobility Role                                 : Mobility Agent
Mobility Protocol Port                        : 16666
Mobility Switch Peer Group Name        :
Multicast IP Address                          : 0.0.0.0
DTLS Mode                                     : Enabled
Mobility Domain ID for 802.11r                : 0xac34
Mobility Keepalive Interval                   : 10
Mobility Keepalive Count                      : 3
Mobility Control Message DSCP Value           : 0
Switch Peer Group Members Configured          : 0

Link Status is Control Link Status : Data Link Status
The status of Mobility Controller:
IP              Public IP            Link Status
-----------------------------------------------
0.0.0.0         0.0.0.0              -    : -
```

#Anzeigeprotokoll

```
*%LWAPP-3-AP_LICENSE_REQUEST_ERR: 1 wcm:  License request failed for AP
0c:68:03:eb:9b:20 - AP License Request timedout, ensure MC link is up, Resettting AP
```

Problem 6: Der Access Point hat einen Mesh-Code.

```
*%CAPWAP-3-SPI_TUNNEL_CREATE_ACK_NOT_REC: 1 wcm:  Dropping  discovery request from AP
0c68.03eb.9b20 - SPI Tunnel Create Ack not received[...It occurred 3 times/sec!.]
```

Diese Meldung ist recht allgemein gehalten und weist nicht auf das aktuelle Problem hin. Um eine weitere Diagnose durchzuführen, bis weitere Protokollierungen für dieses spezielle Problem hinzugefügt werden, überprüfen Sie das AP-Konsolenprotokoll.

Problem 7: Der AP3700 ist mit einem Catalyst Switch der Serie 3850 verbunden, der 3.3.0SE ausführt.

#Anzeigeprotokoll

```
*%CAPWAP-3-DISC_UNSUPPORTED_AP: 1 wcm:  Rejecting discovery request from unsupported AP
08cc.68b4.4780 [...It occurred 2 times/sec!.]
```

Problem 6: Die Controller-Zeit liegt außerhalb des Gültigkeitsintervalls für das AP-Zertifikat.

#Schauuhr

```
*00:14:59.459 GMT0:0 Thu Jan 1 1970
```

#Anzeigeprotokoll

```
*Jan  1 00:05:51.338: %PKI-3-CERTIFICATE_INVALID_NOT_YET_VALID: Certificate chain
validation has failed.  The certificate (SN: 17978AAD00000036823E) is not yet valid
Validity period starts on 04:25:46 GMT0:0 Jun 8 2013

*Jan  1 00:05:51.344: *%DTLS-4-BAD_CERT: 1 wcm:  Certificate verification failed.
Peer IP: 10.201.234.21

*Jan  1 00:05:51.344: *%DTLS-3-HANDSHAKE_FAILURE: 1 wcm:  Failed to complete DTLS handshake
with peer 10.201.234.21  Reason: no certificate returned
```

Problem 9: Die AP-Autorisierungsliste ist auf dem WLC aktiviert. der Access Point ist nicht in der Autorisierungsliste enthalten.

#show ap auth list

```
Authorize MIC APs against AAA                : Enabled

Authorize LSC APs against Auth-List          : Disabled


APs Allowed to Join:

 AP with Manufacturing Installed Certificate : Enabled

 AP with Self-Signed Certificate             : Disabled

 AP with Locally Significant Certificate     : Disabled
```

#Anzeigeprotokoll

```
*%LWAPP-3-RADIUS_ERR: 1 wcm: Could not send join reply, AP authorization failed;
AP:0c:68:03:eb:9b:20

*%CAPWAP-3-DATA_TUNNEL_DELETE_ERR2: 1 wcm:  Failed to delete CAPWAP data tunnel
with interface id: 0x0 from internal database. Reason: AVL database entry not found
```

Problem 10: Die MIC AP-Richtlinie ist deaktiviert.

#show ap auth list

```
Authorize MIC APs against AAA                : Disabled
```

Autorisieren von LSC APs anhand der Auth-Liste: Deaktiviert

Zugelassene APs:

AP mit installiertem Manufacturing-Zertifikat: Deaktiviert

AP mit selbstsigniertem Zertifikat: Deaktiviert

AP mit lokal bedeutendem Zertifikat: Deaktiviert

#Anzeigeprotokoll

```
*%LOG-3-Q_IND: 1 wcm:  Validation of SPAM Vendor Specific Payload failed - AP
f8:4f:57:3b:8c:d0
*%CAPWAP-3-ALREADY_IN_JOIN: 1 wcm:  Dropping join request from AP f84f.573b.8cd0 -
AP is already in joined state
*%CAPWAP-3-DATA_TUNNEL_DELETE_ERR2: 1 wcm:  Failed to delete CAPWAP data tunnel
with interface id: 0x0 from internal database. Reason: AVL database entry not found
```

Diese Meldung hilft nicht, die Ursache des Problems zu finden. Die Ablaufverfolgung zeigt diese Meldung jedoch an.

#Trace-Nachrichten-Gruppenzuordnung anzeigen

```
|

MIC AP is not allowed to join by config

|
```

Allgemeine technische Tipps

Dieser Abschnitt enthält einige hilfreiche Tipps.

- Wenn Sie den Fehlerbehebungsprozess starten, löschen Sie zuvor erfasste Ablaufverfolgungen für die jeweilige Funktion. In diesem Fall werden Capwap, Group-ap und alle gefilterten Traces verwendet.
  # Trace Control Caption festlegen# Trace Control Group ap festlegen
  # Trace-Steuerelement-Sys-Filter-Trace festlegen >> Diese Eigenschaft löscht die gefilterten Traces und kann nicht auf Basis einzelner Funktionen ausgeführt werden.

- AP-Verbindung auf konvergenten Access Controllern nutzt die Funk-MAC-Adresse des AP. Wenn Sie also einen Filter für die Ablaufverfolgung festlegen, verwenden Sie die Funk- oder MAC-Basisadresse des Access Points. Geben Sie den Befehl **show ap join stats summary ein**, um die Radio MAC-Adresse zu finden.

- Probleme mit Zertifikaten werden von IOSd behandelt und erfordern zur weiteren Diagnose die Verwendung von Debuggen und nicht von Ablaufverfolgungen.
  #debuggen crypto pki API#debuggen krypto pki-Callbacks#debug crypto pki-Server#debuggen krypto-pki-Transaktionen#debuggen krypto pki-Nachrichten