



# Dynamic Frequency Selection

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## Information About Dynamic Frequency Selection

Dynamic Frequency Selection (DFS) is the process of detecting radar signals and automatically setting the frequency on a DFS-enabled 5.0-GHz (802.11a/h) radio to avoid interference with the radar signals. Radios configured for use in a regulatory domain must not interfere with radar systems.

In normal DFS, when a radar signal is detected on any of the channels in the 40-MHz or 80-MHz bandwidth, the whole channel is blocked. With Flex DFS, if the radar signals are not detected on the secondary channel, the AP is moved to a secondary channel with a reduction in the bandwidth, usually, by half.

## Configuring Dynamic Frequency Selection (GUI)

### Procedure

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- Step 1** Choose **Configuration > Wireless > Mesh > Profiles**
  - Step 2** Choose a profile.
  - Step 3** In **General** tab, check the **Full sector DFS status** check box.
  - Step 4** Click **Update & Apply to Device**.
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## Configuring Dynamic Frequency Selection

Follow the procedure given below to configure DFS:

**Before you begin**

- The corresponding AP must be on one of the DFS channels.
- Shut down the radio before applying the configuration changes.

**Procedure**

	<b>Command or Action</b>	<b>Purpose</b>
<b>Step 1</b>	<b>configure terminal</b> <b>Example:</b> Device# configure terminal	Enters global configuration mode.
<b>Step 2</b>	<b>no ap dot11 5ghz dtpc</b> <b>Example:</b> Device(config)# no ap dot11 5ghz dtpc	Disables the 802.11a Dynamic Transmit Power Control (DTPC) setting.
<b>Step 3</b>	<b>ap dot11 5ghz channelswitch mode <i>mode-num</i></b> <b>Example:</b> Device(config)# ap dot11 5ghz channelswitch mode 1	Configures the 802.11h channel switch mode.
<b>Step 4</b>	<b>ap dot11 5ghz power-constraint <i>value</i></b> <b>Example:</b> Device(config)# ap dot11 5ghz power-constraint 12	Configures the 802.11h power-constraint value.
<b>Step 5</b>	<b>ap dot11 5ghz smart-dfs</b> <b>Example:</b> Device(config)# ap dot11 5ghz smart-dfs	Configures nonoccupancy time for the radar interference channel.

## Verifying DFS

Use the following commands to verify the DFS configuration:

To display the 802.11h configuration, use the following command:

```
Device# show wireless dot11h
```

To display the auto-rF information for 802.11h configuration, use the following command:

```
Device# show ap auto-rf dot11 5ghz
```

To display the auto-rF information for a Cisco AP, use the following command:

```
Device# show ap name ap1 auto-rf dot11 5gh
```