WIRESHARK TUTORIAL

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What is Wireshark?

Wireshark is an open-source network protocol analysis software program started by Gerald Combs in 1998. A global organization of network specialists and software developers support Wireshark and continue to make updates for new network technologies and encryption methods.

Wireshark is absolutely safe to use. Government agencies, corporations, non-profits, and educational institutions use Wireshark for troubleshooting and teaching purposes. There isn't a better way to learn networking than to look at the traffic under the Wireshark microscope.

There are questions about the legality of Wireshark since it is a powerful packet sniffer. The Light side of the Force says that you should only use Wireshark on networks where you have permission to inspect network packets. Using Wireshark to look at packets without permission is a path to the Dark Side.

How does Wireshark work?

Wireshark is a packet sniffer and analysis tool. It captures network traffic on the local network and stores that data for offline analysis. Wireshark captures network traffic from Ethernet, Bluetooth, Wireless (IEEE.802.11), Token Ring, Frame Relay connections, and more.

A "packet" is a single message from any network protocol (i.e., TCP, DNS, etc.)

LAN traffic is in broadcast mode, meaning a single computer with Wireshark can see traffic between two other computers. If you want to see traffic to an external site, you need to capture the packets on the local computer.

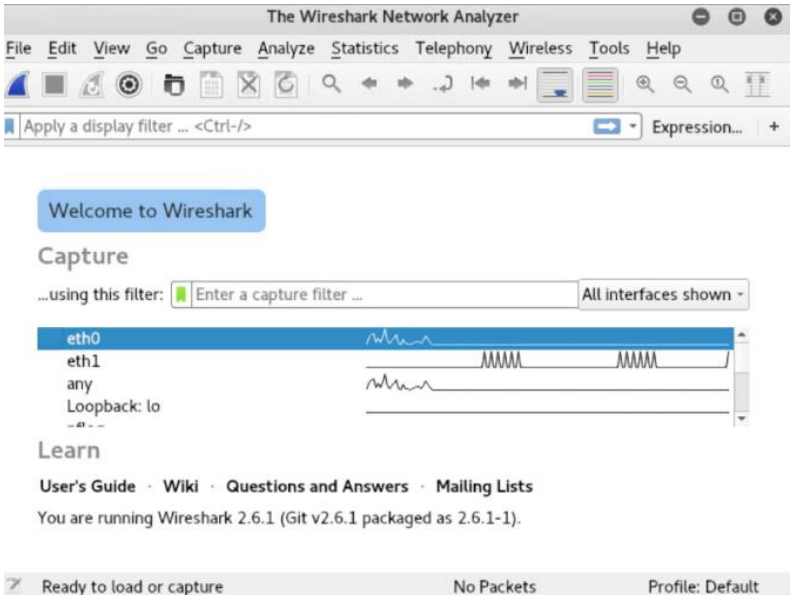
Wireshark allows you to filter the log either before the capture starts or during analysis, so you can narrow down and zero into what you are looking for in the network trace. For example, you can set a filter to see TCP traffic between two IP addresses. You can set it only to show you the packets sent from one computer. The filters in Wireshark are one of the primary reasons it became the standard tool for packet analysis.

How to Download Wireshark?

Downloading and installing Wireshark is easy. Step one is to check the official Wireshark Download page for the operating system you need. The basic version of Wireshark is free.

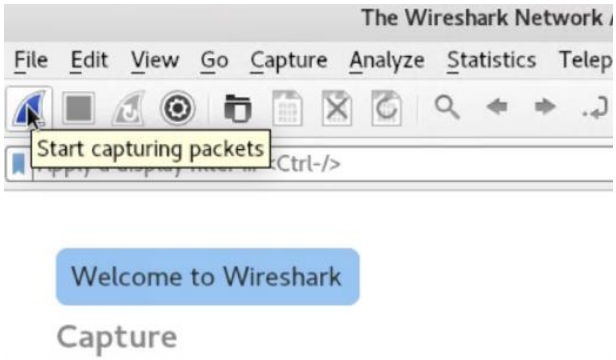
Capturing Data Packets on Wireshark

When you open Wireshark, you see a screen that shows you a list of all of the network connections you can monitor. You also have a capture filter field, so you only capture the network traffic you want to see.

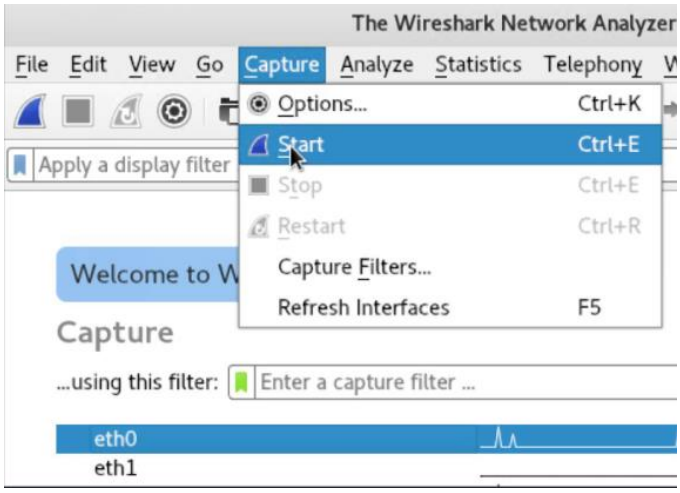


You can select one or more of the network interfaces using “shift left-click.” Once you have the network interface selected, you can start the capture, and there are several ways to do that.

Click the first button on the toolbar, titled “Start Capturing Packets.”

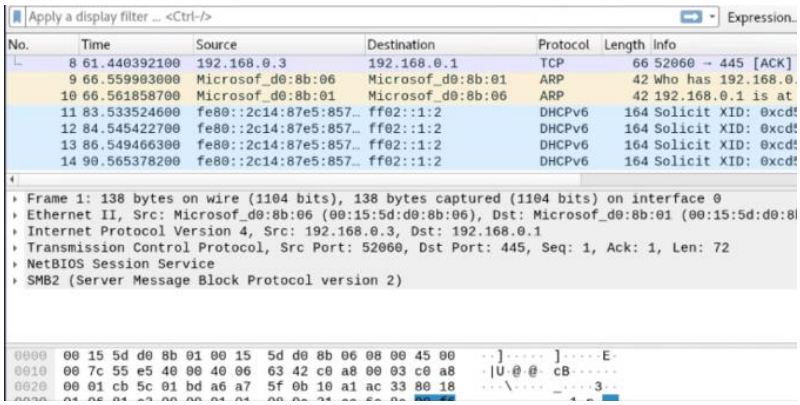


You can select the menu item Capture -> Start



Or you could use the keystroke Control – E.

During the capture, Wireshark will show you the packets that it captures in real-time.



Once you have captured all the packets you need, you use the same buttons or menu options to stop the capture.

Best practice says that you should stop Wireshark packet capture before you do analysis.

THE END