配置和验证工作组网桥(WGB)配置

目录

简介

本文档介绍在思科接入点(AP)上配置工作组网桥(WGB)和验证配置的过程。

先决条件

使用的组件

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。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。

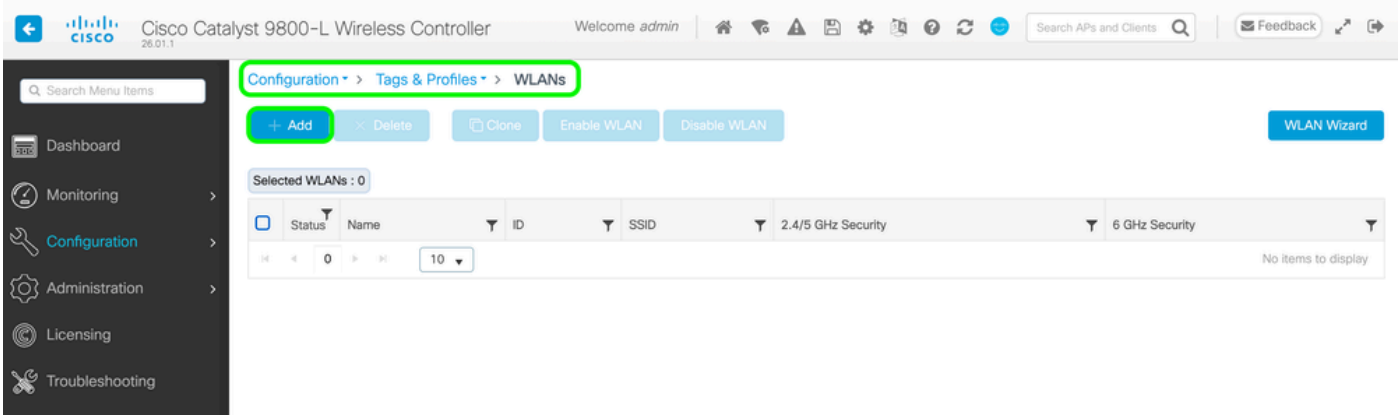
配置

网络图

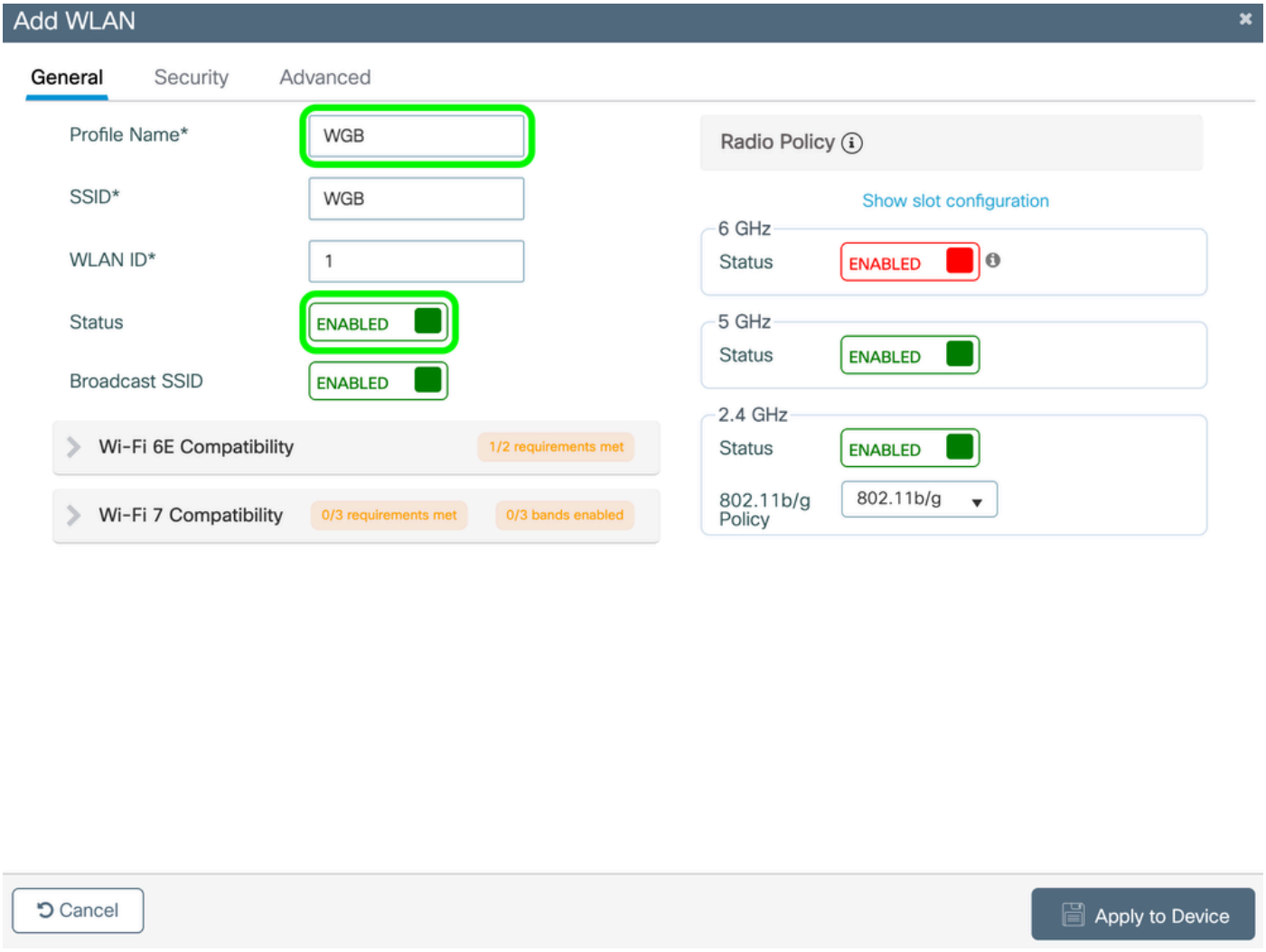
配置

步骤1.在WLC上配置用于WGB的WLAN。

在WLC上，导航到Configuration > Tags & Profiles > WLANs > click + Add，如图所示。



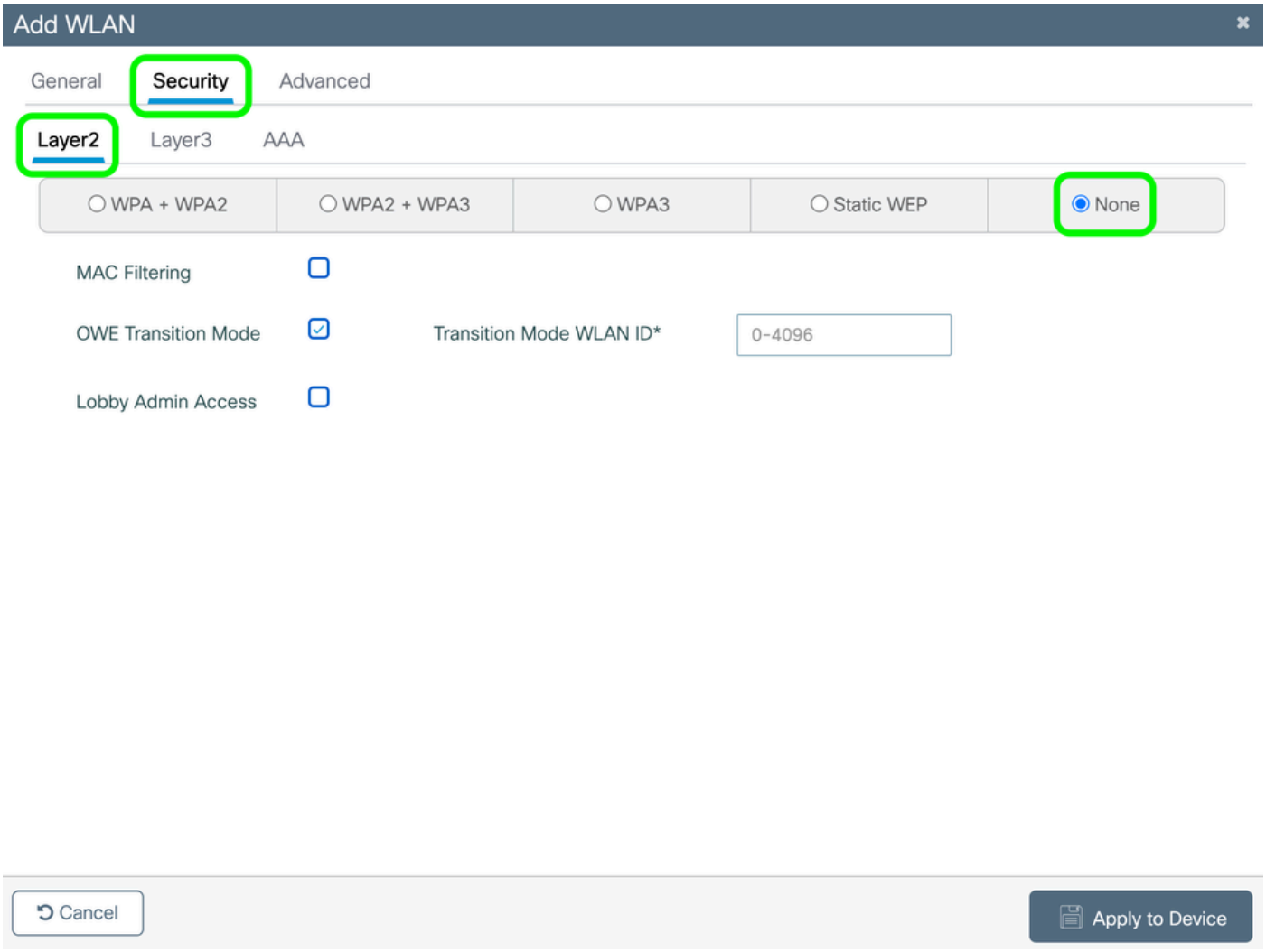
为WLAN指定一个名称，并确保其已启用。



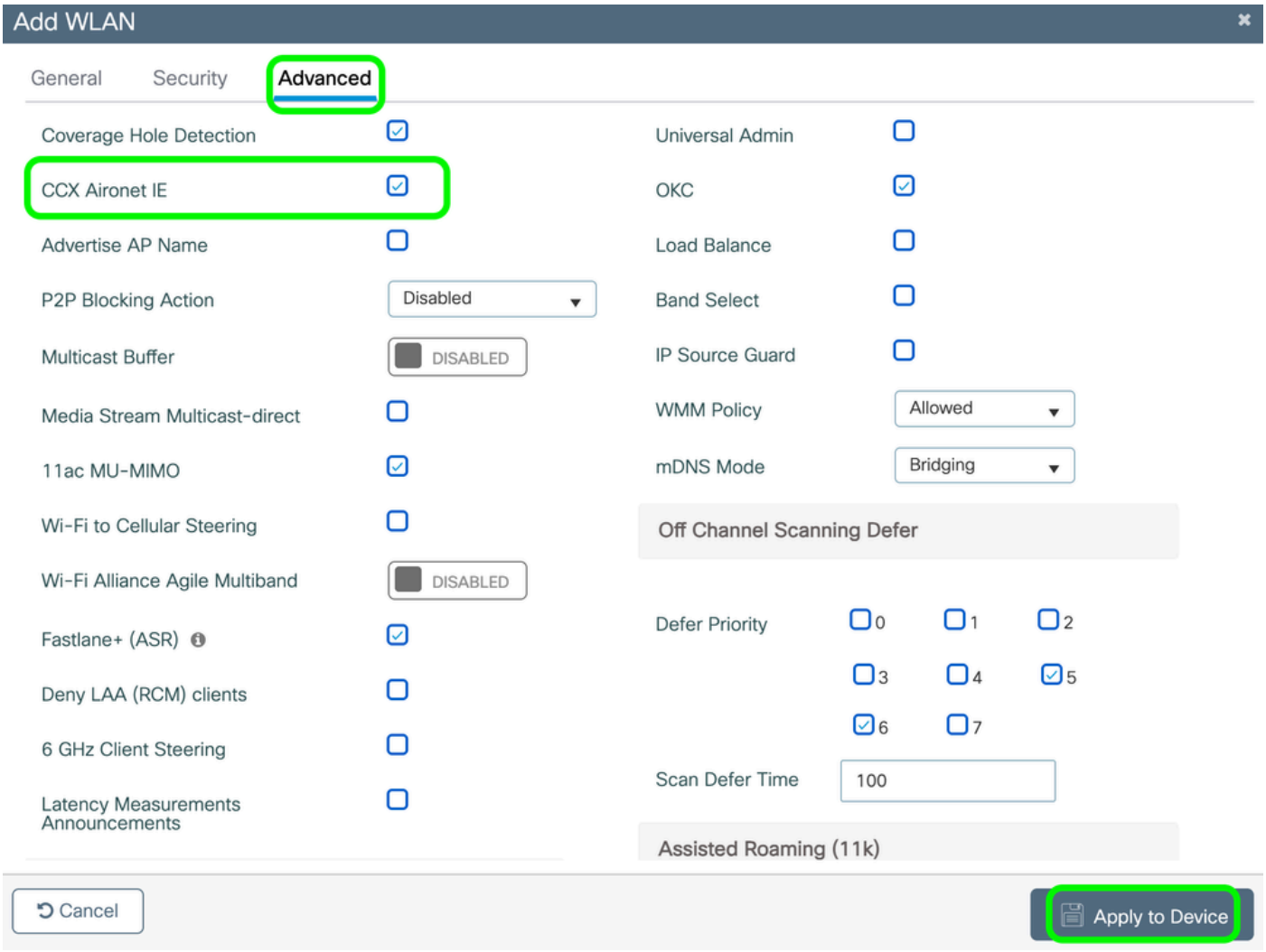
导航到Security选项卡，并为创建的WGB SSID选择所需的安全设置。为本文档的目的，创建了开放式SSID。不过，还可以创建其他安全选项。

警告：请确保WLC上的SSID与WGB AP SSID配置文件之间的安全设置匹配（此配置文件

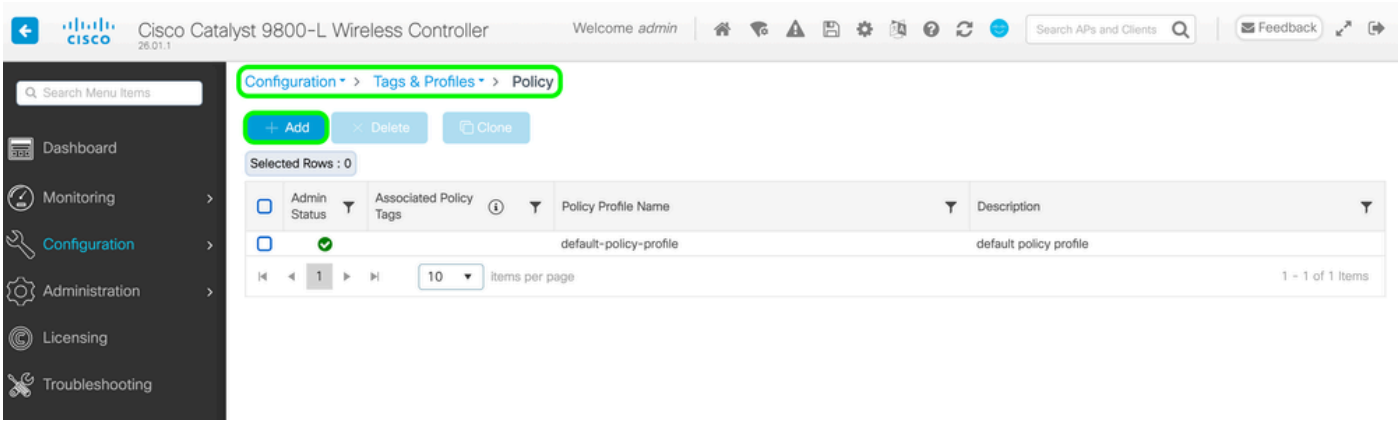
稍后将在WGB AP的文档中进行配置）。



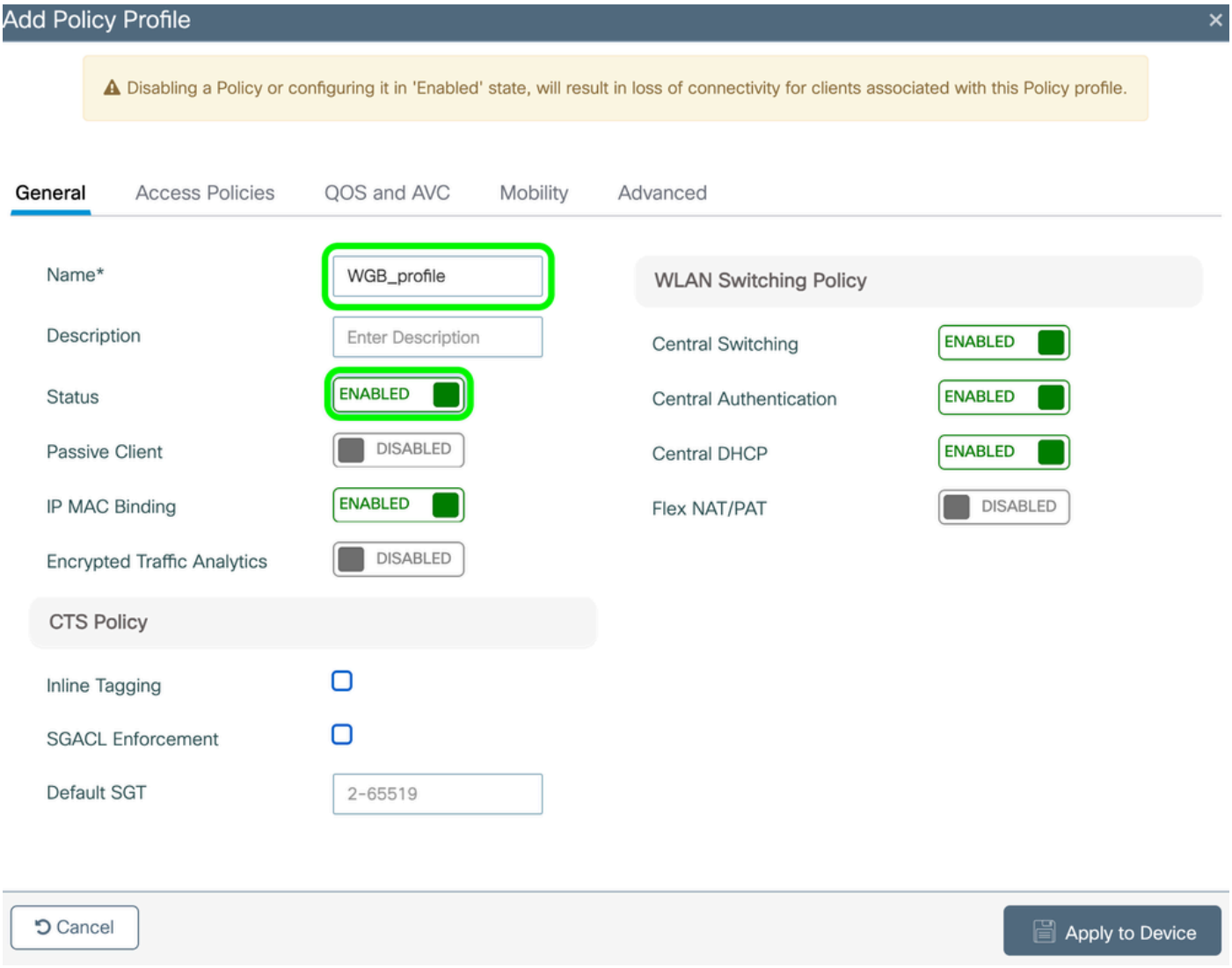
转至Advanced选项卡，确保CCX Aironet IE已启用。然后单击Apply to Device。



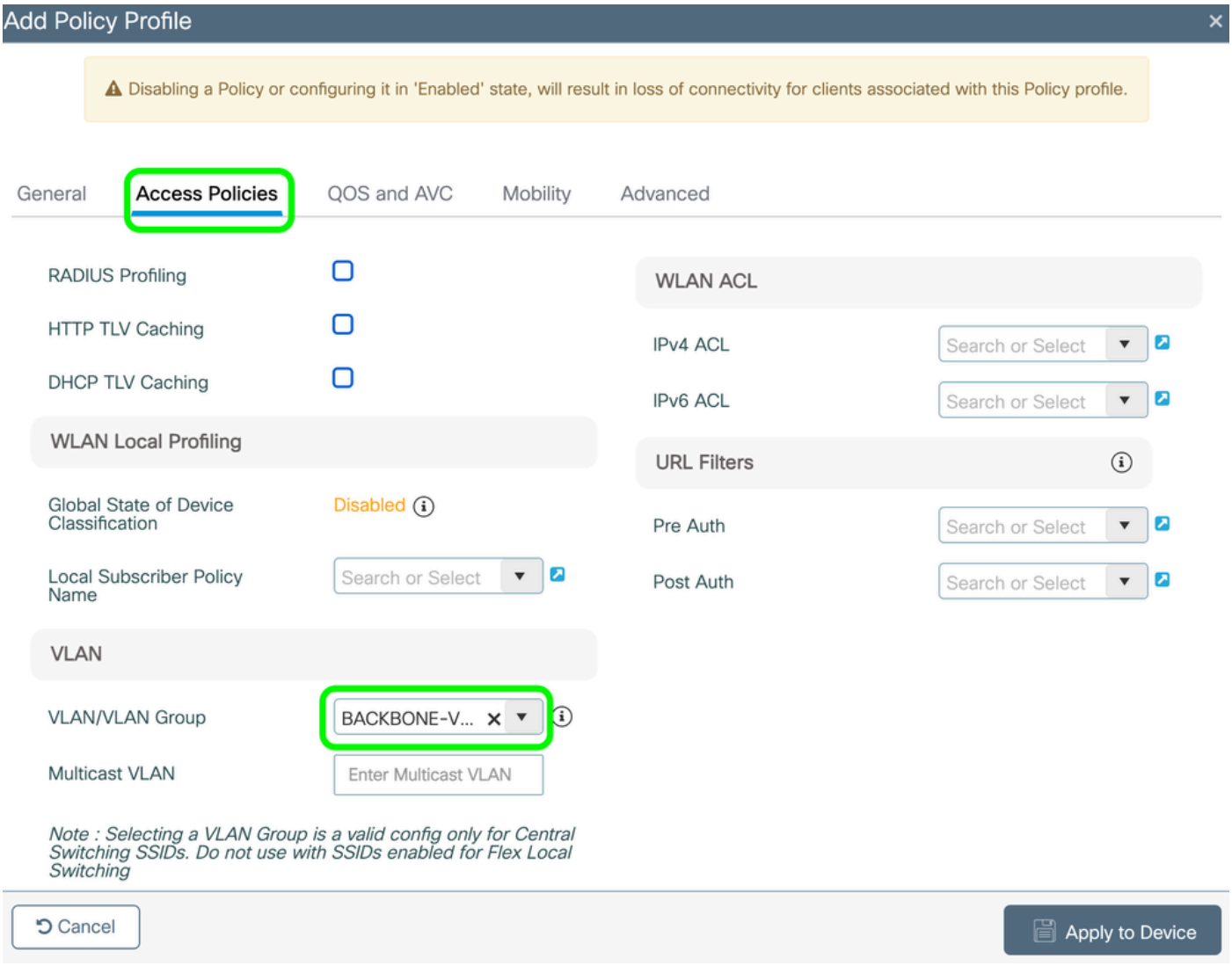
创建WLAN配置文件后，创建该WLAN的策略配置文件。为此，请导航到配置>标记和配置文件>策略>点击+添加。



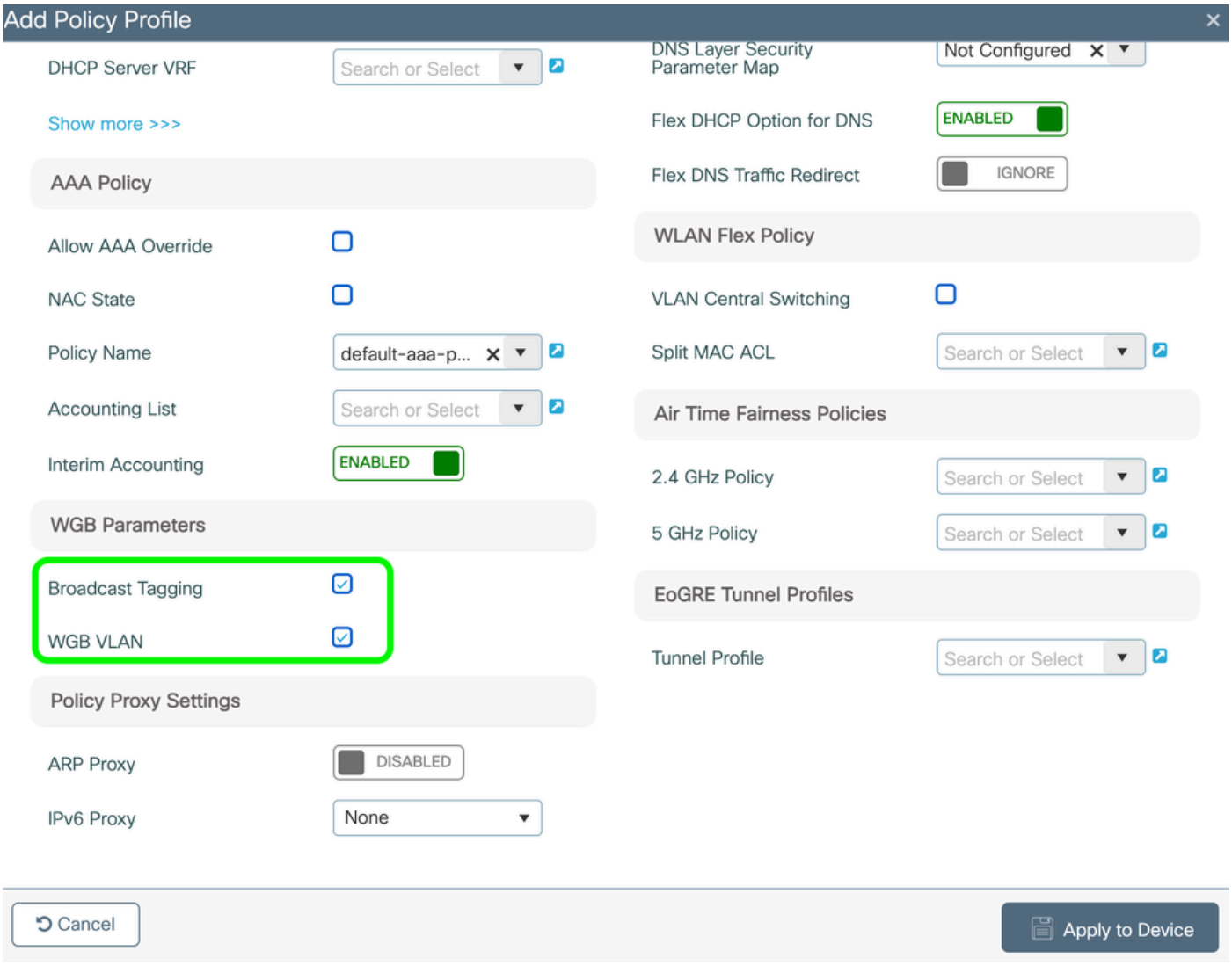
在General选项卡中输入策略配置文件的名称，并确保策略配置文件已启用。



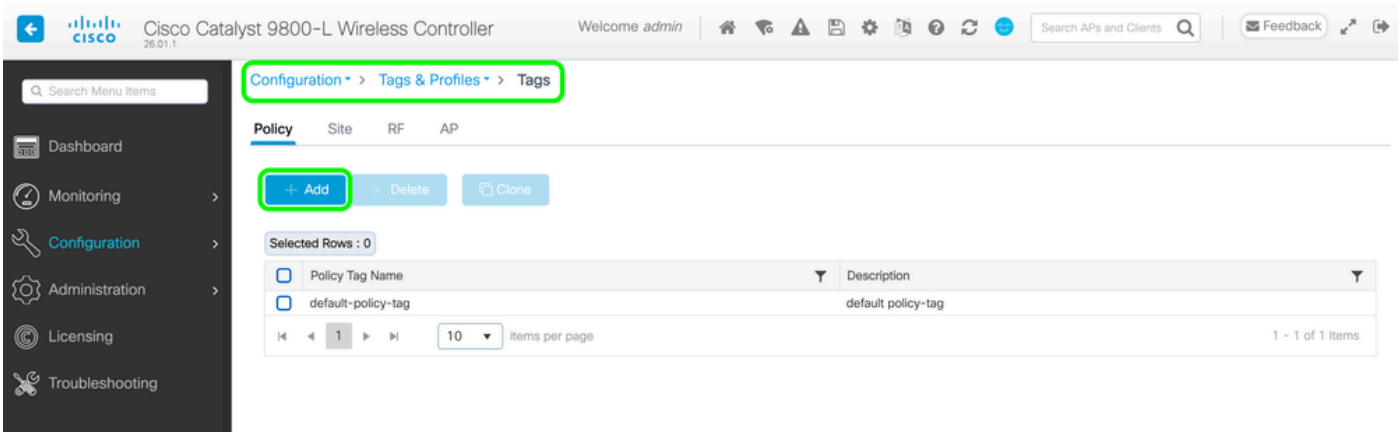
导航到Access Policies选项卡，并将VLAN分配到您的策略配置文件。



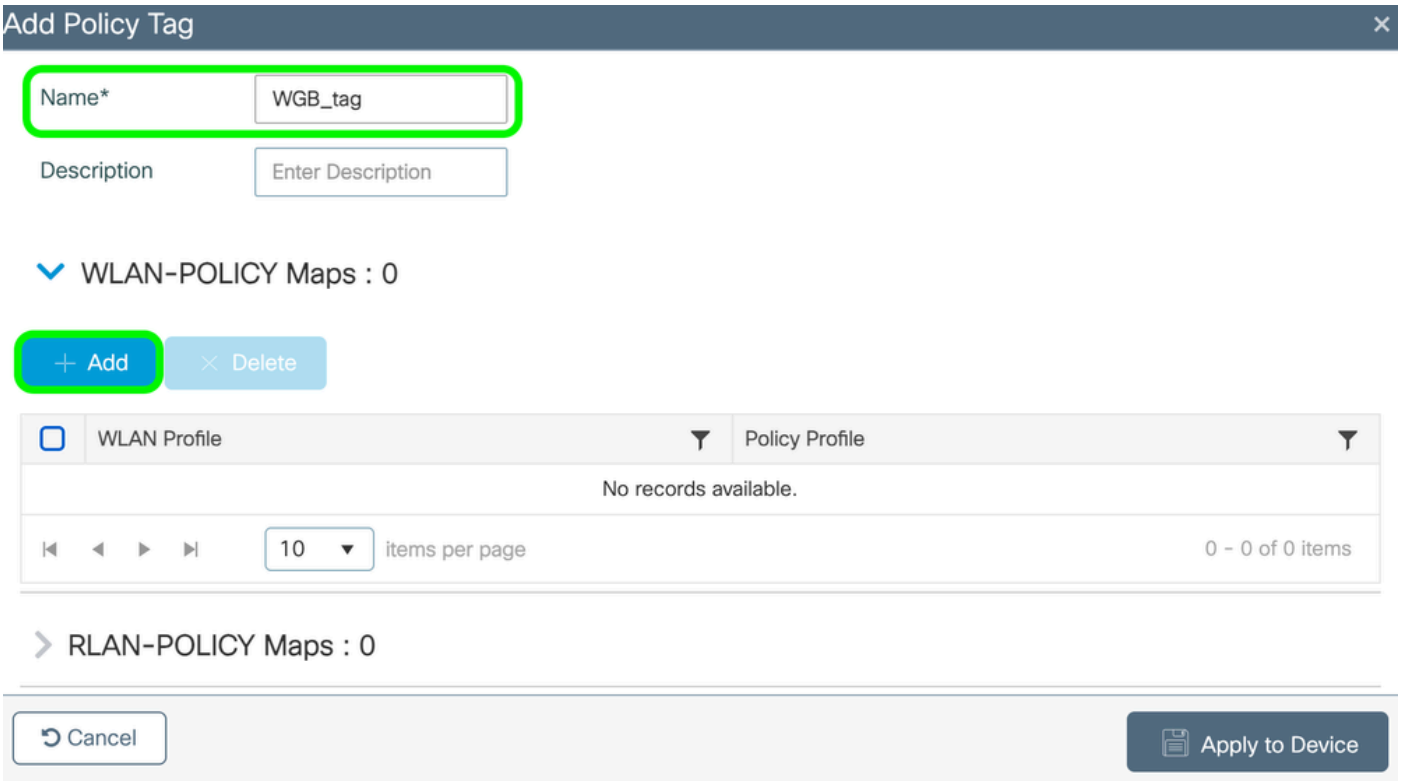
导航到Advanced选项卡，向下滚动到WGB Parameters部分并选择Broadcast Tagging和WGB VLAN选项。然后单击Apply to Device。



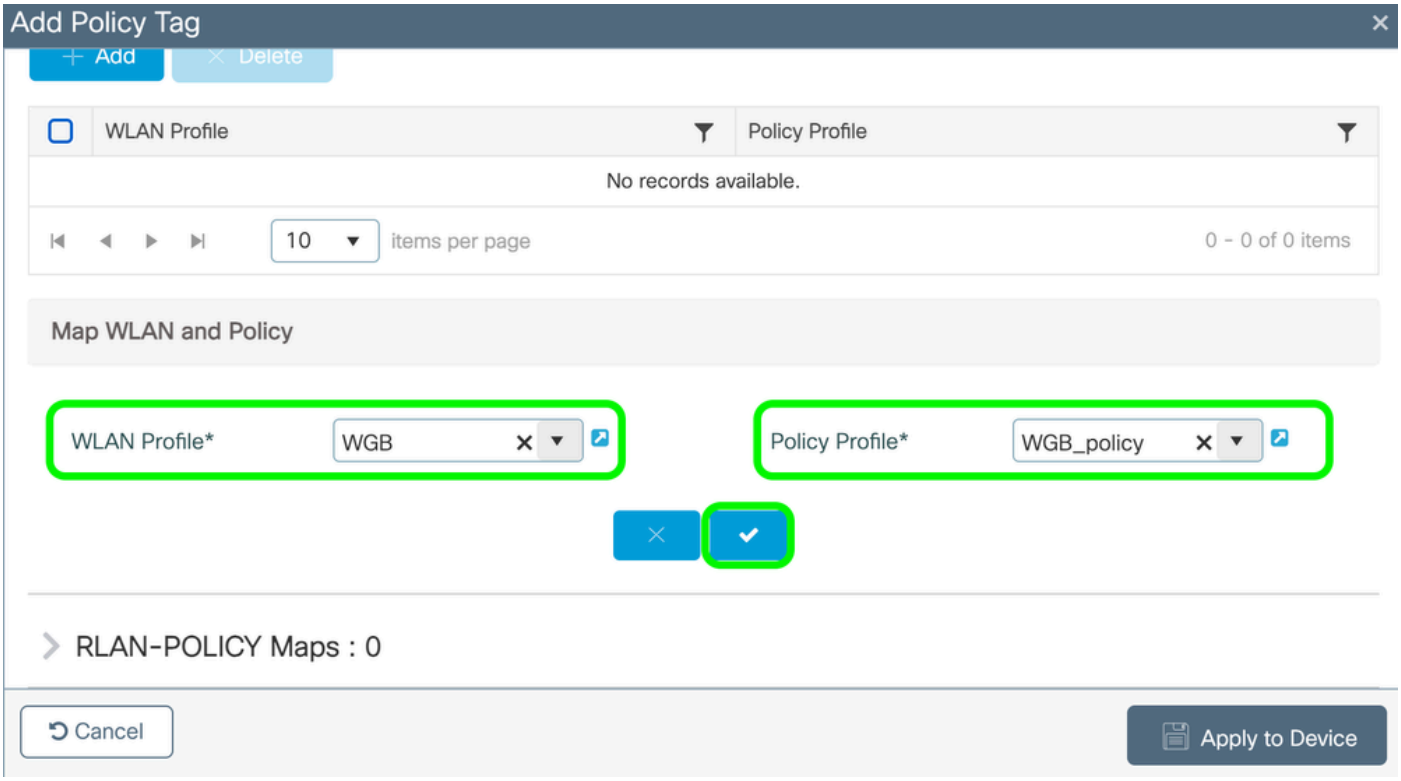
之后，将策略配置文件映射到WLAN配置文件。导航到配置>标签和配置文件>标签>点击+添加。



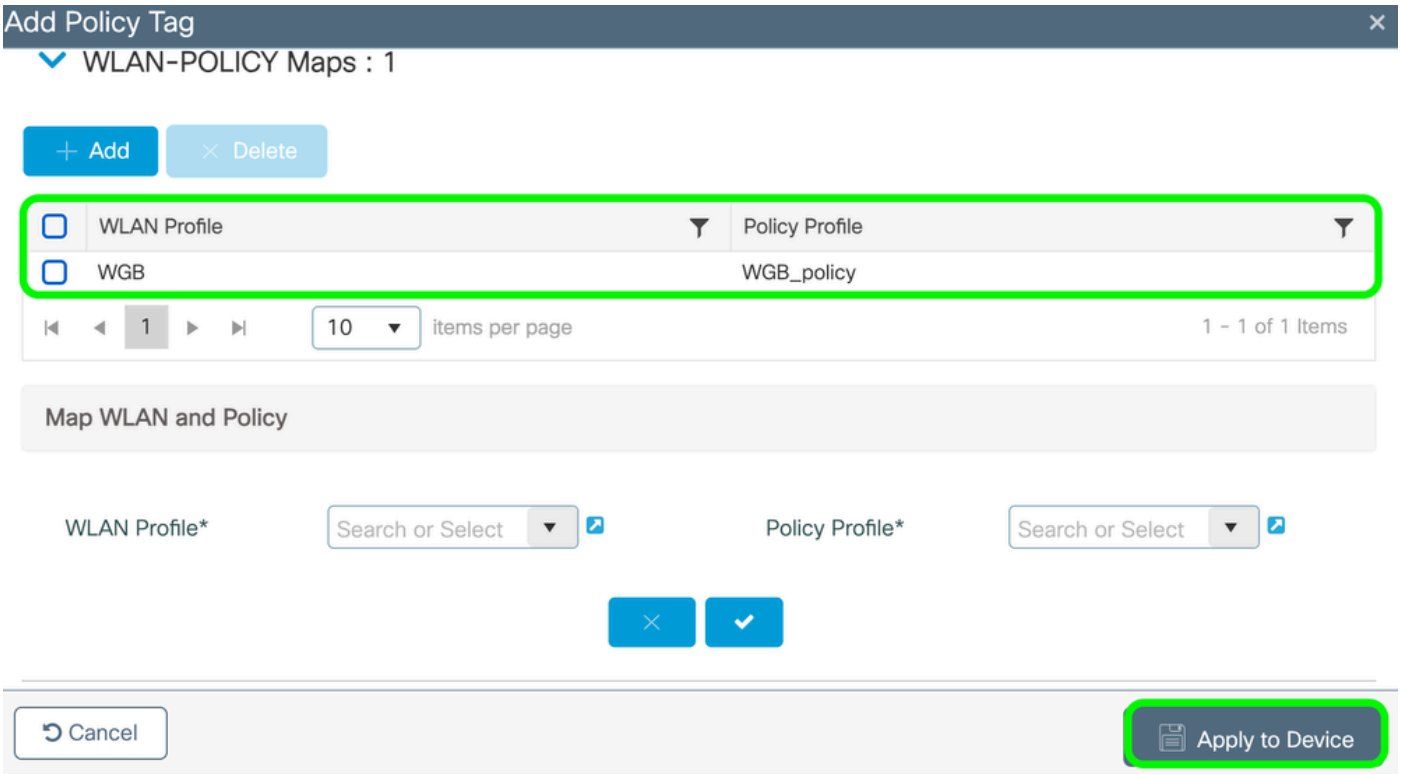
输入策略标记的名称。然后单击+ Add。



向下滚动到Map WLAN and Policy部分，并选择之前创建的WLAN策略配置文件。然后单击✓。



确保映射已添加到表中后，单击Apply to Device。



步骤2.在WGB模式下配置AP。

将AP从CAPWAP转换为WGB类型。

```
WGB_AP#ap-type workgroup-bridge
```

配置WGB AP的IP地址。

对于DHCP IP地址：

```
WGB_AP#configure ap address ipv4 dhcp
```

对于静态IP地址：

```
WGB_AP#configure ap address ipv4 static
```

在WGB AP上配置SSID配置文件。

```
WGB_AP#configure ssid-profile

      ssid

       authentication
```

将SSID配置文件连接到无线电接口。

```
WGB_AP#configure dot11Radio

      mode wgb ssid-profile
```

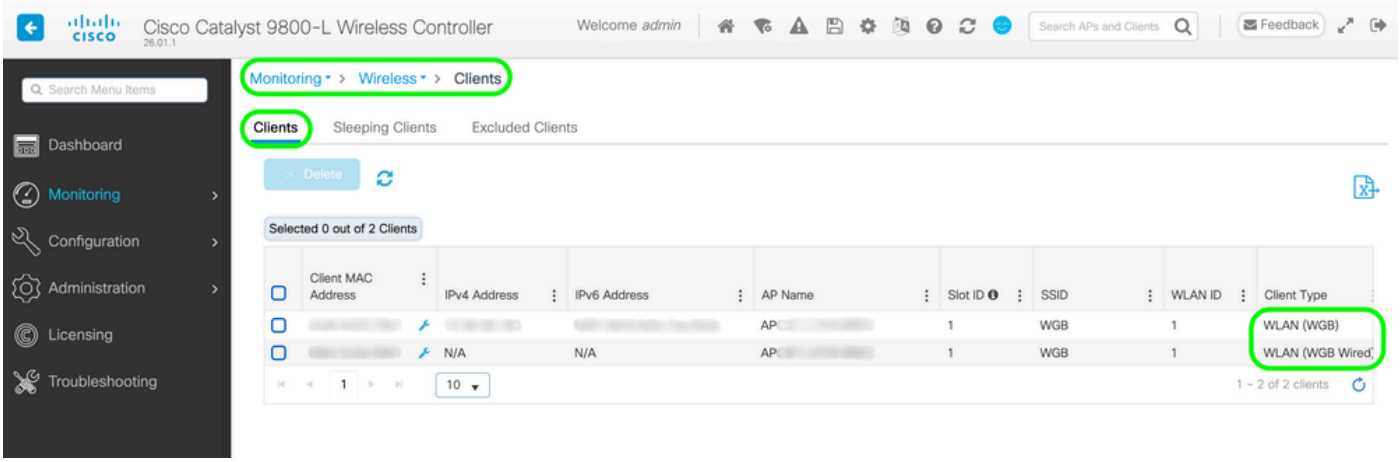
在WGB AP上启用已配置的无线电。

```
WGB_AP#configure dot11Radio 1 enable
```

之后，WGB AP连接到根AP。可以从WLC验证配置是否成功。

在WLC上，WGB AP被视为已连接的无线客户端。在同一个表中，还会显示通过WGB AP连接的有线客户端。

示例：



提示：继续配置WGB AP之前，请确保该AP配置了国家/地区代码（可使用命令“show controllers dot11Radio”进行验证），例如：

```
WGB_AP#show controllers dot11Radio 1
wifi1 Link encap:Ethernet HWaddr XX:XX:XX:XX:XX:XX
BROADCAST MULTICAST MTU:1500 Metric:1
RX packets:0 errors:0 dropped:0 overruns:0 frame:0
TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:2699
RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)

Radio Info Summary:
==============================
Radio: 5.0GHz
Carrier Set: (-E) Belgium ( BE)
```

提示：如果未配置国家/地区代码，请将AP转换为CAPWAP模式，将其加入WLC并确保已配置国家/地区代码。之后，将AP转换为WGB模式并继续配置。

验证

您可以使用这些命令检验当前配置。

在WGB AP上：

#show wgb ssid

成功的配置输出示例：

```
Configured SSIDs details:
SSID-Profile               SSID               Authentication               DTIM
================================================================================
WGB_ssid_profile           "WGB"                OPEN                          1
```

#show wgb dot11关联

成功的配置输出示例：

```
Uplink Radio ID : 1
Uplink Radio MAC : XX:XX:XX:XX:XX:XX
SSID Name : WGB
Connected Duration : 0 hours, 2 minutes, 14 seconds
Parent AP Name : APXXXX.XXXX.XXXX
Parent AP MAC : XX:XX:XX:XX:XX:XX
Uplink State : CONNECTED
Auth Type : OPEN
Dot11 type : 11ax
Channel : 112
Bandwidth : 40 MHz
Current Datarate (Tx/Rx) : 309/195 Mbps
Max Datarate : 1147 Mbps
RSSI : 65
IP : XX.XX.XX.XXX/24
Default Gateway : XX.XX.XX.XXX
IPV6 : ::/128
Assoc timeout : 5000 Msec
Auth timeout : 5000 Msec
Dhcp timeout : 60 Sec
Country-code : BE
```

#show wgb event all

故障排除

收集调试

在WGB AP上：

应用配置后，如果WGB AP未连接到根AP，请启用调试以获取有关故障原因的更多详细信息：

#debug wgb uplink all

成功的连接输出示例：

```
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.0356] DOT11_UPLINK_EV: Scan Started ON SLOT 1
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.0357] DOT11_UPLINK_EV: Uplink state changed [DOT11_
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.0358] DOT11_UPLINK_EV: Set BH root port(hop 00:00:0
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.0358] DOT11_UPLINK_SCAN: Uplink Scan Started in Dot
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.0362] DOT11_UPLINK_SCAN: Enable passive scan on cha
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.0632]  Radio configuration has been saved successfu
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.0633]
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.1492] DOT11_UPLINK_SCAN: Enable passive scan on cha
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.2895] DOT11_UPLINK_SCAN: Enable passive scan on cha
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.4298] DOT11_UPLINK_SCAN: Enable passive scan on cha
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.4933] DOT11_UPLINK_SCAN:[*06/19/2026 13:17:00.6489]
[*06/19/2026 13:17:00.6494] DOT11_UPLINK_EV: parent_rssi: -65, configured low rssi: -70
 Rcvd Beacon from XX:XX:XX:XX:XX:XX channel 112  Time 36143
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.4934] DOT11_UPLINK_SCAN: Received Beacon and going
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.4934] DOT11_UPLINK_SCAN: Sending probe request on
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.4934] WGB Classifier: Dot11UplinkClassifier: Downst
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.4935] WGB Classifier: Dot11UplinkClassifier: Tx ser
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.4952] DOT11_UPLINK_SCAN: Rcvd Probe Response from X
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.4952] DOT11_UPLINK_SCAN: WGB_SCAN_STATUS: Received
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.5266] DOT11_UPLINK_SCAN: Enable passive scan on cha
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.6657] DOT11_UPLINK_SCAN: Enable passive scan on cha
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.8046] DOT11_UPLINK_SCAN: Enable passive scan on cha
Jun 19 12:57:39 WGB_AP kernel: [*06/19/2026 12:57:39.9436] DOT11_UPLINK_SCAN: Enable passive scan on cha
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.0827] DOT11_UPLINK_SCAN: Enable passive scan on cha
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.2218] DOT11_UPLINK_SCAN: Enable passive scan on cha
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.3609] DOT11_UPLINK_SCAN: Enable passive scan on cha
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.4983] DOT11_UPLINK_SCAN: End of channel list
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.4984] DOT11_UPLINK_SCAN: An AP responded, try to as
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.4984] DOT11_UPLINK_SCAN: Uplink Scan stopped in Dot
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.4984] DOT11_UPLINK_SCAN: Choosing best AP
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.4985] DOT11_UPLINK_SCAN: Selected best AP :  XX:XX
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.4985] DOT11_UPLINK_SCAN: Best AP : XX:XX:XX:XX:XX:X
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.4985] DOT11_UPLINK_SCAN: HD IE not present!
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.4986] DOT11_UPLINK_SCAN: WME capable 1
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.4986] DOT11_UPLINK_SCAN: Scan done.Starting Authen
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.4987] DOT11_UPLINK_EV: Uplink state changed [DOT11_
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.4988] DOT11_UPLINK_EV: Set BH root port(hop 00:00:0
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.4995] DOT11_UPLINK_EV: existing channel 140, target
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5001] DOT11_UPLINK_EV: existing channel 140, target
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5168] DOT11_UPLINK_CONFIG: get tx_pow_lvl 1 by txpo
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5433] DOT11_UPLINK_EV: Channel event on slot 1 chan
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5541] DOT11_UPLINK_EV: Channel event on slot 1 chan
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5655] DOT11_UPLINK_EV: Handling auth delay for chan
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5718] DOT11_UPLINK_CONFIG: get tx_pow_lvl 1 by txpo
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5719] DOT11_UPLINK_EV: Starting Connection (uplink)
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5719] WGB_UPLINK_SEC: New roamed parent : XX:XX:XX
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5719] WGB_UPLINK_SEC: WPAS process does not exist
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5719] DOT11_UPLINK_EV: Uplink state changed [DOT11_
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5721] WGB Classifier: Dot11UplinkClassifier: Downst
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5721] WGB Classifier: Dot11UplinkClassifier: Tx ser
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5723] DOT11_UPLINK_EV: Auth request sent!
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5753] DOT11_UPLINK_EV: Channel event on slot 1 chan
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5753] DOT11_UPLINK_EV: Channel 112 set response fr
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5764] DOT11_UPLINK_EV: Channel event on slot 1 chan
```

```
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.5765] DOT11_UPLINK_EV: Channel 112 set response fr
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6035] WGB Classifier: Dot11UplinkClassifier: Rx se
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6036] DOT11_UPLINK_EV: Auth Response (uplink)addr1
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6036] DOT11_UPLINK_EV: Uplink state changed [DOT11
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6038] DOT11_UPLINK_EV: Assoc. Req. addr1[XX:XX:XX:
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6038] DOT11_UPLINK_EV: set_ht_cap_ie_fields: Addin
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6038] DOT11_UPLINK_EV: set_vht_cap_ie_fields: Addi
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6038] DOT11_UPLINK_EV: VhtCapInfo=865069494
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6039] DOT11_UPLINK_EV: set_he_cap_ie_fields: Addin
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6039] DOT11_UPLINK_EV: set_he_cap_ie_fields: Setti
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6039] DOT11_UPLINK_EV: Added system name :  in ass
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6039] DOT11_UPLINK_EV: Added static IP address : X
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6040] WGB Classifier: Dot11UplinkClassifier: Downs
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6040] WGB Classifier: Dot11UplinkClassifier: Tx se
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6041] DOT11_UPLINK_EV: Sent Assoc. Req. (uplink)ad
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6100] WGB Classifier: Dot11UplinkClassifier: Rx se
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6101] DOT11_UPLINK_EV: Assoc Response (uplink)addr
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6102] DOT11_UPLINK_EV: Uplink state changed [DOT11
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6108] DOT11_UPLINK_EV: Set BH root port(hop XX:XX:
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6118] wlan: [10239:I:ANY] ieee80211_ucfg_setparam_
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6124] DOT11_UPLINK_EV: Set BH root port(hop XX:XX:
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6130] DOT11_UPLINK_EV: Static IP address configure
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6131] DOT11_UPLINK_EV: Uplink state changed [DOT11
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6241] route: SIOCADDRT: File exists
Jun 19 12:57:40 WGB_AP odhcp6c[186731]: in timer_init.
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6761] odhcp6c[186731]: in timer_init.
Jun 19 12:57:40 WGB_AP odhcp6c[186735]: (re)starting transaction on srcr2
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6782] DOT11_UPLINK_EV: Odhcp6c process started
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6784] DOT11-UPLINK_ESTABLISHED: Interface Dot11Rad
Jun 19 12:57:40 WGB_AP kernel: [*06/19/2026 12:57:40.6786] DOT11_UPLINK_EV: Peer assoc event received f
Jun 19 12:57:41 WGB_AP odhcp6c[186735]: Starting SOLICIT transaction (timeout 4294967295s, max rc 0)
Jun 19 12:57:41 WGB_AP odhcp6c[186735]: odhcp6c_update_entry state = 16, valid = 1800, preferred = 1800
Jun 19 12:57:41 WGB_AP odhcp6c[186735]: odhcp6c_update_entry state = 16, valid = 259200, preferred = 60
Jun 19 12:57:41 WGB_AP odhcp6c[186735]: odhcp6c_update_entry state = 17, valid = 259200, preferred = 60
Jun 19 12:57:43 WGB_AP kernel: [*06/19/2026 12:57:43.6386] ip6_port srcr2, ip6local XXXX::XXXX:XXXX:XXX
Jun 19 12:58:00 WGB_AP kernel: [*06/19/2026 12:58:00.6134] DOT11_UPLINK_EV: Calling RSSI get for XX:XX:
Jun 19 12:58:00 WGB_AP kernel: [*06/19/2026 12:58:00.6138] DOT11_UPLINK_EV: parent_rssi: -63, configure
Jun 19 12:58:20 WGB_AP kernel: [*06/19/2026 12:58:20.6140] DOT11_UPLINK_EV: Calling RSSI get for XX:XX:
Jun 19 12:58:20 WGB_AP kernel: [*06/19/2026 12:58:20.6145] DOT11_UPLINK_EV: parent_rssi: -63, configure
Jun 19 12:58:40 WGB_AP kernel: [*06/19/2026 12:58:40.6147] DOT11_UPLINK_EV: Calling RSSI get for XX:XX:
Jun 19 12:58:40 WGB_AP kernel: [*06/19/2026 12:58:40.6152] DOT11_UPLINK_EV: parent_rssi: -64, configure
Jun 19 12:59:00 WGB_AP kernel: [*06/19/2026 12:59:00.6154] DOT11_UPLINK_EV: Calling RSSI get for XX:XX:
Jun 19 12:59:00 WGB_AP kernel: [*06/19/2026 12:59:00.6158] DOT11_UPLINK_EV: parent_rssi: -64, configure
Jun 19 12:59:20 WGB_AP kernel: [*06/19/2026 12:59:20.6161] DOT11_UPLINK_EV: Calling RSSI get for XX:XX:
```

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