



UJAR TECH SOLUTION

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TASK 9

Man-in-the-Middle (MITM) Attack Using Ettercap or MITMf:

Understand how Man-in-the-Middle (MITM) attacks work on a local network by performing ARP spoofing to intercept and monitor traffic between two devices.

PRACTICAL DESCRIPTION

Problem:- *Explore a Linux machine to understand how Man-in-the-Middle (MITM) attacks work by using ARP spoofing to intercept and monitor traffic between two devices on a local network.*

Key Concepts of Man-in-the-Middle:

A Man-in-the-Middle (MITM) attack occurs when an attacker secretly positions themselves between two communicating parties (e.g., a user and a server) and:

- Eavesdrops on the communication*
- Modifies traffic (injects malicious code, redirects sessions)*
- Steals sensitive data like login credentials, cookies, or session tokens*

Tools Used

- Ettercap – A popular tool for performing MITM attacks (supports ARP spoofing, sniffing, and traffic manipulation).*
- MITMf (Man-in-the-Middle Framework) – A more advanced framework that includes modules for credential harvesting, session hijacking, and code injection.*

Practical of MITM Attack Using Ettercap Using Kali Linux:-

Installing and running ettercao.

```
root@Rithik: /home/rithik
File Actions Edit View Help

(root@Rithik)-[/home/rithik]
# ettercap --version

ettercap 0.8.3.1 copyright 2001-2020 Ettercap Development Team

ettercap 0.8.3.1

(root@Rithik)-[/home/rithik]
# echo 1 | sudo tee /proc/sys/net/ipv4/ip_forward

1

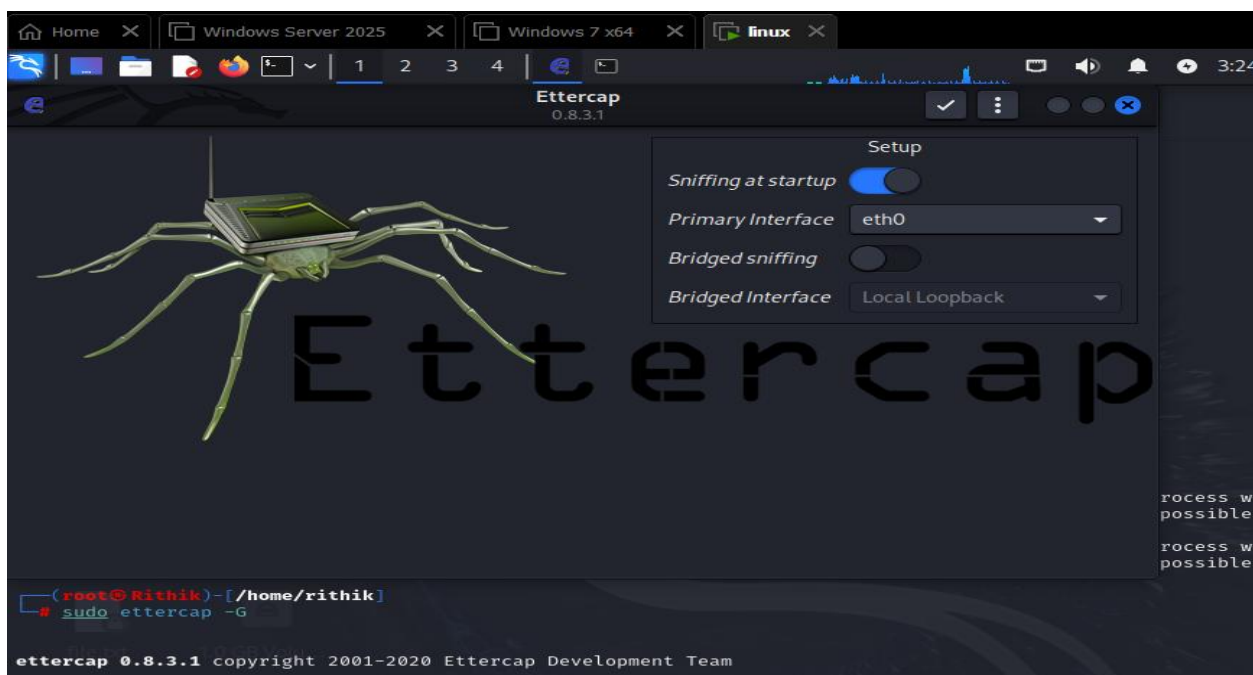
(root@Rithik)-[/home/rithik]
# sudo ettercap -G

ettercap 0.8.3.1 copyright 2001-2020 Ettercap Development Team

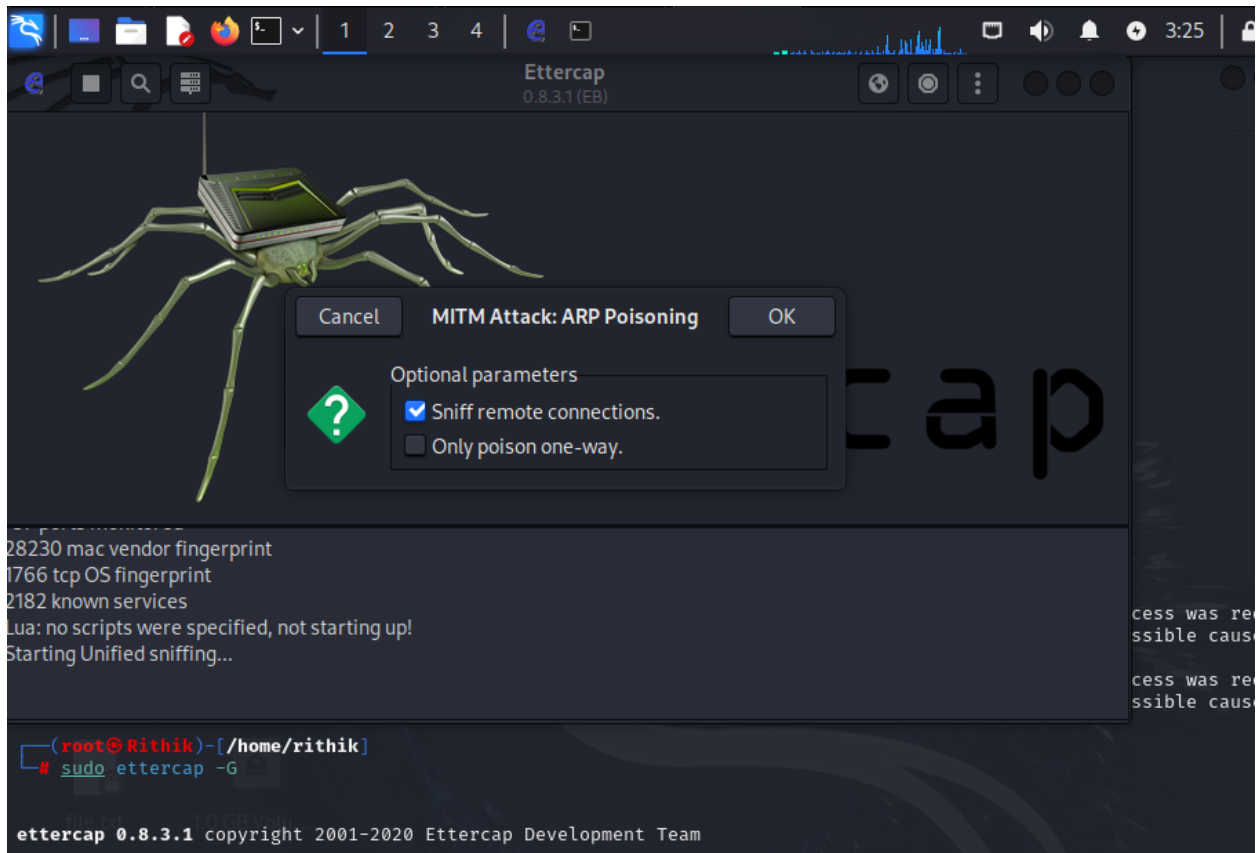
(ettercap:7010): Glib-WARNING **: 03:17:37.441: In call to g_spawn_sync(), wait status of a child process was requested but ECHILD was received by waitpid(). See the documentation of g_child_watch_source_new() for possible causes.

(ettercap:7010): Glib-WARNING **: 03:19:07.036: In call to g_spawn_sync(), wait status of a child process was requested but ECHILD was received by waitpid(). See the documentation of g_child_watch_source_new() for possible causes.
```

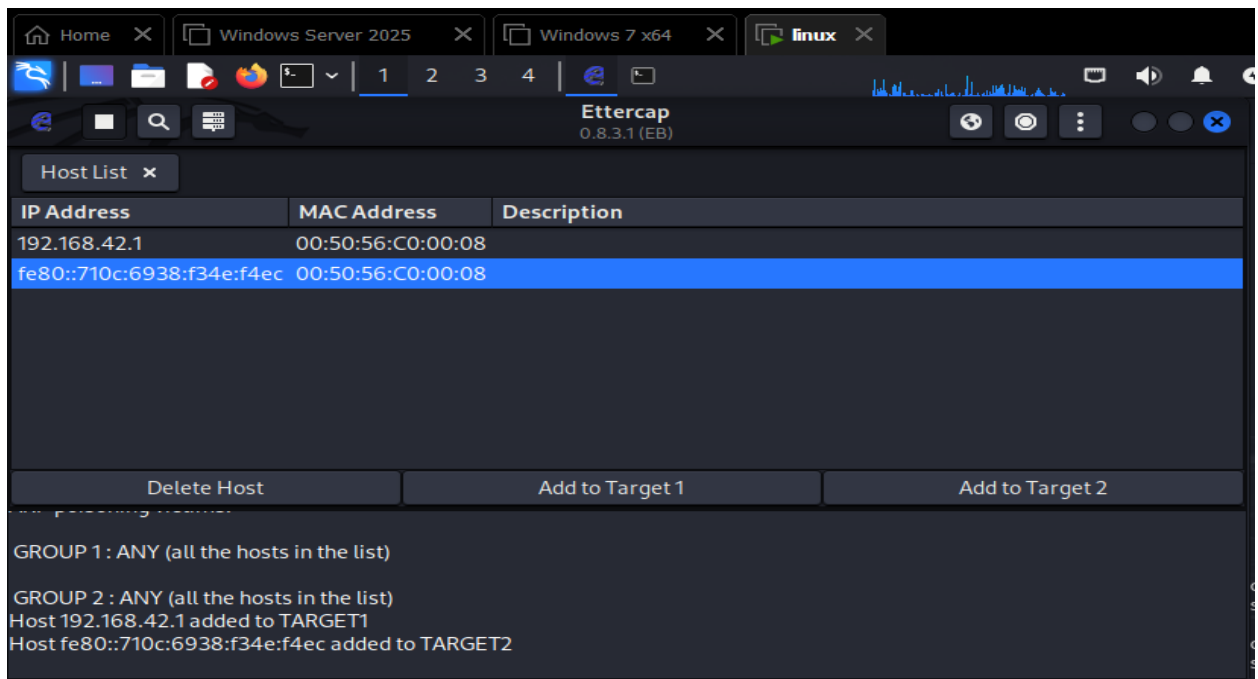
Start Ettercap in Text or GUI Mode



Enable ARP Spoofing

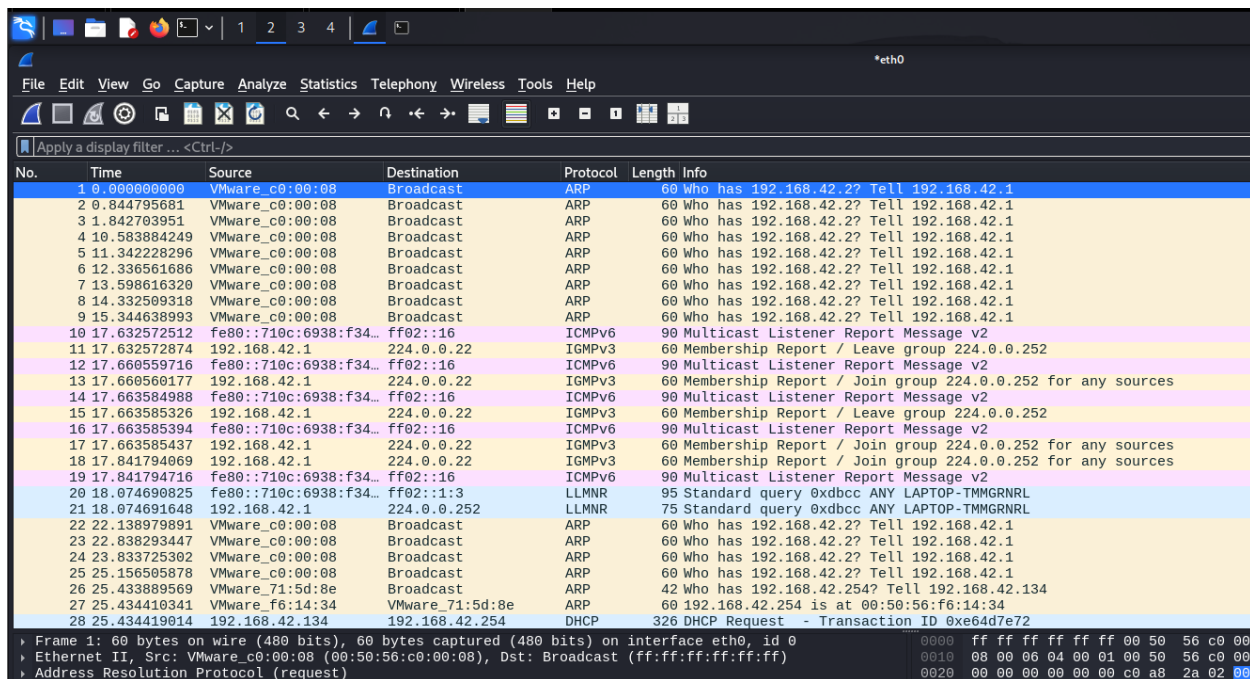
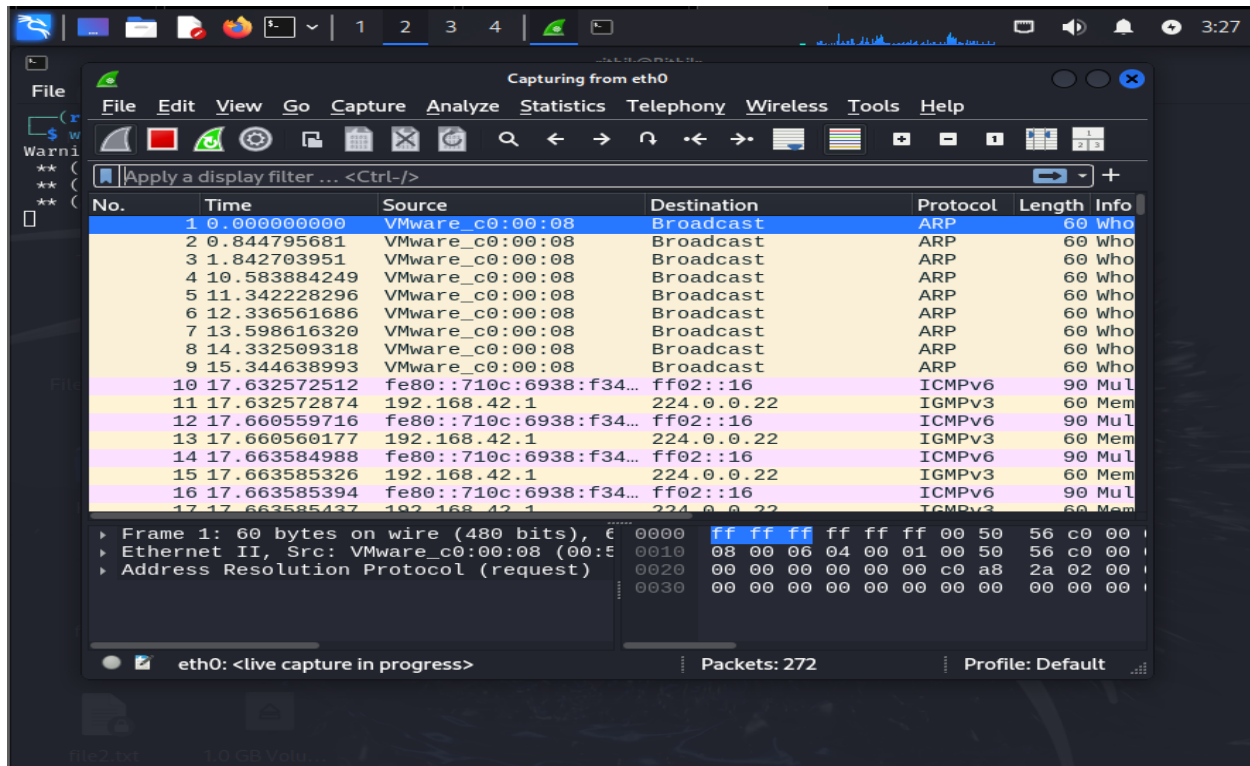


Host list



Sniff Traffic

Ettercap captures the victim's traffic.



Results :-

- Captured login credentials sent via HTTP (unencrypted websites)
- Session cookies that can be used for session hijacking
- Victim traffic redirected to a malicious site (phishing attack)

Conclusion:-

MITM attacks highlight the risks of using insecure communication protocols.

To defend against MITM attacks, organizations and users should:

- Use encrypted connections (HTTPS, TLS, SSH, VPN)
- Enable ARP spoofing protection
- Apply intrusion detection systems
- Educate users about fake certificates and phishing sites