Cybersecurity 701

Credential Harvesting Lab

Lab contributions from

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Credentials Harvesting Materials

- Materials needed
  - Kali Linux Virtual Machine
  - Windows 7 Virtual Machine

- Software Tools used (On the Kali Linux OS)
  - SET (Social-Engineering Toolkit)

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Objectives Covered

- Security+ Objectives (SY0-701)
  - Objective 2.2 – Explain common threat vectors and attack surfaces.
    - Human vectors/social engineering
      - Phishing
      - Misinformation/disinformation
      - Impersonation
      - Brand impersonation

What is Credential Harvesting?

- A malicious actor attempting to obtain log-in credentials from victims
  - Create a fake website
    - Clone of a real website
  - Get the victim to visit the website
  - Victim enters their username/password
    - Does not actually authenticate
  - Malicious actor sees their username/password

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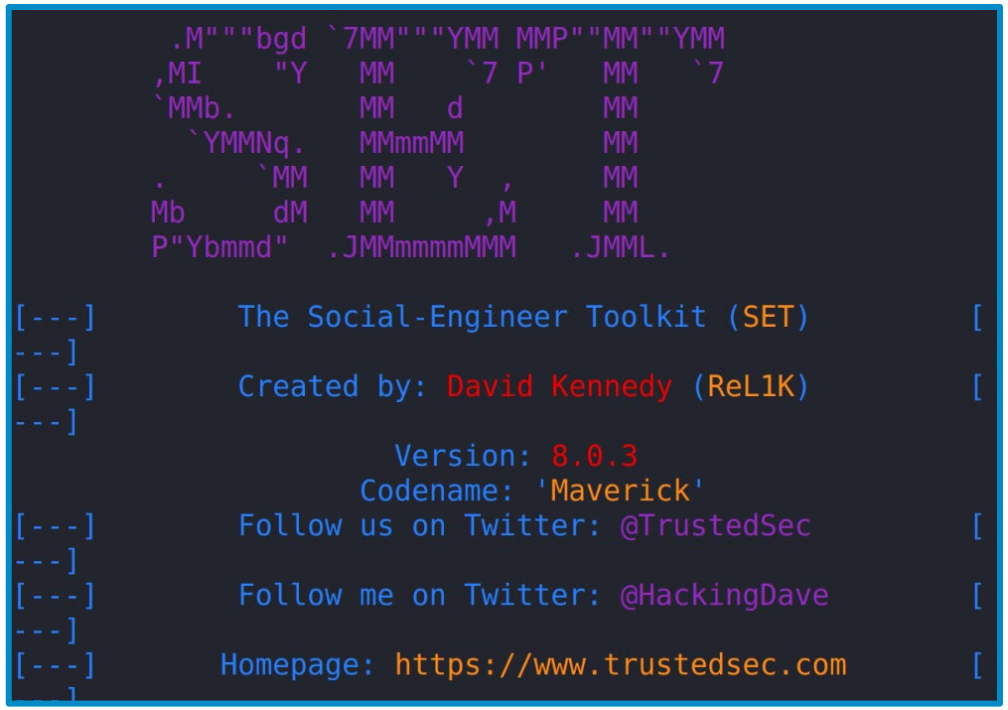
Credential Harvesting Lab Overview

1. Set up Environments
2. Find IP Addresses
3. Open SEToolkit
4. Launching the attack
5. Playing the victim
6. Seeing the attack



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Set up Environments

- Log into your range
- Open the Kali Linux and Windows 7 Environments
  - You should be on your Kali Linux Desktop
  - You should also be on your Windows 7 Desktop

Find the IP Address (Kali Machine)

- You will need the IP address of the Kali machine
- Open the Terminal
- In the Linux VM, open the Terminal and type the following command:

  `hostname -I`

- This will display the IP Address
  - Write down the Kali VM IP address

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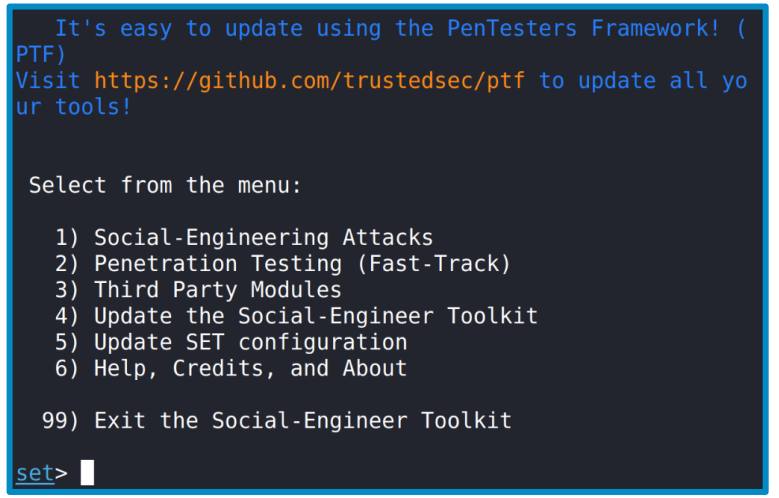
Open SEToolkit

- In the Kali environment, open Terminal
- Enter the following command to open the SEToolkit:

  `sudo setoolkit`

- When asked if you agree to terms and conditions, type **`y`** and press ENTER.



SEToolkit's Home Menu

Launching the Attack

- In the SEToolkit, you will select what attack you want to run.
- Press **1** and **ENTER** to open the Social-Engineering Attacks
- Once the Social Engineering Attacks load, press **2** and **ENTER** to open the Website Attack Vectors

Option 1: Social-Engineering Attacks

```
 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> 1
```

Option 2: Website Attack Vectors

```
 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
```

Launching the Attack

- Once the Website Attack Vectors load, press **3** and **ENTER** to run a Credential Harvester Attack

- Now, we are going to use the Web Templates, so press **1** and **ENTER**

- Verify that the IP Address is the same as your Kali's IP Address, and press **ENTER** again

Option 3: Credential Harvester Attack

```
   1) Java Applet Attack Method
   2) Metasploit Browser Exploit Method
   3) Credential Harvester Attack Method
   4) Tabnabbing Attack Method
   5) Web Jacking Attack Method
   6) Multi-Attack Web Method
   7) HTA Attack Method

  99) Return to Main Menu

set:webattack>3
```

Option 1: Web Templates

```
   1) Web Templates
   2) Site Cloner
   3) Custom Import

  99) Return to Webattack Menu

set:webattack>1
```

```
set:webattack> IP address for the POST back in Harvester/Tabnabbing
 [10.15.71.143]:
```

Verify your Kali IP address and hit ENTER

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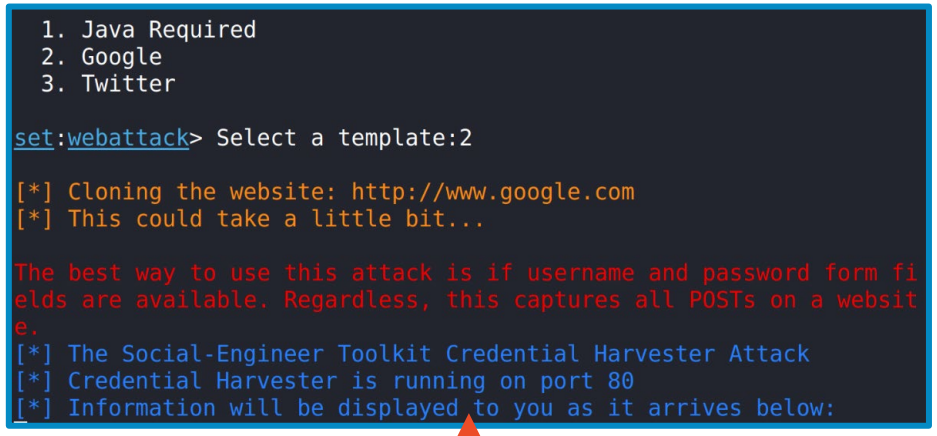
Launching the Attack – Waiting for Results

- To set the site up as a Google login page, press **2** and **ENTER**
- You should see that the attack is running and “Information will be displayed to you as it arrives below”



Verify it says “Information will be displayed to you as it arrives below:”

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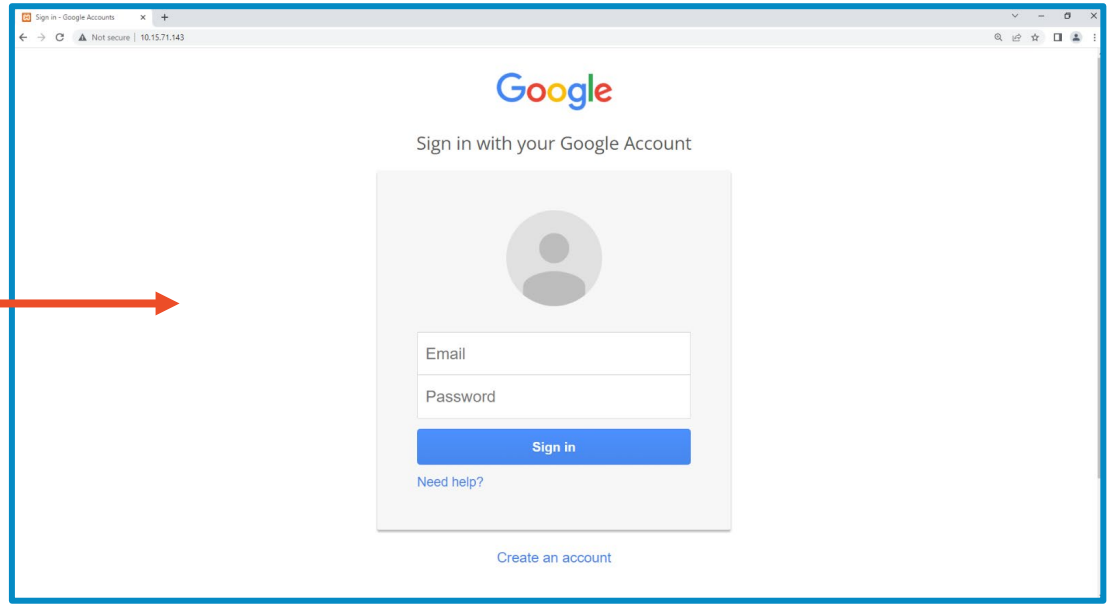
Playing the Victim

- In the Windows environment, open the Chrome Browser
- Go the website of the URL for Kali

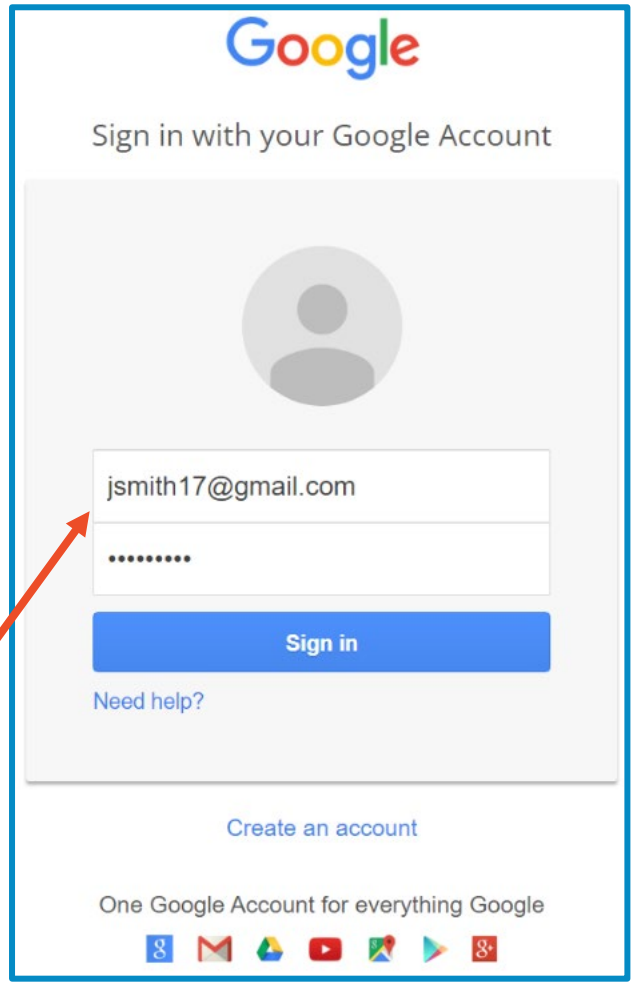
  `Kali-IP-Address` (as the URL)
- Notice that this looks exactly like a login page for a standard Google account

This is the webpage that should load



Playing the Victim - Credentials

- Now, type in fake credentials to this webpage as if you were going to log into a Google account
- Notice, once you log in, it simply takes you to www.google.com, but you are not signed into Google.



Enter fake credentials

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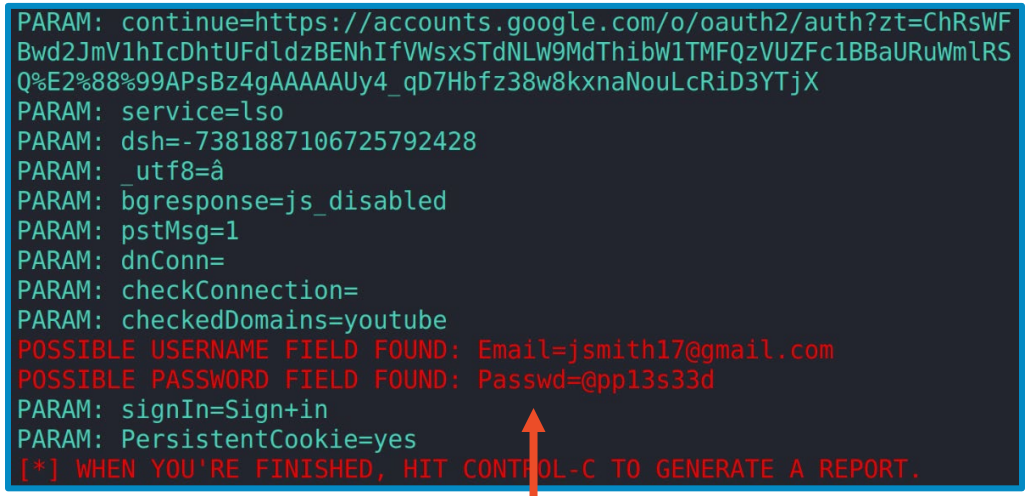
Seeing the Attack

- Go back to Kali
- It should show you that it has “GOT A HIT!” and will show the username and password in plaintext



Notice, you should see the fake credentials that were entered into the fake Google Authentication page

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How to Defend Against a Credential Harvesting Attack?

- Only use credentials at trusted websites!
  - What was the website URL you entered your credentials in?
  - Watch for "watering hole" type attacks at sites that look similar to your intended destination
- Avoid re-using passwords across multiple websites
  - If one site steals your password once and they're all the same...
- Two-Factor Authentication
  - Why would these help secure your password?
- What are some other ways of defending against a credential harvesting attack?