

Wireshark

- a network protocol analyser
- logs packets that flow thru selected interfaces
- analyzes all packets

- designed for network admins to monitor network
- Open Wireshark on Kali.
- go to File → Open → {open files that you sniffed} (packets)

★ Wireshark will capture things flowing thru your iface.  
→ It won't capture packets that doesn't go thru your iface / own pc.

- # run bettercap using caplet spoof
- go to any website on victim
- eth0 will capture those packets as you are the MITM
- ∴ to use Wireshark for victim, you need to spoof first.

## Sniff & Analyze

- ↳ Store the packets somewhere permanently, if needed.
- ↳ Filter information.
  - ↳ After capturing all the packets,
  - ↳ in the display filter, type http to get filtered packets.
  - ↳ double click any packet to analyze
- ↳ to discover passwords
  - ↳ look for POST requests
  - ↳ and open it to look for the data needed

★ In caplet spoof:

- before net.sniff on
- write: `set net.sniff.output /root/capture file.cap`

★ This will store all packets in the file, for future analysis.

## Fake Access Point

- access point receives all the requests
- we can replace the access point itself
- we'll create a fake wifi network w/ internet.
- When people connect to it, we'll automatically become MITM since we are router itself.

★ You need:

- any interface w/ internet access
- wireless adapter supporting AP Mode

★ In settings of Kali-VM:

★ For our system,

- eth0 is the internet interface
- wlan0 is the wireless adapter (not connected)

- use wifi-hotspot
- set any ssid
- open network
- wifi interface = wlan0
- internet interface = eth0
- create hotspot

## Detect ARP Poisoning Attack

- run `arp -a` to list entries of arp table
- ARP poisoning worked because of responses of trust
- when we do arp poisoning, the MAC address of router, in `arp -a`, changes to the address of attacker.
- This is the simplest way to detect it.



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- ★ There's a tool XARP (xarp) that detects it automatically.
  - it automatically monitors arp tables
  - once arp poisoned, Xarp tells us that there has been an ARP attack.



### ★ Using Wireshark:

- ↳ go to preferences → protocols → arp → enable detect arp requests storms
- ⇒ This will detect if someone pings all connected devices on the network.
- ⇒ Go to analyze → expert information, to get more info.

★ You can also change address type to static. This won't allow address change.

→ All these detection happens only for ARP spoofing.

→ Solution is to encrypt our traffic.

↳ use vpn

↳ use only https (plugins available)