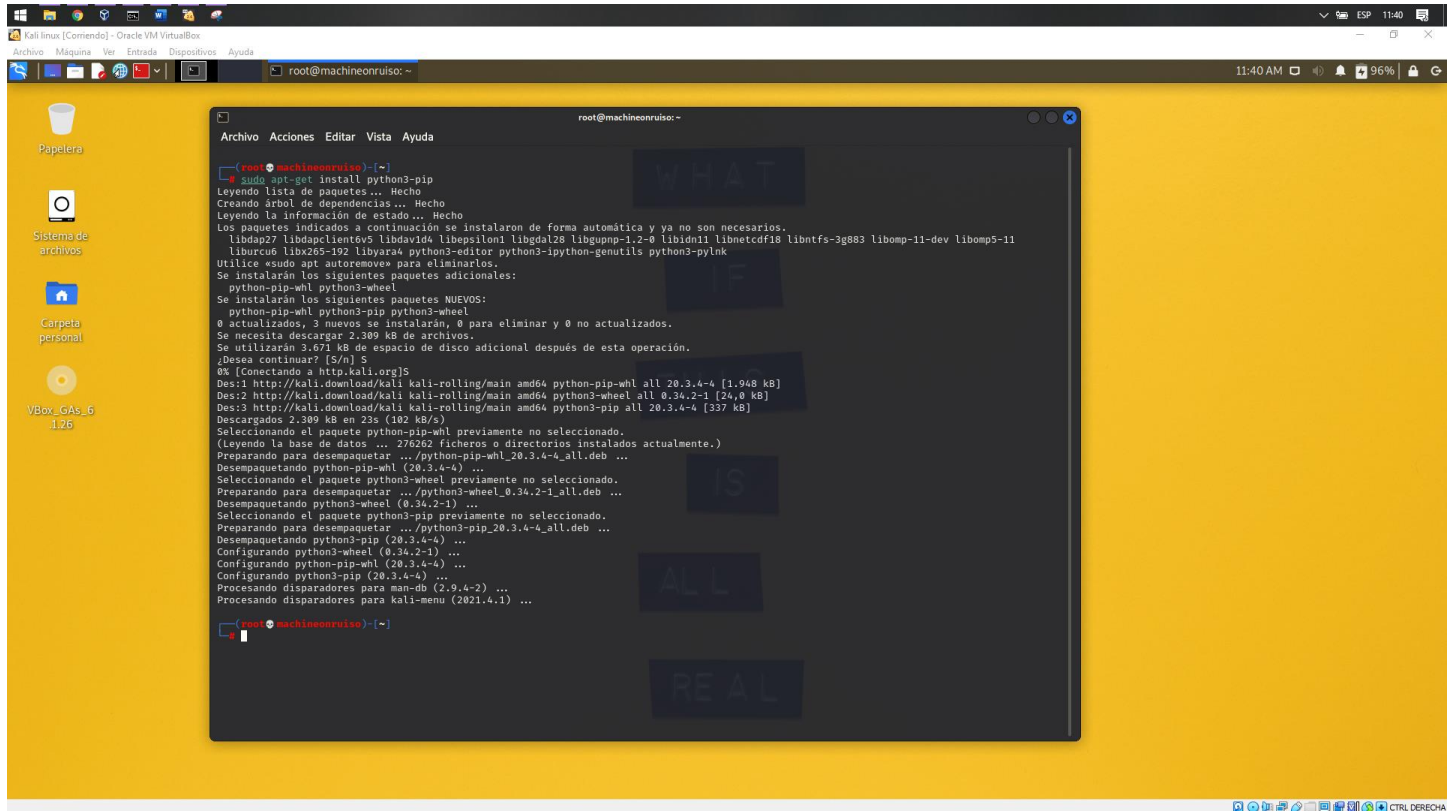


TALLER 1: Hacking Ético

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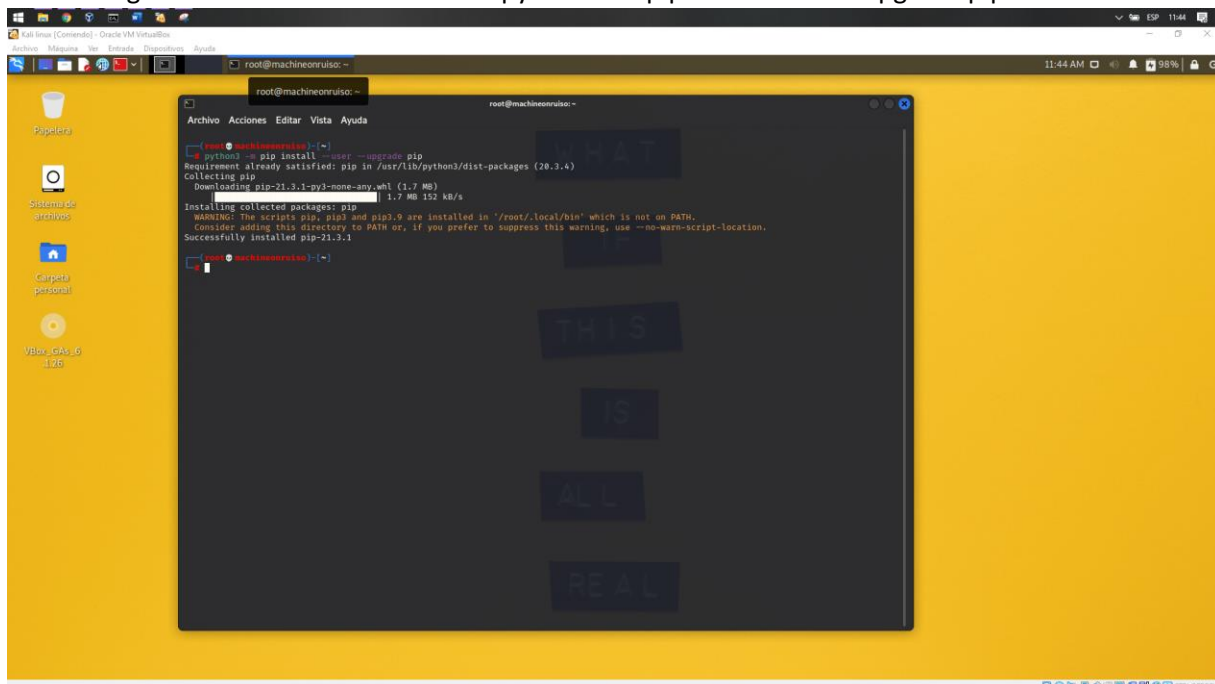
Para esta práctica utilizaremos la herramienta de KickThemOut, la cual esta desarrollada en Python y podemos ejecutar dentro de la consola con usuario root. Para ello primero debemos instalar Python en nuestro sistema y luego la herramienta.

Para instalar Python utilizaremos como primer comando: “sudo apt-get install python3-pip”.



```
root@machineonruiso: ~  
root@machineonruiso:~# sudo apt-get install python3-pip  
Leyendo lista de paquetes ... Hecho  
Creando árbol de dependencias ... Hecho  
Leyendo la información de estado ... Hecho  
Los paquetes indicados a continuación se instalarán de forma automática y ya no son necesarios.  
libdap27 libdapclientv5 libdavi4 libepson1 libgd128 libgomp-1.2-0 libidn11 libnetcdf18 libnfs-3g83 libomp-11-dev libomp5-11  
liborcus libx265-192 libyara4 python3-editor python3-ipynbutils python3-pylnk  
Utilice «sudo apt autoremove» para eliminarlos.  
Se instalarán los siguientes paquetes adicionales:  
python-pip-whl python3-wheel  
Se instalarán los siguientes paquetes NUEVOS:  
python-pip-whl python3-pip python3-wheel  
0 actualizados, 3 nuevos se instalarán, 0 para eliminar y 0 no actualizados.  
Se necesita descargar 2.309 kB de archivos.  
Se utilizarán 3.671 kB de espacio de disco adicional después de esta operación.  
¿Desea continuar? [S/n] S  
0% [Conectando a http://kali.org]  
Des1: http://kali.download/kali kali-rolling/main amd64 python-pip-whl all 20.3.4-4 [1.948 kB]  
Des2: http://kali.download/kali kali-rolling/main amd64 python3-wheel all 0.34.2-1 [24,0 kB]  
Des3: http://kali.download/kali kali-rolling/main amd64 python3-pip all 20.3.4-4 [337 kB]  
Descargados 2.309 kB en 23s (102 kB/s)  
Seleccionando el paquete python-pip-whl previamente no seleccionado.  
(Leyendo la base de datos ... 276262 ficheros o directorios instalados actualmente.)  
Preparando para desempaquetar .../python-pip-whl_20.3.4-4_all.deb ...  
Desempaquetando python-pip-whl (20.3.4-4) ...  
Seleccionando el paquete python3-wheel previamente no seleccionado.  
Preparando para desempaquetar .../python3-wheel_0.34.2-1_all.deb ...  
Desempaquetando python3-wheel (0.34.2-1) ...  
Seleccionando el paquete python3-pip previamente no seleccionado.  
Preparando para desempaquetar .../python3-pip_20.3.4-4_all.deb ...  
Desempaquetando python3-pip (20.3.4-4) ...  
Configurando python3-wheel (0.34.2-1) ...  
Configurando python-pip-whl (20.3.4-4) ...  
Configurando python3-pip (20.3.4-4) ...  
Procesando disparadores para man-db (2.9.4-2) ...  
Procesando disparadores para kali-menu (2021.4.1) ...  
root@machineonruiso:~#
```

Y como segundo comando utilizaremos: “python3 -m pip install --user --upgrade pip”



```
root@machineonruiso: ~  
root@machineonruiso:~# python3 -m pip install --user --upgrade pip  
Requirement already satisfied: pip in /usr/lib/python3/dist-packages (20.3.4)  
Collecting pip  
  Downloading pip-21.3.1-py3-none-any.whl (1.7 MB)  
    1.7 MB 152 KB/s  
Installing collected packages: pip  
WARNING: The scripts pip, pip3 and pip3.9 are installed in '/root/.local/bin' which is not on PATH.  
Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.  
Successfully installed pip-21.3.1  
root@machineonruiso:~#
```

Ahora instalemos la herramienta con los siguientes comandos:

sudo apt-get update && sudo apt-get install nmap

```
(root@machineonruiso)-[~]
# sudo apt-get update && sudo apt-get install nmap
Des:1 http://kali.download/kali kali-rolling InRelease [30,6 kB]
Des:2 http://kali.download/kali kali-rolling/main Sources [14,3 MB]
Des:3 http://kali.download/kali kali-rolling/main amd64 Packages [18,0 MB]
Des:4 http://kali.download/kali kali-rolling/main amd64 Contents (deb) [40,3 MB]
Descargados 72,5 MB en 34s (2.126 kB/s)
Leyendo lista de paquetes ... Hecho
Leyendo lista de paquetes ... Hecho
Creando árbol de dependencias ... Hecho
Leyendo la información de estado ... Hecho
nmap ya está en su versión más reciente (7.91+dfsg1-1kali1).
fijado nmap como instalado manualmente.
Los paquetes indicados a continuación se instalaron de forma automática y ya no son necesarios.
 libdap27 libdapclient6v5 libdav1d4 libepsilon1 libgdal28 libgupnp-1.2-0 libidn11 libnetcdf18 libntfs-3g883 libomp-11-dev libomp5-11
 liborc6 libx265-192 libyara4 python3-editor python3-ipython-genutils python3-pylnk
Utilice «sudo apt autoremove» para eliminarlos.
0 actualizados, 0 nuevos se instalarán, 0 para eliminar y 3 no actualizados.

(root@machineonruiso)-[~]
#
```

~>>> git clone <https://github.com/k4m4/kickthemout.git>

```
(root@machineonruiso)-[~]
# git clone https://github.com/k4m4/kickthemout.git
Clonando en 'kickthemout'...
remote: Enumerating objects: 610, done.
remote: Total 610 (delta 0), reused 0 (delta 0), pack-reused 610
Recibiendo objetos: 100% (610/610), 151.14 KiB | 51.00 KiB/s, listo.
Resolviendo deltas: 100% (353/353), listo.

(root@machineonruiso)-[~]
#
```

~>>> cd kickthemout/

```
(root@machineonruiso)-[~]
# cd kickthemout

(root@machineonruiso)-[~/kickthemout]
#
```

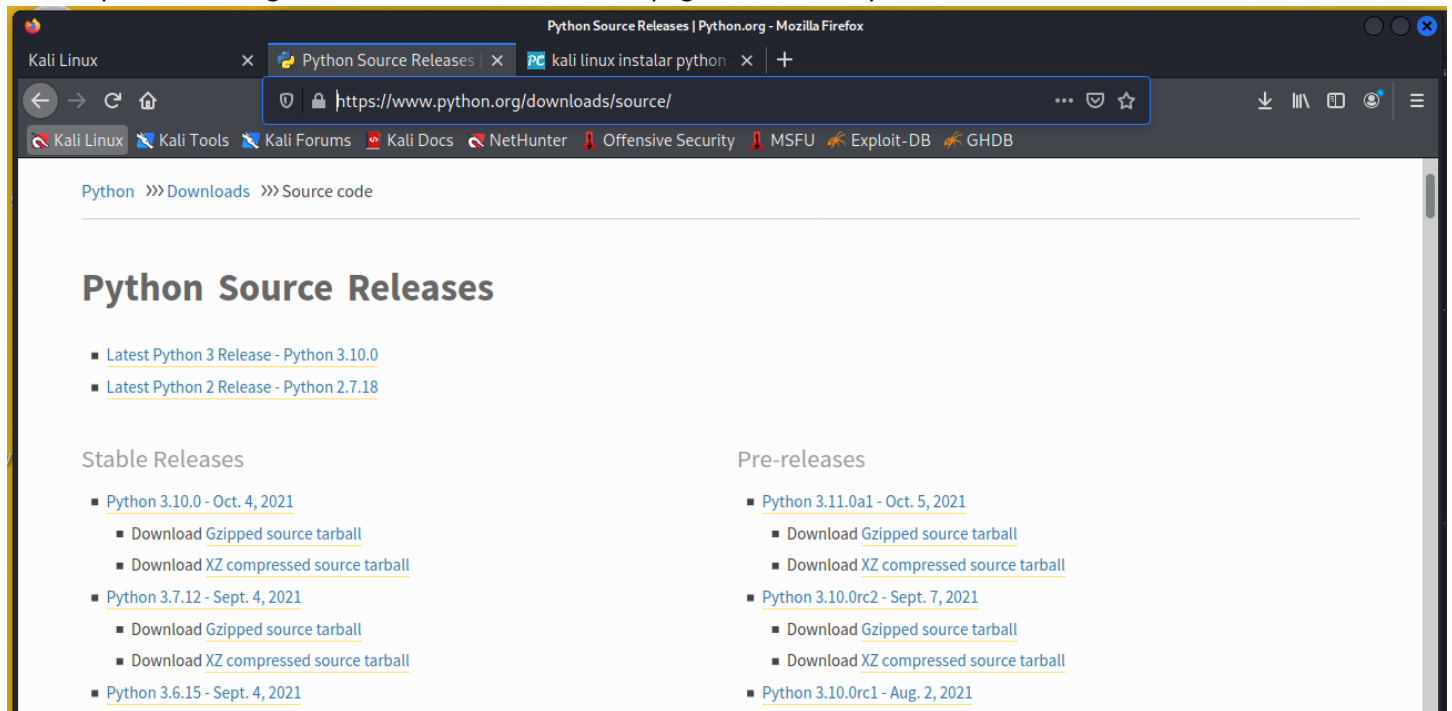
~/kickthemout >>> sudo -H pip3 install -r requirements.txt

```
(root@machineonruiso)-[~/kickthemout]
# sudo -H pip3 install -r requirements.txt
Requirement already satisfied: scapy in /usr/lib/python3/dist-packages (from -r requirements.txt (line 1)) (2.4.4)
Collecting python-nmap
  Downloading python-nmap-0.6.4.tar.gz (43 kB)
    | 43 kB 270 kB/s
  Preparing metadata (setup.py) ... done
Requirement already satisfied: netifaces in /usr/lib/python3/dist-packages (from -r requirements.txt (line 3)) (0.10.9)
Building wheels for collected packages: python-nmap
  Building wheel for python-nmap (setup.py) ... error
  ERROR: Command errored out with exit status 1:
   command: /usr/bin/python3 -u -c 'import io, os, sys, setuptools, tokenize; sys.argv[0] = '''/tmp/pip-install-d8ztj996/python-nmap_5a84b4a3c47b4d08b0c400a0f7413a0d/setup.py'''; __file__ = '''/tmp/pip-install-d8ztj996/python-nmap_5a84b4a3c47b4d08b0c400a0f7413a0d/setup.py'''; f = getattr(tokenize, '''open''', open)(__file__) if os.path.exists(__file__) else io.StringIO(''''from setuptools import setup; setup()'''); code = f.read().replace(''''\\r\\n''', ''''\\n'''); f.close(); exec(compile(code, __file__, ''''exec'''))''' bdist_wheel -d /tmp/pip-wheel-uezahaz3
   cwd: /tmp/pip-install-d8ztj996/python-nmap_5a84b4a3c47b4d08b0c400a0f7413a0d/
  Complete output (2 lines):
  running bdist_wheel
  error: invalid truth value '3'

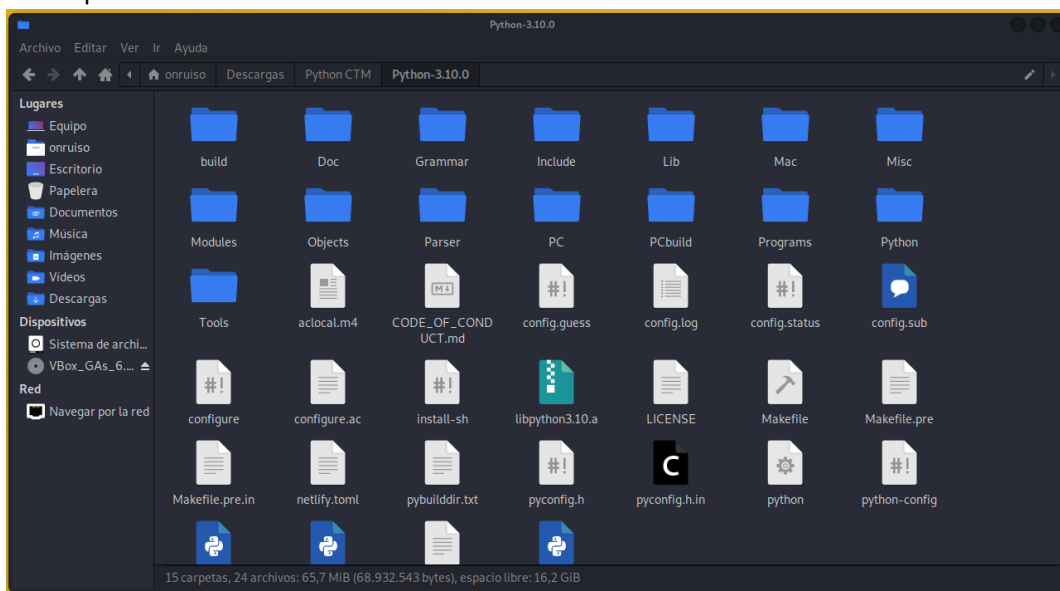
  ERROR: Failed building wheel for python-nmap
  Running setup.py clean for python-nmap
Failed to build python-nmap
Installing collected packages: python-nmap
  Running setup.py install for python-nmap ... done
  DEPRECATION: python-nmap was installed using the legacy 'setup.py install' method, because a wheel could not be built for it. A possible replacement is to fix the wheel build issue reported above. Discussion can be found at https://github.com/pypa/pip/issues/8368
Successfully installed python-nmap-0.6.4
WARNING: Running pip as the 'root' user can result in broken permissions and conflicting behaviour with the system package manager. It is recommended to use a virtual environment instead: https://pip.pypa.io/warnings/venv

(root@machineonruiso)-[~/kickthemout]
#
```

Reintentemos instalar manualmente python para ver si se soluciona el problema que nos ha ocurrido con el archivo “setup.py”. Este paso es extra pero no estrictamente necesario, pues como podemos ver en el mensaje de Warning, la herramienta si se instaló. Bajaremos la última versión ESTABLE de Python para nuestra distribución o en su defecto la versión para Linux en general, esta se encuentra en la página oficial de Python.



Al bajar nuestro archivo comprimido de formato “tgz”, debemos descomprimirlo y acceder a la ruta de la carpeta, esta la podemos ver por el explorador de archivos de nuestro Kali Linux.



Para acceder a nuestra carpeta por la terminal podemos hacer un juego entre el comando “cd” y la descripción de carpetas que genera el comando “dir”.

```

(root@machineonruiso)~[~]
# cd ..

(root@machineonruiso)~[/]
# dir
bin dev home initrd.img.old lib32 libx32 media opt root sbin sys usr vmlinuz
boot etc initrd.img lib lib64 lost+found mnt proc run srv tmp var vmlinuz.old

(root@machineonruiso)~[/]
# cd home

(root@machineonruiso)~[/home]
# dir
onruiso

(root@machineonruiso)~[/home]
# cd onruiso

(root@machineonruiso)~[/home/onruiso]
# dir
Descargas Documentos Escritorio Imágenes Música Plantillas Público Videos

(root@machineonruiso)~[/home/onruiso]
# cd Descargas

(root@machineonruiso)~[/home/onruiso/Descargas]
# dir
pexels-aleksandar-pasaric-3280211.jpg pexels-cottonbro-8720593.jpg Python\ CTM Python-3.10.0.tgz

(root@machineonruiso)~[/home/onruiso/Descargas]
# cd Python\ CTM

(root@machineonruiso)~[/home/onruiso/Descargas/Python CTM]
# dir
Python-3.10.0

(root@machineonruiso)~[/home/onruiso/Descargas/Python CTM]
# cd Python-3.10.0

(root@machineonruiso)~[/home/onruiso/Descargas/Python CTM/Python-3.10.0]
# dir
aclocal.m4 config.sub Doc install-sh Mac Modules Parser Programs README.rst
CODE_OF_CONDUCT.md configure Grammar Lib Makefile.pre.in netlify.toml PC pyconfig.h.in setup.py
config.guess configure.ac Include LICENSE Misc Objects PCbuild Python Tools

```

Ahora que estamos dentro del directorio, podemos acceder a el archivo de configuración de Python.

```

(root@machineonruiso)~[/home/onruiso/Descargas/Python CTM/Python-3.10.0]
# ./configure --prefix=/usr/local/python-3.10.0
checking build system type... x86_64-pc-linux-gnu
checking host system type... x86_64-pc-linux-gnu
checking for python3.10... no
checking for python3... python3
checking for --enable-universalsdk... no
checking for --with-universal-archs... no
checking MACHDEP... "linux"
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
checking for suffix of executables...
checking whether we are cross compiling... no
...
config.status: creating Modules/ld_so_aix
config.status: creating pyconfig.h
creating Modules/Setup.local
creating Makefile

If you want a release build with all stable optimizations active (PGO, etc),
please run ./configure --enable-optimizations

(root@machineonruiso)~[/home/onruiso/Descargas/Python CTM/Python-3.10.0]
#

```

Ahora procedemos a compilar.


```
(root@machineonruiso)-[/home/onruiso/Descargas/Python CTM/Python-3.10.0]
# make
gcc -pthread -c -Wno-unused-result -Wsign-compare -DNDEBUG -g -fwrapv -O3 -Wall -std=c99 -Wextra -Wno-unused-result -Wno-unused-parameter -Wno-missing-field-initializers -Werror=implicit-function-declaration -fvisibility=hidden -I./Include/internal -I. -I./Include -DPy_BUILD_CORE -o Programs/python.o ./Programs/python.c
gcc -pthread -c -Wno-unused-result -Wsign-compare -DNDEBUG -g -fwrapv -O3 -Wall -std=c99 -Wextra -Wno-unused-result -Wno-unused-parameter -Wno-missing-field-initializers -Werror=implicit-function-declaration -fvisibility=hidden -I./Include/internal -I. -I./Include -DPy_BUILD_CORE -o Parser/token.o Parser/token.c
gcc -pthread -c -Wno-unused-result -Wsign-compare -DNDEBUG -g -fwrapv -O3 -Wall -std=c99 -Wextra -Wno-unused-result -Wno-unused-parameter -Wno-missing-field-initializers -Werror=implicit-function-declaration -fvisibility=hidden -I./Include/internal -I. -I./Include -DPy_BUILD_CORE -o Parser/pegen.o Parser/pegen.c
gcc -pthread -c -Wno-unused-result -Wsign-compare -DNDEBUG -g -fwrapv -O3 -Wall -std=c99 -Wextra -Wno-unused-result -Wno-unused-parameter -Wno-missing-field-initializers -Werror=implicit-function-declaration -fvisibility=hidden -I./Include/internal -I. -I./Include -DPy_BUILD_CORE -o Programs/_testembed.o ./Programs/_testembed.c
gcc -pthread -Xlinker -export-dynamic -o Programs/_testembed Programs/_testembed.o libpython3.10.a -lcrypt -lpthread -ldl -lutil -lm -lm
sed -e "s,@EXENAME@,/usr/local/python-3.10.0/bin/python3.10," < ./Misc/python-config.in >python-config.py
LC_ALL=C sed -e 's,${\[[A-Za-z0-9_]*\)}\,${\{1\},g' < Misc/python-config.sh >python-config

...

Renaming build/scripts-3.10/pydoc3 to build/scripts-3.10/pydoc3.10
renaming build/scripts-3.10/idle3 to build/scripts-3.10/idle3.10
renaming build/scripts-3.10/2to3 to build/scripts-3.10/2to3-3.10
/usr/bin/install -c -m 644 ./Tools/gdb/libpython.py python-gdb.py
gcc -pthread -c -Wno-unused-result -Wsign-compare -DNDEBUG -g -fwrapv -O3 -Wall -std=c99 -Wextra -Wno-unused-result -Wno-unused-parameter -Wno-missing-field-initializers -Werror=implicit-function-declaration -fvisibility=hidden -I./Include/internal -I. -I./Include -DPy_BUILD_CORE -o Programs/_testembed.o ./Programs/_testembed.c
gcc -pthread -Xlinker -export-dynamic -o Programs/_testembed Programs/_testembed.o libpython3.10.a -lcrypt -lpthread -ldl -lutil -lm -lm
sed -e "s,@EXENAME@,/usr/local/python-3.10.0/bin/python3.10," < ./Misc/python-config.in >python-config.py
LC_ALL=C sed -e 's,${\[[A-Za-z0-9_]*\)}\,${\{1\},g' < Misc/python-config.sh >python-config

(root@machineonruiso)-[/home/onruiso/Descargas/Python CTM/Python-3.10.0]
#
```

Ahora instalemos la compilación.

```
(root@machineonruiso)-[/home/onruiso/Descargas/Python CTM/Python-3.10.0]
# make install
Creating directory /usr/local/python-3.10.0/bin
Creating directory /usr/local/python-3.10.0/lib
if test "no-framework" = "no-framework" ; then \
    /usr/bin/install -c python /usr/local/python-3.10.0/bin/python3.10; \
else \
    /usr/bin/install -c -s Mac/pythonw /usr/local/python-3.10.0/bin/python3.10; \
fi
if test "3.10" != "3.10"; then \
    if test -f /usr/local/python-3.10.0/bin/python3.10 -o -h /usr/local/python-3.10.0/bin/python3.10; \
    then rm -f /usr/local/python-3.10.0/bin/python3.10; \
    fi; \
    (cd /usr/local/python-3.10.0/bin; ln python3.10 python3.10); \
fi
if test "x" != "x" ; then \
    rm -f /usr/local/python-3.10.0/binpython3.10-32; \
    lipo \
        -output /usr/local/python-3.10.0/bin/python3.10-32 \
        /usr/local/python-3.10.0/bin/python3.10; \
fi

...

WARNING: Value for scheme.headers does not match. Please report this to <https://github.com/pypa/pip/issues/10151>
distutils: /usr/local/python-3.10.0/include/python3.10/UNKNOWN
sysconfig: /home/onruiso/Descargas/Python CTM/Python-3.10.0/Include/UNKNOWN
WARNING: Additional context:
user = False
home = None
root = '/'
prefix = None
Looking in links: /tmp/tmpm92gk_cv
Processing /tmp/tmpm92gk_cv/setuptools-57.4.0-py3-none-any.whl
Processing /tmp/tmpm92gk_cv/pip-21.2.3-py3-none-any.whl
Installing collected packages: setuptools, pip
WARNING: Value for scheme.headers does not match. Please report this to <https://github.com/pypa/pip/issues/10151>
distutils: /usr/local/python-3.10.0/include/python3.10/UNKNOWN
sysconfig: /home/onruiso/Descargas/Python CTM/Python-3.10.0/Include/setuptools
WARNING: Value for scheme.headers does not match. Please report this to <https://github.com/pypa/pip/issues/10151>
distutils: /usr/local/python-3.10.0/include/python3.10/pip
sysconfig: /home/onruiso/Descargas/Python CTM/Python-3.10.0/Include/pip
WARNING: The scripts pip3 and pip3.10 are installed in '/usr/local/python-3.10.0/bin' which is not on PATH.
Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.
Successfully installed pip-21.2.3 setuptools-57.4.0
WARNING: Running pip as the 'root' user can result in broken permissions and conflicting behaviour with the system package manager. It is recommended to use a virtual environment instead: https://pip.pypa.io/warnings/venv

(root@machineonruiso)-[/home/onruiso/Descargas/Python CTM/Python-3.10.0]
#
```

Con Python nuevamente instalado, podemos volver a probar la instalación de la herramienta.

```
(root@machineonruiso)-[~]
# cd kickthemout

(root@machineonruiso)-[~/kickthemout]
# sudo -H pip3 install -r requirements.txt
Requirement already satisfied: scrapy in /usr/lib/python3/dist-packages (from -r requirements.txt (line 1)) (2.4.4)
Requirement already satisfied: python-nmap in /usr/lib/python3/dist-packages (from -r requirements.txt (line 2)) (0.6.4)
Requirement already satisfied: netifaces in /usr/lib/python3/dist-packages (from -r requirements.txt (line 3)) (0.10.9)
WARNING: Running pip as the 'root' user can result in broken permissions and conflicting behaviour with the system package manager. It is recommended to use a virtual environment instead: https://pip.pypa.io/warnings/venv

(root@machineonruiso)-[~/kickthemout]
#
```

Una vez instalada la herramienta de Kickthemout exitosamente, podemos ponerla en ejecución con el comando “sudo python3 kickthemout.py”, pero antes de ejecutarla debemos tener en cuenta la dirección IP y MAC de nuestro equipo, siendo esta nuestra maquina virtual Kali Linux, el comando utilizado es “ifconfig”.

```
(root@machineonruiso)-[~]
# ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.21.103.140 netmask 255.255.255.0 broadcast 172.21.103.255
    inet6 fe80::a00:27ff:fe07:df8 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:07:0d:f8 txqueuelen 1000 (Ethernet)
    RX packets 10514 bytes 1030471 (1006.3 KiB)
    RX errors 0 dropped 993 overruns 0 frame 0
    TX packets 38 bytes 4186 (4.0 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 8 bytes 400 (400.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 8 bytes 400 (400.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

(root@machineonruiso)-[~]
#
```

Ejecutando la herramienta tendríamos lo siguiente en la terminal:

```
(root@machineonruiso)-[~/kickthemout]
# sudo python3 kickthemout.py

ERROR: Gateway IP could not be obtained. Please enter IP manually.

kickthemout> Enter Gateway IP (e.g. 192.168.1.1):
```

Como podemos observar en nuestra consola, nos esta pidiendo un Gateway IP, esto hace referencia a nuestra dirección MAC, debemos escribirla a continuación.

```
(root@machineonruiso)~[/kickthemout]
# sudo python3 kickthemout.py

ERROR: Gateway IP could not be obtained. Please enter IP manually.

kickthemout> Enter Gateway IP (e.g. 192.168.1.1): 172.21.103.140
Scanning your Network, hang on...
ERROR: Default Gateway MAC Address could not be obtained. Please enter MAC manually.

kickthemout> Enter your gateway's MAC Address (MM:MM:MM:SS:SS:SS): 172.21.103.140

      KICK THEM OUT

      Kick Devices Off Your LAN (KickThemOut)
      Made With <3 by: Nikolaos Kamarinakis (k4m4) & David Schütz (xdavidhu)
                        Version: 2.0

Using interface 'eth0' with MAC address '08:00:27:07:0d:f8'.
Gateway IP: '172.21.103.140' → 147 hosts are up.

Choose an option from the menu:

    [1] Kick ONE Off
    [2] Kick SOME Off
    [3] Kick ALL Off

    [E] Exit KickThemOut

kickthemout> 
```

Aquí lo que queremos hacer, es desconectar una IP en específico de la red, para ello seleccionamos la opción DOS denominada KICK SOME OFF, la cual desplegará una lista de los equipos que están conectados a nuestra red. Para desconectar un dispositivo bastaría solo con escribir el número que le corresponde en la lista que tenemos.

```
kickSOMEOFF selected ...

Online IPs:
[0] 172.21.103.1      70:EA:1A:28:D9:CD      Cisco Systems, Inc (N/A)
[1] 172.21.103.16    0C:2F:80:E3:40:88      Samsung Electronics Co.,L (N/A)
[2] 172.21.103.24    00:02:D1:87:12:84      Vivotek, Inc. (N/A)
[3] 172.21.103.30    20:47:47:FF:D0:72      Dell Inc. (N/A)
[4] 172.21.103.32    F4:8E:38:DD:05:D0      Dell Inc. (N/A)
[5] 172.21.103.33    F4:8E:38:DE:0B:31      Dell Inc. (N/A)
[6] 172.21.103.34    F4:8E:38:DD:06:29      Dell Inc. (N/A)
[7] 172.21.103.41    00:17:C8:7D:1D:D6      KYOCERA Document Solution (N/A)

...

[137] 172.21.103.234 C8:1F:66:B6:D3:A2      Dell Inc. (N/A)
[138] 172.21.103.235 18:1D:EA:23:77:74      Intel Corporate (N/A)
[139] 172.21.103.236 B4:00:16:87:6F:21      INGENICO TERMINALS SAS (N/A)
[140] 172.21.103.238 C8:1F:66:B6:D7:51      Dell Inc. (N/A)
[141] 172.21.103.240 C8:1F:66:B6:CB:43      Dell Inc. (N/A)
[142] 172.21.103.242 48:F1:7F:8A:06:CE      Intel Corporate (N/A)
[143] 172.21.103.245 48:F1:7F:37:2D:0F      Intel Corporate (N/A)
[144] 172.21.103.248 18:1D:EA:22:0B:C8      Intel Corporate (N/A)
[145] 172.21.103.250 18:1D:EA:22:1B:54      Intel Corporate (N/A)
[146] 172.21.103.251 18:1D:EA:22:0A:6F      Intel Corporate (N/A)

Choose devices to target (comma-separated): 
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