802.11ax Per WLAN

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An 802.11ax mode per WLAN is a wireless configuration feature that

- enables or disables 802.11ax functionality at the individual WLAN level rather than per radio band
- provides granular control over 11ax settings for specific SSIDs
- allows mixed 11ax and legacy client connectivity on the same access point.

Configuration evolution and behavior

Prior to Cisco IOS XE Bengaluru Release 17.4.1, the 802.11ax mode was configured per radio band. In this configuration, the 11ax mode was either enabled or disabled for all WLANs (AP) that were configured per radio, all at once. When 11ax was enabled per radio, the 11ac clients were not able to scan or connect to the SSID if the beacon had 11ax information elements. Client could not probe an access point (AP), if the beacon has 11ax IE.

Therefore, a 11ax configuration knob per AP is introduced, from Cisco IOS XE Bengaluru Release 17.5.1. This knob is introduced under the WLAN profile. By default, the 11ax knob per WLAN is now enabled on the controller.

Note For 6-GHz radio, the 802.11ax parameters are taken from the multi BSSID profile tagged to the corresponding 6-GHz RF profile of the AP. So, the WLAN dot11ax parameters are overridden by multi BSSID profile parameters in the case of 6-GHz. There are no changes for 2.4 and 5-GHz band WLANs. They continue to use the WLAN parameters for 802.11ax.

Configure 802.11ax mode per WLAN (GUI)

Enable or disable 802.11ax mode on a specific WLAN to control Wi-Fi 6 functionality.

Procedure

Step 1 Choose **Configuration** > **Tags & Profiles** > **WLANs**.

Step 2 Click **Add**.

The **Add WLAN** window is displayed.

Step 3 Click the **Advanced** tab.

Step 4 In the **11ax** section, check the **Enable 11ax** check box to enable 802.11ax operation status on the WLAN.

Note
When 11ax is disabled, beacons will not display 11ax IE, and all the 11ax features will be operationally disabled on the WLAN.

Step 5 Click **Apply to Device**.

The 802.11ax mode is now configured or disabled on the specified WLAN according to your requirements.

Configure 802.11ax mode per WLAN (CLI)

Enable or disable 802.11ax mode on a specific WLAN to control Wi-Fi 6 functionality.

802.11ax (Wi-Fi 6) provides improved performance and efficiency. This configuration allows you to enable or disable 802.11ax mode on individual WLANs based on your network requirements.

Procedure

Step 1 Enter global configuration mode.

Example:

```
Device# configure terminal
```

Step 2 Specify the WLAN name and enter the WLAN configuration mode.

Example:

```
Device(config)# wlan wlan-profile-name
```

Step 3 Configure 802.11ax on a WLAN.

Example:

```
Device(config-wlan)# dot11ax
```

Step 4 Disable 802.11ax on the WLAN profile.

Example:

```
Device(config-wlan)# no dot11ax
```

The 802.11ax mode is now configured or disabled on the specified WLAN according to your requirements.

Verify 802.11ax mode per WLAN

This task verifies the operational status of 802.11ax parameters for a specific WLAN configuration to ensure the wireless network is operating with the expected 802.11ax features enabled.

Follow these steps to verify 802.11ax mode per WLAN:

Procedure

Display the status of the 11ax parameter by running this command:

Example:

```
Device# show wlan id 6
WLAN Profile Name     : power
================================================
Identifier                                    : 6
Description                                   :
Network Name (SSID)                           : power
Status                                        : Enabled
Broadcast SSID                                : Enabled
Advertise-Apname                              : Disabled
Universal AP Admin                            : Disabled
Max Associated Clients per WLAN               : 0
Max Associated Clients per AP per WLAN        : 0
Max Associated Clients per AP Radio per WLAN  : 200
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802.11ac MU-MIMO                              : Enabled
802.11ax parameters
    802.11ax Operation Status                 : Enabled
    OFDMA Downlink                            : Enabled
    OFDMA Uplink                              : Enabled
    MU-MIMO Downlink                          : Enabled
    MU-MIMO Uplink                            : Enabled
    BSS Target Wake Up Time                   : Enabled
    BSS Target Wake Up Time Broadcast Support  : Enabled
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```