



## Client Limit

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## Information About Client Limit

This feature enforces a limit on the number of clients that can be associated with an AP. Further, you can configure the number of clients that can be associated with each AP radio.

From Cisco IOS XE Cupertino 17.8.x onwards, client limiting is supported per AP, per radio, and per radio per WLAN.

## Limitations for Client Limit

- APs other than the Cisco Catalyst 9136 Series APs, support only 200 clients per radio. If you configure more than 200 clients for these APs, the number of clients that can be associated with the AP radios will still be limited to only 200 clients, as per the AP capability value.
- Client limiting is supported on the Cisco Catalyst 9136 Series APs in Flex mode.

## Configuring Client Limit Per WLAN (GUI)

### Procedure

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- Step 1** Choose **Configuration > Tags & Profiles > WLANs**.
- Step 2** Click a WLAN from the list of WLANs.

- Step 3** Click the **Advanced** tab.
- Step 4** Under the **Max Client Connections** settings, enter the client limit for **Per WLAN**, **Per AP Per WLAN**, and **Per AP Radio Per WLAN**.
- Step 5** Click **Update & Apply to Device**.

## Configuring Client Limit Per WLAN (CLI)

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	<b>enable</b> <b>Example:</b> Device# <b>enable</b>	Enters privileged EXEC mode.
<b>Step 2</b>	<b>configure terminal</b> <b>Example:</b> Device# <b>configure terminal</b>	Enters global configuration mode.
<b>Step 3</b>	<b>wlan wlan-name</b> <b>Example:</b> Device(config)# <b>wlan ramban</b>	Specifies the WLAN name.
<b>Step 4</b>	<b>client association limit</b> <i>maximum-clients-per-WLAN</i> <b>Example:</b> Device(config-wlan)# <b>client association limit 110</b>	Configures the maximum number of clients that can be associated to the given WLAN.
<b>Step 5</b>	<b>client association limit ap</b> <i>max-clients-per-AP-per-WLAN</i> <b>Example:</b> Device(config-wlan)# <b>client association limit ap 120</b>	Configures the maximum number of clients that can be associated to an AP in the WLAN. The valid range is between 0 and 1200 clients. The default value is 0. <b>Note</b> A Cisco Catalyst 9136 Series AP can support a maximum of 1200 clients.
<b>Step 6</b>	<b>client association limit radio</b> <i>maximum-clients-per-AP-radio-per-WLAN(0–400)</i> <b>Example:</b> Device(config-wlan)# <b>client association limit radio 100</b>	Configures the maximum limit of clients that can be associated to an AP radio in the WLAN. The valid range is between 0 to 400 clients. The default value is 200. <b>Note</b> A Cisco Catalyst 9136 Series AP radio can support a maximum of 400 clients.

	Command or Action	Purpose
<b>Step 7</b>	<b>end</b> <b>Example:</b> Device(config)# <b>end</b>	Returns to privileged EXEC mode. Alternatively, you can also press <b>Ctrl-Z</b> to exit global configuration mode.
<b>Step 8</b>	<b>show wlan id wlan-id</b> <b>Example:</b> Device# <b>show wlan id 2</b>	Displays the current configuration of the WLAN and the corresponding client association limits.

## Configuring Client Limit Per AP (GUI)

### Procedure

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- Step 1** Choose **Configuration > Tags & Profiles > AP Join**.
  - Step 2** Click **Add**.
  - Step 3** In the **General** tab, enter the name and description of the corresponding AP join profile.
  - Step 4** Click the **Client** tab.
  - Step 5** In the **Maximum Client Limit** field, enter the maximum client associations per AP. The valid values are between 0 and 1200. The default value is 0.
  - Step 6** Click **Apply to Device**.
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## Configuring Client Limit Per AP (CLI)

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	<b>configure terminal</b> <b>Example:</b> Device# <b>configure terminal</b>	Enters global configuration mode.
<b>Step 2</b>	<b>ap profile ap-profile-name</b> <b>Example:</b> Device(config)# <b>ap profile</b> <i>ap-profile-name</i>	Configures an AP profile and enters AP profile configuration mode.
<b>Step 3</b>	<b>association-limit max-client-connections</b> <b>Example:</b> Device(config-ap-profile)# <b>association-limit 200</b>	Configures the maximum client connections per AP. The default value is 0.  <b>Note</b> A Cisco Catalyst 9136 Series AP can support a maximum of 1200 clients.

	Command or Action	Purpose
<b>Step 4</b>	<b>end</b>  <b>Example:</b> Device(config)# <b>end</b>	Returns to privileged EXEC mode. Alternatively, you can also press <b>Ctrl-Z</b> to exit global configuration mode.

## Configuring Client Limit Per Radio (GUI)

### Procedure

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- Step 1** Choose **Configuration > Tags & Profiles > RF/Radio**.
- Step 2** In the **RF** tab, click the required RF profile name from the displayed list of RF profiles. The **Edit RF Profile** page is displayed.
- Step 3** Click the **Advanced** tab.
- Step 4** Under the **High Density Parameters** section, in the **Max Clients** field, enter the maximum number of client connections per AP radio. The valid range is between 0 and 400. The default value is 200 client connections.
- Step 5** Click **Update & Apply to Device**.
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## Configuring Client Limit Per Radio (CLI)

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	<b>configure terminal</b>  <b>Example:</b> Device# <b>configure terminal</b>	Enters global configuration mode.
<b>Step 2</b>	<b>ap dot11 {24ghz   5ghz   6ghz} rf-profile</b> <i>rf-profile-name</i>  <b>Example:</b> Device(config)# <b>ap dot11 6ghz rf-profile</b> <i>rf-profile-name</i>	Configures an RF profile and enters RF profile configuration mode.
<b>Step 3</b>	<b>high-density clients count</b> <i>maximum-client-connections &lt;0-400&gt;</i>  <b>Example:</b> Device(config-rf-profile)# <b>high-density</b> <b>clients count 200</b>	Configures the maximum number of client connections per AP radio. The valid range is between 0 and 400. The default value is 200 client connections.  <b>Note</b> A Cisco Catalyst 9136 Series AP radio can support a maximum of 400 clients.

	Command or Action	Purpose
Step 4	<b>end</b> <b>Example:</b> Device(config)# <b>end</b>	Returns to privileged EXEC mode. Alternatively, you can also press <b>Ctrl-Z</b> to exit global configuration mode.

## Verifying Client Limit

To verify client limit in local mode, run the following command:

```
Device# show wireless stats client delete reasons | sec Max
Maximum client limit reached on AP : 0
Maximum client limit reached on AP per wlan : 0
Maximum client limit reached on AP radio per wlan : 0
Maximum client limit reached on AP radio : 0
```

To verify client limit in the FlexConnect central authentication mode, run the following command:

```
Device# show wireless stats client delete reasons | sec max
AP limiting maximum client per AP : 0
AP limiting maximum client per AP radio per wlan : 0
AP limiting maximum client per AP radio : 0
```

