Computer Network Security

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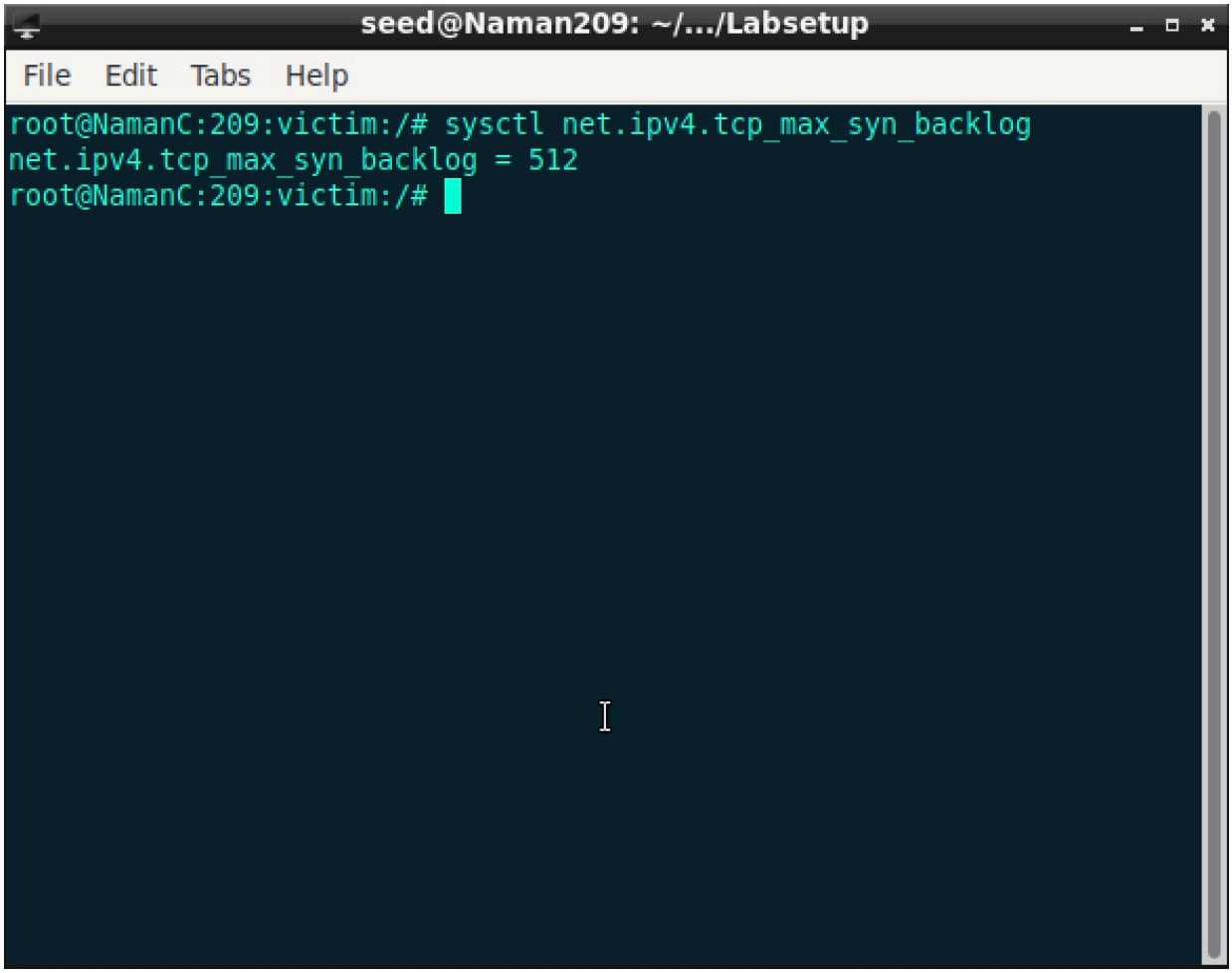
Section	D

Lab 4 - TCP Attack Lab

Task 1: SYN Flooding Attack

Command: sysctl net.ipv4.tcp*max*syn_backlog

Screenshots:

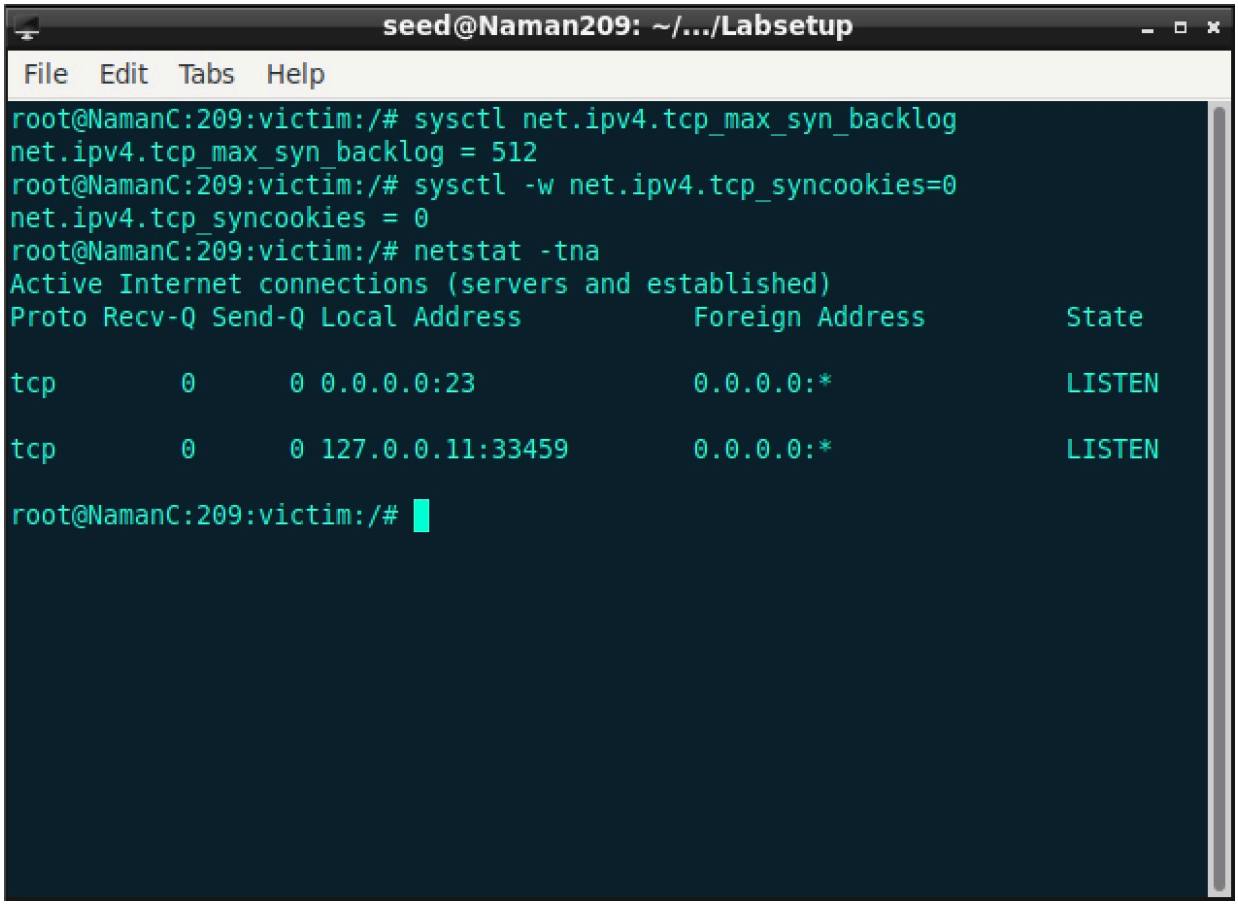


Command:

sysctl net.ipv4.tcp_syncookies=0

netstat -tna

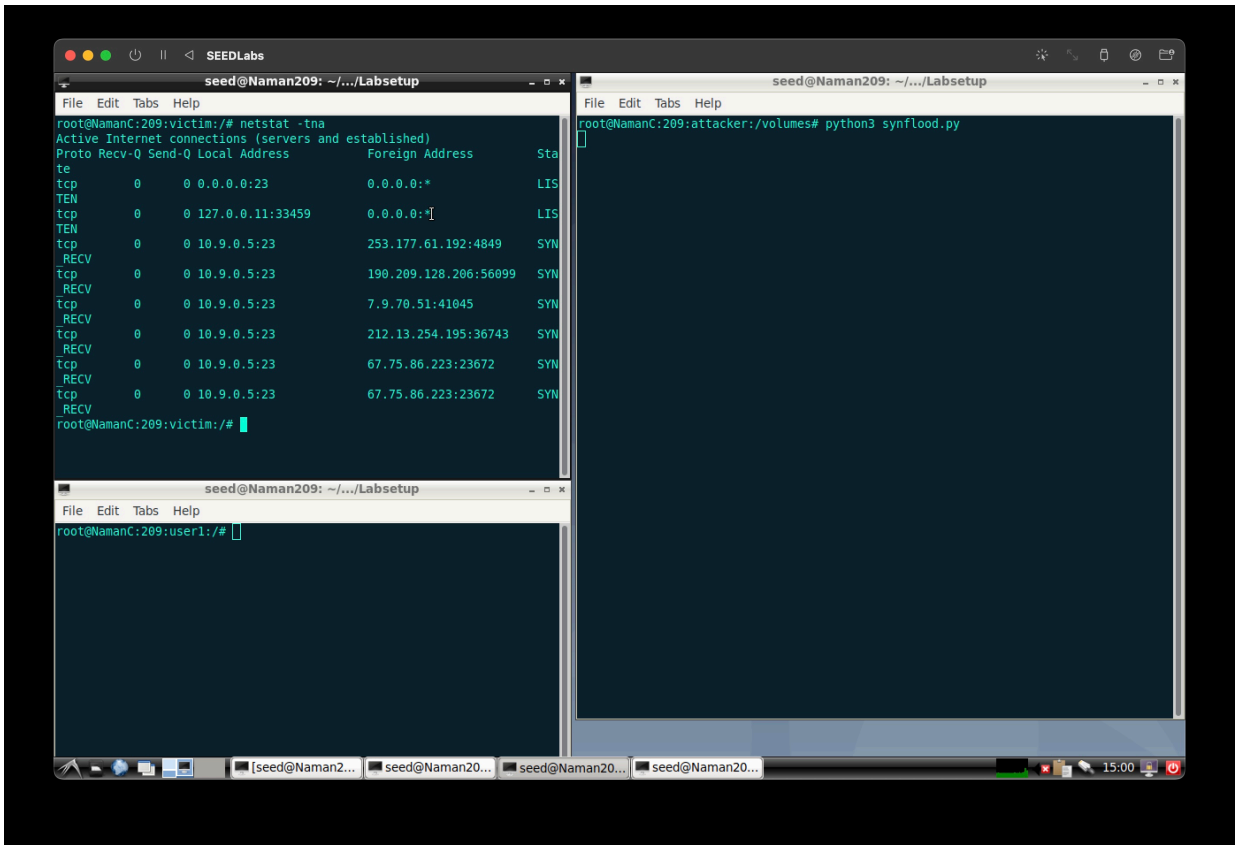
Screenshots:



Task 1.1: Launching the Attack Using Python

Command: python3 synflood.py

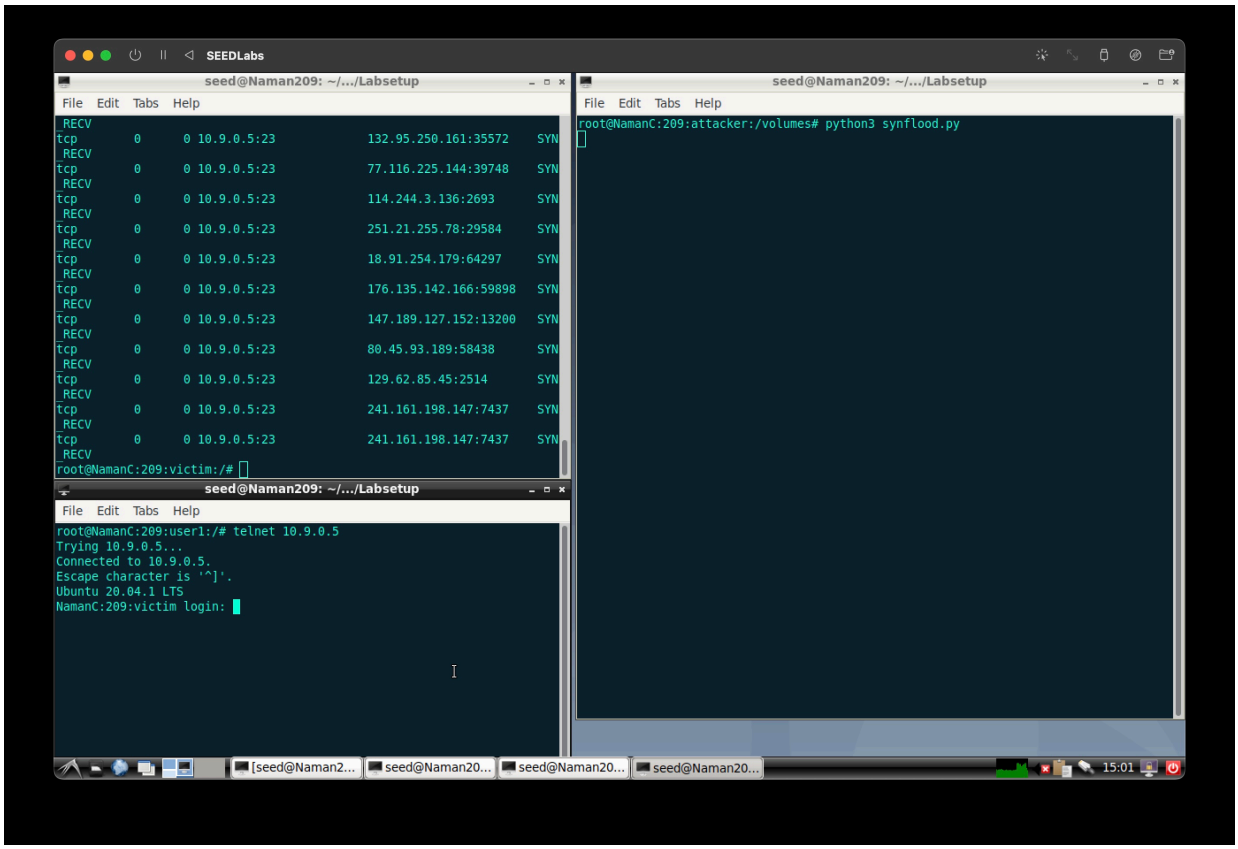
Screenshots:



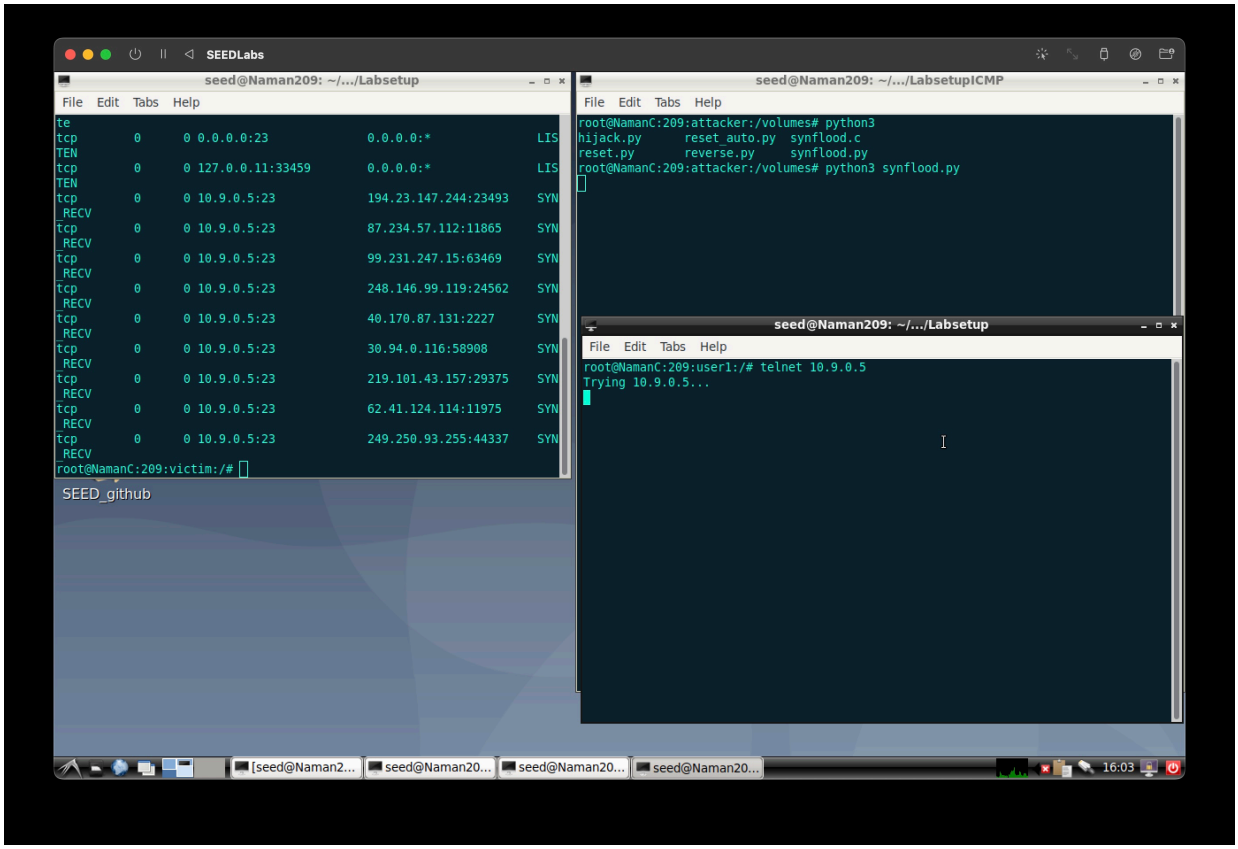
Command: telnet 10.9.0.5

Screenshots:

Faliure



Success

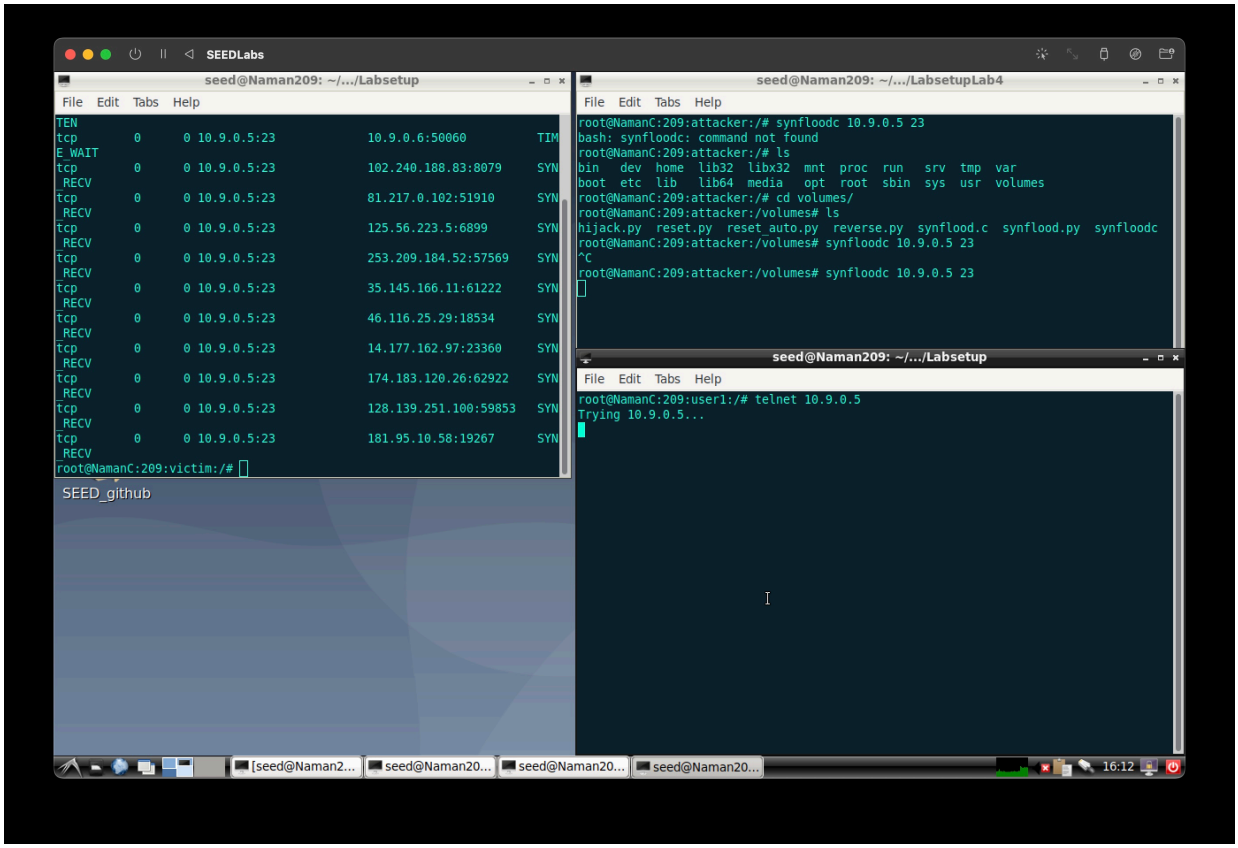


Task 1.2: Launching the Attack Using C

Command: gcc -o synflood synflood.c

synflood 10.9.0.5 23

Screenshots:

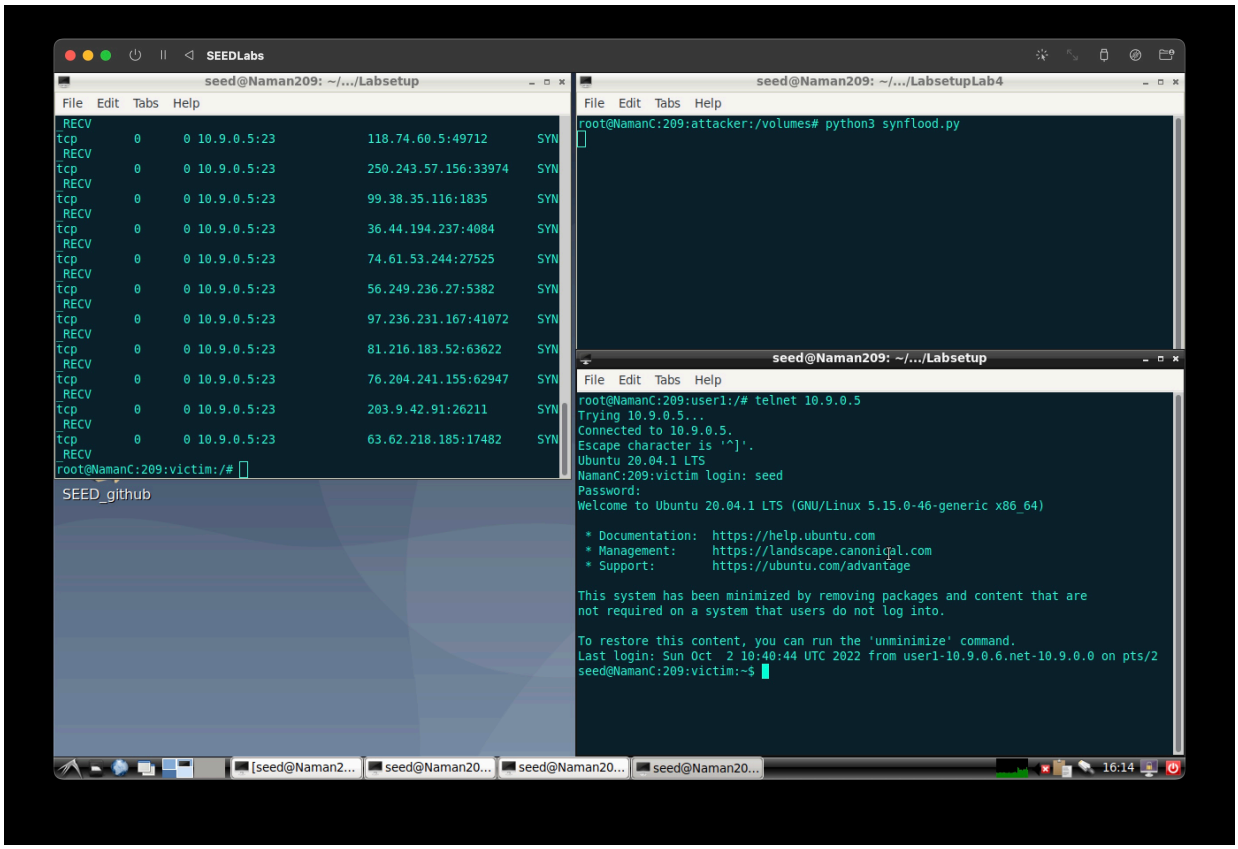


Task 1.3: Enable the SYN Cookie Countermeasure

Command: sysctl -w net.ipv4.tcp_syncookies=1

python3 synflood.py

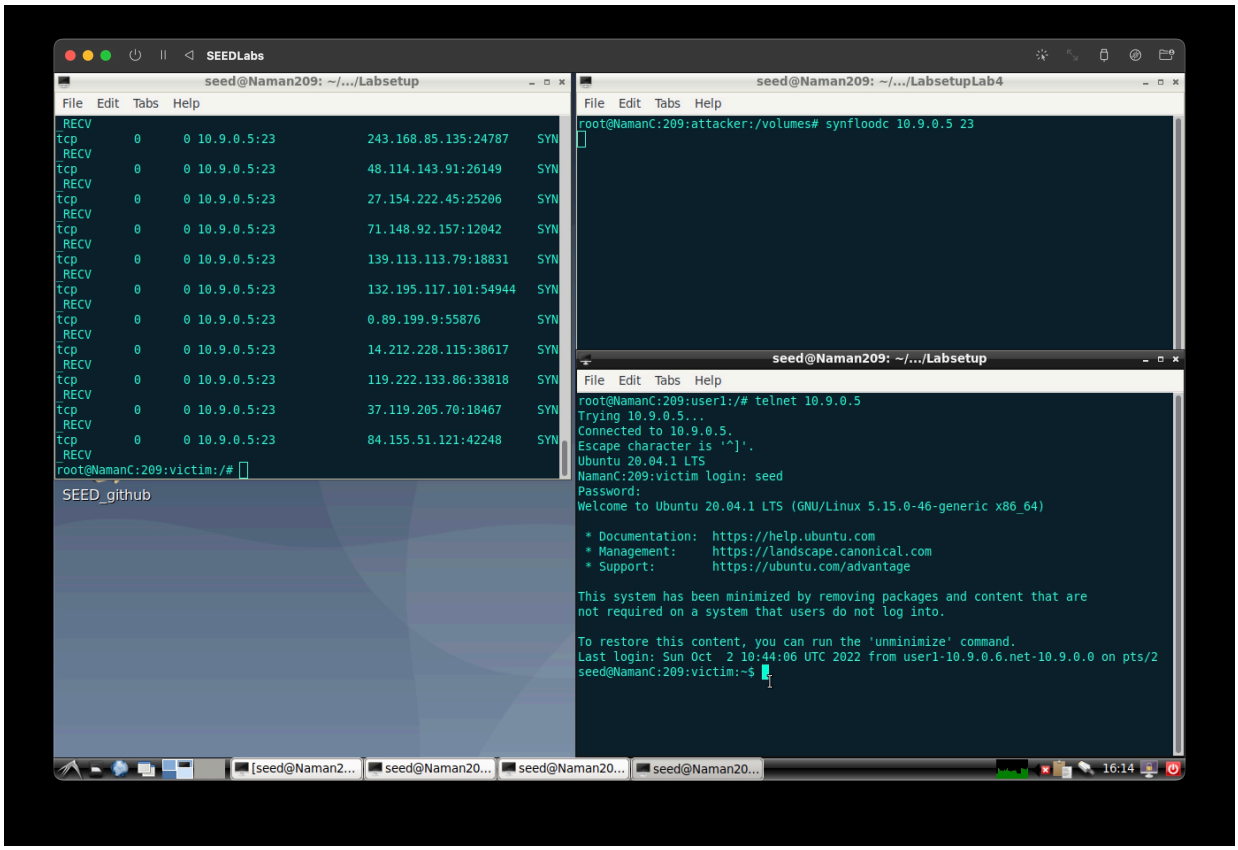
Screenshots:



Command: sysctl -w net.ipv4.tcp_syncookies=1

synflood 10.9.0.5 23

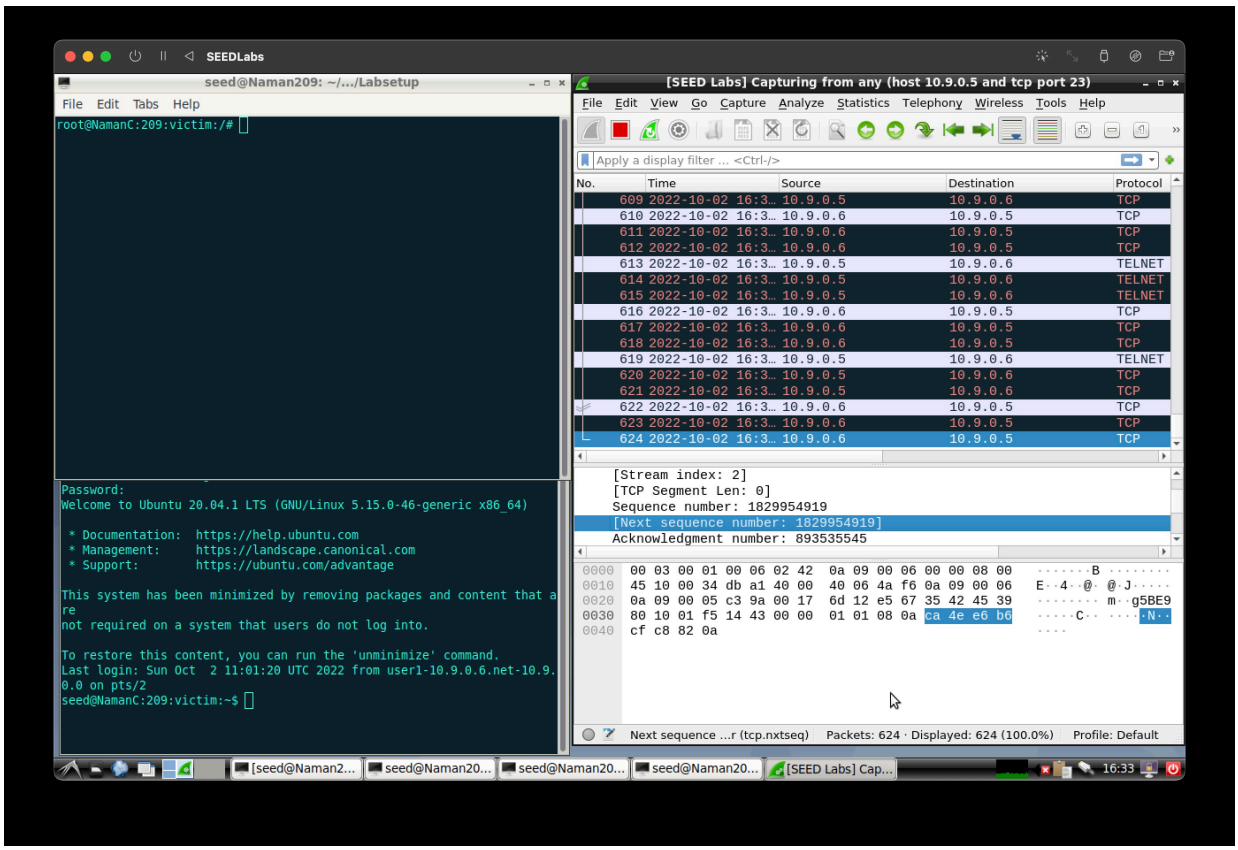
Screenshots:



Task 2: TCP RST Attacks on Telnet Connections

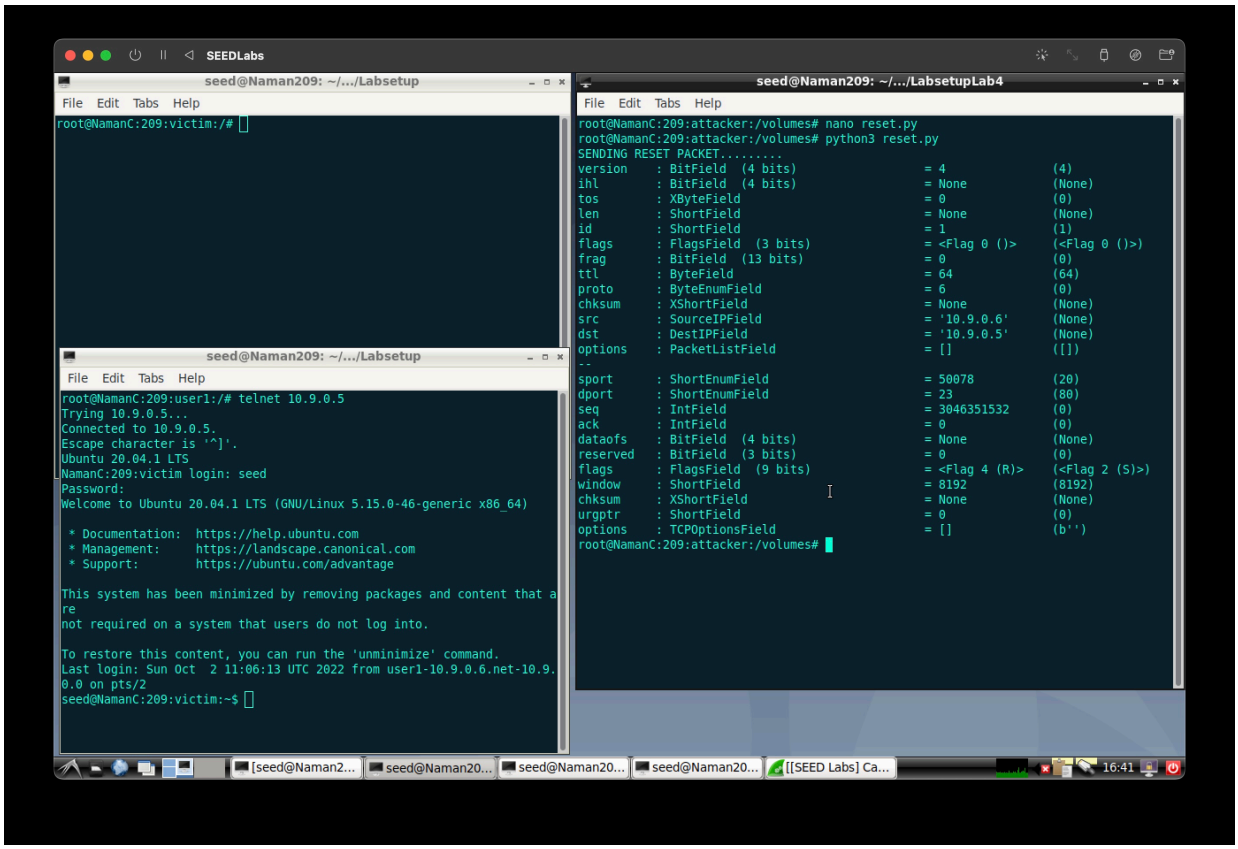
Command: telnet 10.9.0.5

Wireshark Screenshots:

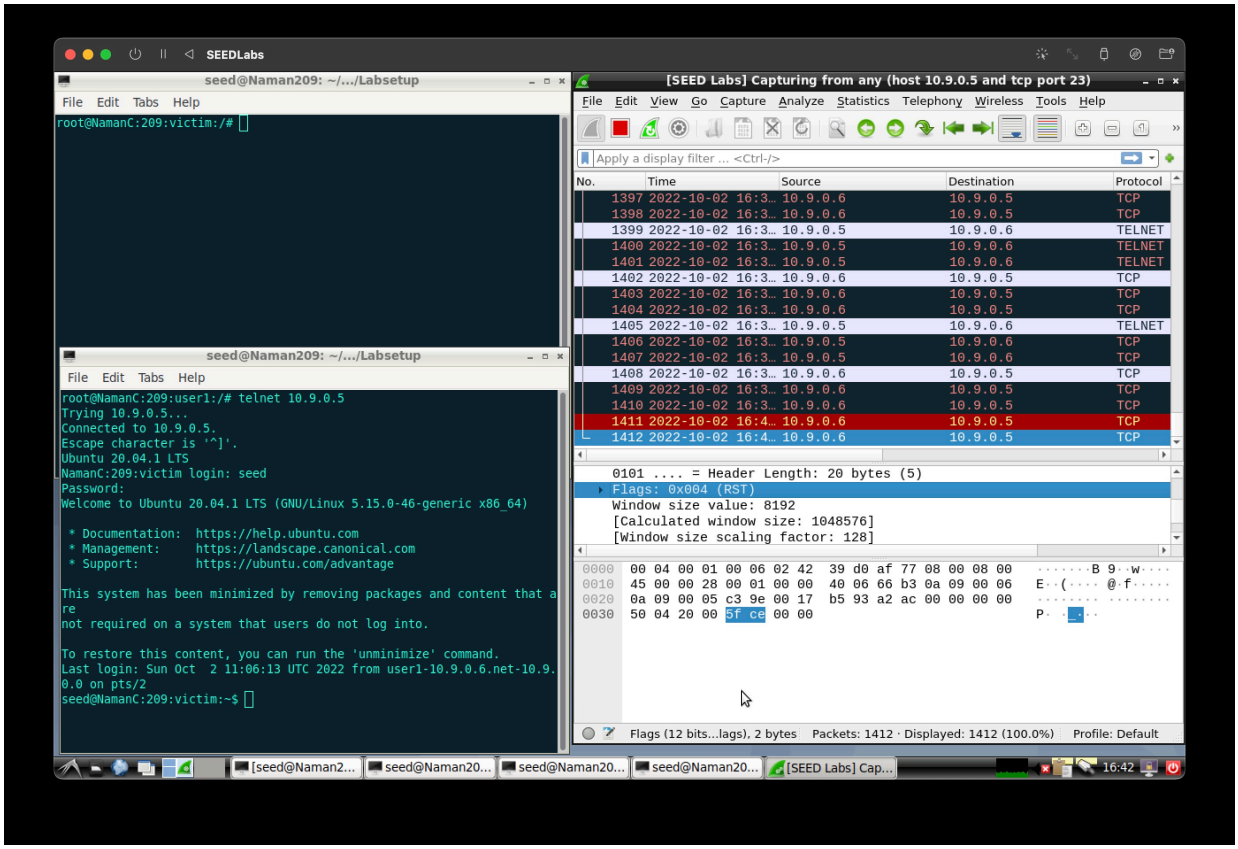


Command: python3 reset.py

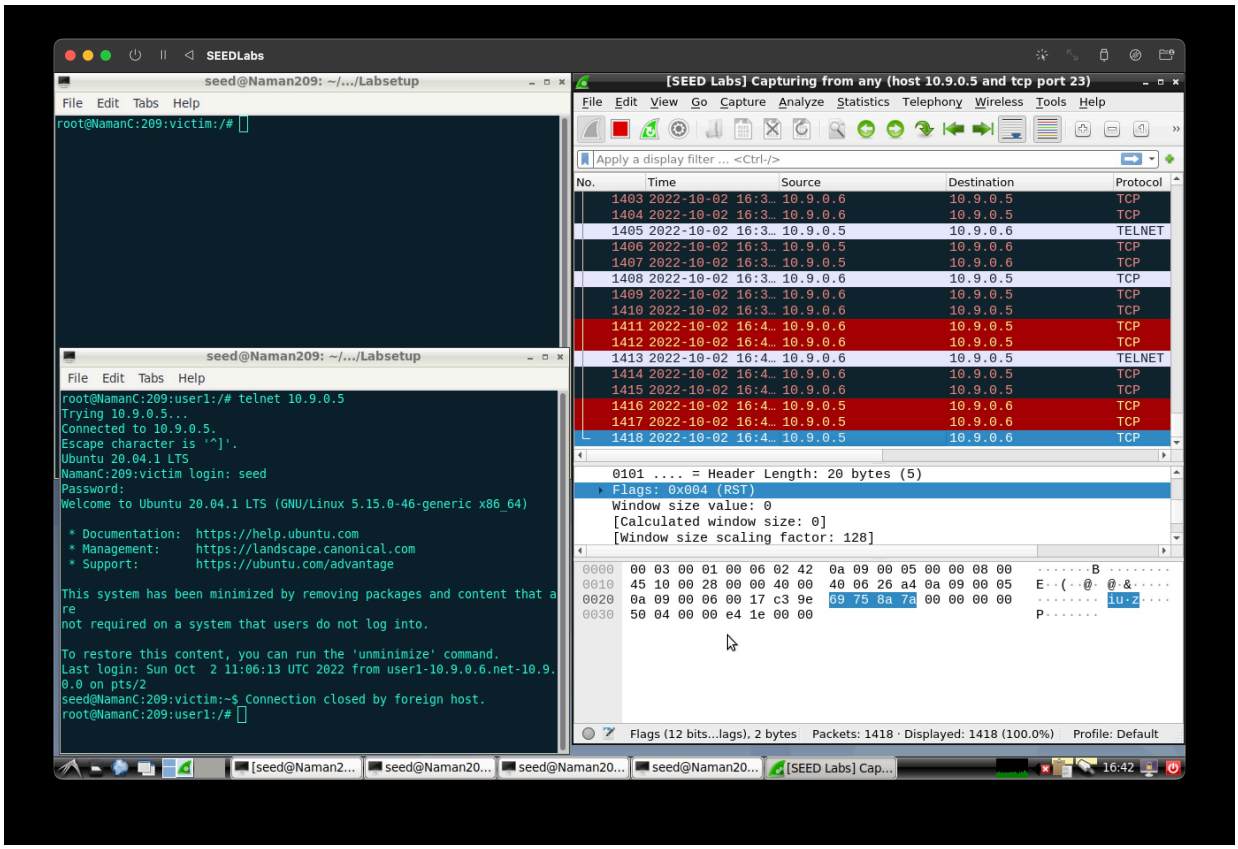
Screenshots:



Wireshark Screenshots



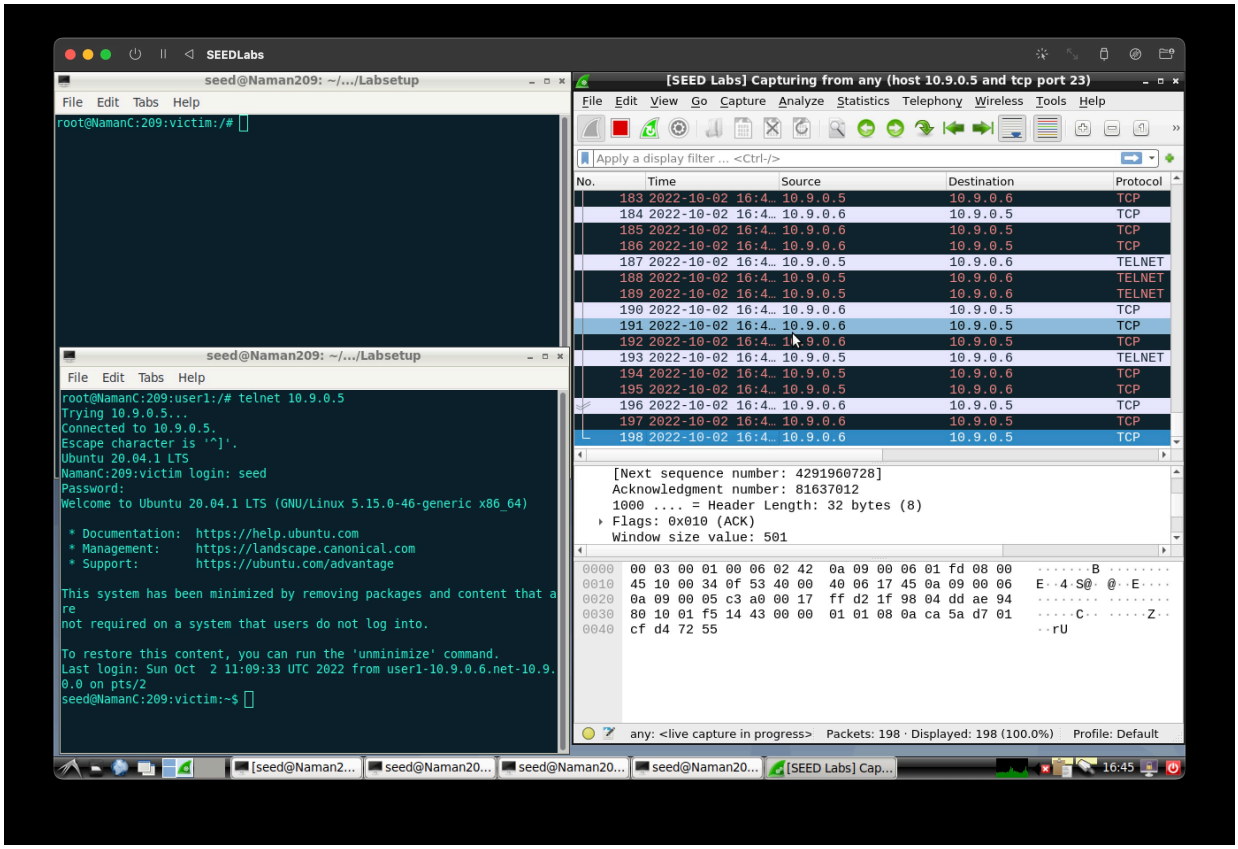
reset flag sent



Observation: The connection between host and victim is broken

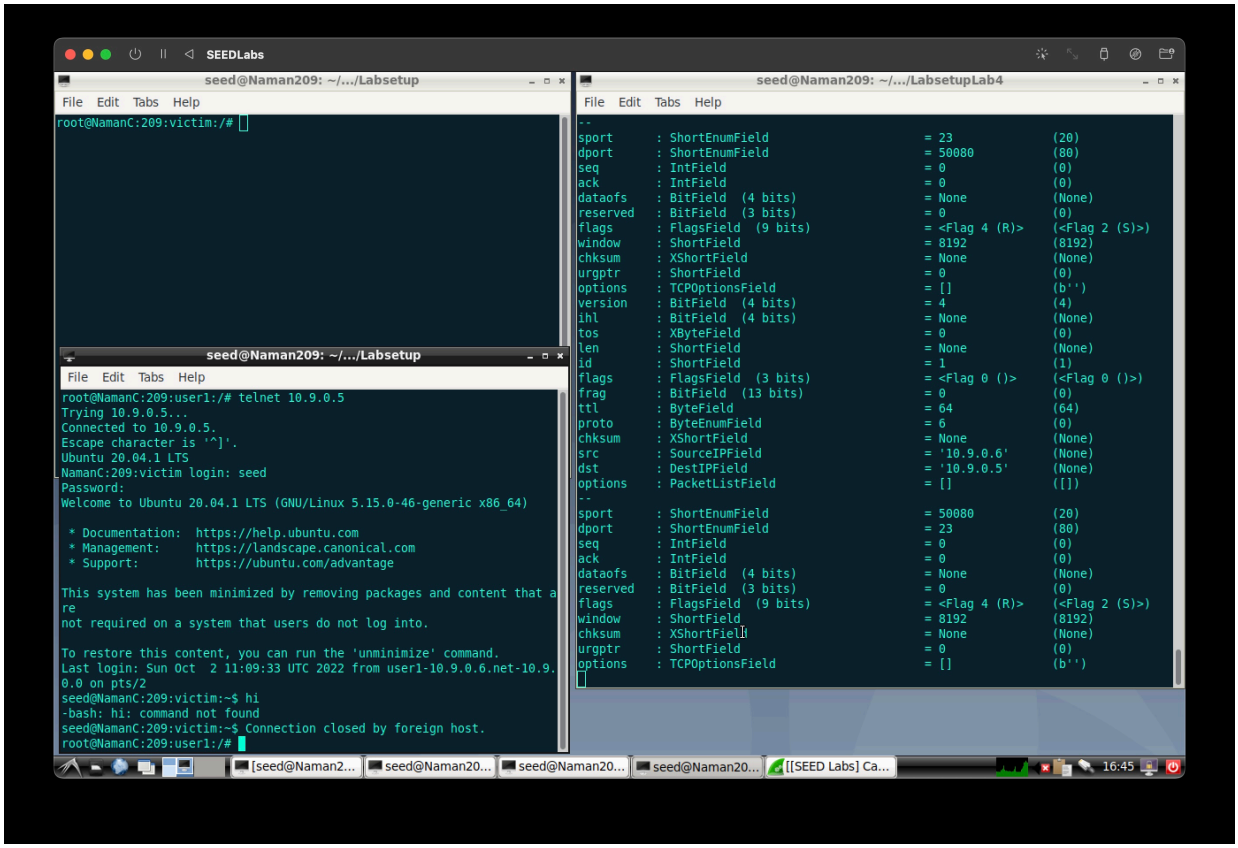
Launching the attack automatically

Wireshark Screenshots:

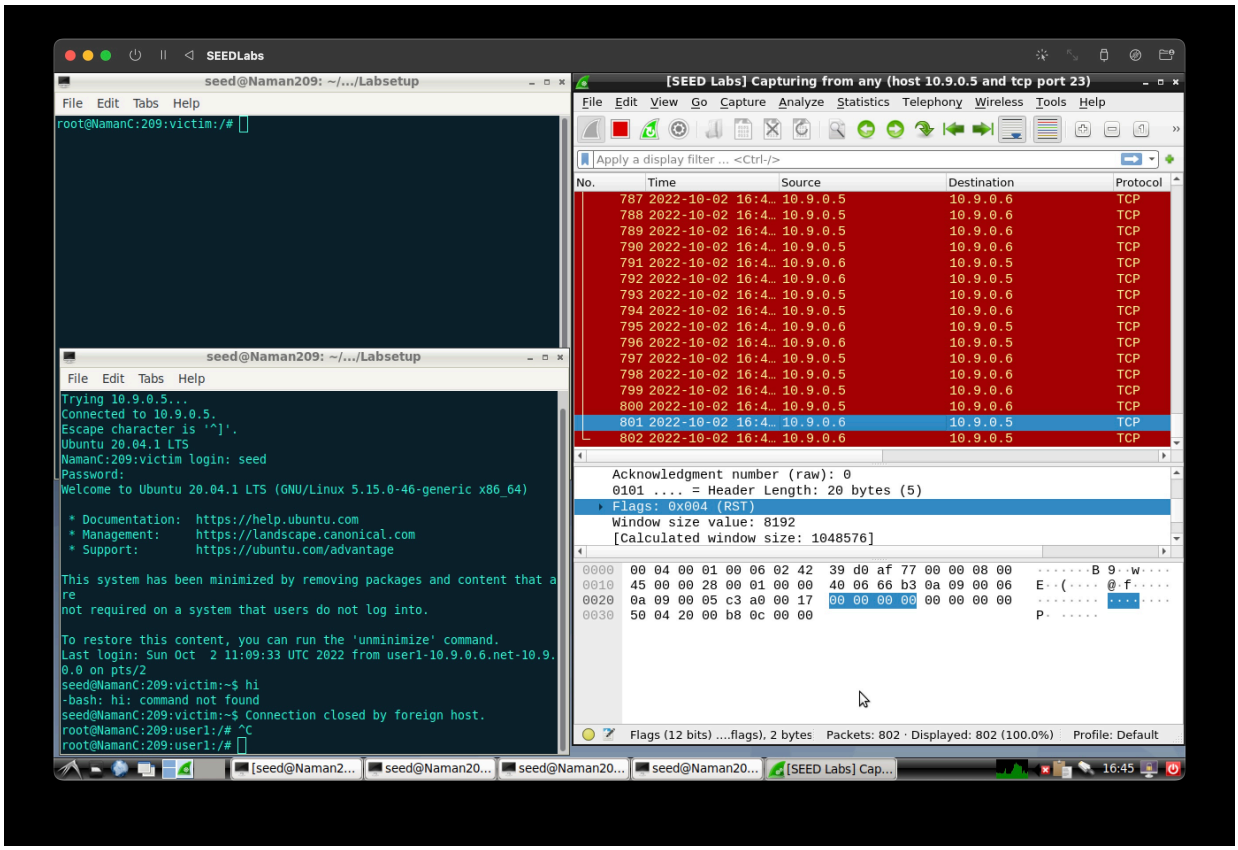


Command: python3 reset_auto.py

Screenshots:



Wireshark Screenshots:



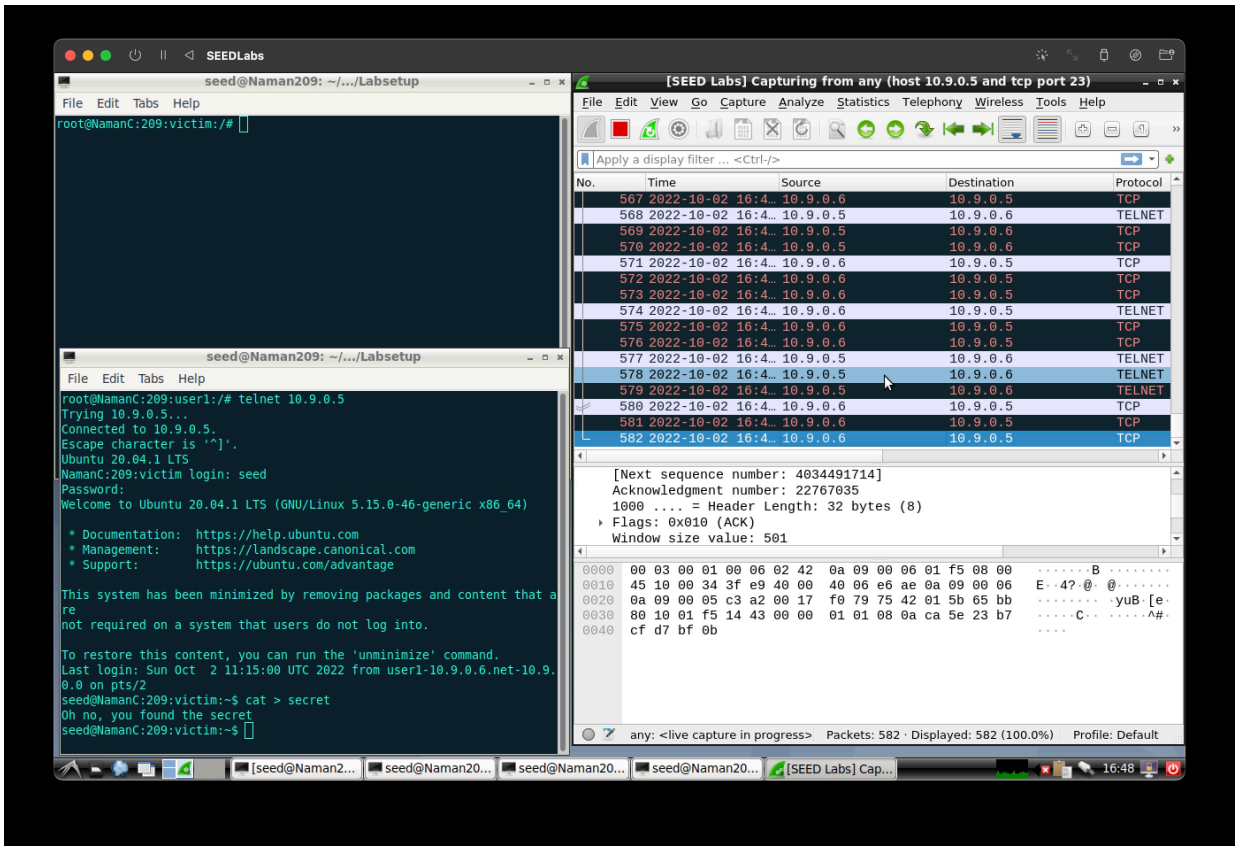
Observation: A spam of reset flags is being sent to break the connection between host and

victim

Task 3: TCP Session Hijacking

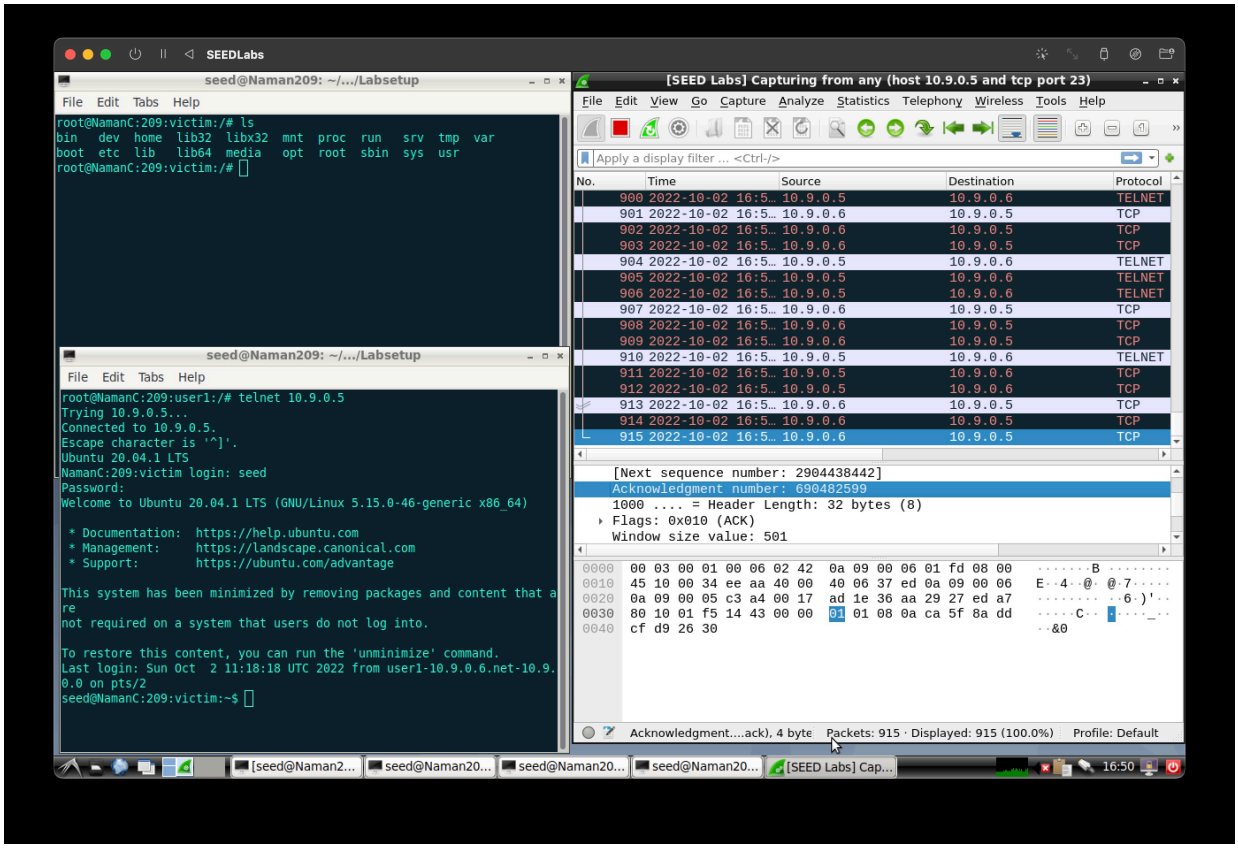
Command: On User 1 (remotely logged onto the Victim) $ cat > secret (enter your desired text)

Screenshots:



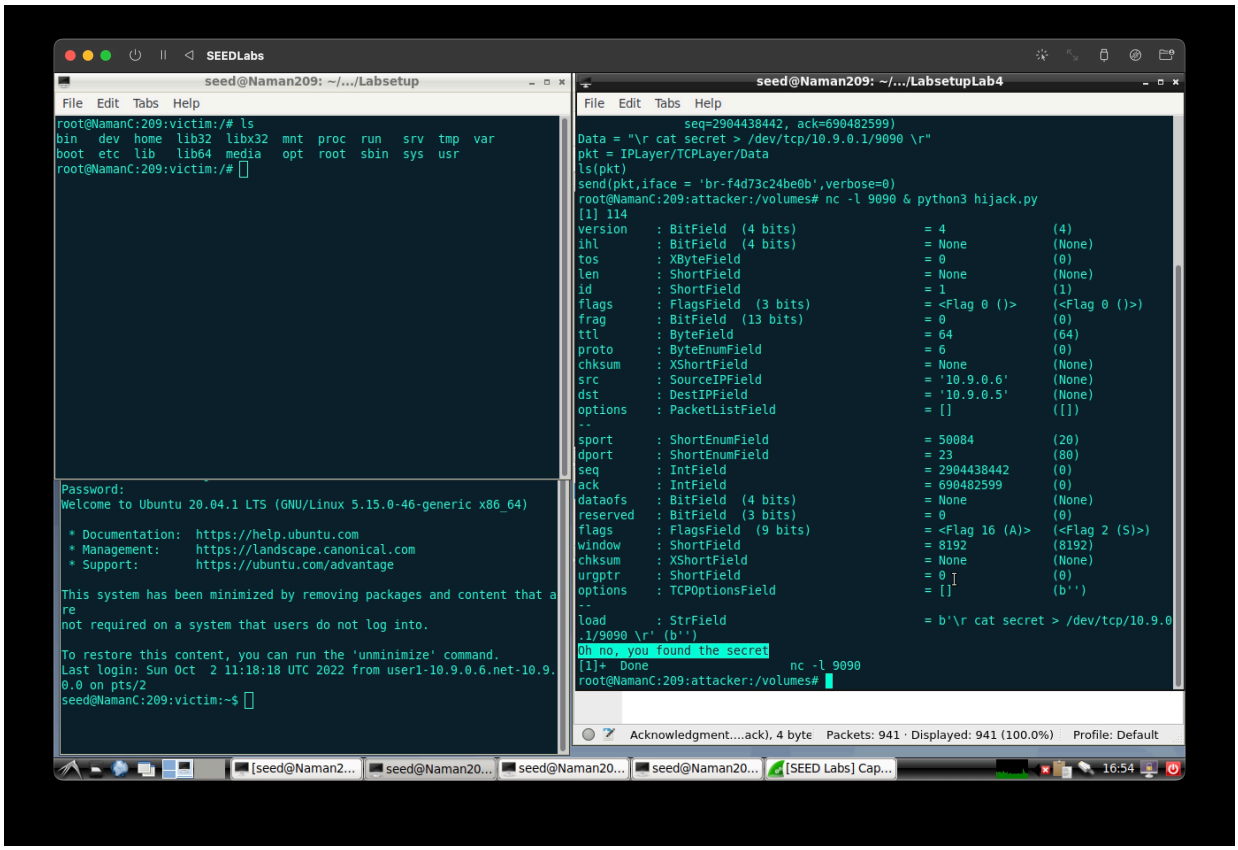
Command: telnet 10.9.0.5

Wireshark Screenshots:



Command: nc -l 9090 & python3 hijack.py

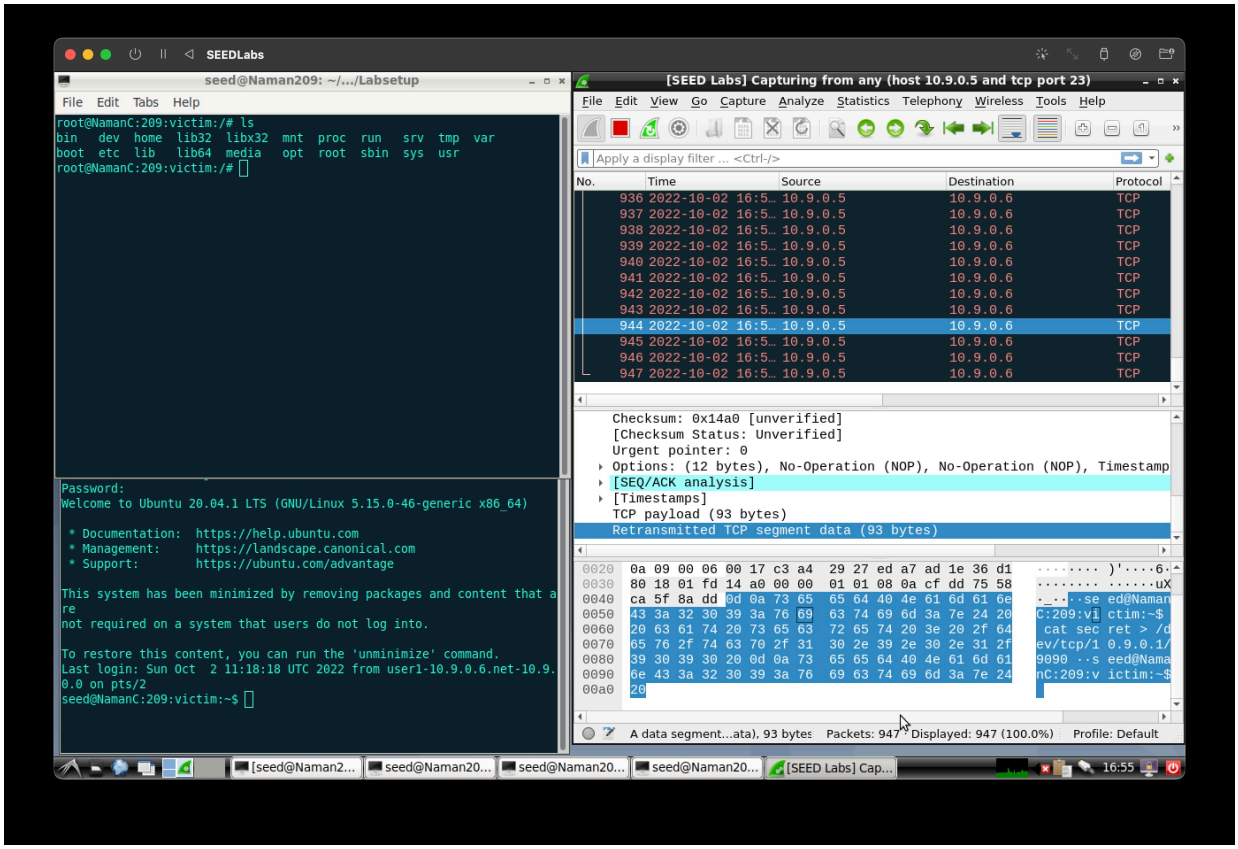
Screenshots:



Observation: The secret stored in `secret` file has been revealed

```
Oh no, you have found the secret
```

Wireshark Screenshots:

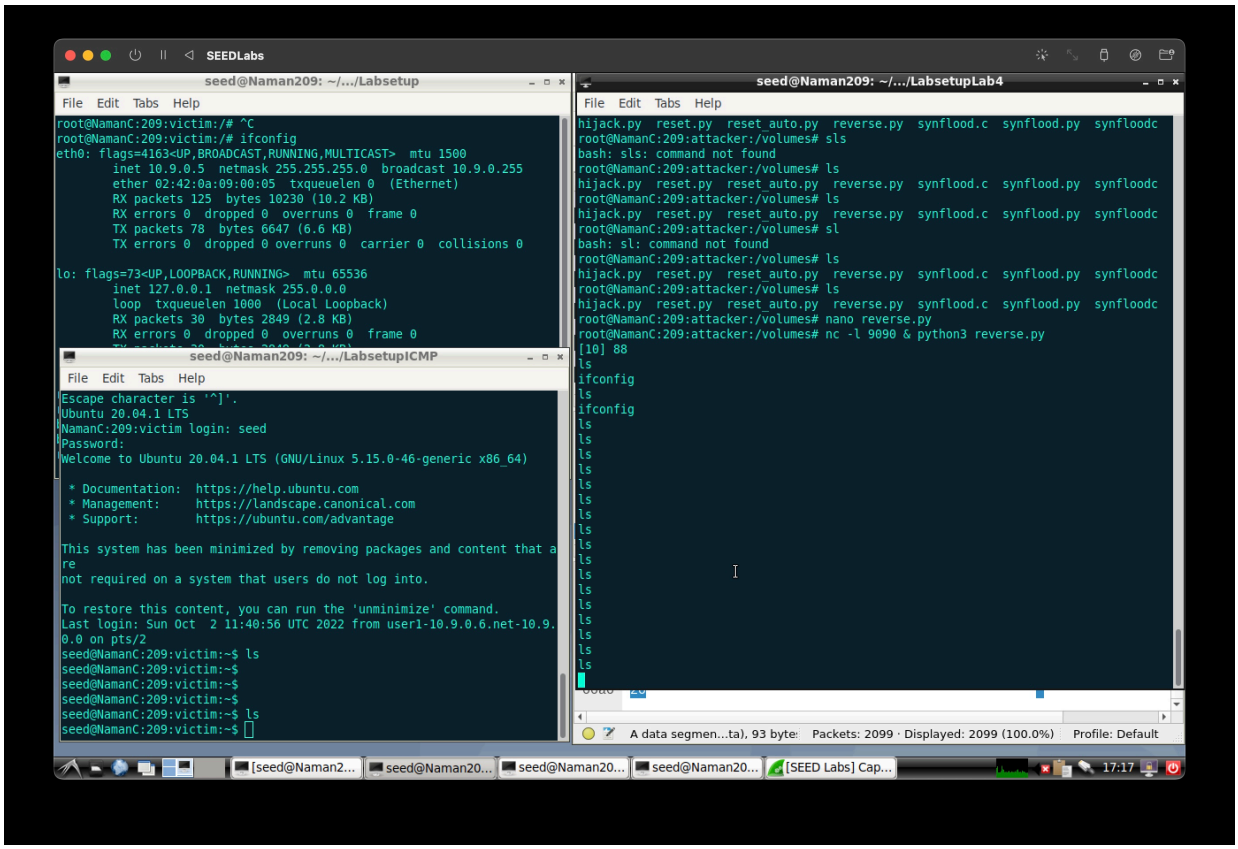


Task 4:Creating Reverse Shell using TCP Session Hijacking

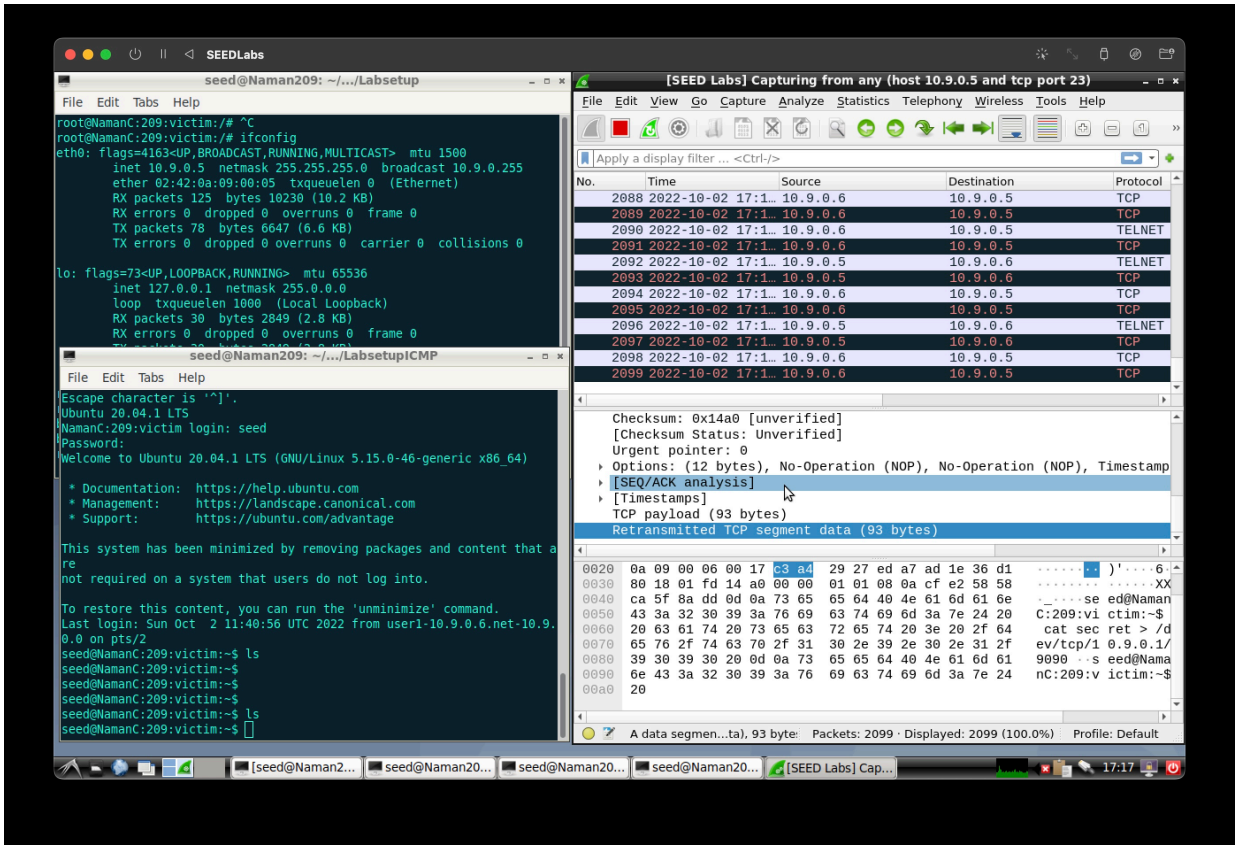
Command: telnet 10.9.0.5

nc -l 9090 & python3 reverse.py

Screenshots:



Wireshark Screenshots:



Attack successful