ATTACK DEFENSE

by PentesterAcademy

Name	T1040: Network Sniffing
URL	https://attackdefense.com/challengedetails?cid=1549
Type	MITRE ATT&CK Linux : Credential Access

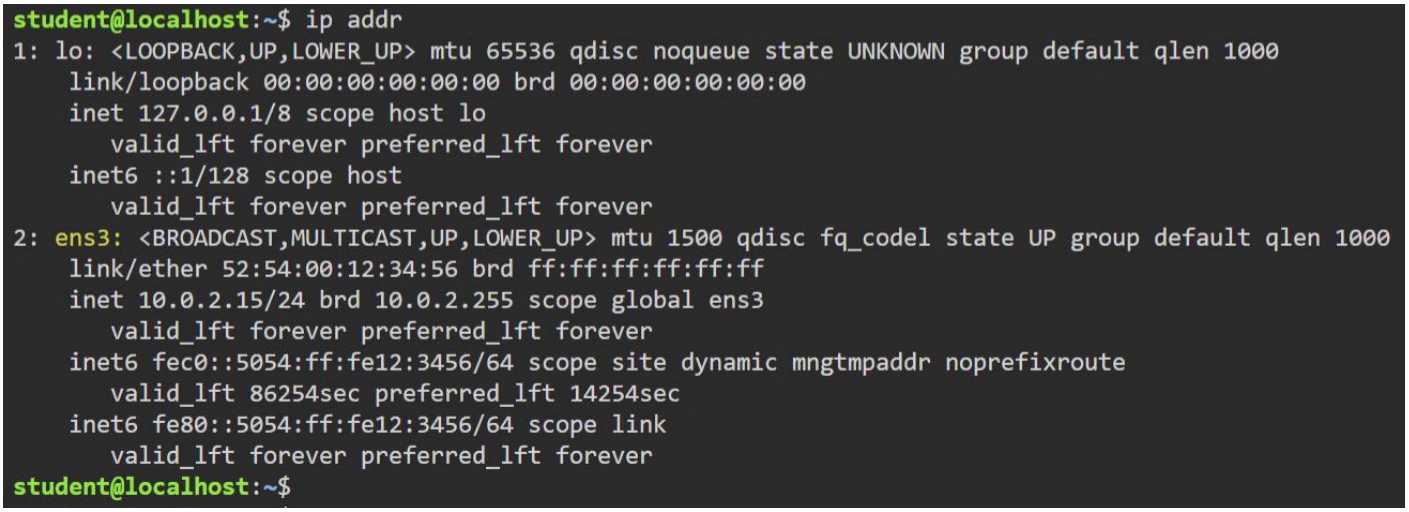
Important Note: This document illustrates all the important steps required to complete this lab. This is by no means a comprehensive step-by-step solution for this exercise. This is only provided as a reference to various commands needed to complete this exercise and for your further research on this topic. Also, note that the IP addresses and domain names might be different in your lab.

Objective: Use tcpdump to retrieve the flag on the Ethernet interface!

Solution:

Step 1: Check the list of network interfaces.

Command: ip addr

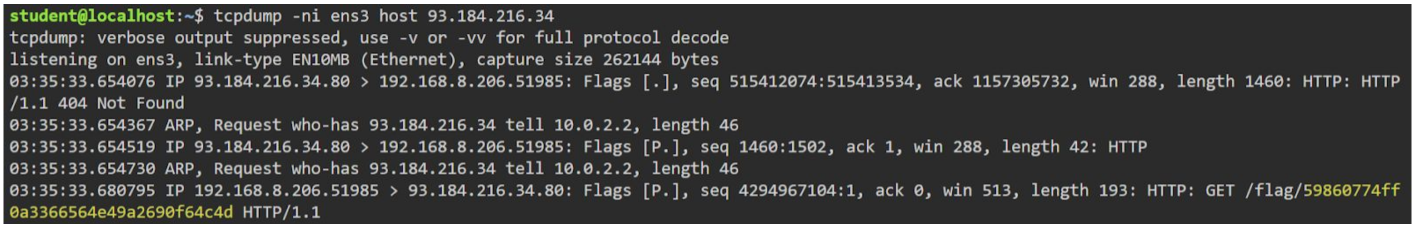


```
student@localhost:~$ ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: ens3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 52:54:00:12:34:56 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global ens3
       valid_lft forever preferred_lft forever
    inet6 fec0::5054:ff:fe12:3456/64 scope site dynamic mngtmpaddr noprefixroute
       valid_lft 86254sec preferred_lft 14254sec
    inet6 fe80::5054:ff:fe12:3456/64 scope link
       valid_lft forever preferred_lft forever
student@localhost:~$
```

Only one Ethernet interface is present on the machine. Hence, the traffic must be flowing through this.

Step 2: Capture the traffic on ens3. From the challenge description, one knows to look for IP 93.184.216.34

Command: tcpdump -ni ens3 host 93.184.216.34



```
student@localhost:~$ tcpdump -ni ens3 host 93.184.216.34
tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
listening on ens3, link-type EN10MB (Ethernet), capture size 262144 bytes
03:35:33.654076 IP 93.184.216.34.80 > 192.168.8.206.51985: Flags [.], seq 515412074:515413534, ack 1157305732, win 288, length 1460: HTTP: HTTP
/1.1 404 Not Found
03:35:33.654367 ARP, Request who-has 93.184.216.34 tell 10.0.2.2, length 46
03:35:33.654519 IP 93.184.216.34.80 > 192.168.8.206.51985: Flags [P.], seq 1460:1502, ack 1, win 288, length 42: HTTP
03:35:33.654730 ARP, Request who-has 93.184.216.34 tell 10.0.2.2, length 46
03:35:33.680795 IP 192.168.8.206.51985 > 93.184.216.34.80: Flags [P.], seq 4294967104:1, ack 0, win 513, length 193: HTTP: GET /flag/59860774ff
0a3366564e49a2690f64c4d HTTP/1.1
```

One can observe the flag being transmitted in a GET request.

Flag: 59860774ff0a3366564e49a2690f64c4d