



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

- 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

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