FUTURE_CS_02

Phishing Attack - Simulation

1. Introduction

This report details the execution and results of a phishing simulation campaign designed to assess employee awareness of social engineering attacks and improve organizational security training programs. The campaign utilized the Social Engineering Toolkit (SET) to simulate credential harvesting attacks via cloned websites.

2. Objectives

- Simulate phishing attacks using cloned login pages to test employee susceptibility.
- Measure success rates based on link clicks and credential submissions.
- Identify vulnerabilities in employee security behavior.
- Provide recommendations to enhance security awareness and reduce phishing risks.

3. Tools and Environment

- **Operating System:** Kali Linux
- **Tool Used:** Social Engineering Toolkit (SET)
- **Phishing Technique:** Credential Harvester Attack (Web Attack Method)
- **Target Websites:** Cloned login pages
- **Local Server IP:** Local Ip **(**Apache server hosting phishing pages)

4. Methodology

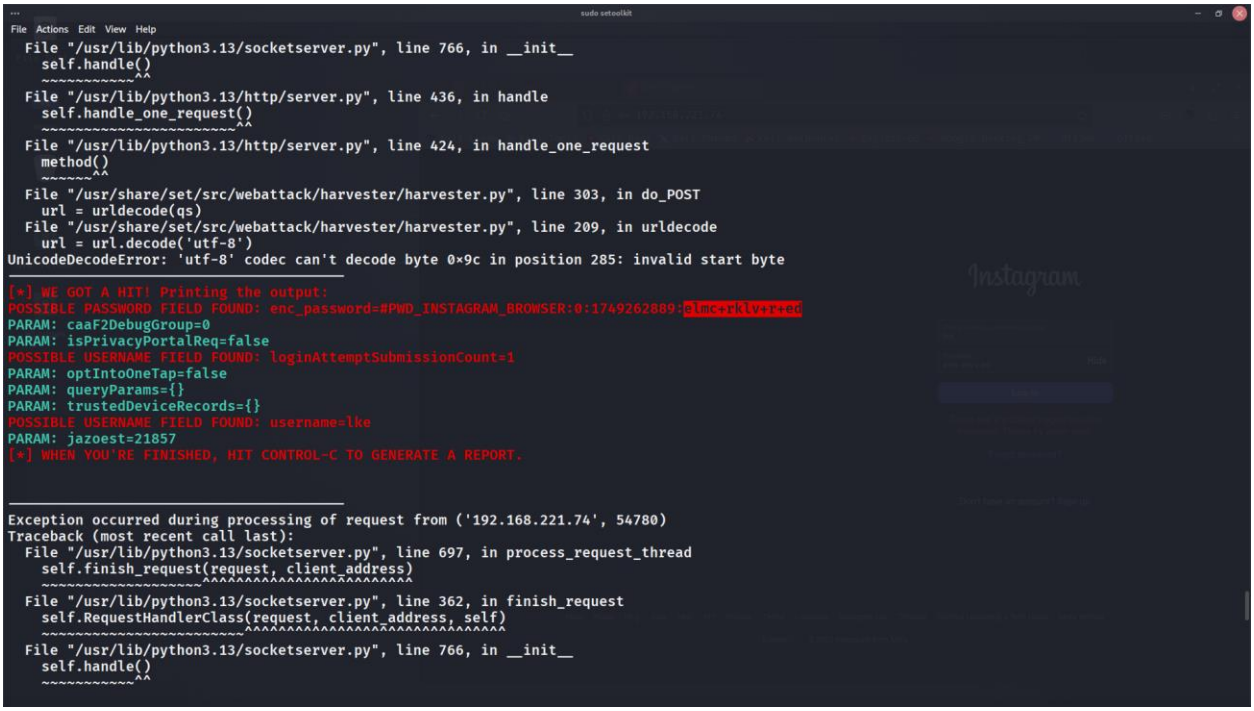
- Set up a local Apache server on Kali Linux to host cloned phishing pages.

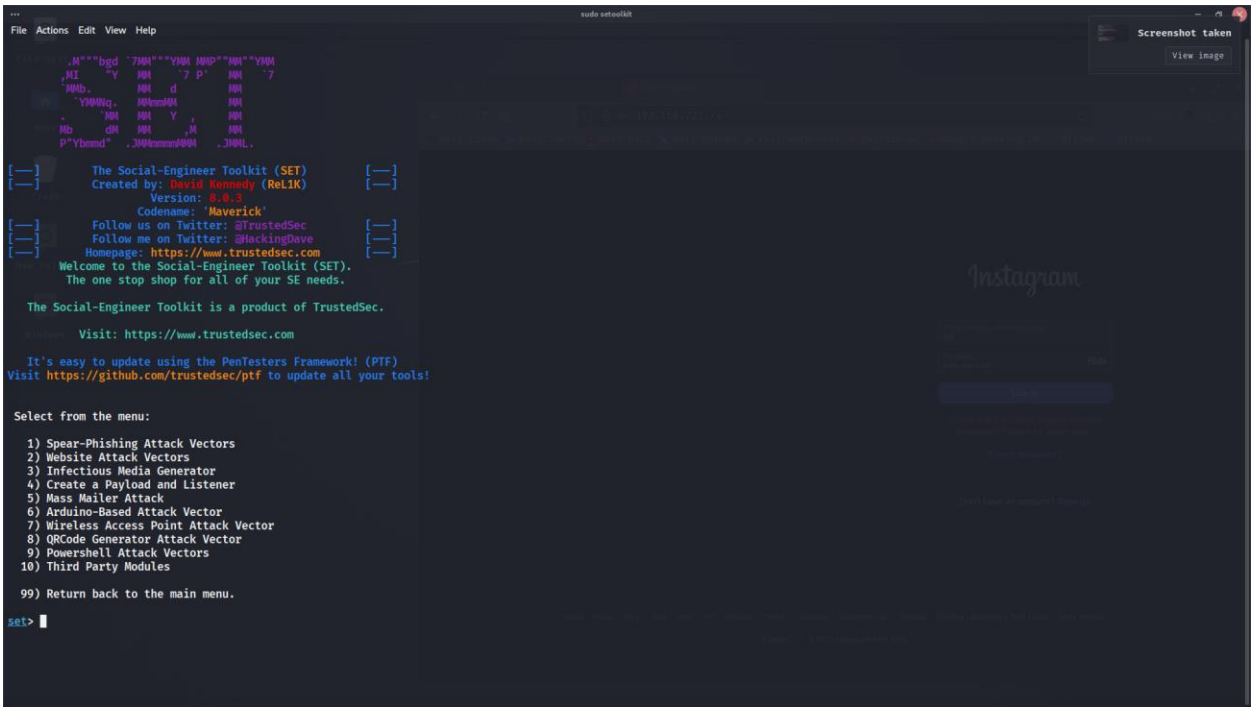
- Selected the Credential Harvester Attack method in SET.
- Entered the server IP to capture POST data from victims.
- Monitored incoming credential submissions through SET's interface.
- Logged and analyzed the data collected.

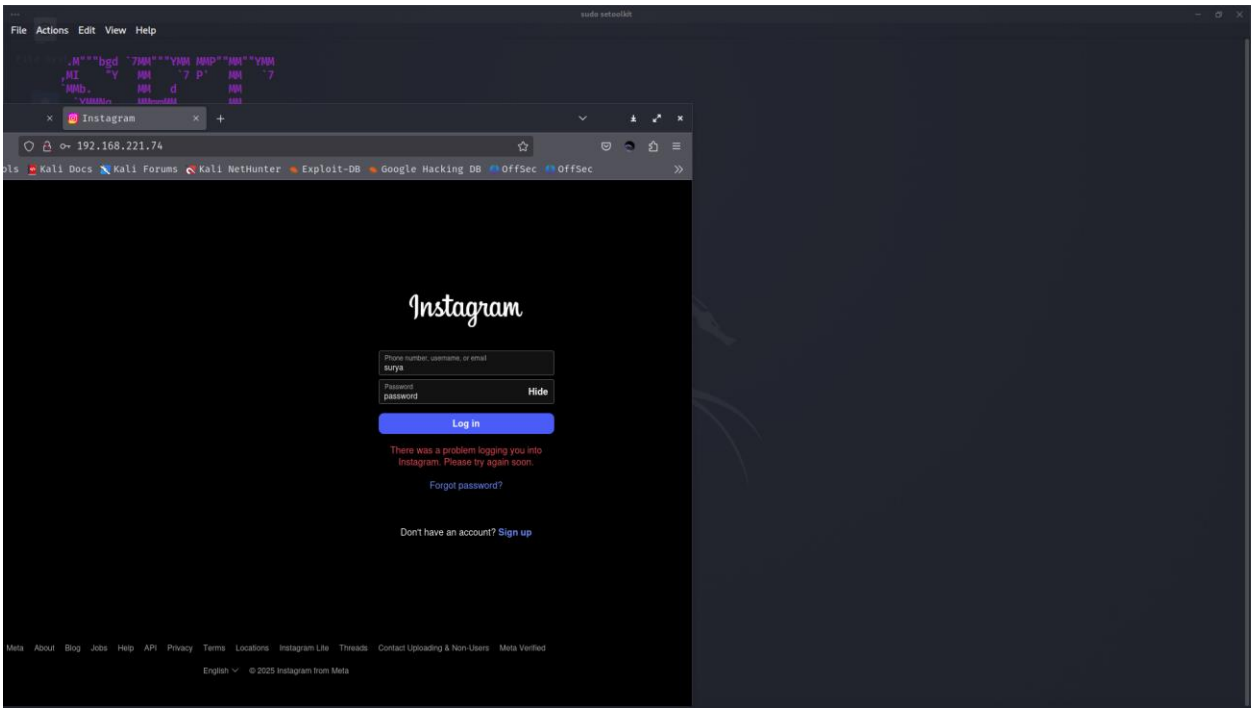
5. Results

Captured credentials included usernames and passwords entered into the cloned sites. A sanitized sample is shown below:

Username: joe
Password: password123







6. Challenges

- Cloning complex websites like Instagram or Microsoft was hindered by dynamic content and anti-bot protections.

- Port conflicts with Apache required temporarily stopping the service to allow SET to bind to port 80.
- Varied employee awareness impacted the campaign, with some users identifying and avoiding phishing links.

7. Recommendations

- Implement regular security awareness training focusing on phishing detection.
- Enforce Multi-Factor Authentication (MFA) across critical systems.
- Educate employees to verify URLs and email sources before entering credentials.
- Conduct periodic phishing simulations to reinforce vigilance.
- Enhance email filtering and endpoint protection to reduce phishing exposure.

8. Conclusion

The phishing simulation successfully identified gaps in employee security awareness, with a significant portion of users clicking on links and submitting credentials. Continuous training and technical safeguards are essential to mitigate phishing risks and strengthen organizational cybersecurity posture.

Report prepared by :

Suryaganthan R

CYBERSECURITY STUDENT

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