Enable Spectrum Analysis Mode on a WAP581 Access Point

Objective

The WAP581 Dual-Radio Wireless-AC/N Access Point features Spectrum Analysis capabilities. When enabled, it allows the access point to capture data that is related to the radio where it is active. The data is presented as bar graphs for ease of interpretation. Spectrum Analysis is particularly useful in helping network administrators determine the cleanest signal and use. It will also show administrators the channels that has the most interference, which can be used to optimize the wireless network environment.

This article aims to show you how to enable Spectrum Analysis Mode on a WAP581 Access Point.

Applicable Devices

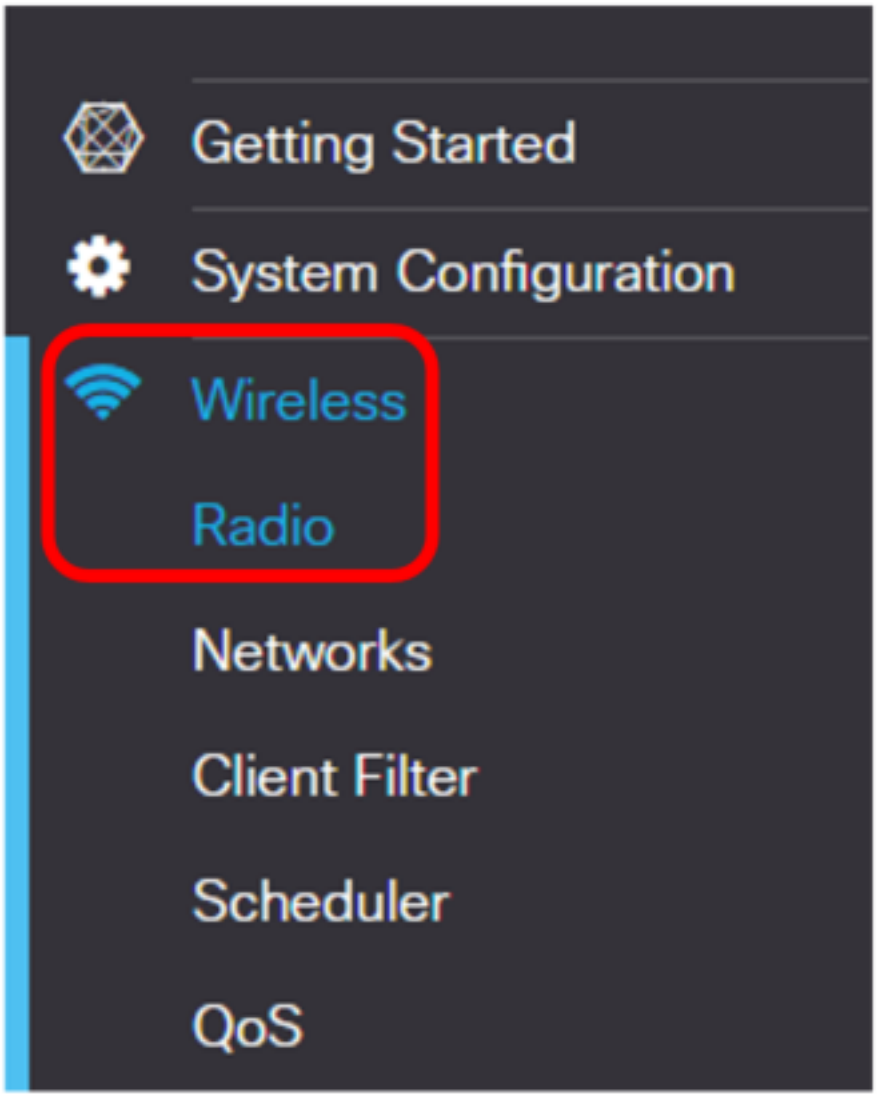
- WAP581

Software Version

- 1.0.0.4

Enable Spectrum Analysis

Step 1. Log in to the web-based utility of the WAP581 Access Point and choose **Wireless > Radio** .

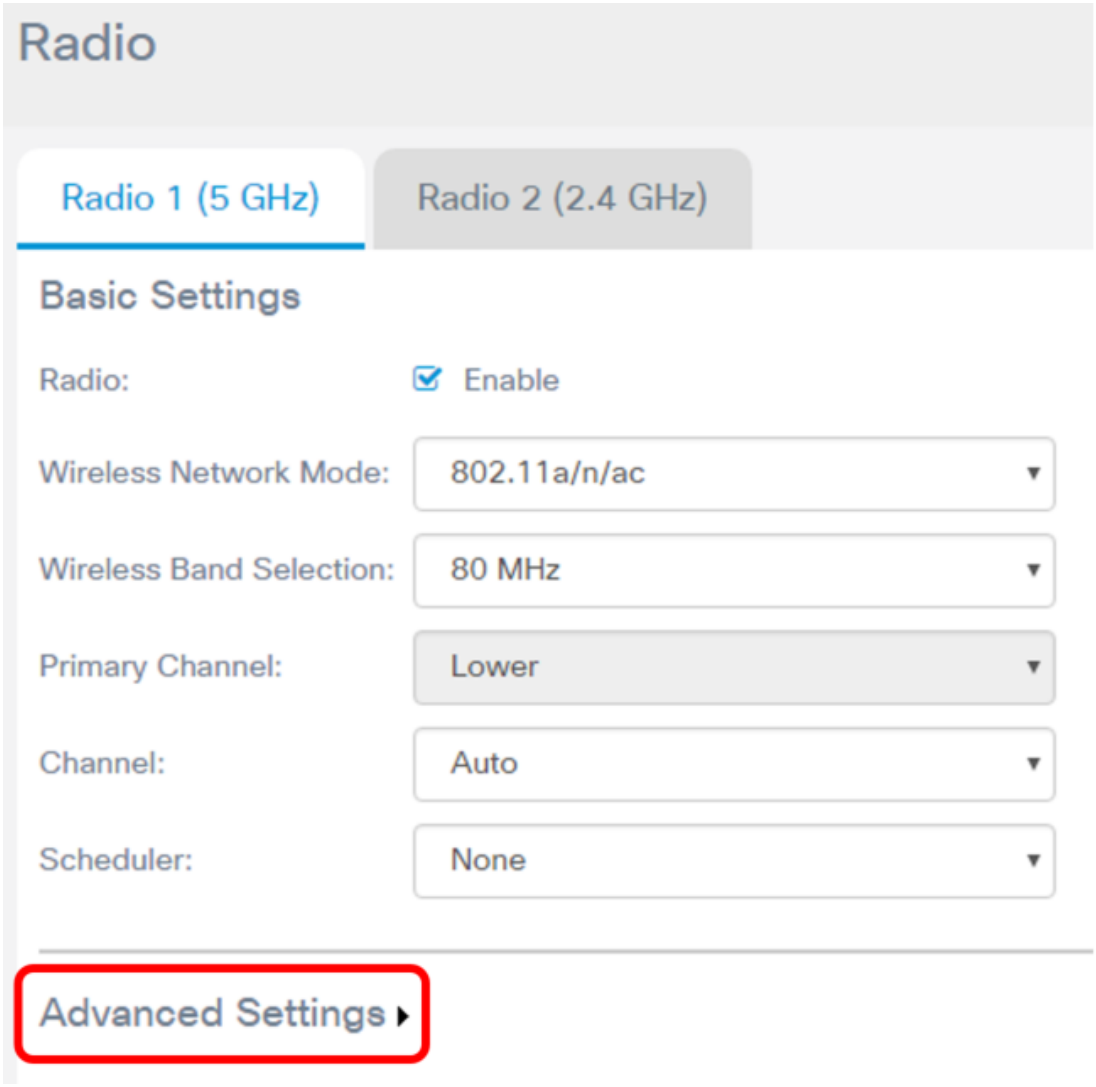


Step 2. Choose a radio band.

Note: The Radio area will show the active radio band. In this example, Radio 1 (5 GHz) and Radio 2 (2.4 GHz) are shown.

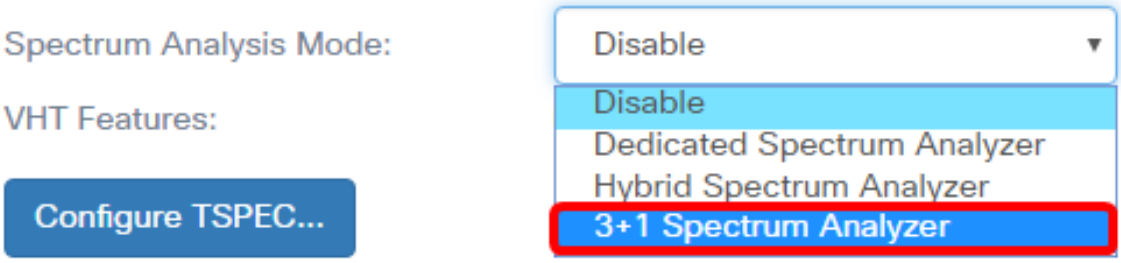
Note: In this example, Radio 1 (5 GHz) is chosen.

Step 3. Click **Advanced Settings**.



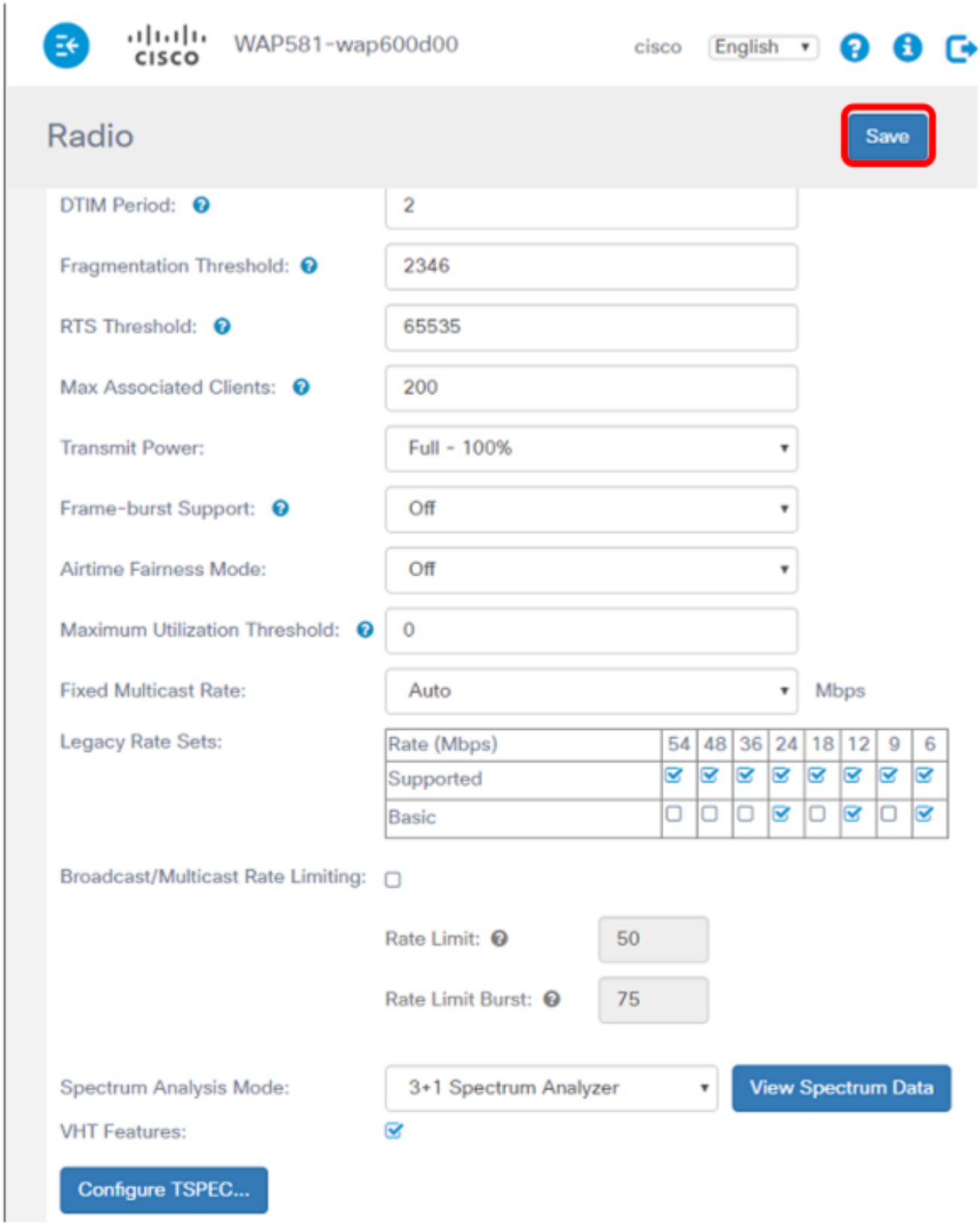
Step 4. Choose an option from the Spectrum Analysis Mode drop-down list. The options are:

- Disable - This option means that spectrum analysis mode is not activated. In this state, data gathering and presentation are not available.
- Dedicated Spectrum Analyzer - This option uses the radio for 10% of the time. This means that the main function of the radio will be used for Spectrum Analysis. This also means that the client connections may work, but are not guaranteed.
- Hybrid Spectrum Analyzer - This option guarantees client connection but connectivity issues may arise due to the analysis running. This means that the radio is being utilized for spectrum analysis and wireless traffic.
- 3+1 Spectrum Analyzer - This option lets the clients connect to 3x3 chains, while spectrum analysis is done on 1x1 chain.



Note: The default value is Disable. In this example, 3+1 Spectrum Analyzer is chosen. This is to dedicate three transmit and three receive antennas for the wireless client of the access point. This will equate to better performance for the wireless clients.

Step 5. Click **Save**.

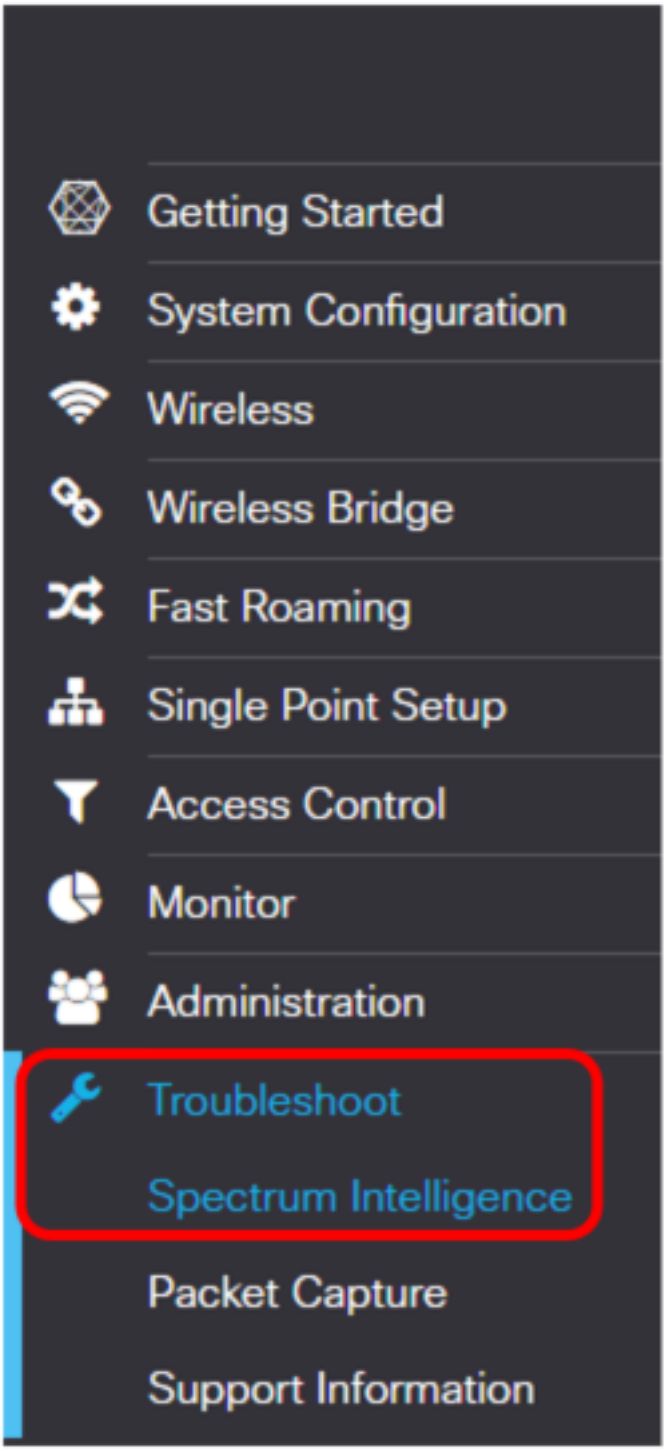


Step 6. Repeat Step 2 to Step 5 if you need to enable Spectrum Analysis for the other radio band.

You should now have enabled Spectrum Analysis on the WAP581 Access Point.

View Spectrum Intelligence

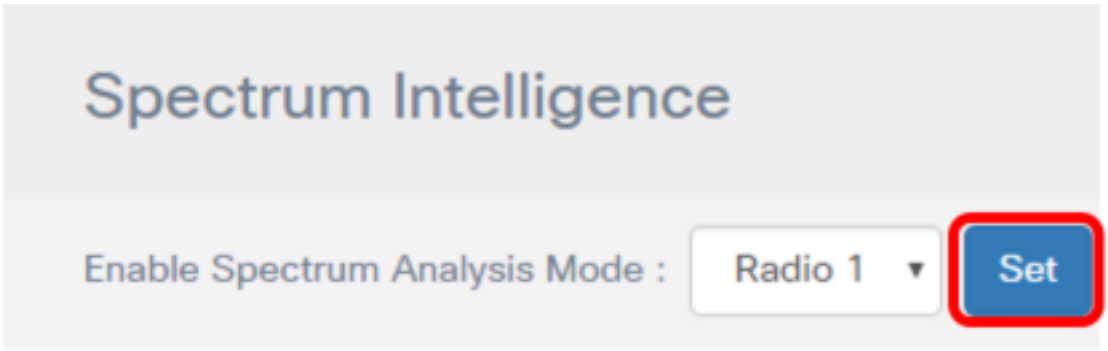
Step 1. Choose **Troubleshoot > Spectrum Intelligence**.



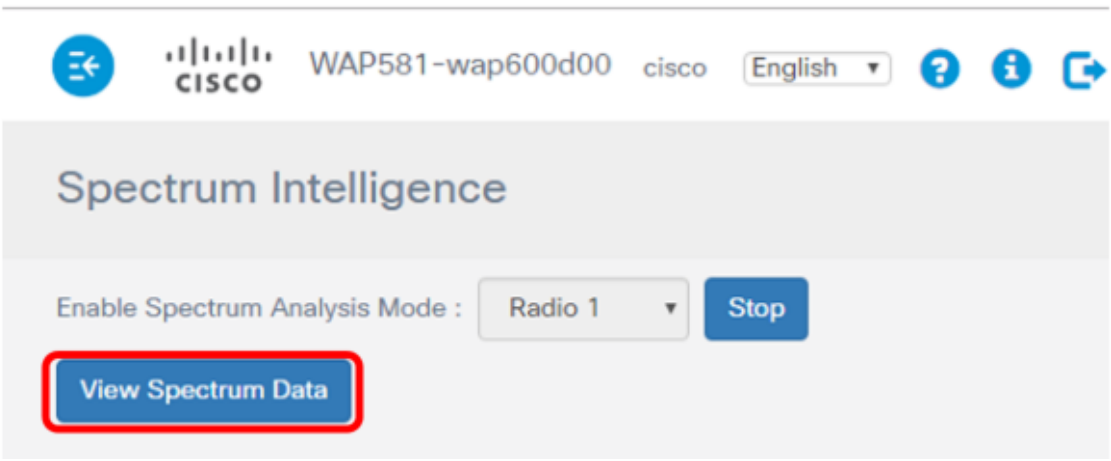
Step 2. Choose a radio from the Enable Spectrum Analysis Mode drop-down list.

Note: In this example, Radio 1 is chosen.

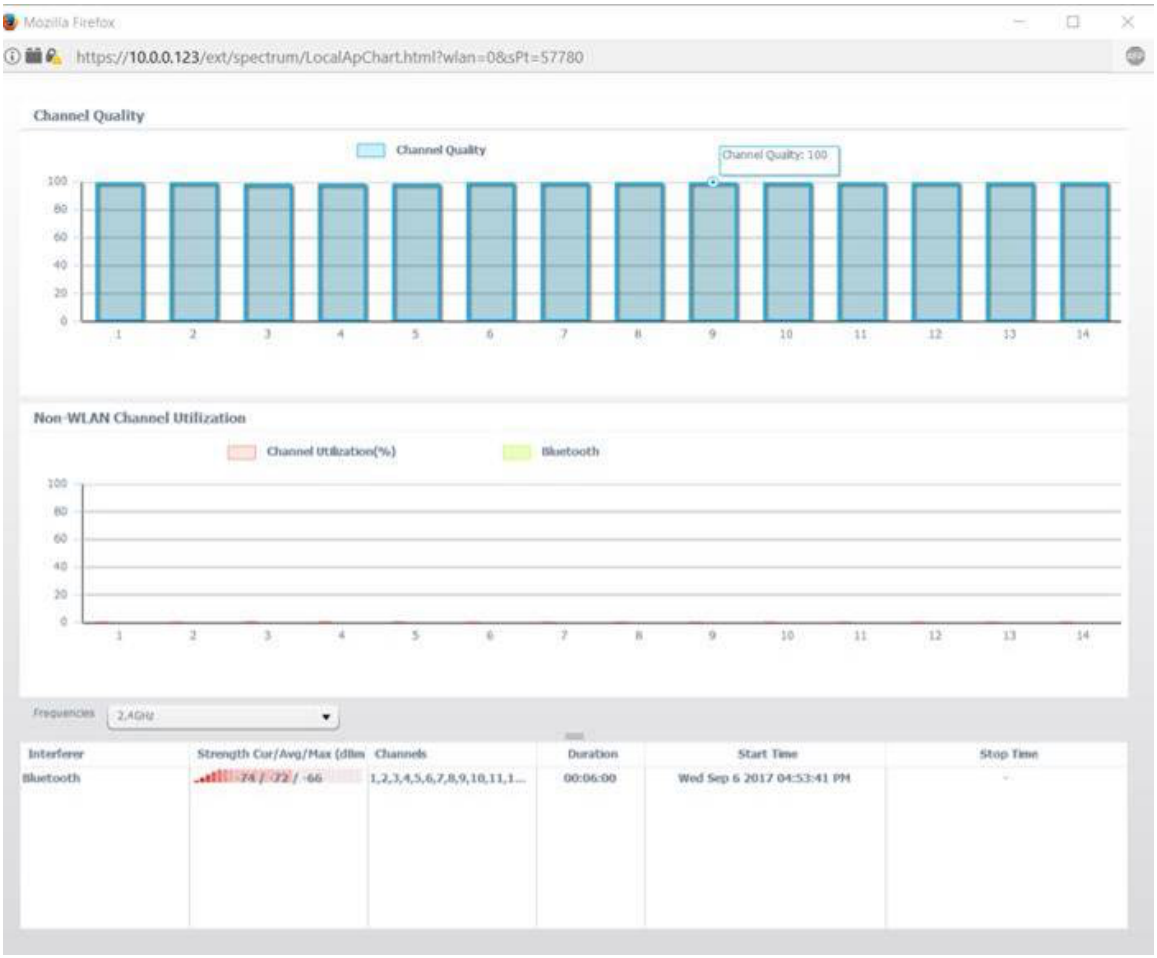
Step 3. Click **Set**.



Step 4. Click **View Spectrum Data**.

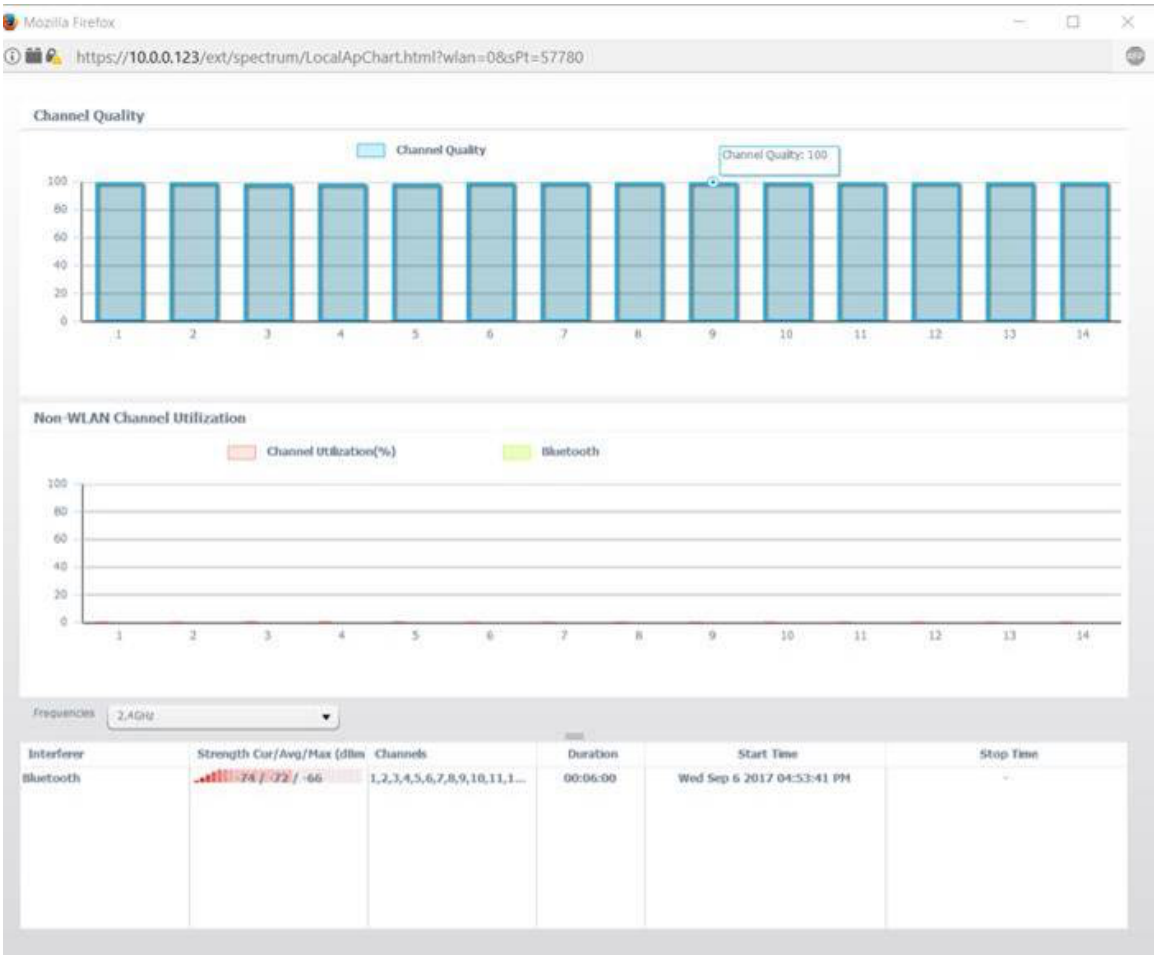


The Spectrum Data window below will appear.



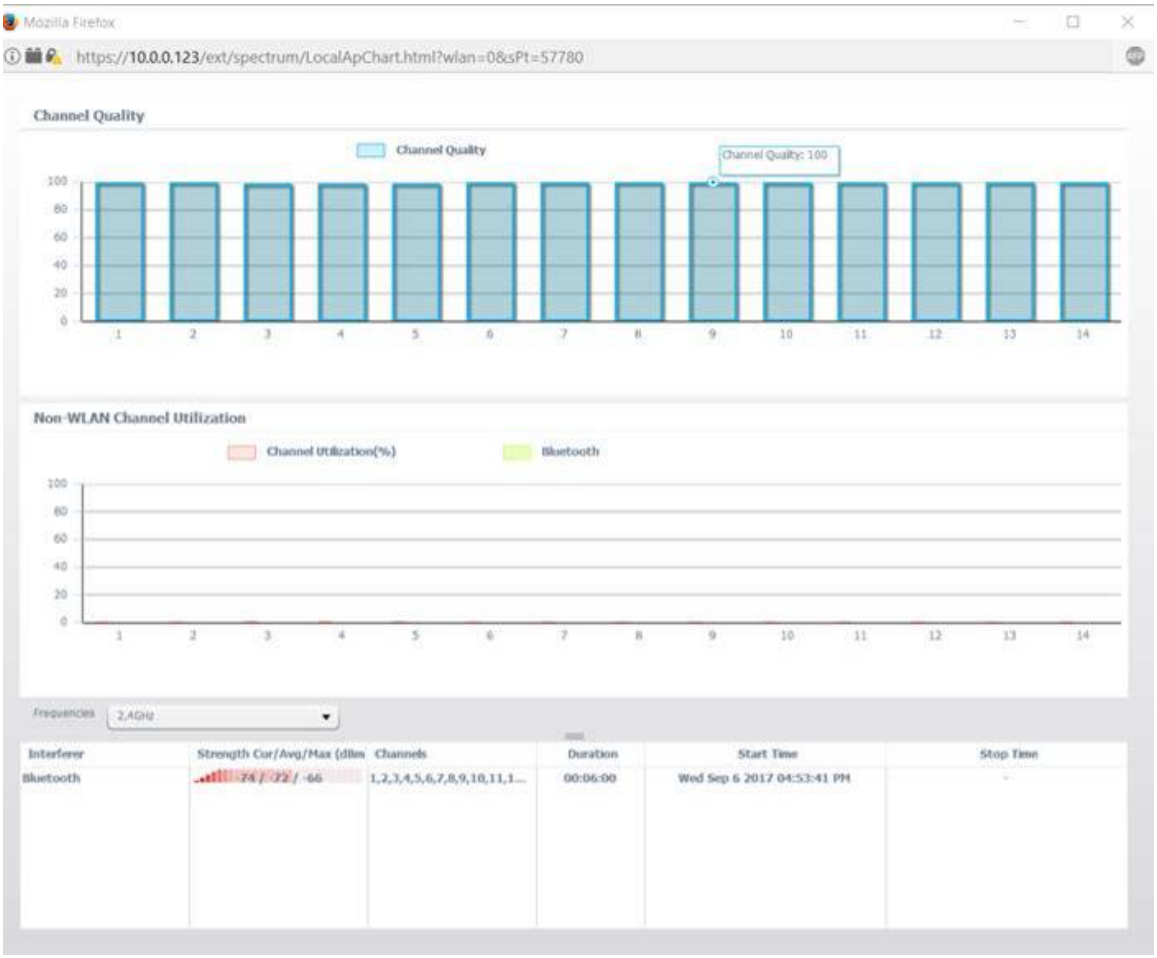
Channel Quality

The Channel Quality area displays a bar graph with the channel quality represented by 0 to 100 at the Y Axis of the graph. The X Axis represents the channel. In this presentation, 100 represents an extremely good channel quality while 0 represents an extremely poor channel quality. In this example, channels 1 to 14 is shown with a 100 channel quality rating.



Non-WLAN Channel Utilization

The Non-WLAN Channel Utilization area represents the signal of nearby devices that are broadcasting in the same frequency as the WAP581. It is displayed as a bar graph with the Y Axis representing the level of signal strength, and the X Axis representing the channel. In this example, A Bluetooth signal is detected by the WAP581 at the 2.4GHz frequency, however, the signal is weak to the point that it did not register on the graph. It is possible to choose a frequency from the drop-down list to display possible nearby devices broadcasting in the range of the access point.



You should now have viewed the spectrum analysis on the WAP581 Access Point.