

## Displaying and maintaining load balancing

Task	Command	Remarks
Display load balancing configuration.	<b>display wlan load-balance-group</b> { <i>group-id</i>   <b>all</b> } [ [ { <b>begin</b>   <b>exclude</b>   <b>include</b> } <i>regular-expression</i> ]	Available in any view.

## Configuring band navigation

Band navigation enables APs to prefer accepting dual-band (2.4 GHz and 5 GHz) clients on their 5 GHz radio because the 2.4 GHz band is often congested, increasing overall network performance.

When band navigation is enabled, the AP directs clients to its 2.4 GHz or 5 GHz radio by following these principles:

- The AP associates with a 2.4 GHz client on its 2.4 GHz radio after rejecting it several times.
- The AP directs a dual-band client to its 5 GHz radio.
- The AP associates with a 5 GHz- client on its 5 GHz radio.

The AP checks the RSSI of a dual-band client before directing the client to the 5 GHz radio. If the RSSI is lower than the value specified by the **band-navigation rssi-threshold** command, the AP does not direct the client to the 5 GHz band.

If the number of clients on the 5 GHz radio has reached the upper limit, and the gap between the number of clients on the 5 GHz radio and that on the 2.4 GHz radio has reached the upper limit (the two thresholds are specified by the **band-navigation balance session** *session* [ **gap** *gap* ] command), the AP denies the client's association to the 5 GHz radio, and allows new clients to associate with the 2.4 GHz radio. If the number of times that a client has been denied reaches or exceeds the specified maximum number on the 5 GHz radio (specified by the **band-navigation balance access-denial** command), the AP considers that the client is unable to associate with any other AP and unable to associate with the 2.4 GHz radio of the AP, and allows the 5 GHz radio to accept the client.

## Configuration guidelines

Follow these guidelines when you configure band navigation:

- When band navigation is enabled, the client association efficiency is affected, so this feature is not recommended in a scenario where most clients use 2.4 GHz.
- Band navigation is not recommended in a delay-sensitive network.
- Band navigation and load balancing can be used simultaneously.

## Configuration prerequisites

To enable band navigation to operate properly, make sure of the following:

- The fast association function is disabled. By default, the fast association function is disabled. For more information about fast association, see "Configuring WLAN access."
- Band navigation is enabled for the AP. By default, band navigation is enabled for the AP.
- The SSID is bound to the 2.4 GHz and 5 GHz radios of the AP.

## Enabling band navigation globally

Step	Command	Remarks
1. Enter system view.	<b>system-view</b>	N/A
2. Enter RRM view.	<b>wlan rrm</b>	N/A
3. Enable band navigation globally.	<b>band-navigation enable</b>	By default, band navigation is disabled globally. Band navigation takes effect for the specified AP only when band navigation is enabled both globally and for the AP.

## Enabling band navigation for an AP

Step	Command	Remarks
1. Enter system view.	<b>system-view</b>	N/A
2. Enter AP template view.	<b>wlan ap</b> <i>ap-name</i> [ <b>model</b> <i>model-name</i> [ <b>id</b> <i>ap-id</i> ] ]	N/A
3. Enable band navigation for the AP.	<b>band-navigation enable</b>	By default, band navigation is enabled for an AP. Band navigation takes effect for an AP only when band navigation is enabled both globally and for the AP.

## Configuring band navigation parameters

Step	Command	Remarks
1. Enter system view.	<b>system-view</b>	N/A
2. Enter RRM view.	<b>wlan rrm</b>	N/A
3. Configure load balancing session threshold and session gap.	<b>band-navigation balance session</b> <i>session</i> [ <b>gap</b> <i>gap</i> ]	Optional. By default, load balancing for band navigation is disabled. If you disable this command, the AP does not prohibit clients from associating with the 802.11a radio even if the 802.11a radio is overloaded. If you enable this command, the AP prefers accepting dual-band clients on their 802.11g radio if the 802.11a radio is overloaded.
4. Configure the maximum denial count of association requests sent by a 5 GHz client.	<b>band-navigation balance access-denial</b> <i>access-denial</i>	Optional. By default, the association requests sent by 5 GHz clients are not rejected.
5. Configure the client RSSI threshold.	<b>band-navigation rssi-threshold</b> <i>rssi-threshold</i>	Optional. The default RSSI threshold is 15.

Step	Command	Remarks
6. Configure the client information aging time.	<b>band-navigation aging-time</b> <i>aging-time</i>	Optional. The default aging time is 180 seconds. The AP records the client information when a client tries to associate with it. If the AP receives the probe request or association request sent by the client before the aging time expires, the AP refreshes the client information and restarts the aging timer. If not, the AP removes the client information, and does not count the client during band navigation.

## WLAN RRM configuration examples

The configuration examples were created on the 10500/7500 20G unified wired-WLAN module and may vary with device models.

When configuring the 10500/7500 20G unified wired-WLAN module, make sure the settings are correct (including VLAN settings) on the internal Ethernet interface that connects the module to the switch. For more information, see *HP 10500 & 7500 20G Unified Wired-WLAN Module Fundamentals Configuration Guide*.

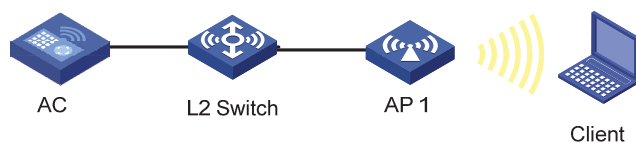
By default, the aggregate interfaces between the access controller engine and the switching engine on an 830 switch are Access interfaces in VLAN 1. When configuring the two aggregate interfaces, make sure their permitted VLANs are the same. HP also recommends setting their link type to be the same.

## Configuring auto DFS

### Network requirements

As shown in [Figure 50](#), configure auto DFS on AC so that the AC can perform channel adjustment when the channel of AP 1 is unavailable.

**Figure 50 Network diagram**



### Configuration procedure

# Create a WLAN ESS interface.

```

<AC> system-view
[AC] interface wlan-ess 1
[AC-WLAN-ESS1] quit
  
```

# Create service template 1 of clear type, configure its SSID as **channel-adjust**, and bind WLAN-ESS1 to **channel-adjust**.

```

[AC] wlan service-template 1 clear
[AC-wlan-st-1] ssid channel-adjust
[AC-wlan-st-1] bind wlan-ess 1
[AC-wlan-st-1] authentication-method open-system
  
```