Catalyst 9800無線控制器上具有802.1x AAA覆寫 的FlexConnect WLAN

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簡介

本文說明如何使用FlexConnect模式存取點(AP)設定彈性無線LAN控制器(9800 WLC),以及使用虛 擬區域網路(VLAN)驗證、授權及計量(AAA)覆寫進行本地交換的802.1x無線區域網路(WLAN)。

必要條件

需求

思科建議您瞭解以下主題:

- 9800 WLC組態模式
- FlexConnect

採用元件

本文中的資訊係根據以下軟體和硬體版本:

• 9800 WLC v16.10

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除(預設))的組態來啟動。如果您的網路運作中,請確保您瞭解任何指令可能造成的影響。

設定

網路圖表



組態

9800 WLC 的 AAA 組態

您可以遵循此連結中的說明:

<u>9800 WLC 的 AAA 組態</u>

WLAN配置

您可以遵循此連結中的說明:

<u>WLAN配置</u>

將AP設定為FlexConnect模式

與AireOS配置不同,在9800 WLC上,無法直接從AP配置AP本地或flexconnect模式。按照以下步驟在FlexConnect模式下配置AP。

步驟1.配置Flex配置檔案。

o

導航至 配置>標籤與配置檔案>Flex 並修改default-flex-profile 或按一下+Add以建立一個新配置檔案

| Q Search Menu Items | Flex Profile | | | |
|--------------------------|-----------------------|--------------------------------|--------------|----------------------|
| Dashboard | + Add × Delete | | | |
| (2) Monitoring | Flex Profile Name | | | - Description |
| | default-flex-profile | | | default profile |
| | | ▼ items per page | | |
| () Administration | | | | |
| X Troubleshooting | | | | |
| Add Flex Profile | | | | × |
| General Local Authentica | ation Policy ACL VLAN | | | |
| Name* | new-flex-profile | Multicast Cverridden Interface | | |
| Description | New flex profile | Fallback Radio Shut | | |
| Native VLAN ID | 2601 | ARP Caching | \checkmark | |
| UTTO Draw Dart | 0 | Efficient Image Upgrade | \checkmark | |
| HTTP Proxy Port | 0 | CTS Inline Tagging | | |
| HTTP-Proxy IP Address | 0.0.0.0 | Office Extend AP | | |
| | | Join Minimum Latency | | |
| "D Cancel | | | 🛛 🗎 Sa | ve & Apply to Device |

步驟2.新增所需的VLAN(預設WLAN的VLAN或從ISE推送的VLAN)。

註:在**策略配置檔案配置一節的步驟3中,選擇分配給SSID的預設VLAN。**如果在此步驟中使用VLAN名稱,請確保在Flex Profile組態中使用相同的VLAN名稱,否則使用者端無法連線到WLAN。

| Edit Flex Prof | file | |
|----------------|---------------------------------|---------------|
| General | Local Authentication Policy ACL | VLAN |
| + Add | × Delete | |
| VLAN Name | V ID V ACL Name | ~ |
| ⊲ ⊲ 0 | ▶ ▶ 10 ▼ items per page | |
| | No item | is to display |
| | | |

您可以選擇性為每個VLAN新增特定ACL。

| VLAN Name* | vlan2602 |
|------------|------------|
| VLAN Id* | 2602 |
| ACL Name | Select ACL |
| ✓ Save | Cancel |

或者,分配一個Radius伺服器組以允許FlexConnect AP執行本地身份驗證。

| Edit Flex Profile | | | | |
|-------------------------|------------------------------------|-----------|--------|--|
| General Local Authentic | Policy ACL | VLAN | | |
| Radius Server Group | ISE-kcg-grp | L | EAP | |
| EAP Fast Profile | Select Profile | P | PEAP | |
| | | т | rls | |
| | | R | RADIUS | |
| Users | | | | |
| + Add × Delete | | | | |
| Usemame | | ~ | | |
| ≪ ≪ 0 ⊨ ⊨ 10 | items per page | | | |
| | No items to | o display | | |

步驟3.配置站點標籤。

導航到Configuration > Tags & Profiles > Tags > Site。修改default-site-tag(預設情況下分配給所 有AP的標籤)或建立一個新標籤(按一下+Add建立一個新標籤)。

| Q Search Menu Items | Manage Tags |
|----------------------|-------------------|
| 🔜 Dashboard | Policy Site RF AP |
| Monitoring | + Add × Delete |
| 🔾 Configuration 🛛 🗸 | Site Tag Name |
| (ĵ) Administration → | default-site-tag |
| 💥 Troubleshooting | realis per page |

確保禁用**啟用本地站點**選項,否則Flex**配置檔案**選項不可用。

| Add Site Tag | | × |
|-------------------|----------------------|------------------------|
| Name* | new-flex-site | |
| Description | Enter Description | |
| AP Join Profile | default-ap-profile 🔻 | |
| Flex Profile | new-flex-profile 🔻 | |
| Enable Local Site | | - |
| Cancel | | Save & Apply to Device |

附註:任何獲取啟用了**啟用本地站點**的站點標籤的AP都配置為本地模式。同樣,任何獲取禁 用了**啟用本地站點**的站點標籤的AP都配置為flexconnect模式。

步驟4.將AP與9800 WLC關聯並分配在步驟2中配置的站點標籤。

導航到Configuration > Wireless > Access Points > AP name並設定Site標籤。然後點選Update & Apply to Device以設定更改。

| Q Search Menu Items | Access Points | Edit AP | | | × |
|---|--|---|--|--|---|
| Dashboard | All APS Number of AP(s): 1 | General Interfaces General | High Availability Inve | entory Advanced Version | |
| Monitoring > Configuration > Administration > Troubleshooting > | Admorer of Artige 1 AP Name AP Model AP Model AP Mode Admonstration AP Mode Admonstrat | AP Name* Location* Base Radio MAC Ethernet MAC Admin Status AP Mode Operation Status Fabric Status | AP1702-05 default location 00:resister 20:000 00:f2:00:00:000 Enabled Local Registered Disabled | Primary Software Version Predownloaded Status Predownloaded Version Next Retry Time Boot Version IOS Version Mini IOS Version IP Config | 16.8.1.5 N/A N/A 15.3.0.0 15.C(20100001,005348)\$ 0.0.0.0 |
| | Country | Tags Policy Site RF | default-policy-tag v new-flex-site v default-rf-tag v | IP Address Static IP Time Statistics Up Time Controller Associated Time Controller Association Latency | 172.16.0.200 days 19 hrs 8 mins 11 9ecs O days 18 hrs 57 mins 16 9ecs O days 0 hrs 10 mins 44 9ecs |
| | | Cancel | | | Update & Apply to Device |

注意:請注意,變更AP上的標籤後,AP會失去與9800 WLC的關聯,並在約1分鐘內重新加入 。

步驟5.當AP連線回後,請注意AP模式為Flex



CLI

```
# config t
# wireless profile flex new-flex-profile
# arp-caching
# description "New flex profile"
# native-vlan-id 2601
# config t
# wireless tag site new-flex-site
# flex-profile new-flex-profile
# no local-site
# site-tag new-flex-site
# config t
# ap <eth-mac-address>
# site-tag new-flex-site
Associating site-tag will cause associated AP to reconnect
# exit
#show ap name <ap-name> config general | inc AP Mode
AP Mode
                                                 : FlexConnect
交換器組態
```

配置AP所連線的交換機介面。

config t
interface <int-id>
switchport trunk native vlan 2601
switchport mode trunk
spanning-tree portfast trunk
end

原則設定檔組態

在策略配置檔案中,您可以決定向哪個VLAN分配客戶端,以及其他設定(如訪問控制清單[ACL]、 服務品質[QoS]、移動錨點、計時器等)。

GUI

步驟1.配置要分配給WLAN的策略配置檔案。

導航到Configuration > Tags & Profiles > Policy,然後建立新配置檔案或修改default-policyprofile。

| Q, Search Menu Items | Policy Profile | | |
|---|--------------------------------|---|------------------------|
| Dashboard | + Add > Delete | | |
| (2) Monitoring > | Policy Profile Name | × | Description |
| | default-policy-profile | | default policy profile |
| \sim Configuration \rightarrow | 4 4 1 ⊨ ⊨ 10 v items per page | | |
| \bigcirc Administration \rightarrow | | | |
| 💥 Troubleshooting | | | |

步驟2.在General選項卡中,為Policy Profile指定一個名稱,並將其狀態更改為ENABLED。

| Add Policy Profile | 9 | | | × |
|--------------------------|--|---------------------------------|------------------|------------------------|
| General | Access Policies | QOS and AVC | Mobility | Advanced |
| O Configuring in enabled | d state will result in loss of connect | ivity for clients associated wi | th this profile. | |
| Name* | new-policy-profile | | | |
| Description | Enter Description | | | |
| Status | ENABLED | | | |
| | | | | |
| Cancel | | | | Save & Apply to Device |

步驟3.在**Access Policies**索引標籤中,指定無線客戶端在預設情況下連線到此WLAN時分配到的 VLAN。

您可以從下拉選單中選擇一個VLAN名稱,也可以手動鍵入VLAN ID。

註:如果從下拉選單中選擇vlan名稱,請確保它與在**將AP設定為FlexConnect模式一節的步驟** 2中使用的vlan名稱相匹配。

| Add Po | olicy Profile | • | | | | | × |
|---------------|---------------------|-----------------|-----------------|----------|----------|------------------|--------|
| Gen | eral | Access Policies | QOS and AVC | Mobility | Ad | dvanced | |
| WLA | N Local Prof | hling | | | WLAN ACL | | |
| Local | HTTP Profilin | 9 | | | IPv4 ACL | Search or Select | • |
| Radiu | is HTTP Profil | ing 🗌 | | | IPv6 ACL | Search or Select | • |
| Local | DHCP Profilir | ng 🗌 | | | | | |
| Local Name | l Subscriber P e | Sea | rch or Select 🔹 | | | | |
| VLA | N | | | | | | |
| VLAN | N/VLAN Group | VLA | N2602 | | | | |
| | | | | | | | |
| 00 | ancel | | | | | Save & Apply to | Device |

或

| General | Access Policies | QOS and AVC | Mobility | Advanced | |
|--|-----------------|-------------------|----------|---------------------|---|
| WLAN Local | Profiling | | WLAN | ACL | |
| .ocal HTTP Pro | ofiling | | IPv4 A | CL Search or Select | • |
| Radius HTTP P | rofiling | | IPv6 A | CL Search or Select | • |
| .ocal DHCP Pr | rofiling | | | | |
| .ocal Subscrib Name | er Policy S | earch or Select 🔹 | | | |
| VLAN | | | | | |
| And the second | | | | | |

步驟4.導覽至Advanced 索引標籤,並啟用Central Authentication Enable和Allow AAA Overrideoptions。必須禁用集中交換。

如果希望9800 WLC集中執行驗證程式,必須啟用集中驗證。如果您希望FlexConnect AP對無線客 戶端進行身份驗證,請將其禁用。

| General Access Policies QOS and AVC Mobility Advanced WLAN Timeout Fabric Profile Search or Select • Session Timeout (sec)* 300 Central Switching • de Timeout (sec)* 300 Central Authentication ✓ de Timeout (sec)* 300 Central Authentication ✓ de Timeout (sec)* 60 Central Authentication ✓ Client Exclusion Timeout (sec)* 60 Central Association • DHCP Enable Central Association • • DHCP Enable 0.0.0 WLAN Flex Policy • • DHCP Opt82 Enable 0.0.0 WLAN Flex Policy • • DHCP Opt82 Farable 0.0.0 WLAN Central Switching • • DHCP Opt82 RiD 0 O Split MAC ACL Search or Select • DHCP Opt82 RiD 0 O O • • • DHCP AP MAC 0 O O • • • DHCP AP IT MAC 0 O • • • • DHCP AP It MAC 0 O • • • • DHCP AP It MAC 0 • • • • • DHCP AP It MAC 0 • • • • • DHCP AP It MAC 0 • • • • • DHCP AP It MAC 0 • • • • • DHCP AP It M | t Policy Profi | le | | | |
|--|-------------------|--------------------|-------------|-------------------------------|---------------------|
| WLAN Timeout Fabric Profile Search or Select Session Timeout (sec)* 1800 WLAN Switching Policy die Timeout (sec)* 300 Central Switching die Timeout (sec)* 0 Central Authentication die Threshold (bytes)* 0 Central Authentication Client Exclusion Timeout (sec)* 60 Central Authentication DHCP 60 Central Authentication DHCP 60 Central Authentication DHCP 60 Central Authentication DHCP Enable 0.0.0.0 WLAN Fiex Policy DHCP Opt82 Enable 0.0.0.0 VLAN Fiex Policy DHCP Opt82 Enable VLAN Fiex Policy DHCP Opt82 RiD 0.0.0.0 DHCP Opt82 Format 0.0.0.0 DHCP AP MAC 0.0.0.0 DHCP AP IMAC 0.0.0.0 DHCP AP IMAC 0.0.0.0 DHCP AP IMAC 0.0.0.0 DHCP AP IMAC 0.0.0.0 DHCP AP Location 0.0.0.0 DHCP AP IMAC 0.0.0.0 DHCP AP Location 0.0.0.0 DHCP AP NAME 0.0.0.0 DHCP AP Location 0.0.0.0 DHCP VLAN ID 0.0.0.0 AAA Policy VIAN Fiex Policy Nac State Policy Name | General | Access Policies | QOS and AVC | Mobility | Advanced |
| Session Timeout (sec)* 1800 WLAN Switching Policy dle Timeout (sec)* 300 Central Switching Central Switching die Timeout (sec)* 60 Central Authentication Central Authentication Client Exclusion Timeout (sec)* 60 DHCP Central Association DHCP 60 DHCP Central Authentication DHCP Enable Central Association DHCP Server IP Address 0.0.0 DHCP Opt82 Enable VLAN Fiex Policy DHCP Opt82 Rabile VLAN Central Switching DHCP Opt82 Rabile VLAN Central Switching DHCP Opt82 Rabile VLAN Central Switching DHCP Opt82 Rabile Split MAC ACL DHCP AP MAC Split MAC ACL DHCP AP ETH MAC Split MAC ACL DHCP Policy Tag Split MAC ACL DHCP VLAN ID Split MAC ACL AAA Policy VLAN Split Split MAC ACL VAC State Split Spli | WLAN Timeout | | | Fabric Profile | Search or Select 🗸 |
| die Timeout (sec)* 300 die Timeout (sec)* 0 Central Authentication Central Authentication Client Exclusion Timeout (sec)* 60 Central Authentication Central Authentication DHCP Central Authentication DHCP Central Authentication DHCP Central Authentication DHCP Carboic Central Authentication DHCP Carboic Central Authentication DHCP Server IP Address 0.0.0 DHCP Opt82 Enable Image: Central Switching DHCP Opt82 Rable Image: Central Switching DHCP AP MAC Image: Central Switching DHCP AP Image: Central Switching Image: Central Switching DHCP A | Session Timeout | (sec)* 1800 | | WLAN Switching | Policy |
| Idle Threshold (bytes)* 0 Client Exclusion Timeout (sec)* 60 DHCP Central Authentication 【 DHCP Central Association DHCP Flex NAT/PAT DHCP Opt82 Enable 0.0.00 DHCP Opt82 Enable VLAN Central Switching DHCP Opt82 Enable Split MAC ACL DHCP Opt82 Format Split MAC ACL DHCP Opt82 Format OLOP Opt82 Format DHCP Opt82 Format OLOP Opt82 Format DHCP AP MAC OLOP Opt82 Format DHCP AP NAME OLOP Opt82 Format DHCP AP Iccation OLOP Opt82 Format DHCP VLAN ID OLOP Opt82 Format DHCP VLAN ID Subscription DHCP VLAN ID NAC State Policy Name Search or Select | Idle Timeout (sec | 300 | | Central Switching | |
| Client Exclusion Timeout (sec) 60 Central DHCP Central Association Control Association Central Association Central Association Control Association Central Associat | Idle Threshold (b | ytes)* 0 | | Central Authenticat | ion 🖌 |
| DHCP Central Association DHCP Enable Flex NAT/PAT DHCP Server IP Address 0.0.0 DHCP Opt82 Enable VLAN Flex Policy DHCP Opt82 Enable VLAN Central Switching DHCP Opt82 Enable Split MAC ACL DHCP Opt82 Ascii Split MAC ACL DHCP Opt82 Format Other Aption DHCP AP ETH MAC Other Aption DHCP AP Location Other Aption DHCP AP NAME Other Aption DHCP AP Location Other Aption DHCP AP Location Split MAC ACL DHCP AP Location Other Aption DHCP AP Location Other Aption DHCP AP Location Split MAC ACL DHCP AP Location Split MAC DHCP AP MAC Split MAC DHCP AP MAC Split MAC DHCP AP MAC S | Client Exclusion | Timeout (sec)* 60 | | Central DHCP | |
| DHCP Enable Image: Sect or Select Flex NAT/PAT Image: Sect or Select DHCP Server IP Address 0.0.00 VLAN Flex Policy DHCP Opt82 Enable Image: Sect or Select VLAN Central Switching DHCP Opt82 Ascii Image: Sect or Select Split MAC ACL Sect or Select DHCP Opt82 Ascii Image: Sect or Select Image: Sect or Select Image: Sect or Select DHCP Opt82 Format Image: Sect or Select Image: Sect or Select Image: Sect or Select Image: Sect or Select DHCP Opt82 Format Image: Sect or Select Image: Sect or Select Image: Sect or Select Image: Sect or Select DHCP AP MAC Image: Sect or Select DHCP AP Location Image: Sect or Select | DHCP | | | Central Association Enable | |
| DHCP Server IP Address 0.0.0 DHCP Opt82 Enable DHCP Opt82 Enable DHCP Opt82 Ascii DHCP Opt82 Ascii DHCP Opt82 RID DHCP Opt82 Format DHCP AP MAC DHCP AP MAC DHCP AP NAME DHCP AP Internation DHCP VLAN ID Alka Policy NAC State Policy Name | DHCP Enable | | | Flex NAT/PAT | |
| DHCP Opt82 Enable VLAN Central Switching DHCP Opt82 Ascii DHCP Opt82 Ascii DHCP Opt82 RID DHCP Opt82 Format DHCP AP MAC DHCP AP MAC DHCP SSID DHCP AP TH MAC DHCP AP NAME DHCP AP NAME DHCP AP Location DHCP AP Location DHCP VLAN ID AAA Policy Allow AAA Override Policy Name Search or Select v | DHCP Server IP | Address 0.0.0.0 | | WLAN Flex Policy | r |
| DHCP Opt82 Ascii Search or Select • DHCP Opt82 RID DHCP Opt82 RID DHCP Opt82 Format DHCP AP MAC OHCP AP MAC OHCP SSID DHCP AP ETH MAC OHCP AP ETH MAC OHCP AP Location DHCP AP Location DHCP VLAN ID AAA Policy Allow AAA Override Policy Name Search or Select • | DHCP Opt82 Ena | able | | VLAN Central Switc | ching 🗌 |
| DHCP Opt82 RID DHCP Opt82 Format DHCP AP MAC DHCP SSID DHCP AP ETH MAC DHCP AP ETH MAC DHCP Policy Tag DHCP Policy Tag DHCP VLAN ID AAA Policy Allow AAA Override NAC State Policy Name Search or Select | DHCP Opt82 Asc | cii 🗖 | | Split MAC ACL | Search or Select |
| DHCP Opt82 Format CHCP AP MAC C C DHCP AP MAC C C C C C C C C C C C C C C C C C C | DHCP Opt82 RID | | | | |
| DHCP AP MAC DHCP SSID DHCP AP ETH MAC DHCP AP ETH MAC DHCP AP NAME DHCP Policy Tag DHCP Policy Tag DHCP VLAN ID DHCP VLAN ID ALLOW AAA Override ALLOW AAA Override NAC State Policy Name Search or Select | DHCP Opt82 For | mat 🗌 | | | |
| DHCP SSID □ DHCP AP ETH MAC □ DHCP AP NAME □ DHCP Policy Tag □ DHCP AP Location □ DHCP VLAN ID □ AAA Policy □ Allow AAA Override ✓ NAC State □ Policy Name 	Search or Select ▼ | DHCP AP MAC | | | | |
| DHCP AP ETH MAC DHCP AP NAME DHCP Policy Tag DHCP AP Location DHCP VLAN ID AAA Policy Allow AAA Override NAC State Policy Name Search or Select | DHCP SSID | | | | |
| DHCP AP NAME DHCP Policy Tag DHCP AP Location DHCP VLAN ID AAA Policy Allow AAA Override NAC State Policy Name Search or Select | DHCP AP ETH M | AC 🗌 | | | |
| DHCP Policy Tag DHCP AP Location DHCP VLAN ID AAA Policy Allow AAA Override NAC State Policy Name Search or Select • | DHCP AP NAME | | | | |
| DHCP AP Location □ DHCP VLAN ID □ AAA Policy Allow AAA Override ✓ NAC State □ Policy Name Search or Select ▼ | DHCP Policy Tag | | | | |
| DHCP VLAN ID □ AAA Policy Allow AAA Override ✓ NAC State Policy Name Search or Select | DHCP AP Location | on 🗌 | | | |
| AAA Policy Allow AAA Override NAC State Policy Name Search or Select | DHCP VLAN ID | | | | |
| Allow AAA Override NAC State Policy Name Search or Select | AAA Policy | | | | |
| NAC State Search or Select | Allow AAA Overr | ide 🔽 | | | |
| Policy Name Search or Select | NAC State | | | | |
| | Policy Name | Search or S | elect 👻 | | |
| | D Cancel | | | [| 🛱 Update & Apply to |

CLI

config t

wireless profile policy new-policy-profile # central association # vlan <vlan-id or vlan-name>

原則標籤組態

策略標籤用於將SSID與策略配置檔案連結。您可以建立新的原則標籤,或使用 default-policy-tag。

注意:default-policy-tag會自動將WLAN ID介於1到16之間的所有SSID對映到default-policy-profile。無法修改或刪除它。如果您的WLAN的ID為17或更高,則不能使用default-policy-tag。

GUI:

如果需要,請導航到Configuration > Tags & Profiles > Tags > Policy,然後新增一個新檔案。

| Q. Search Menu Items | | Manage Tags | | |
|----------------------|---|---------------------------------|---|--------------------|
| Dashboard | | Policy Site RF AP | | |
| Monitoring | > | + Add X Delete | | |
| 🔾 Configuration | • | Policy Tag Name | × | Description |
| ি Administration | > | central-anchor | | |
| ~ | | default-policy-tag | | default policy-tag |
| X Troubleshooting | | [4] 4 1 ⊨ ⊨ 10 v items per page | | |

將 WLAN 設定檔連結至想要的原則設定檔。

| A | Add Policy Tag | | | | | × |
|---|----------------|---------------------|---|----------------|------------------------|---|
| | Name* | PolicyTagName | | | | |
| | Description | Enter Description | | | | |
| | + Add X Dele | | | | | |
| | WLAN Profile | | ~ | Policy Profile | | ~ |
| | | 10 🔹 items per page | | | No items to display | |
| (| Cancel | | | | Save & Apply to Device | |

| Add Policy Tag | | | × |
|-------------------|---------------------|------------------------------------|------------------------|
| Name* | PolicyTagName | | |
| Description | Enter Description | | |
| + Add X Dele | ote | | |
| WLAN Profile | | Policy Profile | ~ |
| | 10 🔹 items per page | | No items to display |
| Map WLAN and Poli | су | | |
| WLAN Profile* | prof-name | Policy Profile* | default-policy-profile |
| | × | ✓ | |

| D Cancel | 🖹 Save & Apply to Device |
|-----------------|--------------------------|

| Add Policy Tag | | | | × |
|----------------|---------------------|---|------------------------|--------------------------|
| Name* | PolicyTagName | | | |
| Description | Enter Description | | | |
| + Add X Deie | | | | |
| WLAN Profile | | ~ | Policy Profile | ~ |
| prof-name | | | default-policy-profile | |
| | 10 🔻 items per page | | | 1 - 1 of 1 items |
| Cancel | | | [| 🖺 Save & Apply to Device |

CLI:

config t # wireless tag policy <policy-tag-name> # wlan <profile-name> policy <policy-profile-name>

策略標籖分配

為AP分配策略標籤

GUI

要將標籤分配給一個AP,請導航到Configuration > Wireless > Access Points > AP Name > General Tags,進行所需的分配,然後點選Update & Apply to Device。

| it AP | | | |
|--------------------|----------------------|--------------------------------|-------------------------------------|
| General Interfaces | High Availability In | ventory Advanced | |
| General | | Version | |
| AP Name* | AP1702-05 | Primary Software Version | 16 |
| Location* | default location | Predownloaded Status | NIA |
| Base Radio MAC | 00:01:01:01:01 | Predownloaded Version | NIA |
| Ethernet MAC | 00:: | Next Retry Time | NIA |
| Admin Status | Enabled • | Boot Version | 15.4 |
| AP Mode | Fex. • | IOS Version | 15.1 |
| Operation Status | Registered | Mini IOS Version | 0.0.0.0 |
| Fabric Status | Disabled | IP Config | |
| Tags | | IP Address | 172.16.0.200 |
| Poley | new-policy-tag + | Static IP | 0 |
| Ste | new-fex-site + | Time Statistics | |
| 10 | default-rf-tag + | Up Time | 1 days 1 hrs 44 mins 59 9605 |
| | | Controller Associated Time | 0 days 5 hrs 32 mins 5 secs |
| | | Controller Association Latency | 0 days 20 hrs 11 mins 24 secs |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| D Cancel | | | Update & Apply to Devic |

注意:請注意,變更AP上的原則標籤後,AP會失去與9800 WLC的關聯,並在約1分鐘內重新加入。

要將相同的策略標籤分配給多個AP,請導航至Configuration > Wireless > Wireless Setup > Start Now > Apply。



選擇要為其分配標籤的AP,然後按一下**+ Tag AP**

+ Tag APs

Number of APs: 3

¢

Selected Number of APs: 3

| | AP 🗸 Name | AP | AP MAC ~ | AP ~ Mode | Admin 🗹 Status | Operation ~ Status | Policy 🗹 Tag | Site Tag |
|----|------------------|--------------------------|--|--------------|-------------------|-----------------------|------------------------|-------------------|
| | AP3802- 02-WS | AIR- AP3802I- A-K9 | CO-40-00-00-00-00-00-00-00-00-00-00-00-00- | Local | Enabled | Registered | default- policy-tag | defaul site-ta |
| | AP3802- 01 | AIR- AP2802I- B-K9 | 2 | Local | Enabled | Registered | default- policy-tag | defaul site-ta |
| | AP3802- 02 | AIR- AP3802I- B-K9 | e e | Local | Enabled | Registered | default- policy-tag | defaul site-ta |
| 14 | - 1 □ | 10 | items per page | | | | 1 - 3 of 3 i | tems |

選擇完成的標籤,然後按一下**儲存並應用到裝置**

| Tag APs | | × |
|---------|------------------------|---|
| Tags | | |
| Policy | default-policy-tag | |
| Site | SiteTag1 | |
| RF | default-gf-tag | |
| Cancel | Save & Apply to Device | |

CLI

config t

- # ap <ethernet-mac-addr>
- # policy-tag <policy-tag-name>
- # end

ISE 組態

對於ISE v1.2配置,請檢查此連結:

<u>ISE 組態</u>



您可以使用這些命令驗證當前配置

show run wlan
show run aaa
show aaa servers
show ap config general
show ap name <ap-name> config general
show ap tag summary
show ap tag summary
show wlan { summary | id | name | all }
show wireless tag policy detailed <policy-tag-name>
show wireless profile policy detailed <policy-profile-name>

疑難排解

WLC 9800 提供永不間斷的追蹤功能。如此可確保所有與錯誤相關的用戶端連線、警告及通知層級 訊息皆持續受到記錄,且您可在事件或故障情況發生後檢視相關記錄。

附註:根據正在生成的日誌量,您可以將時間返回幾小時到幾天。

若要檢視 9800 WLC 依預設收集的追蹤,您可透過 SSH/Telnet 連接至 9800 WLC,並遵循以下步 驟執行(請確認您將作業階段記錄至文字檔)。

步驟1.檢查控制器的當前時間,以便您可以跟蹤問題發生時的記錄時間。

show clock

步驟 2. 從控制器的緩衝區或系統組態指定的外部系統日誌來收集系統日誌。如此可快速檢視系統 健全狀況和錯誤(如有)。

show logging

步驟 3. 確認所有偵錯條件是否已啟用。

show debugging
IOSXE Conditional Debug Configs:

Conditional Debug Global State: Stop

IOSXE Packet Tracing Configs:

Packet Infra debugs:

Ip Address Port

附註:如果您看見任何列出的條件,這表示追蹤已記錄至所有遭遇啟用條件(MAC 位址、IP 位址等)之程序的偵錯層級。 如此可能會增加記錄量。因此,建議您在未主動偵錯時清除所 有條件。

步驟 4. 假設在步驟 3 中,測試之下的 MAC 位址未列為條件,請針對特定 MAC 位址收集永不間斷

之通知層級的追蹤。

show logging profile wireless filter { mac | ip } { <aaaa.bbbb.cccc> | <a.b.c.d> } to-file
always-on-<FILENAME.txt>

您可顯示作業階段中的內容,或可將檔案複製到外部 TFTP 伺服器。

more bootflash:always-on-<FILENAME.txt>

or

copy bootflash:always-on-<FILENAME.txt> tftp://a.b.c.d/path/always-on-<FILENAME.txt>

條件式偵錯和無線電主動式追蹤

如果全天候運作的追蹤未提供充足資訊,使您在調查之下無法判斷問題的觸發原因,則您可啟用條 件式偵錯並擷取無線電主動式 (RA) 追蹤,如此可將偵錯層級追蹤提供給所有與指定條件(在此案 例中為用戶端 MAC 位址)互動的所有程序。 若要啟動條件式偵錯,請遵循以下步驟執行。

步驟 5. 確認未啟用任何偵錯條件。

clear platform condition all 步驟 6. 針對您想要監控的無線用戶端 MAC 位址啟用偵錯條件。

此命令開始監控提供的mac地址達30分鐘(1800秒)。 您可選擇將此時間增加至 2085978494 秒。

debug wireless mac <aaaa.bbbb.cccc> {monitor-time <seconds>}

注意:為了同時監控多個客戶端,請對每個mac地址運行debug wireless mac <aaaa.bbb.cccc>命令。

注意:您看不到終端會話上客戶端活動的輸出,因為所有內容都在內部緩衝,供以後檢視。

步驟 7. 重現您想要監控的問題或行為。

步驟 8. 如果問題在預設或設定的監控時間結束之前重現,請停止偵錯。

no debug wireless mac <aaaa.bbbb.cccc>

當監控時間結束或偵錯無線停止後,9800 WLC 會產生本機檔案,名稱如下:

ra_trace_MAC_aaaabbbbcccc_HHMMSS.XXX_timezone_DayWeek_Month_Day_year.log

步驟9. 收集mac地址活動的檔案。您可以將ra跟蹤.log複製到外部伺服器,也可以直接在螢幕上顯示 輸出。

檢查RA跟蹤檔案的名稱

dir bootflash: | inc ra_trace 將檔案複製到外部伺服器:

copy bootflash:ra_trace_MAC_aaaabbbbbcccc_HHMMSS.XXX_timezone_DayWeek_Month_Day_year.log
tftp://a.b.c.d/ra-FILENAME.txt
顯示內容:

more bootflash:ra_trace_MAC_aaaabbbbcccc_HHMMSS.XXX_timezone_DayWeek_Month_Day_year.log 步驟 10. 如果根本原因仍不明顯,請收集內部記錄,該記錄為較詳細的偵錯層級記錄檢視。您無需 再次調試客戶端,因為我們只是進一步詳細檢視已收集並內部儲存的調試日誌。

show logging profile wireless internal filter { mac | ip } { <aaaa.bbbb.cccc> | <a.b.c.d> }
to-file ra-internal-<FILENAME>.txt

附註:此命令輸出會傳回所有程序之所有記錄層級的追蹤,且資訊相當大量。請聯絡 Cisco TAC 協助剖析此類追蹤。

您可將 ra-internal-FILENAME.txt 複製到外部伺服器,或將輸出內容直接顯示於螢幕上。

將檔案複製到外部伺服器:

copy bootflash:ra-internal-<FILENAME>.txt tftp://a.b.c.d/ra-internal-<FILENAME>.txt 顯示內容:

more bootflash:ra-internal-<FILENAME>.txt 步驟 11. 移除偵錯條件。

clear platform condition all

附註:疑難排解作業階段後,請務必移除偵錯條件。