# Management Mode Migration in Cisco Catalyst 916X Access Points



## Feature History for Management Mode Migration in Cisco Catalyst Wireless 916X Access Points

This table provides release and related information for the feature explained in this module.

This feature is also available in all the releases subsequent to the one in which they are introduced in, unless noted otherwise.

***Table 1: Feature History for Management Mode Migration in Cisco Wireless Catalyst Wireless 916X Series Access Points***

| Release | Feature | Feature Information |
|---|---|---|
| Cisco IOS XE Cupertino 17.9.1 | Management Mode Migration in Cisco Catalyst Wireless 916X Series Access Points | This feature allows you to convert the AP mode between DNA Management mode and Meraki Management mode, depending on your requirements.<br>**Note** The document explains the conversion from DNA Management mode to Meraki Management mode and not vice versa. |

# Information About Management Mode Migration in Cisco Catalyst Wireless 916X Series Access Points

Cisco Catalyst Wireless 916x APs (CW9164I-x and CW9166I-x) support both cloud and controller architecture. You can migrate between cloud and controller deployments, depending on your requirements. The CW916x APs join and operate either in the DNA Management mode or in the Meraki Management mode. You can configure the management mode migration with the help of CLI commands in the privileged EXEC mode, at the AP level, and from the controller GUI.

CW916x APs support dual-band slot 3 radios, which in turn support both 6-GHz and 5-GHz bands.

**Note** The section explains the migration from DNA Management mode to the Meraki Management mode and not vice versa.

# Regulatory Domain

For regulatory domain support, Cisco Catalyst 916x (CW916x) supports Rest of the World (RoW) and a few other fixed domains as shown here:

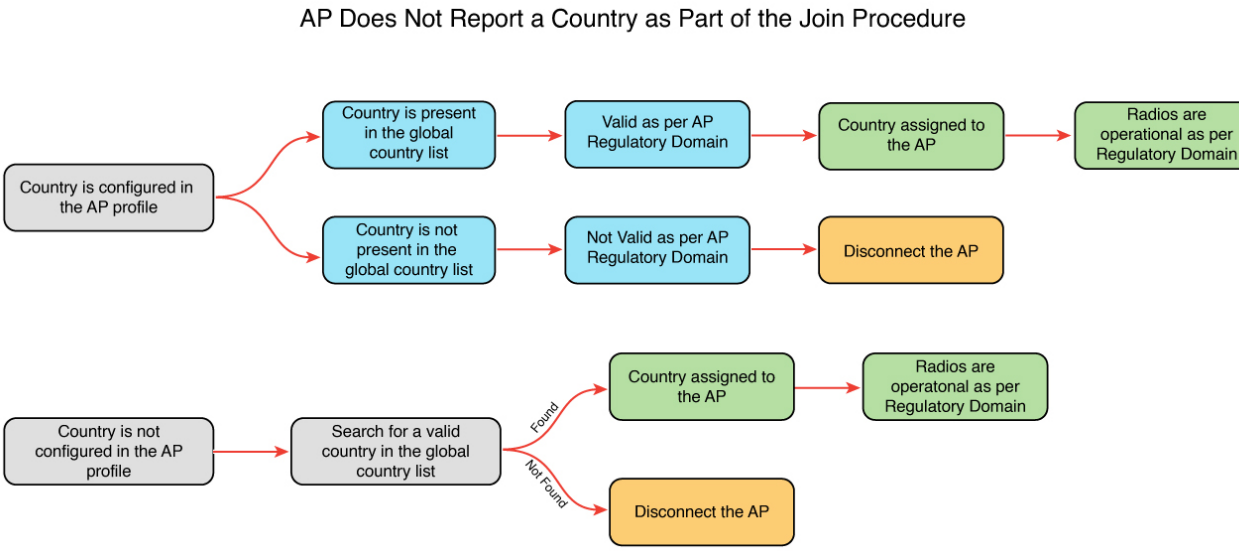
- -B
- -E
- -A
- -Z
- -Q
- -I
- -R

During the AP join flow, the regulatory domain details and the details of the country that is configured is passed on to the controller from the AP. The controller assigns or validates the right country of operation. After the country is validated based on the decision tree, the controller informs the AP about which country the AP should be configured with.

The following are the scenarios that determine the country that an AP should be configured with:

### AP Configured with Non-RoW Regulatory Domain

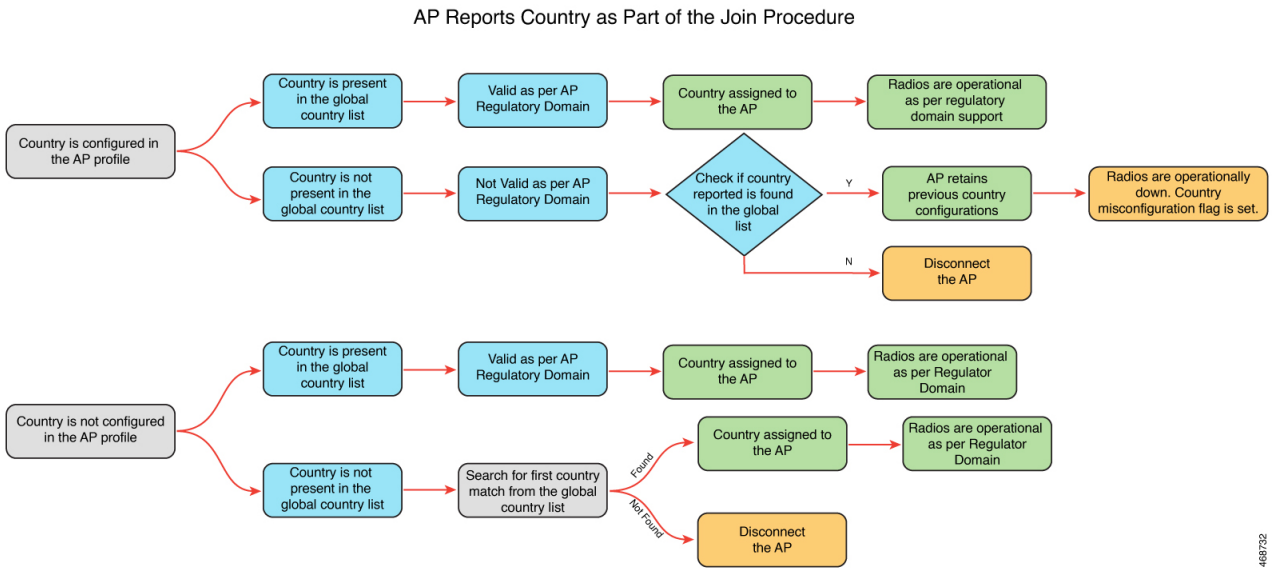
**Case 1**: AP does not report a country as part of the join procedure.




In the non-RoW regulatory domain, when an AP does not report a country as part of the join procedure, the following takes place:

- AP profile has a country configured.
  - If the country configured in the AP profile is present in the global country list, and is valid as per the AP regulatory domain, the country that is configured in the AP profile is assigned to the AP. Radios become operational as per the country or regulatory domain support.
  - If the country configured the AP profile is not present in the global country list, and is not valid as per the AP regulatory domain, the AP is disconnected.
- AP profile does not have a country configured. Find a valid country from the global country list (the first match), as per the AP regulatory domain.
  - If the country is found, the country is assigned to the AP and the radios become operational as per the country or regulatory domain support.
  - If the country is not found, the AP is disconnected.

**Case 2**: AP reports a country as part of the join procedure.



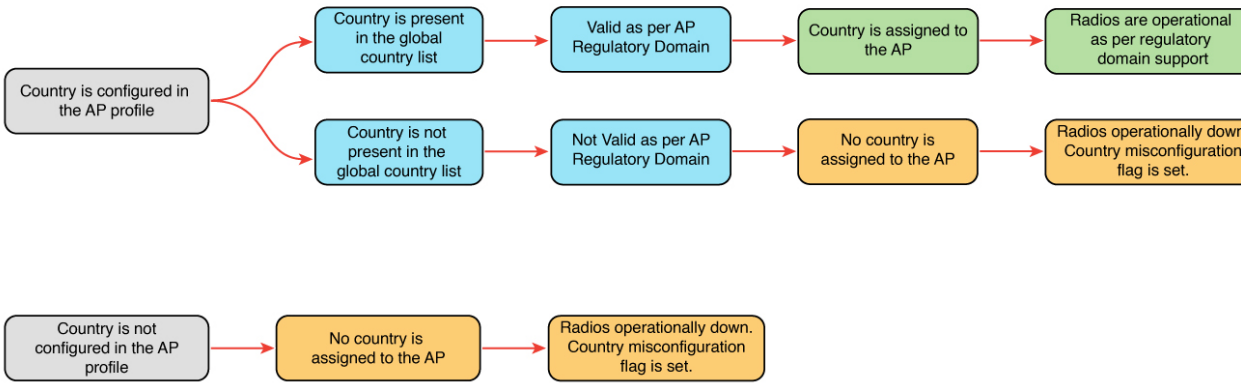

In the non-RoW regulatory domain, when an AP reports a country as part of the join procedure, the following takes place:

- The AP profile has a country configured.
  - If the country configured in the AP profile is present in the global country list, and it is valid as per the AP regulatory domain, the country that is configured in the AP profile is assigned to the AP. Radios become operational as per the country or regulatory domain support.
  - If the country configured in the AP profile is not present in the global country list, and is not valid as per the AP regulatory domain, check the global country list to confirm if the country is present in the list. If the country is present in the global list, the AP retains the previous country configuration and the radios are not operational with the country misconfiguration flag set. If the country is not located in the global list, the AP is disconnected.
- The AP profile does not have a country configured.
  - If the country reported by the AP is found in the global country list, and is valid as per the AP regulatory domain, the country is assigned to the AP and the radios become operational as per the country or regulatory domain support.
  - If the country is not present in the list, search for the first country match from the global list. If the country is found, the country is assigned to the AP and the radios become operational. If the country is not found, the AP is disconnected.

### AP Configured with RoW Regulatory Domain

**Case 1**: The AP does not report a country as part of the join procedure.

AP Does Not Report a Country as Part of the Join Procedure

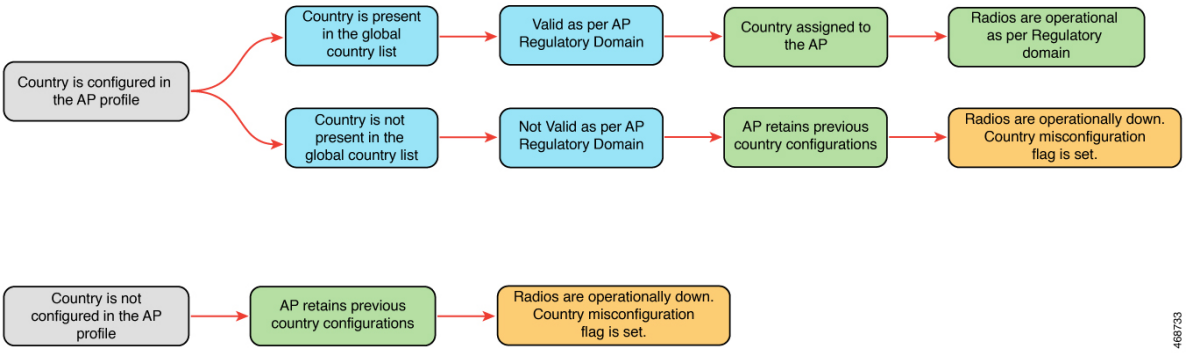



In the RoW regulatory domain, when an AP does not report a country as part of the join procedure, the following takes place:

- The AP profile has a country configured.
  - If the country configured in the AP profile is present in the global country list, and is valid as per the AP regulatory domain, country that is configured in the AP profile is assigned to the AP. Radios become operational as per the country or regulatory domain support.
  - If the country configured in the AP profile is not present in the global country list, and is not valid as per the AP regulatory domain, country is not assigned to the AP and radios are not operational, and the country misconfiguration flag is set.
- If the AP profile does not have a country configured, the country is not assigned to the AP and radios are not operational, and the country misconfiguration flag is set.

**Case 2**: The AP reports a country as part of the join procedure.

AP Reports a Country as Part of the Join Procedure




In the RoW regulatory domain, when an AP reports a country as part of the join procedure, the following takes place:

- The AP profile has a country configured.

- If the country configured in the AP profile is present in the global country list, and it is valid as per the AP regulatory domain, the country that is configured in the AP profile is assigned to the AP. Radios become operational as per the country or regulatory domain support.
- If the country configured in the AP profile is not present in the global country list, and is not valid as per the AP regulatory domain, the AP retains the previous country configuration and the radios are not operational with the country misconfiguration flag set.

- The AP retains the previous country configuration and the radios are not operational with the country misconfiguration flag set.

# Configuring Management Mode Migration (GUI)

### Before you begin

The country code must be configured on the AP profile. To configure the country code, navigate to **Configuration** > **Tags & Profiles** > **AP Join** page. Click an AP profile to edit. In the **General** tab, select the country code from the drop-down list.

### Procedure

**Step 1** Choose **Configuration** > **Wireless** > **Migrate to Meraki Management Mode**.

**Step 2** Select the required APs by clicking on the check box(es), from the displayed APs.
The **Migrate to Meraki Management Mode** button is enabled.

**Step 3** Click **Migrate to Meraki Management Mode** button to perform a validation check on the selected APs. If the validation check is successful, the **Next** button is enabled.

**Step 4** Click **Next** to start the process.

**Step 5** On the **Confirm Management Mode Migration** window, do the following:

**a.** Select the **Agree and continue** check box.

**b.** Click **Yes** to confirm.

The **Management Mode Migration Successful** section displays the APs that were migrated to the Meraki management mode. The **Management Mode Migration Failed** section displays the APs that were retained in DNA management mode.

**Step 6** Click **Restart Workflow** to restart the workflow for APs that did not migrate from DNA management mode to Meraki management mode.

# Exporting Meraki Management Mode-Migrated APs (GUI)

You can export the details about the Meraki management mode-migrated APs either from the **Change to Meraki Persona** tab after the workflow is completed or from the **Previously changed APs** tab.

### Procedure

| | Command or Action | Purpose |
|---|---|---|
| **Step 1** | Choose **Configuration** > **Wireless** > **Migrate to Meraki Management Mode**. | |
| **Step 2** | Click the **Export** button to export the list of APs. | |
| **Step 3** | Select whether you want to export only the current page or all pages. Click **Yes** to continue. | |
| **Step 4** | On the **Export** window, select the export method. The available options are: | • **Serial Number**<br>• **JSON**<br>• **Export to Meraki Dashboard**<br>**Note** We recommend the Export to Meraki Dashboard option as you can directly export the migrated APs information into the Meraki Dashboard. |
| **Step 5** | Click **Copy** to copy the migrated APs. Click **Download** and save the file location. | |

# Configuring the AP Management Mode (CLI)

### Before you begin

- Ensure that the AP is Meraki-capable to run any of the EXEC commands. To view the list of Meraki-capable APs, use the **show ap management-mode meraki capability summary** command.

**Note** If the country code is misconfigured, the change of management mode will not be allowed for any of the EXEC commands, except the **force** command.

If the regulatory domain is misconfigured for any slot, the change of management mode is not allowed for any of the EXEC commands, except the **force** command.

### Procedure

| | Command or Action | Purpose |
|---|---|---|
| **Step 1** | **enable**<br>**Example:**<br>`Device> enable` | Enables privileged EXEC mode. Enter the password, if prompted. |

| | Command or Action | Purpose |
|---|---|---|
| **Step 2** | **ap name** *Cisco-AP-name* **management-mode meraki** [**force** ] [**noprompt**]<br>**Example:**<br>`Device# ap name Cisco-AP-name management-mode meraki`<br>`Device# ap name Cisco-AP-name management-mode meraki force`<br>`Device# ap name Cisco-AP-name management-mode meraki noprompt`<br>`Device# ap name Cisco-AP-name management-mode meraki force noprompt` | Changes the AP management mode to Meraki.<br>Here, **force** skips the validations at the controller and attempts Meraki management mode change at the AP.<br>**noprompt** skips the user prompt for attempting AP management mode change. |
| **Step 3** | (Optional) **clear ap meraki stats**<br>**Example:**<br>`Device# clear ap meraki stats` | Clears the Meraki AP-related data. |

# Verifying the Management Mode Migration Details

To view the summary of the Meraki-capable AP information, run the following command:

```
Device# show ap management-mode meraki capability summary
AP Name                    AP Model            Radio MAC        MAC Address      AP Serial
 Number       Meraki Serial Number
-----------------------------------------------------------------------------------------------
APXXXD.BXXX.1XXX          CW9162I            6XXd.bXXe.eXX0   6XXd.bXXe.eXX0    FOCXXXXXB90
            FOCXXXXXB90
```

To view the failure summary of the AP along with the migration attempt timestamp, run the following command:

```
Device# show ap management-mode meraki failure summary
AP Name              AP Model          Radio MAC        MAC Address      Conversion Attempt
        AP Serial Number       Meraki Serial Number   Reason Code
-----------------------------------------------------------------------------------------------
APXXXD.BXXC.1        CW9162I          6XXd.bXXe.eXX0   6XXd.bXXe.eXX0   03/03/2022 17:17:42
 IST   FOCXXXXXB90            FOCXXXXXB90            Regulatory domain not set
```

To view the successful Meraki management mode migration attempts of all the APs, run the following command:

```
Device# show ap management-mode meraki change summary
AP Name                  AP Model          Radio MAC        MAC Address      Conversion
Timestamp       AP Serial Number        Meraki Serial Number
-----------------------------------------------------------------------------------------------
APXXXX.3XXX.EXXX         CW9166I-B         1XXX.2XXX.1100   ccXX.3XXX.eXX0   05/02/2022
07:48:56 CST    KWC2XXXXX5G             Q5XX-4XXX-K7XX
```