

Configure Packet Capture on the WAP125

Objective

The Packet Capture feature enables capturing and storing packets received and transmitted by the Wireless Access Point (WAP). The captured packets can then be analyzed by a network protocol analyzer for troubleshooting or performance optimization. There are two methods of packet capture:

- **Save File on this Device** — Captured packets are stored in a file on the WAP. The WAP can also send the file to a Trivial File Transport Protocol (TFTP) server. The file Administration Packet Capture is formatted in pcap format and can be examined using tools such as Wireshark and OmniPeek.
- **Stream to a Remote Host** — Captured packets are redirected in real time to an external computer running the Wireshark tool.

This article aims to explain and guide you on configuring Packet Capture on a WAP and receive these packet captures locally or remotely.

Applicable Devices

- WAP125

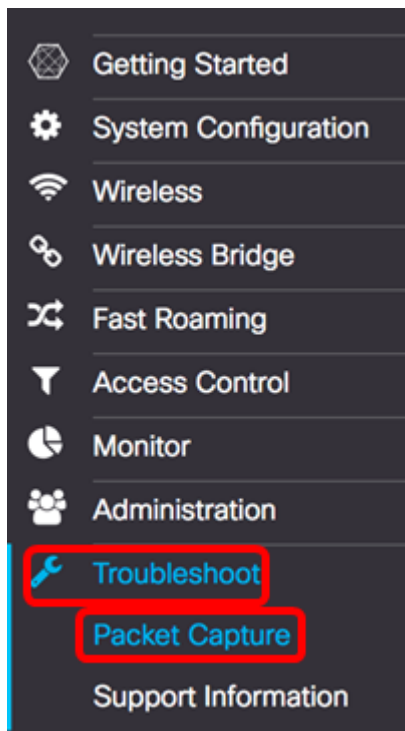
Software Version

- 1.0.0.3

Configure Packet Capture

Configure Packet Capture Settings

Step 1. Log in to the web-based utility and choose **Troubleshoot > Packet Capture**.



Step 2. Choose one of the following Packet Capture Method radio buttons:

- Save File on this Device — Stores the captured packets as a file on the WAP. Configure the Interface, duration, and maximum file size to be saved locally.
- Stream to a Remote Host — Redirects the captured packets in real-time to an external computer that runs the network protocol analyzer tools. If this is chosen, skip to [Step 6](#).

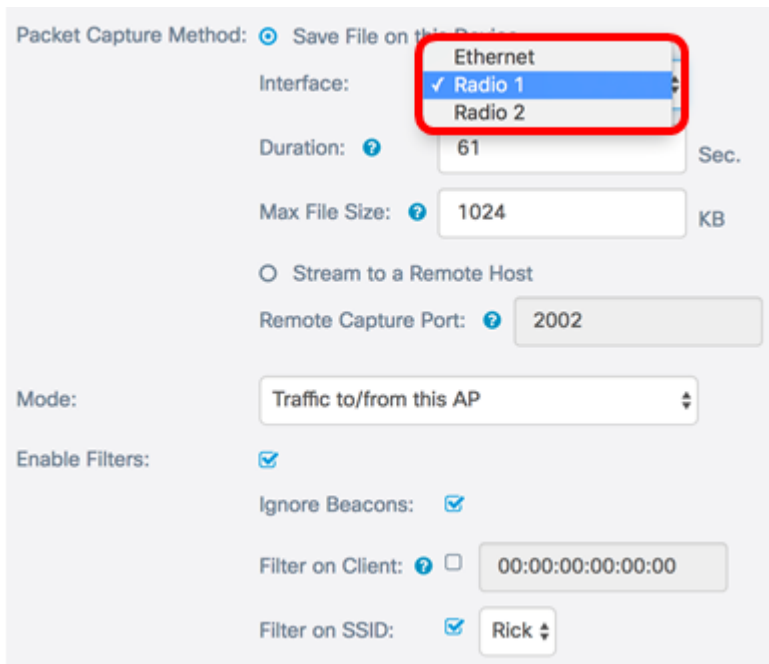
Note: In this example, Save File on this Device is chosen.

A configuration form for packet capture. At the top, it says 'Packet Capture Method:'. There are two radio buttons: 'Save File on this Device' (selected) and 'Stream to a Remote Host' (unselected). Under 'Save File on this Device', there are three input fields: 'Interface:' with a dropdown menu showing 'Radio 1', 'Duration:' with a text input '60' and 'Sec.' to its right, and 'Max File Size:' with a text input '1024' and 'KB' to its right. Under 'Stream to a Remote Host', there is one input field: 'Remote Capture Port:' with a text input '2002'. Below these is a 'Mode:' dropdown menu showing 'Traffic to/from this AP'. At the bottom, there is a section 'Enable Filters:' with a checked checkbox. Below that are three more options: 'Ignore Beacons:' with a checked checkbox, 'Filter on Client:' with an unchecked checkbox and a text input '00:00:00:00:00:00', and 'Filter on SSID:' with an unchecked checkbox and a dropdown menu showing 'Rick'.

Step 3. From the Interface drop-down list, choose the interface for which the packets are to be captured from the Capture Interface drop-down list. The options are:

- Ethernet — 802.3 traffic on the Ethernet port.
- Radio 1 — 802.11 traffic on the radio interface 1.
- Radio 2 — 802.11 traffic on the radio interface 2.

Note: In this example, Radio 1 is chosen.



Packet Capture Method: Save File on this Device

Interface: (Dropdown menu showing: Ethernet, Radio 1, Radio 2)

Duration: Sec.

Max File Size: KB

Stream to a Remote Host

Remote Capture Port:

Mode:

Enable Filters:

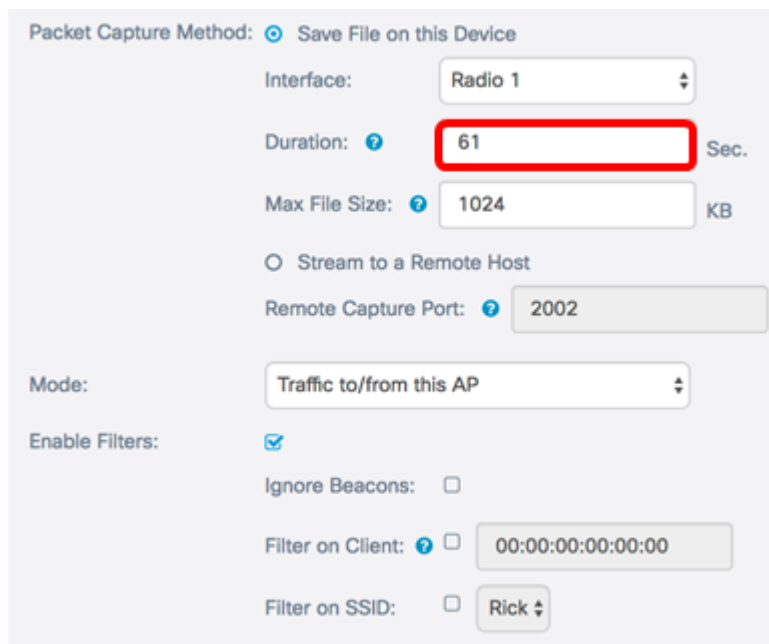
Ignore Beacons:

Filter on Client:

Filter on SSID:

Step 4. Enter the capture duration in the *Duration* field ranging from 10 to 3600 seconds. The default is 60 seconds.

Note: In this example, 61 is used.



Packet Capture Method: Save File on this Device

Interface:

Duration: Sec.

Max File Size: KB

Stream to a Remote Host

Remote Capture Port:

Mode:

Enable Filters:

Ignore Beacons:

Filter on Client:

Filter on SSID:

Step 5. In the *Max File Size* field, enter the maximum capture file size ranging from 64 to 4096 KB. The default is 1024 KB.

Packet Capture Method: Save File on this Device

Interface: Radio 1

Duration: 61 Sec.

Max File Size: 1024 KB

Stream to a Remote Host

Remote Capture Port: 2002

Mode: Traffic to/from this AP

Enable Filters:

Ignore Beacons:

Filter on Client: 00:00:00:00:00:00

Filter on SSID: Rick

Step 6. If remote packet capture method is chosen, enter the port number ranging from 1 to 65530 in the *Remote Capture Port* field. The default is 2002.

Packet Capture Method: Save File on this Device

Interface: Radio 1

Duration: 61 Sec.

Max File Size: 1024 KB

Stream to a Remote Host

Remote Capture Port: 2002

Mode: Traffic to/from this AP

Enable Filters:

Ignore Beacons:

Filter on Client: 00:00:00:00:00:00

Filter on SSID: Rick

Step 7. From the Mode drop-down list, choose which packets will be captured. The options are:

- All Wireless Traffic — Captures all the wireless packets, including those sent on other networks.
- Traffic to/from this AP — Capture packets that are sent between the WAP and the clients.

Packet Capture Method: Save File on this Device

Interface:

Duration: Sec.

Max File Size: KB

Stream to a Remote Host

Remote Capture Port:

Mode:
 Traffic to/from this AP

Enable Filters:

Ignore Beacons:

Filter on Client:

Filter on SSID:

Step 8. Check the **Enable Filters** check box to allow specific filters on packet capture.

Mode:

Enable Filters:

Ignore Beacons:

Filter on Client:

Filter on SSID:

Step 9. (Optional) Check the Ignore Beacons check box to disable the capturing of 802.11 beacons detected or transmitted by the radio. Beacon frames are transmitted periodically to announce the presence of a Wireless Local Area Network (WLAN).

Note: In this example, Ignore Beacons is enabled.

Mode:

Enable Filters:

Ignore Beacons:

Filter on Client:

Filter on SSID:

Step 10. (Optional) Check the Filter on Client check box to specify a MAC address of a wireless client.

Note: In this example, the Filter on Client is unchecked.

Mode: Traffic to/from this AP

Enable Filters:

Ignore Beacons:

Filter on Client: 00:00:00:00:00:00

Filter on SSID: Rick

Step 11. (Optional) Enter the MAC address of the client in the *Filter on Client* field.

Note: This is only active if Packet Capture is performed on a radio interface.

Mode: Traffic to/from this AP

Enable Filters:

Ignore Beacons:

Filter on Client: 00:00:00:00:00:00

Filter on SSID: Rick

Step 12. Check the **Filter on SSID** check box to capture packets on a specific SSID.

Mode: Traffic to/from this AP

Enable Filters:

Ignore Beacons:

Filter on Client: 00:00:00:00:00:00

Filter on SSID: Rick

Step 13. From the SSID drop-down list, choose an SSID to capture packets.

Note: The SSIDs that appear in the drop-down list depend on what interface was chosen and how many SSIDs have been configured. In this example, Rick is chosen.

Mode: Traffic to/from this AP

Enable Filters:

Ignore Beacons:

Filter on Client: 00:00:00:00:00:00

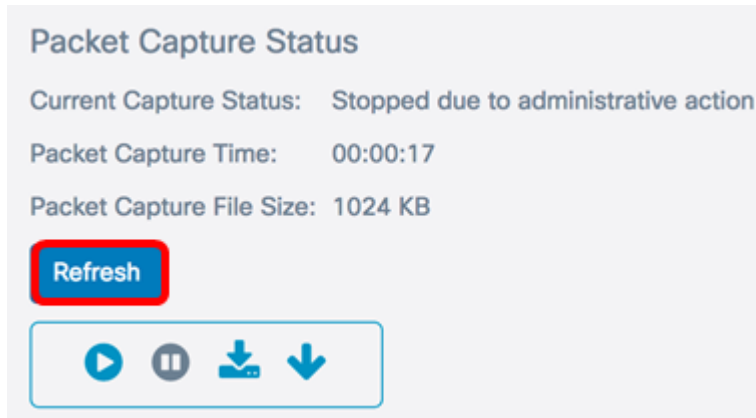
Filter on SSID: Rick

Step 14. Click [Save](#).

You should now have successfully configured the Packet Capture settings.

Packet Capture

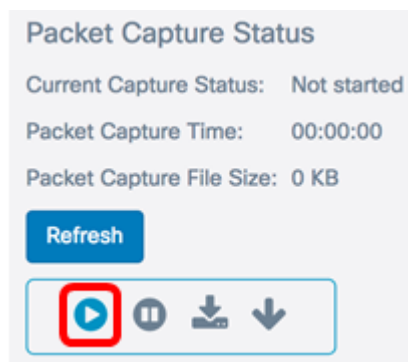
Step 15. The *Packet Capture Status* area contains the following information. Click **Refresh** to view the current status.



The screenshot shows a 'Packet Capture Status' panel with the following text: 'Current Capture Status: Stopped due to administrative action', 'Packet Capture Time: 00:00:17', and 'Packet Capture File Size: 1024 KB'. Below the text is a blue 'Refresh' button with a red border. At the bottom of the panel is a toolbar with four icons: a play button (highlighted with a red square), a pause button, a download icon, and a refresh icon.

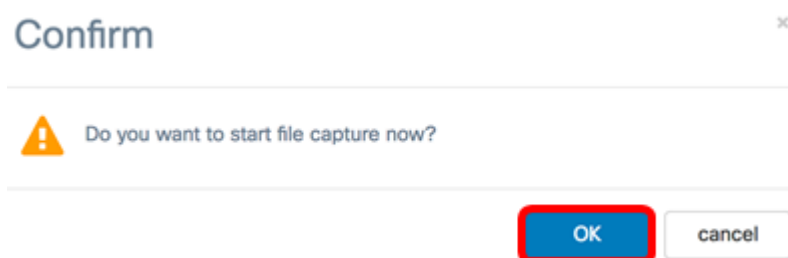
- Current Capture Status — Displays the current packet capture status. In this example, “Stopped due to administrative action” is the current status.
- Packet Capture Time — Displays the duration for which the packets are captured. In this example, 00:00:17 seconds was recorded.
- Packet Capture File Size — Displays the size of the packet captured file. In this example, 1024kb is the capture size.

Step 16. Click the **Start Capture** button to start the packet capture process.



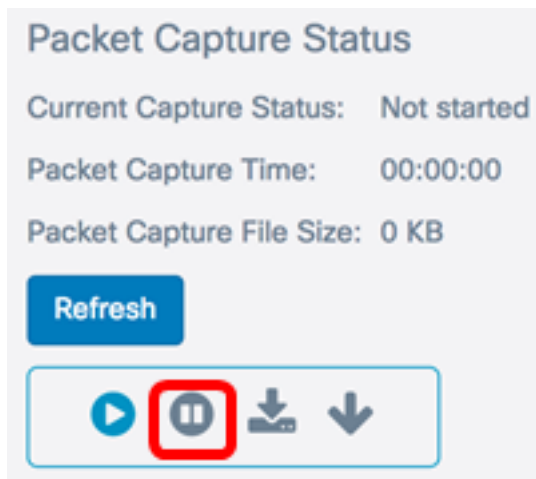
The screenshot shows the 'Packet Capture Status' panel with the following text: 'Current Capture Status: Not started', 'Packet Capture Time: 00:00:00', and 'Packet Capture File Size: 0 KB'. Below the text is a blue 'Refresh' button. At the bottom of the panel is a toolbar with four icons: a play button (highlighted with a red square), a pause button, a download icon, and a refresh icon.

Step 17. A window will pop up to inform you that the *Packet Capture* will now commence. Click **OK** to continue.

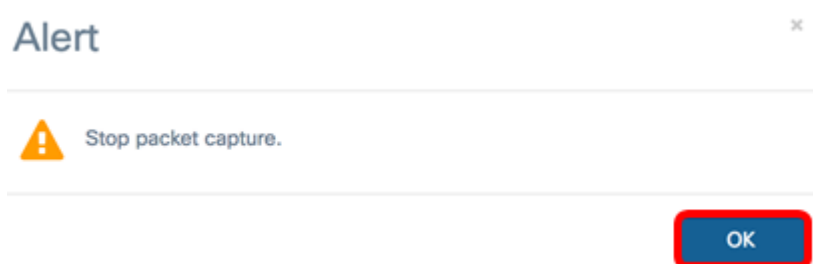


The screenshot shows a 'Confirm' dialog box with a close button (x) in the top right corner. Below the title bar is a warning icon (yellow triangle with an exclamation mark) and the text 'Do you want to start file capture now?'. At the bottom of the dialog are two buttons: a blue 'OK' button with a red border and a white 'cancel' button.

Step 18. Click the **Stop Capture** button to stop the packet capture process.



Step 19. A window will pop up to inform you to confirm to end the packet capture. Click **OK** to continue.

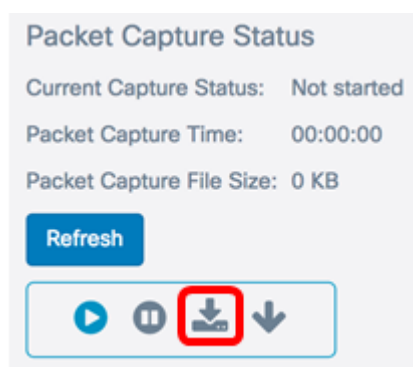


You should now have successfully captured packets on the WAP125.

Packet Capture File Download

Download to this Device

Step 1. Click the **Download** to this Device button.



Step 2. A window will pop up to commence the download. Click **OK** continue.

Confirm

✕



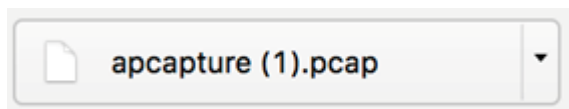
The file is downloading now.

OK

cancel

Once the download is complete, the downloaded file will appear in your browser download history. The file is downloaded with HTTP/HTTPS and the file format is .pcap.

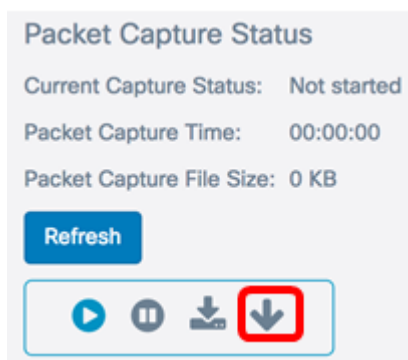
Note: In this example, apcapture(1).pcap is the downloaded file.



You have successfully downloaded the packet capture file on the WAP125.


Download to TFTP Server


Step 1. (Optional) If the captured file has to be downloaded from a TFTP server, click the **Download** to TFTP Server button.



Once clicked, a window will appear with the Server IPv4 Address field and the Destination File Name field.

Download File Using TFTP


Server IPv4 Address 


Destination File Name 

Step 2. Enter the IPv4 address of the TFTP server in the Server IPv4 Address field. The port number entered in the *Remote Capture Port* field in Step 6 is then attached to the TFTP server address.

Note: In this example, 128.12.8.128 is used.

Download File Using TFTP


Server IPv4 Address 


Destination File Name 

Step 3. Enter the file name in pcap format in the *Destination File Name* field.

Note: In this example, apcapture.pcap is used.


Download File Using TFTP


Server IPv4 Address 

Destination File Name 

Step 4. Click **Download**.


Download File Using TFTP


Server IPv4 Address 

Destination File Name 

A progress bar appears below the *Destination File Name* field.

Download File Using TFTP

Server IPv4 Address 

Destination File Name 



You should now have downloaded your Packet Capture file through a TFTP server.

