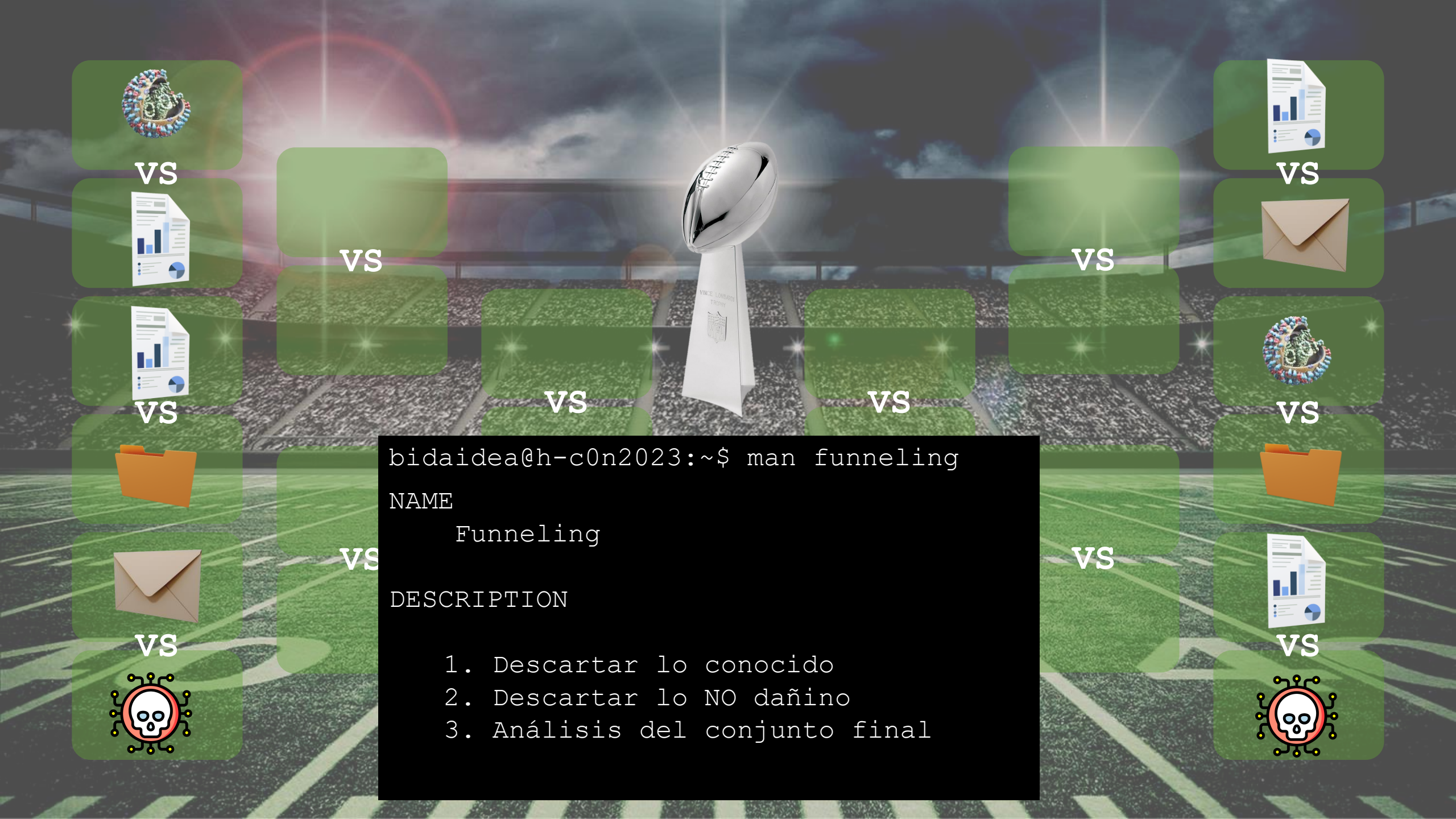
bidaidea
CYBERSECURITY &
INTELLIGENCE

```
bidaidea@h-c0n2023:~$ sudo adduser rafa --ingroup bidaidea
Adding user `rafa`
Adding new user `rafa` (1001) with group `bidaidea`
Enter the new value, or press ENTER for the default
       Full Name []: Rafael Tenorio
       Rol []: DFIR & CTI Service Manager @ Bidaidea
       Email []: rafael.tenorio@bidaidea.com
       Other []: GCTI/GCFA/GCFE/GASF/CISM en más de 10 años en estas batallas,
involucrado en incidentes internacionales, analizando APTs, liderando equipos de
ciberinteligencia y construyendo CSIRT/CERT en operaciones, todo con familia y
aficiones.

bidaidea@h-c0n2023:~$ sudo adduser luise --ingroup bidaidea
Adding user `luise`
Adding new user `luise` (1002) with group `bidaidea`
Enter the new value, or press ENTER for the default
       Full Name []: Luis Enrique Sainz
       Rol []: Cybersecurity Principal analyst @ Bidaidea
       Email []: luis.sainz@bidaidea.com
       Other []: cerca 20 años de experiencia en el desarrollo y de admin, siendo
reservista voluntario en el MCCE y radioaficionado.

bidaidea@h-c0n2023:~$ whoami
rafa/luise
```

Camino a Super Bowl

Los playoff del *malware*

¿Está infectado?




```
bidaidea@h-c0n2023:~$ man funneling

NAME
     Funneling

DESCRIPTION

    1. Descartar lo conocido
    2. Descartar lo NO dañino
    3. Análisis del conjunto final
```

Wild Card

VS

Divisional

VS

Conference

VS

VS

```
bidaidea@h-c0n2023:~$ sudo ewfacquire -u -c “fast” -S “10GiB” -C “Playoff” -D “Dirty” -e “HeadCoach” -l /data/dirty/ewfacquire.log -t “/data/dirty/dirty” /dev/nvme0n1p3
```


```
caine@caine: ~
File  Edit  View  Search  Terminal  Help
/dev/nvme0n1p2    206848    239615     32768   16M Microsoft reserved
/dev/nvme0n1p3    239616 166729555 166489940 79,4G Microsoft basic data
/dev/nvme0n1p4 166729728 167768063   1038336  507M Windows recovery environment


Disk /dev/sda: 200 GiB, 214748364800 bytes, 419430400 sectors
Disk model: VMware Virtual S
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: gpt
Disk identifier: FBB2473F-C013-334A-8220-028499F90D5D

Device     Start       End   Sectors  Size Type
/dev/sda1   2048 419430366 419428319  200G Linux filesystem
caine@caine:~$ sudo mount /dev/sda1 /mnt/
caine@caine:~$ sudo umount /mnt
caine@caine:~$ sudo mount /dev/sda1 /media/sda
ntfs-3g-mount: failed to access mountpoint /media/sda: No such file or directory
caine@caine:~$ sudo mount /dev/sda1 /mnt/
caine@caine:~$ ls /mnt/
clean  dirty
caine@caine:~$ sudo ewfacquire -u -c "fast" -S "10GiB" -C "Playoff" -D "Dirty" -
e "HeadCoach" -l /mnt/dirty/log.txt -t "/mnt/dirty/dirty" /dev/nvme0n1p3
```

```
bidaidea@h-c0n2023:~$ sudo ewfmount /data/dirty/dirty.E01 /mnt/ewf_dirty
bidaidea@h-c0n2023:~$ sudo mount -t ntfs3 -o ro,loop /mnt/ewf_dirty/ewf1
/mnt/windows02
bidaidea@h-c0n2023:~$ macrobber-ng -5 /mnt/windows02 > /data/dirty/dirty.body
```

```
jedi@eadu:/media/jedi/76FF193F32F8C57A/dirty$ macrobber-ng -5 /mnt/windows02 > dirty.body
jedi@eadu:/media/jedi/76FF193F32F8C57A/dirty$ ls -lh
total 22G
-rwxrwxrwx 1 jedi jedi 116M Feb  8 15:35 dirty.body
-rwxrwxrwx 1 jedi jedi  10G Feb  8 10:36 dirty.E01
-rwxrwxrwx 1 jedi jedi  10G Feb  8 10:46 dirty.E02
-rwxrwxrwx 1 jedi jedi 1,2G Feb  8 10:54 dirty.E03
-rwxrwxrwx 1 jedi jedi   65 Feb  8 10:54 log.txt
jedi@eadu:/media/jedi/76FF193F32F8C57A/dirty$ head -n 3  dirty.body
|/mnt/windows02/Documents and Settings|93524|lrwxrwxrwx -> /mnt/windows02/Users|0|0|20|1621348116.247863700|1621348116.247863700|
1621348116.247863700|0.0
0|/mnt/windows02/$Recycle.Bin|64|drwxrwxrwx|0|0|0|1675795731.536805400|1622619892.233908900|1622619892.233908900|0.0
0|/mnt/windows02/$Recycle.Bin/S-1-5-18|100768|drwxrwxrwx|0|0|0|1622619892.233908900|1622619892.233908900|1622619892.233908900|0.0
```

Body file!!!!

MD5/Path/inodo/filetype+Permissions+linkfile/uid/gid/size/AMCB Time

Wild Card

Divisional

Conference

VS

VS

VS

VS

System Informati

Operating System Version

Description
This determines the operating system type, version, build number and installation dates for current installation and previous updates.

Location
- SOFTWARE\Microsoft\Windows NT\CurrentVersion
- SYSTEM\Setup\Source OS

Interpretation
CurrentVersion key stores:
- **ProductName, EditionID** – OS type
- **DisplayVersion, ReleaseId, CurrentBuildNumber** – Version info
- **InstallTime** – Installation time of current build (not original installation)

Source OS keys are created for each historical OS update:
- **ProductName, EditionID** – OS type
- **BuildBranch, ReleaseId, CurrentBuildNumber** – Version info
- **InstallTime** – Installation time of this build version
- **Times present in names of Source OS keys are extraneous:**
  InstallTime = 64-bit FILETIME format (Win10+)
  InstallDate = Unix 32-bit epoch format
  (both times should be equivalent)

Computer Name

Description
This stores the hostname of the system in the ComputerName value.

Location
SYSTEM\CurrentControlSet\Control\ComputerName\ComputerName

Interpretation
Hostname can facilitate correlation of log data and other artifacts.

System Boot &

Description
System Boot and Autostart Programs
on system boot or at user login.

Location
- NTUSER.DAT\Software\Microsoft\Windows\CurrentVersi
- NTUSER.DAT\Software\Microsoft\Windows\CurrentVersion
- SOFTWARE\Microsoft\Windows\CurrentVersion\RunOnce
- SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\Explo
- SOFTWARE\Microsoft\Windows\CurrentVersion\Run
- SYSTEM\CurrentControlSet\Services
  If Start value is set to 0x02, then service applicat
  (0x00 for drivers)

Interpretation
- Useful to find malware and to audit installed softwar
- This is not an exhaustive list of autorun locations

System Last Shutdown Ti

Description
It is the last time the system was shutdown. On Windows XP, the
of shutdowns is also recorded.

Location
- SYSTEM\CurrentControlSet\Control\Windows (Shutdown Time)
- SYSTEM\CurrentControlSet\Control\Watchdog\Display
  (Shutdown Count – WinXP only)

Interpretation
- Determining last shutdown time can help to detect user behavior and system anomalies
- Windows 64-bit FILETIME format

SANS DFIR

FORENSICS & INCIDENT RESPONSE

Forensic Anal

POSTER

– You Can't Protect the

sics.sans.org

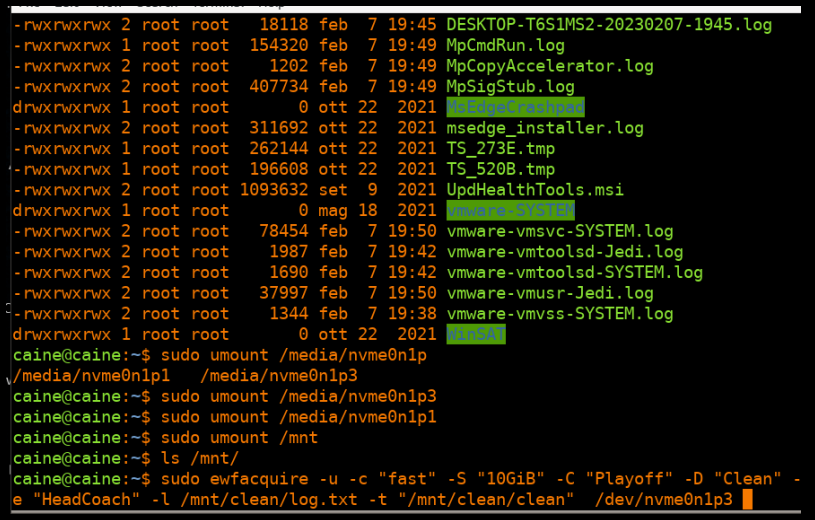
bidaidea@h-c0n2023:~$ rip.pl -r /mnt/dirty/Windows/System32/config/SOFTWARE -p winver

```
jedi@eadu:/media/jedi/76FF193F32F8C57A/dirty$ rip.pl -r /mnt/dirty/Windows/System32/config/SOFTWARE -p winver
Launching winver v.20200525
winver v.20200525
(Software) Get Windows version & build info

ProductName              Windows 10 Home
ReleaseID                2009
BuildLab                 19041.vb_release.191206-1406
BuildLabEx               19041.1.amd64fre.vb_release.191206-1406
CompositionEditionID     Core
RegisteredOrganization
RegisteredOwner          Jedi
InstallDate              2021-05-18 14:28:41Z
InstallTime              2021-05-18 14:28:41Z
```

bidaidea@h-c0n2023:~$ rip.pl -r /mnt/dirty/Windows/System32/config/SYSTEM -p shutdown

```
jedi@eadu:/media/jedi/76FF193F32F8C57A/dirty$ rip.pl -r /mnt/dirty/Windows/System32/config/SYSTEM -p shutdown
Launching shutdown v.20200518
shutdown v.20200518
(System) Gets ShutdownTime value from System hive

ControlSet001\Control\Windows key, ShutdownTime value
LastWrite time: 2023-02-07 19:13:45Z
ShutdownTime  : 2023-02-07 19:13:45Z
```

```
bidaidea@h-c0n2023:~$ sudo ewfacquire -u -c “fast” -S “10GiB” -C “Playoff” -D
“Clean” -e “HeadCoach” -l /data/clean/ewfacquire.log -t “/data/clean/clean”
/dev/nvme0n1p3
```




```
bidaidea@h-c0n2023:~$ sudo ewfmount /data/clean/clean.E01 /mnt/ewf_clean
bidaidea@h-c0n2023:~$ sudo mount -t ntfs3 -o ro /mnt/ewf_clean /mnt/windows02
bidaidea@h-c0n2023:~$ macrobber-ng -5 /mnt/windows01 > /data/clean/clean.body
```

```
jedi@eadu:/media/jedi/76FF193F32F8C57A/clean$ macrobber-ng -5 /mnt/windows01 > clean.body
jedi@eadu:/media/jedi/76FF193F32F8C57A/clean$ ls -lh
total 18G
-rwxrwxrwx 1 jedi jedi 116M Feb 8 14:56 clean.body
-rwxrwxrwx 1 jedi jedi 10G Feb 7 20:58 clean.E01
-rwxrwxrwx 1 jedi jedi 7,5G Feb 7 21:11 clean.E02
-rwxrwxrwx 1 jedi jedi 65 Feb 7 21:11 log.txt
```

```
bidaidea@h-c0n2023:~$ cd /wildcard
bidaidea@h-c0n2023:/wildcard$ cut -d '|' -f 1 dirty.body | sort | uniq > dirty_md5_uniqs.txt
```

```
jedi@eadu:/media/jedi/76FF193F32F8C57A/wildcard$ wc -l dirty_md5.txt
423257 dirty_md5.txt
jedi@eadu:/media/jedi/76FF193F32F8C57A/wildcard$ cut -d "|" -f 1 dirty.body | sort | uniq  > dirty_uniqs_md5.txt
jedi@eadu:/media/jedi/76FF193F32F8C57A/wildcard$ wc -l dirty_uniqs_md5.txt
215827 dirty_uniqs_md5.txt
```

```
bidaidea@h-c0n2023:/wildcard$ for i in $(cat dirty_uniqs_md5.txt); do grep $i clean.body >
/dev/null; if [ $? -gt 0 ] ; then echo $i >> md5_not_clean.txt; fi ; done
```

```
jedi@eadu:/media/jedi/76FF193F32F8C57A/wildcard$ for i in $(cat dirty_uniqs_md5.txt); do grep $i clean.body
> /dev/null; if [ $? -gt 0 ] ; then echo $i >> md5_not_clean.txt; fi ; done
```

```
jedi@eadu:/media/jedi/76FF193F32F8C57A/wildcard$ wc -l md5_not_clean.txt
2924 md5_not_clean.txt
jedi@eadu:/media/jedi/76FF193F32F8C57A/wildcard$
```

Touchdown!!!!

```python
def body_parse(file, absolute_path, limit=10):
    """ This function returns a list of dicts with each file in the body file """
    files_object={}
    with open(file) as f:
        lines=0
        for line in f:
            fields=line[0:len(line)-1].split('|') #To remove the New Line
            if fields[0]=='' or fields[0]==None or fields[0]=='0': # Remove empty lines and directories
                continue
            last_bar_pos=fields[1].rfind('/')+1
            filename=None
            extension=None
            if (last_bar_pos!=-1):
                filename=fields[1][last_bar_pos:]
                last_dot_pos=filename.rfind('.')+1
                extension=filename[last_dot_pos:]
                path=fields[1][len(absolute_path):last_bar_pos]
            else:
                path=fields[1][len(absolute_path):]
            file_obj={
                'md5': fields[0],
                'filename':filename,
                'extension':extension,
                'path': path,
                'size': int(fields[6]),
                'atime': float(fields[7]),
                'mtime': float(fields[8]),
                'ctime': float(fields[9]),
                'crtime': float(fields[10]),
            }
            files_object[file_obj['md5']]=file_obj
            if limit!=None and lines>limit:
                break
            lines=lines+1
    f.close()
    return files_object
```

```python
def md5_list(file_list):
    md5_=set()
    i=0
    for file in file_list:
        md5_.add(file_list[file]['md5'])
        i=i+1
    return md5_
```

```python
def list_compare(a, b):
    r=set()
    for e in a:
        if e not in b:
            r.add(e)
    return r
```

In [1]:
```
import time
from utilities import list_compare, md5_list, body_parse
```

In [2]:
```
# Cargamos la lista de ficheros de la imagen limpia
t1=time.time()
files_clean=body_parse('../Data/clean/clean.body', '/mnt/windows01', None)
md5_list_clean=md5_list(files_clean)
t2=time.time()-t1
print(("Cargados "+str(len(md5_list_clean))+" ficheros en {:02.2f} segundos").format(t2))
```

```
Cargados 214740 ficheros en 0.93 segundos
```

In [3]:
```
# Cargamos la lista de ficheros de la imagen sucia
t1=time.time()
files_dirty=body_parse('../Data/dirty/dirty.body', '/mnt/windows02', None)
md5_list_dirty=md5_list(files_dirty)
t2=time.time()-t1
print(("Cargados "+str(len(md5_list_dirty))+" ficheros en {:02.2f} segundos").format(t2))
```

```
Cargados 215825 ficheros en 0.90 segundos
```

In [4]:
```
# Comparamos los sets
files_difference=list_compare(md5_list_dirty, md5_list_clean)
print("Hay " + str(len(files_difference)) + " ficheros diferentes")
```

```
Hay 2924 ficheros diferentes
```

Wild Card | Divisional | Conference

VS

VS

VS

VS

```
bidaidea@h-c0n2023:~$ cd /divisional
bidaidea@h-c0n2023:/divisional$ grep -f md5_not_clean.txt dirty.body > divisional.body
bidaidea@h-c0n2023:/divisional$ egrep
"\.exe\||\.dll\||\.msi\||\.vbs\||\.vbe\||\.bat\||\.ps1\|" divisional.body >
conference.body
```

```
jedi@eadu:/data/divisional$ egrep "\.exe\||\.dll\||\.msi\|\.vbs\||\.vbe\||\.bat\||\.ps1\|" divisional.body > conference.body
jedi@eadu:/data/divisional$ wc -l conference.body
602 conference.body
```

```
8cec1af925f69f30a17f772b14662bca|/mnt/windows02/Program Files (x86)/Microsoft/Edge/Application/109.0.1518.78/mip_protection_sdk.dll|3
3cfa0341aa269dd8781e66614d94d9d5|/mnt/windows02/Program Files (x86)/Microsoft/Edge/Application/109.0.1518.78/augloop_client.dll|39927
12f546eb0fd220609e2d4747e48aaccc|/mnt/windows02/Program Files (x86)/Microsoft/Edge/Application/109.0.1518.78/BHO/ie_to_edge_bho.dll|3
cade8c94b6f83d98c949e2a8e078243d|/mnt/windows02/Program Files (x86)/Microsoft/Edge/Application/109.0.1518.78/BHO/ie_to_edge_bho_64.dl
70e19e4a1b095398fb044cdb0a8a8150|/mnt/windows02/Program Files (x86)/Microsoft/Edge/Application/109.0.1518.78/BHO/ie_to_edge_stub.exe|
```

```
008ad741e745236b2cc546999966726c|/mnt/windows02/Users/Jedi/AppData/Local/Microsoft/Teams/current/api-ms-win-core-sysinfo-l1-1-0.dll|125933|-
d1f061c3ceb4f6af11f5e3c174507573|/mnt/windows02/Users/Jedi/AppData/Local/Microsoft/Teams/current/api-ms-win-core-timezone-l1-1-0.dll|125106|
fd1ffb1bcf3315dade9842baa522e2ed|/mnt/windows02/Users/Jedi/AppData/Local/Microsoft/Teams/current/api-ms-win-core-util-l1-1-0.dll|125897|-rwx
a226a2c9dba8ba379bc46f0ecd270669|/mnt/windows02/Users/Jedi/AppData/Local/Microsoft/Teams/current/api-ms-win-crt-conio-l1-1-0.dll|125949|-rwx
```

```
bidaidea@h-c0n2023:/divisional$ egrep -v
"\/Program Files \(x86\)\/Microsoft\/Edge|\/Users\/.*\/AppData\/Local\/Microsoft\/Teams"
conference.body > conference_Extratime.body
```

```
jedi@eadu:/data/divisional$ egrep -v "\/Program Files \(x86\)\/Mi                    Users\/.*\/AppData\/Local\/Microsoft\/Teams"
 conference.body > conference_Extratime.body
jedi@eadu:/data/divisional$ wc -l conference_Extratime.body
13 conference_Extratime.body
```

Touchdown!!!!

In [5]:

```
print("Filtramos por extensión...")
interesting_extensions={'exe', 'dll', 'msi', 'bat', 'ps1', 'vbs', 'vbe'}
cleanup_set=set()
for file_md5 in files_difference:
    extension=files_dirty[file_md5]['extension'].lower()
    if (extension not in interesting_extensions):
        cleanup_set.add(file_md5)
print("\tQuitando "+str(len(cleanup_set))+" elementos")
for e in cleanup_set:
    files_difference.remove(e)
```

```
Filtramos por extensión...
        Quitando 2570 elementos
```

/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/Documents/KeyCheck v1.0.3.6_RU_EN_ES_VI_LV/data/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/fr-FR/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/resources/app.asar.unpacked/node_modules/slimcore/bin/
/Users/Jedi/Documents/KeyCheck v1.0.3.6_RU_EN_ES_VI_LV/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/cy-GB/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/fr-CA/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/en-GB/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/resources/app.asar.unpacked/node_modules/slimcore/bin/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/resources/app.asar.unpacked/node_modules/slimcore/bin/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/es-MX/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/Downloads/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/it-IT/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/el-GR/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/ro-RO/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/nn-NO/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/fi-FI/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/vi-VN/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/swiftshader/
/Users/Jedi/Downloads/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/EBWebView/x86/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/lt-LT/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/pl-PL/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/he-IL/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/resources/app.asar.unpacked/node_modules/adal34-win/build/Release/
/Users/Jedi/AppData/Local/Temp/ExpressRip-9004-1/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/th-TH/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/ja-JP/
/Users/Jedi/Documents/KeyCheck v1.0.3.6_RU_EN_ES_VI_LV/data/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/nb-NO/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/he-IL/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/el-GR/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/resources/app.asar.unpacked/node_modules/slimcore/bin/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/fi-FI/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/runtimes/win-x86/native/
/Users/Jedi/Documents/KeyCheck v1.0.3.6_RU_EN_ES_VI_LV/data/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/nb-NO/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/zh-TW/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/hr-HR/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/lt-LT/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/sv-SE/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/resources/app.asar.unpacked/node_modules/slimcore/bin/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/resources/app.asar.unpacked/node_modules/@microsoft/electron-windows-interactive-notifications/build/Release/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/hr-HR/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/Installer/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/sr-Latn-RS/
/Program Files (x86)/NCH Software/ExpressRip/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/bg-BG/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Program Files (x86)/NCH Software/Components/mp3el/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/fr-FR/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/sk-SK/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/bg-BG/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/BHO/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/resources/app.asar.unpacked/node_modules/slimcore/bin/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/pl-PL/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/zh-TW/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/ja-JP/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/fr-CA/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/hu-HU/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/zh-CN/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/ar-SA/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/is-IS/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/sl-SI/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/et-EE/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/Documents/KeyCheck v1.0.3.6_RU_EN_ES_VI_LV/data/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/Edge/User Data/Speech Recognition/1.15.0.1/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/ko-KR/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/lv-LV/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/sl-SI/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/vi-VN/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/cs-CZ/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/swiftshader/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/pt-PT/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/resources/assets/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/lv-LV/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/BHO/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/es-MX/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/en-GB/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/runtimes/win-x64/native/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Users/Jedi/AppData/Local/Microsoft/Teams/current/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/Teams/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x64/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeUpdate/1.3.171.39/
/Program Files (x86)/Microsoft/EdgeWebView/Application/109.0.1518.78/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/sr-Latn-RS/
/Users/Jedi/AppData/Local/Microsoft/TeamsMeetingAddin/1.0.22272.2/x86/cy-GB/

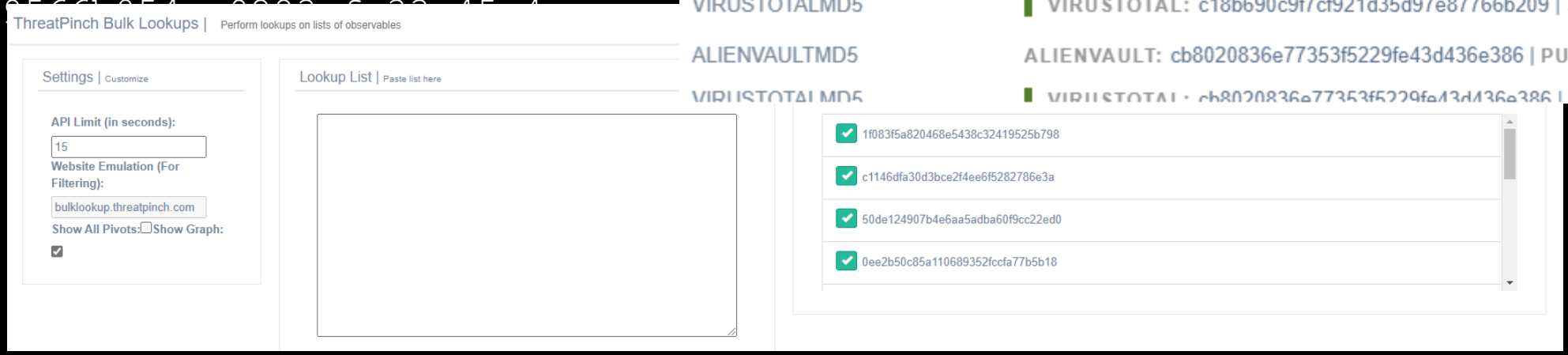
In [6]:

```
print("Limpiando por rutas...")
exclude_paths=["\/Program Files \\(x86\\)\/Microsoft\/Edge",
               "\/Users\/[a-zA-Z0-9]+\/AppData\/Local\/Microsoft\/Teams",]
for path in exclude_paths:
    print("\tPath filter: "+path)
    cleanup_set=set()
    pattern = re.compile(path)
    for file_md5 in files_difference:
        if pattern.match(files_dirty[file_md5]['path']):
            cleanup_set.add(file_md5)
    print("\t\tQuitando "+str(len(cleanup_set))+" elementos")
    for e in cleanup_set:
        files_difference.remove(e)
```

```
Limpiando por rutas...
        Path filter: \/Program Files \(x86\)\/Microsoft\/Edge
                Quitando 152 elementos
        Path filter: \/Users\/[a-zA-Z0-9]+\/AppData\/Local\/Microsoft\/Teams
                Quitando 190 elementos
```

Wild Card	Divisional	Conference	
			
VS	VS	VS	VS
			

```
bidaidea@h-c0n2023:~$ cd /conference
bidaidea@h-c0n2023:/conference$ cut -d "|" -f 1 conference_Extratime.body >
conference_hashes.txt
bidaidea@h-c0n2023:~$ cat conference_hashes.txt
1f083f5a820468e5438c32419525b798
c1146dfa30d3bce2f4ee6f5282786e3a
50de124907b4e6aa5adba60f9cc22ed0
0ee2b50c85a110689352fccfa77b5b18
50de124907b4e6aa5adba60f9cc22ed0
c18b690c9f7cf921d35d97e87766b209
cb8020836e77353f5229fe43d436e386
97cf870f1d1fdc83640e3c8d8ec81c66
fdb53152230e3beafccbc2aaf2a00165
370b191519abcd3956a065bb89eb9445
6a49ba414d53c304bddcbd4a501281cd
cf7dc712c6b4fff1107f28f9bdac829b
aeca0aa5
```



1f083f5a820468e5438c32419525b798
c1146dfa30d3bce2f4ee6f5282786e3a
50de124907b4e6aa5adba60f9cc22ed0
0ee2b50c85a110689352fccfa77b5b18
50de124907b4e6aa5adba60f9cc22ed0
c18b690c9f7cf921d35d97e87766b209
cb8020836e77353f5229fe43d436e386
97cf870f1d1fdc83640e3c8d8ec81c66
fdb53152230e3beafccbc2aaf2a00165
370b191519abcd3956a065bb89eb9445
6a49ba414d53c304bddcbd4a501281cd
cf7dc712c6b4fff1107f28f9bdac829b
aeca0aa59566b054ca9283cfc33e45a4

Touchdown!!!!

MD5	Fichero	VT	MalShare	AlienWare OTX	MalwareBazaar	CAPEv2	ClamAv	Malware Hash Registry	MISP	Circl.lu
fdb53152230e3beafccbc2aaf2a00165	pidgenx.dll	0/69	-	0	-	1.3/10	-	0%	-	Conocido (que no seguro)
cf7dc712c6b4fff1107f28f9bdac829b	ripsetup.exe	0/72	-	0	-	8.5/10	-	0%	-	-
97cf870f1d1fdc83640e3c8d8ec81c66	msvcr120.dll	0/65	-	0	-	1.6/10	-	0%	-	-
c18b690c9f7cf921d35d97e87766b209	KInfo.exe	0/56	-	0	-	0.4/10	-	0%	-	-
aeca0aa59566b054ca9283cfc33e45a4	combase.exe	16/55	-	0	X	5.9/10	-	17%	-	-
cb8020836e77353f5229fe43d436e386	msvcp120.dll	0/69	-	0	-	1.6/10	-	0%	-	-
50de124907b4e6aa5adba60f9cc22ed0	Installer.exe	3/68	-	0	-	10/10	-	0%	-	-
1f083f5a820468e5438c32419525b798	mp3enc.exe	2/68	-	0	-	1.1/10	-	0%	-	-
370b191519abcd3956a065bb89eb9445	KeyCheck.exe	23/45	-	0	-	7.2/10	-	0%	-	-
0ee2b50c85a110689352fccfa77b5b18	Microsoft.CognitiveServices.Speech.core.dll	0/69	-	0	-	-	-	0%	-	Conocido (que no seguro)
6a49ba414d53c304bddcbd4a501281cd	PDFPower.exe	0/70	-	0	-	3.6/10	-	0%	-	-
c1146dfa30d3bce2f4ee6f5282786e3a	expressrip.exe	2/64	-	0	-	6.1/10	-	0%	-	-

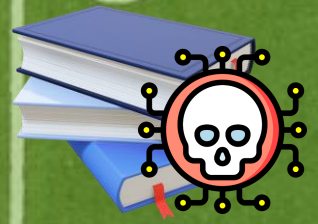
Wild Card

VS

Divisional

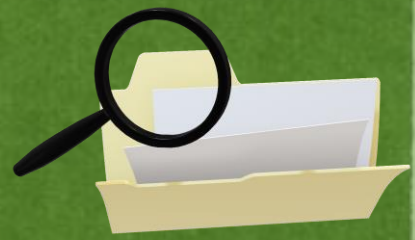
VS

Conference



VS

VS



```
bidaidea@h-c0n2023:~$ cd /superbowl
bidaidea@h-c0n2023:/superbowl$ cat superbowl.body
```

```
jedi@eadu:/data/superbowl$ cat superbowl.body
1f083f5a820468e5438c32419525b798|/mnt/windows02/Program Files (x86)/NCH Software/Components/mp3el/mp3enc.exe|398931|
c1146dfa30d3bce2f4ee6f5282786e3a|/mnt/windows02/Program Files (x86)/NCH Software/ExpressRip/expressrip.exe|398921|-r
50de124907b4e6aa5adba60f9cc22ed0|/mnt/windows02/Program Files (x86)/NCH Software/ExpressRip/expressripsetup_v5.00.ex
50de124907b4e6aa5adba60f9cc22ed0|/mnt/windows02/Users/Jedi/AppData/Local/Temp/ExpressRip-9004-1/Installer.exe|398912
370b191519abcd3956a065bb89eb9445|/mnt/windows02/Users/Jedi/Documents/KeyCheck v1.0.3.6_RU_EN_ES_VI_LV/KeyCheck.exe|3
aeca0aa59566b054ca9283cfc33e45a4|/mnt/windows02/Windows/Temp/combase.exe|235858|-rwxrwxrwx|0|0|804352|1675797199.806
```

```
bidaidea@h-c0n2023:/superbowl$ mactime -b superbowl.body > superbowl.MACBtime.txt
bidaidea@h-c0n2023:/superbowl$ cat superbowl.MACBtime.txt
```

```
jedi@eadu:/data/superbowl$ mactime -b superbowl.body > superbowl.MACBtime.txt
jedi@eadu:/data/superbowl$ cat superbowl.MACBtime.txt
Tue May 06 2014 09:07:36   315904 ...b -rwxr-xr-x 0       0       399830   /mnt/windows01/Users/Jedi/Documents/KeyCheck v1.0.3.6_RU_EN_ES_VI_LV/KeyCheck.exe
Tue Feb 08 2022 17:37:32  1111568 m... -rwxr-xr-x 0       0       398921   /mnt/windows01/Program Files (x86)/NCH Software/ExpressRip/expressrip.exe
Tue Feb 07 2023 19:11:06   804352 m... -rwxr-xr-x 0       0       235858   /mnt/windows01/Windows/Temp/combase.exe
Tue Feb 07 2023 19:56:03   607760 ...b -rwxr-xr-x 0       0       398912   /mnt/windows01/Users/Jedi/AppData/Local/Temp/ExpressRip-9004-1/Installer.exe
Tue Feb 07 2023 19:56:04   607760 m.c. -rwxr-xr-x 0       0       398912   /mnt/windows01/Users/Jedi/AppData/Local/Temp/ExpressRip-9004-1/Installer.exe
                           607760 m.c. -rwxr-xr-x 0       0       398965   /mnt/windows01/Program Files (x86)/NCH Software/ExpressRip/expressripsetup_v5.00.exe
Tue Feb 07 2023 19:56:17  1111568 ..cb -rwxr-xr-x 0       0       398921   /mnt/windows01/Program Files (x86)/NCH Software/ExpressRip/expressrip.exe
Tue Feb 07 2023 19:56:18   110592 macb -rwxr-xr-x 0       0       398931   /mnt/windows01/Program Files (x86)/NCH Software/Components/mp3el/mp3enc.exe
Tue Feb 07 2023 19:56:21   607760 .a.. -rwxr-xr-x 0       0       398912   /mnt/windows01/Users/Jedi/AppData/Local/Temp/ExpressRip-9004-1/Installer.exe
                           607760 ...b -rwxr-xr-x 0       0       398965   /mnt/windows01/Program Files (x86)/NCH Software/ExpressRip/expressripsetup_v5.00.exe
Tue Feb 07 2023 19:56:22   607760 .a.. -rwxr-xr-x 0       0       398965   /mnt/windows01/Program Files (x86)/NCH Software/ExpressRip/expressripsetup_v5.00.exe
Tue Feb 07 2023 20:06:50  1111568 .a.. -rwxr-xr-x 0       0       398921   /mnt/windows01/Program Files (x86)/NCH Software/ExpressRip/expressrip.exe
Tue Feb 07 2023 20:07:04   315904 m... -rwxr-xr-x 0       0       399830   /mnt/windows01/Users/Jedi/Documents/KeyCheck v1.0.3.6_RU_EN_ES_VI_LV/KeyCheck.exe
Tue Feb 07 2023 20:07:19   315904 ..c. -rwxr-xr-x 0       0       399830   /mnt/windows01/Users/Jedi/Documents/KeyCheck v1.0.3.6_RU_EN_ES_VI_LV/KeyCheck.exe
Tue Feb 07 2023 20:07:33   315904 .a.. -rwxr-xr-x 0       0       399830   /mnt/windows01/Users/Jedi/Documents/KeyCheck v1.0.3.6_RU_EN_ES_VI_LV/KeyCheck.exe
Tue Feb 07 2023 20:11:38   804352 ...b -rwxr-xr-x 0       0       235858   /mnt/windows01/Windows/Temp/combase.exe
Tue Feb 07 2023 20:13:03   804352 ..c. -rwxr-xr-x 0       0       235858   /mnt/windows01/Windows/Temp/combase.exe
Tue Feb 07 2023 20:13:19   804352 .a.. -rwxr-xr-x 0       0       235858   /mnt/windows01/Windows/Temp/combase.exe
```

SANS DFIR

DIGITAL FORENSICS & INCIDENT RESPONSE

Windows® Time Rules[1]

$Standard_Information Win10 v1903

File Creation	File Access	File Modification	File Rename	File Copy *(new file)*	Local File Move	Volume File Move *(move via CLI)*	Volume File Move *(cut/paste via Explorer)*	File Deletion *(shift+delete)*
Modified – Time of File Creation	**Modified – No Change**	Modified – Time of Data Modification	**Modified – No Change**	**Modified – Inherited from Original**	**Modified – No Change**	**Modified – Inherited from Original**	**Modified – Inherited from Original**	**Modified – No Change**
Access – Time of File Creation	Access – Time of Access *(No Change If System Volume > 128 GiB)*	Access – Time of Data Modification	**Access – No Change**	Access – Time of File Copy	**Access – No Change**	Access – Time of File Move via CLI	Access – Time of Cut/Paste	**Access – No Change**
Metadata –	**Metadata –**	Metadata –	Metadata –	Metadata –	Metadata –	**Metadata –**	**Metadata –**	**Metadata –**

17b6e0bb426b762e1caee67606532e3350d8c752c0625994424916e0fba527ab

55
/ 71

?

Community Score

55 security vendors and 3 sandboxes flagged this file as malicious

17b6e0bb426b762e1caee67606532e3350d8c752c0625994424916e0fba527ab

wFCW.exe

peexe assembly runtime-modules detect-debug-environment checks-network-adapters checks-bios clipboard

DETECTION DETAILS RELATIONS BEHAVIOR COMMUNITY 4

Join the VT Community and enjoy additional community insights and crowdsourced detections.

Security vendors' analysis

AhnLab-V3	Trojan/Win.Injection.R557217	Alibaba
ALYac	Trojan.GenericKD.65391021	Antiy-AVL

```
jedi@eadu:/data/superbowl$ cat superbowl.MACBtime.txt superbowl.body | grep /combase.exe
Tue Feb 07 2023 19:11:06   804352 m... -rwxr-xr-x 0        0        235858   /mnt/windows01/Windows/Temp/combase.exe
Tue Feb 07 2023 20:11:38   804352 ...b -rwxr-xr-x 0        0        235858   /mnt/windows01/Windows/Temp/combase.exe
Tue Feb 07 2023 20:13:03   804352 ..c. -rwxr-xr-x 0        0        235858   /mnt/windows01/Windows/Temp/combase.exe
Tue Feb 07 2023 20:13:19   804352 .a.. -rwxr-xr-x 0        0        235858   /mnt/windows01/Windows/Temp/combase.exe
aeca0aa59566b054ca9283cfc33e45a4|/mnt/windows01/Windows/Temp/combase.exe|235858|-rwxr-xr-x|0|0|804352|1675797199.806824000|1675793466.0|1675797183.243482800|1675797098.939306100
```

17b6e0bb426b762e1caee67606532e3350d8c752c0625994424916e0fba527ab

55 / 71

55 security vendors and 3 sandboxes flagged this file as malicious

17b6e0bb426b762e1caee67606532e3350
wFCW.exe

peexe assembly runtime-modules detect-

Community Score

DETECTION DETAILS RELATIONS BEHAVIOR

Join the VT Community and enjoy additional community insights and

Security vendors' analysis

AhnLab-V3	Trojan/Win.Injection.R5572
ALYac	Trojan.GenericKD.6539102

MalwareBazaar Database

You are currently viewing the MalwareBazaar entry for **SHA256 17b6e0bb426b762e1caee67606532e3350d8c752c0625994424916e0fba527ab**. While MalwareBazaar tries to identify whether the sample provided is malicious or not, there is no guarantee that a sample in MalwareBazaar is malicious.

Database Entry

AgentTesla

Vendor detections: **15**

Intelligence 15 | IOCs | YARA 2 | File information | Comments | Actions

SHA256 hash:	17b6e0bb426b762e1caee67606532e3350d8c752c0625994424916e0fba527ab
SHA3-384 hash:	ad227875abb4faf65fe24d865a7aaac69215212abe10461edd1ff7a48bd6c34dc0aa8cf45fa916338e3e7b3b6345f83c

combase.exe | AgentTesla
aka: AgenTesla, AgentTesla, Negasteal
Actor(s): SWEED

Analysis

Category	Package	Started	Completed	Duration	Log	MalScore
FILE	exe	2023-02-16 08:31:49	2023-02-16 08:36:27	278 seconds	Show Log	7.2

Machine

Name	Label	Manager	Started On	Shutdown On	Route

Signatures

- SetUnhandledExceptionFilter detected (possible anti-debug)
- A file with an unusual extension was attempted to be loaded as a DLL.
- Possible date expiration check, exits too soon after checking local time
- Guard pages use detected - possible anti-debugging.
- Dynamic (imported) function loading detected
- Creates RWX memory
- Uses Windows utilities for basic functionality
- Deletes executed files from disk
- Uses suspicious command line tools or Windows utilities

Security vendors' analysis

Do you want to automate checks?

Ad-Aware	Application.Hacktool.KMSActivator.GH	ALYac	Application.Hacktool.KMSActivator.GH
BitDefender	Application.Hacktool.KMSActivator.GH	BitDefenderTheta	Gen:NN.ZemsilF.34666.tq0@ayVnwRi
CrowdStrike Falcon	Win/grayware_confidence_90% (W)	Cybereason	Malicious.519abc
Cylance	Unsafe	Emsisoft	Application.Hacktool.KMSActivator.GH (B)
eScan	Application.Hacktool.KMSActivator.GH	ESET-NOD32	A Variant Of MSIL/HackKMS.I Potentiall

Analysis

Category	Package	Started	Completed	Duration	Log	MalScore
FILE	exe	2023-02-23 11:13:55	2023-02-23 11:18:01	246 seconds	Show Log	5.9

Machine

Name	Label	Manager	Started On	Shutdown On	Route
cuckoo1	cuckoo1	VirtualBox	2023-02-23 11:13:56	2023-02-23 11:18:01	inetsim

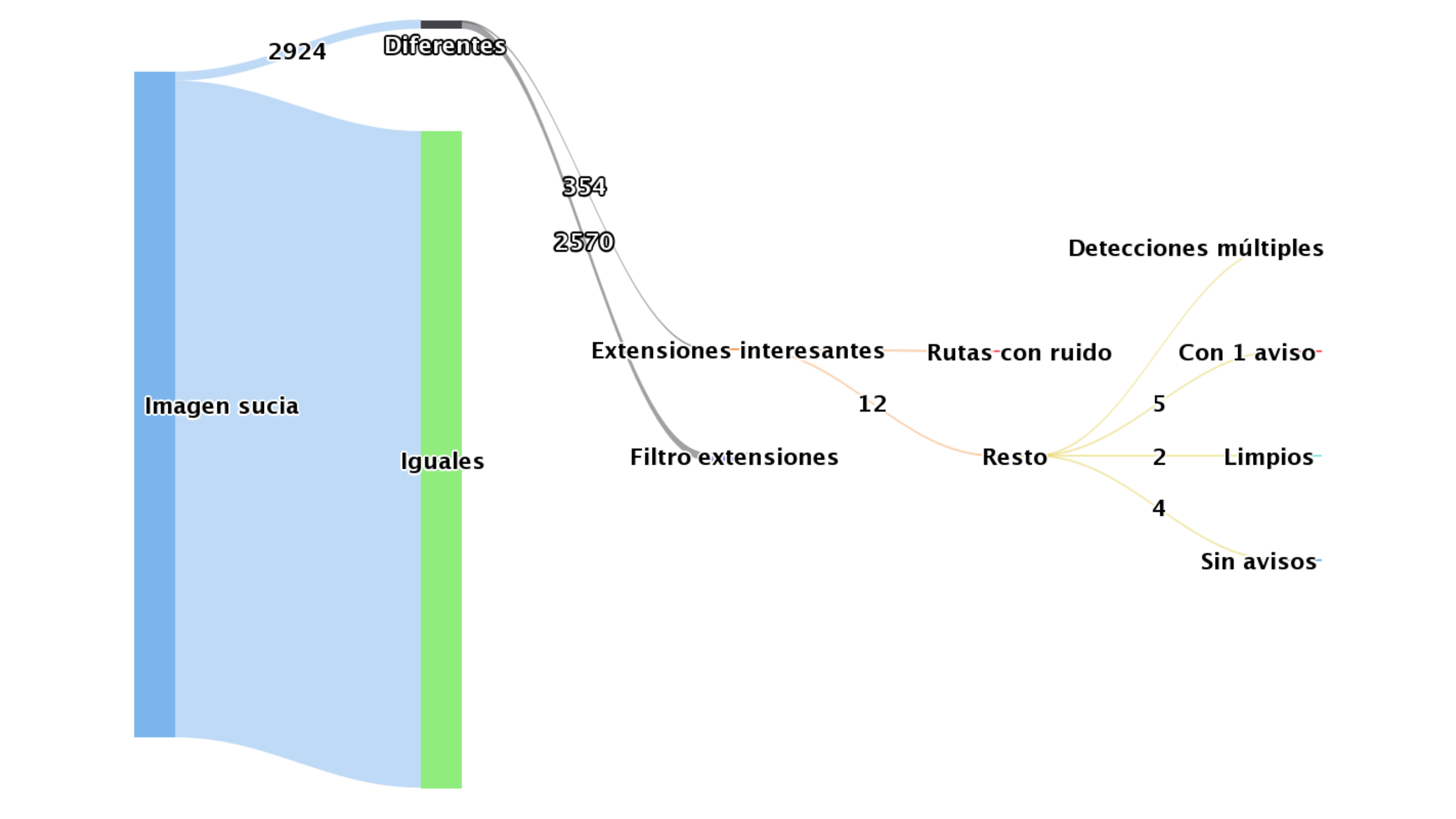
Mitre ATT&CK

Command and Control	Execution

• T1071 - Application Layer Protocol
  ◦ procmem_yara
	• T1106 - Native API
	  ◦ antidebug_guardpages

Signatures

- SetUnhandledExceptionFilter detected (possible anti-debug)
- At least one process apparently crashed during execution
- Guard pages use detected - possible anti-debugging.
- Dynamic (imported) function loading detected
- Reads data out of its own binary image
- Creates RWX memory
- Yara rule detections observed from a process memory dump/dropped files/CAPE


2924
Diferentes
Imagen sucia
Iguales
354
2570
Extensiones interesantes
Filtro extensiones
Rutas con ruido
12
Resto
Detecciones múltiples
Con 1 aviso
5
2
Limpios
4
Sin avisos

```
bidaidea@h-c0n2023:~$ sudo deluser rafa
bidaidea@h-c0n2023:~$ sudo deluser luise
bidaidea@h-c0n2023:~$ cd /
bidaidea@h-c0n2023:/$ sudo rm -rf *
```

https://github.com/bidaidea-cyber
https://github.com/kero99/macrobber-ng