tcpdump

List the interfaces

```
sudo tcpdump -D
```

Capture All traffic

```
tcpdump -i eth0
tcpdump -i wlan0
```

To a File

```
tcpdump -i eth0 -w capture.pcap
tcpdump -i any -w capture.pcap -nn 'ip and port 80'


# Set Timeout
timeout 6m tcpdump -i eth0 -w capture.pcap
```

Read a file (.pcap)

- `-nn`: Disable port and protocol name lookup.
- `-r` : Read capture data from the named file.
- `-v` : Display detailed packet data.
- `-X` : Display the hexadecimal and ASCII output format packet data. Security analysts can analyze hexadecimal and ASCII output to detect patterns or anomalies during malware analysis or forensic analysis.

```
tcpdump -r capture.pcap
tcpdump -r capture.pcap -nn -v 'ip and (port 80 or port 443)'
tcpdump -nn -r capture.pcap -X
```

Filter

```
# Filter by Source IP
tcpdump src 192.168.0.1
```

```
# Filter by Destination IP
tcpdump dst 192.168.0.1

# Filter by Port
tcpdump port 80

# Filter by Protocol
tcpdump icmp

# Protocol and Port
tcpdump tcp port 443

# Source and Destination
tcpdump src 192.168.0.1 and dst 192.168.0.2

tcpdump -i any -w capture.pcap -n 'ip and port 80'
```

Display in ASCII

```
# Dispaly in ASCII
tcpdump -A

# Display in Hexadecimal
tcpdump -X
```

Specific Number of Packets

```
tcpdump -c 100
```

Display

```
# Capture and Display IPv6 Traffic
tcpdump -6

# Capture and Display Traffic in Timestamp Format
tcpdump -tttt
```

SSH Connections

```
# -l: real-time
# -e: including ethernet headers
tcpdump -i eth0 'tcp port 22' -l -e
```

HTTP Request and Response

```
tcpdump -i eth0 -s 0 -A -n 'tcp dst port 80'
```

IP Range and Protocol

```
tcpdump -i eth0 'net 192.168.0.0/24 and (tcp port 22 or icmp)'
```

DNS Traffic

```
tcpdump -i eth0 'udp port 53' -nnvvv
```

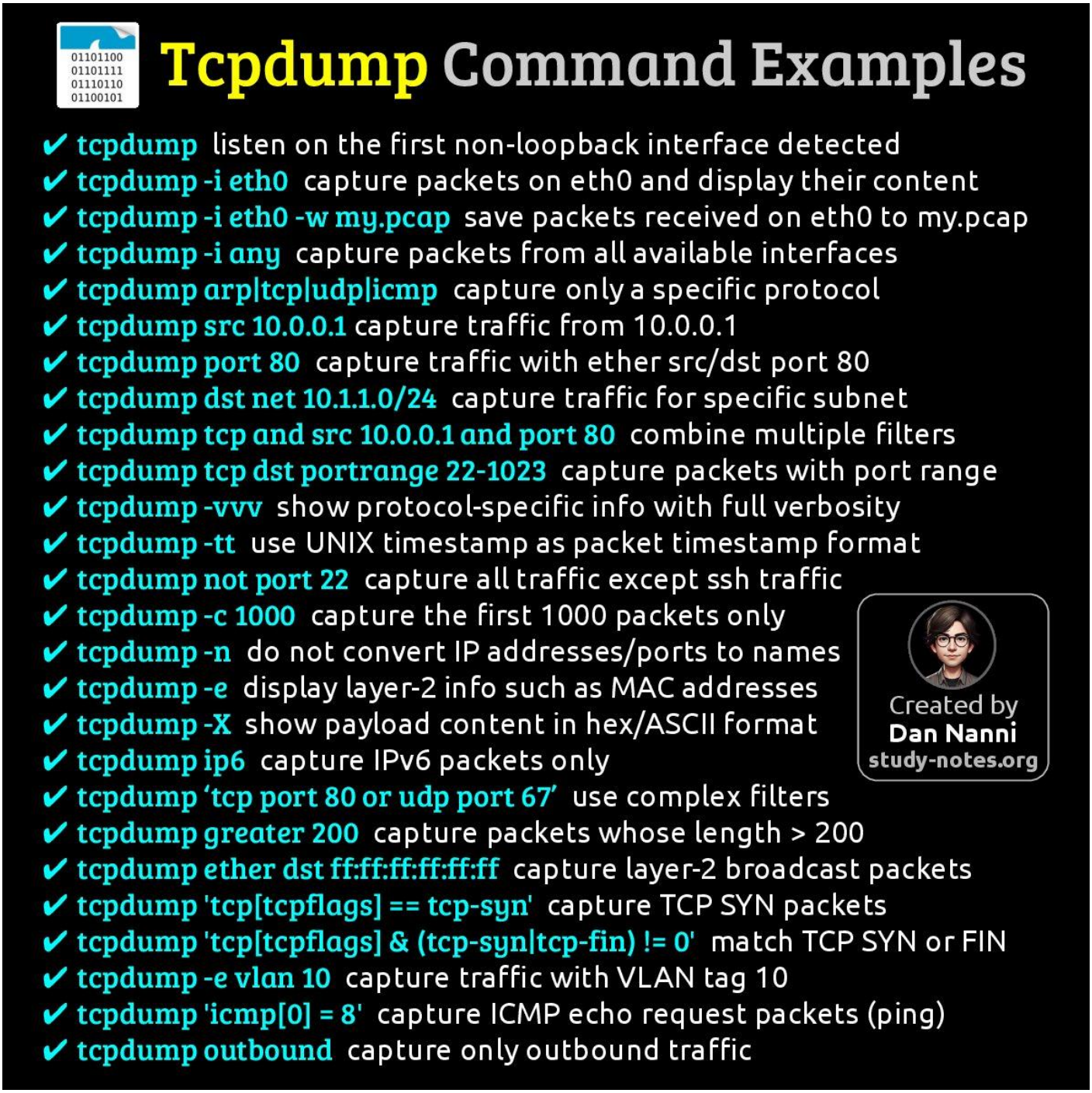
FTP Traffic

```
tcpdump -i eth0 -s 0 'tcp port 21'
```

?? DDos ?????????

```
interface=ens1
dumpdir=/home/user/automatic-tcp-dump/
while /bin/true; do
  pkt_old=`grep $interface: /proc/net/dev | cut -d :  -f2 | awk '{ print $2 }'`
  sleep 1
  pkt_new=`grep $interface: /proc/net/dev | cut -d :  -f2 | awk '{ print $2 }'`
  pkt=$(( $pkt_new - $pkt_old ))
  echo -ne "\r$pkt packets/s\033[0K"
  if [ $pkt -gt 30000 ]; then
    echo -e "\n`date` Under Attack. Capturing Packets..."
    sudo  tcpdump -n -i $interface -s0 -c 20000 -w $dumpdir/dump.`date +"%Y%m%d-%H%M%S"`.pcap
    echo "`date` Packets Captured."
    sleep 300  && pkill -HUP -f /usr/sbin/tcpdump
  else
    sleep 1
  fi
done
```

Cheat Sheets



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