



Using the System Tools (CPE and WBS)

CHAPTERS

1. Configure Ping
2. Configure Traceroute
3. Test Speed
4. Survey
5. Analyze Spectrum



This guide applies to:

CPE610(UN) 1.0, CPE520(UN) 3.0, CPE510(UN) 3.0, CPE210(UN) 3.0, CPE210(EU) 3.0, CPE220(UN) 3.0, CPE510(UN) 1.0, CPE510(UN) 2.0, CPE210(UN) 1.0, CPE210(UN) 2.0, CPE220(UN) 1.0, CPE220(UN) 2.0, CPE520(UN) 1.0, CPE520(UN) 2.0, WBS210(UN) 1.0, WBS210(UN) 2.0, WBS510(UN) 1.0, WBS510(UN) 2.0.

This guide introduces how to use the system tools of CPE/WBS products:

1. Configure Ping
2. Configure Traceroute
3. Test Speed
4. Survey
5. Analyze Spectrum

The following parts detailedly introduces these tools.

1 Configure Ping

Ping test function is used to test the connectivity and reachability between the device and the target host so as to locate the network malfunctions.

- 1) Click *Ping* from the drop-down list on the upper-right corner and specify the following parameters.

Figure 1-1 Configuring Ping

Destination IP/ Domain	Enter the IP address of the destination node for Ping test. The device will send Ping packets to test the network connectivity and reachability of the host and the results will be displayed in the Ping Result.
Packet Count	Enter the number of packets to be sent during the testing. It can be 1 to 50 and the default is 4.
Ping Timeout	Enter a time value to wait for a response. If the device doesn't receive any response during the timeout time, the connection will be considered to be failed. It can be 100-2000 milliseconds. The default value is 800 milliseconds.
Packet Size	Enter the number of data bytes to be sent. It can be 4-1472 bytes and the default is 64.

- 2) Click *Start*.

2 Configure Traceroute

Traceroute function is used to tracks the route packets taken from source on their way to a given target host. When malfunctions occur in the network, you can troubleshooting with traceroute utility.

- 1) Click *Traceroute* from the drop-down list on the upper-right corner and specify the following parameters.

Figure 2-1 Configuring Traceroute

The screenshot shows a configuration window titled "Traceroute". At the top, there are two input fields: "Destination IP/Domain:" and "Ping Timeout: 5 (1-30)". Below these is a section titled "Traceroute" which contains a dropdown menu currently set to "Enable". At the bottom right of the window is a "Start" button.

Destination IP/ Domain	Enter the IP address of the destination node for Traceroute test. The device will send Traceroute packets to test the network connectivity and reachability of the host and the results will be displayed in the Traceroute.
Traceroute Max TTL	Specify the traceroute max TTL (Time To Live) during the traceroute process. It is the maximum number of the route hops the test packets can pass through.

- 2) Click *Start*.

3 Test Speed

Speed Test tool is used for testing the throughput between two Pharos products in the same network. The test requires one of the two devices to be set as a server and the other as a client. The client launches the test request to the server and the server respond to it. The test result will display on the page of the client.

- 1) Click *Speed Test* from the drop-down list on the upper-right corner and specify the following parameters.

Figure 3-1 Testing Speed

Speed Test	Displays the data streams that the device is transmitting (TX), receiving (RX) and both of them (Total).
Server	Select Server and the device will passively accept the test request from the clients in the speed test process.
Client	Select Client and the device will launch the test request to the server in speed test process.
Server IP	Specify the server IP for speed test.
Direction	Select the direction of the speed test including unidirectional (RX), unidirectional (TX) and bidirectional.
Testing	Displays the process of the test.

- 2) Click *Start*.

4 Survey

The survey tool is used to survey the wireless network around the device.

Click *Survey* from the drop-down list on the upper-right corner and the following page will appear.

Figure 4-1 Surveying

Index	BSSID	SSID	MAXstream	Device Name	SNR(dB)	Signal / Noise(dBm)	Channel	Security
1	50-C7-BF-04-BF-26	TP-LINK_BF28_5G	No		38	-63/-101	5805 (161)	WPA2-PSK
2	60-E3-27-D0-E2-2A	jjjj5	No		34	-61/-95	5220 (44)	WPA2-PSK
3	50-C7-BF-08-5D-86	TP-LINK_Cui5	No		38	-57/-95	5220 (44)	WPA2-PSK
4	18-A6-F7-F3-47-1A	TP-LINK_Cui5re	No		41	-54/-95	5220 (44)	WPA-PSK/WPA2-PSK
5	18-A6-F7-20-02-E1	EAP225 5g	No		38	-61/-99	5765 (153)	WPA2-PSK
6	18-A6-F7-F3-71-BA	hubiao2.5	No		33	-62/-95	5180 (36)	WPA-PSK/WPA2-PSK
7	EC-08-6B-00-F4-3A	TP-LINK_F43A	No		20	-75/-95	5180 (36)	WPA-PSK/WPA2-PSK
8	50-C7-BF-01-88-1F	7200_5G	No		45	-50/-95	5180 (36)	WPA-PSK/WPA2-PSK
9	C4-E9-84-ED-08-C3	ap3200_5G_1	No		28	-67/-95	5180 (36)	WPA2-PSK
10	18-A6-F7-2D-CA-77	EAP_TEST	No		35	-60/-95	5180 (36)	WPA2-PSK
11	50-C7-BF-01-0B-FA	C9test-5	No		34	-61/-95	5180 (36)	WPA-PSK/WPA2-PSK
12	50-C7-BF-06-A8-BD	TP-LINK_A8BE_5G	No		38	-57/-95	5200 (40)	WPA-PSK/WPA2-PSK
13	18-A6-F7-F3-4D-42	jjjj5re	No		36	-59/-95	5220 (44)	WPA-PSK/WPA2-PSK
14	F4-F2-6D-EF-69-53	ARC2_5G	No		30	-65/-95	5220 (44)	WPA2-PSK
15	50-C7-BF-0B-BE-01	eap_fuck000_5G	No		29	-66/-95	5240 (48)	WPA2-PSK
16	F4-F2-6D-D2-8F-7D	TP-LINK_8F7C_5G	No		29	-66/-95	5240 (48)	WPA-PSK/WPA2-PSK
17	F4-F2-6D-B6-AC-5D	TP-LINK_AC5E_5G	No		45	-53/-98	5745 (149)	WPA-PSK/WPA2-PSK
18	D0-EE-07-1C-89-54	autoss	No		7	-91/-98	5745 (149)	WPA-PSK/WPA2-PSK
19	00-0A-EB-13-7A-FE	TP-LINK_7AFE_5G	No		44	-42/-86	5765 (153)	WPA-PSK/WPA2-PSK
20	90-F6-52-C3-B0-B8	TestingRoom	No		32	-67/-99	5765 (153)	WPA-PSK/WPA2-PSK
21	EC-08-6B-9F-BD-2A	Smart Home5G	No		47	-52/-99	5765 (153)	WPA-PSK/WPA2-PSK
22	F6-F2-6D-2F-A3-24	onhub	No		42	-57/-99	5765 (153)	WPA2-PSK

AP Count: 26 Refresh

BSSID Displays the BSSID of other APs surveyed by this device.

SSID Displays the SSID of other APs surveyed by this device.

MAXstream Displays the MAXstream capability of other APs surveyed by this device.

Device Name Displays the names of other APs surveyed by this device.

SNR(dB) Displays the Signal Noise Ratio (Unit: dB) of other APs surveyed by this device.

Signal/Noise (dBm) Displays the signal and noise value (Unit: dBm) of other APs surveyed by this device.

Channel Displays the channels of other APs surveyed by this device.

Security Displays the security mode of APs surveyed by this device.

AP Count Displays the number of other APs surveyed by this device.

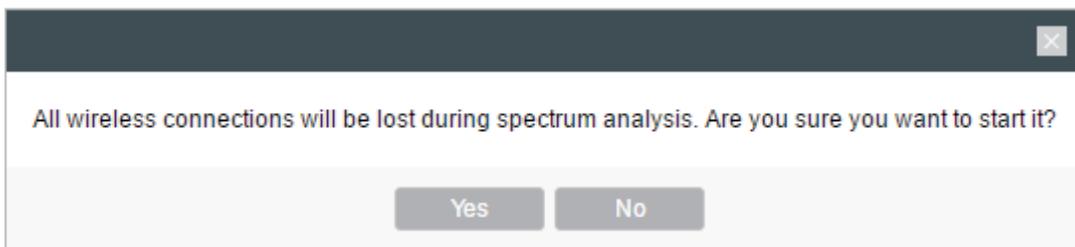
Refresh Click *Refresh* to refresh this page.

5 Analyze Spectrum

Spectrum Analysis can help you to choose the proper channel/frequency. Through the spectrum analysis you can learn the distribution of the radio noise and intelligently select the channel/frequency in low noise.

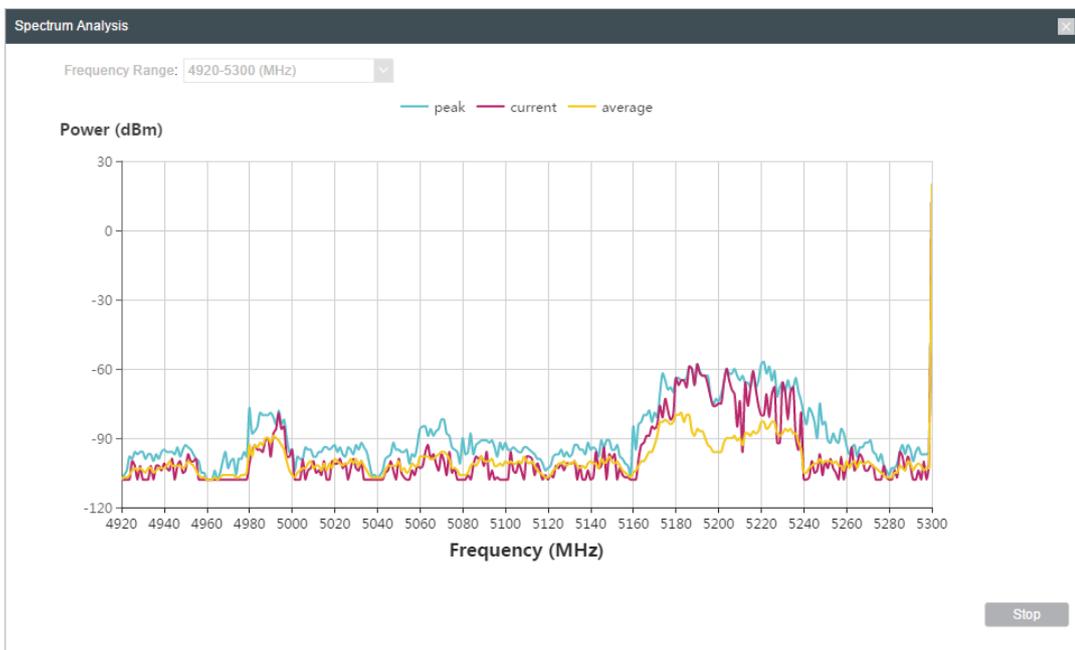
- 1) Click *Spectrum Analysis* from the drop-down list on the upper-right corner and click *Yes* on the pop-up window.

Figure 5-1 Pop-Up Window



- 2) Click *Start*. Observe the curves for a period of time, and then click *Stop*. The relatively low and continuous part of the average curve indicates less radio noise. Here we take the figure below as an example.

Figure 5-2 Analyzing Spectrum



Note:

Only CPE610/CPE510/CPE520/WBS510 has the select box of Frequency Range at the upper-left corner. Select the required range and then click *Start*.

- 3) When choosing *Channel/Frequency*, try to avoid the spectrum with large radio noise.