

Lab 7 Response Outline

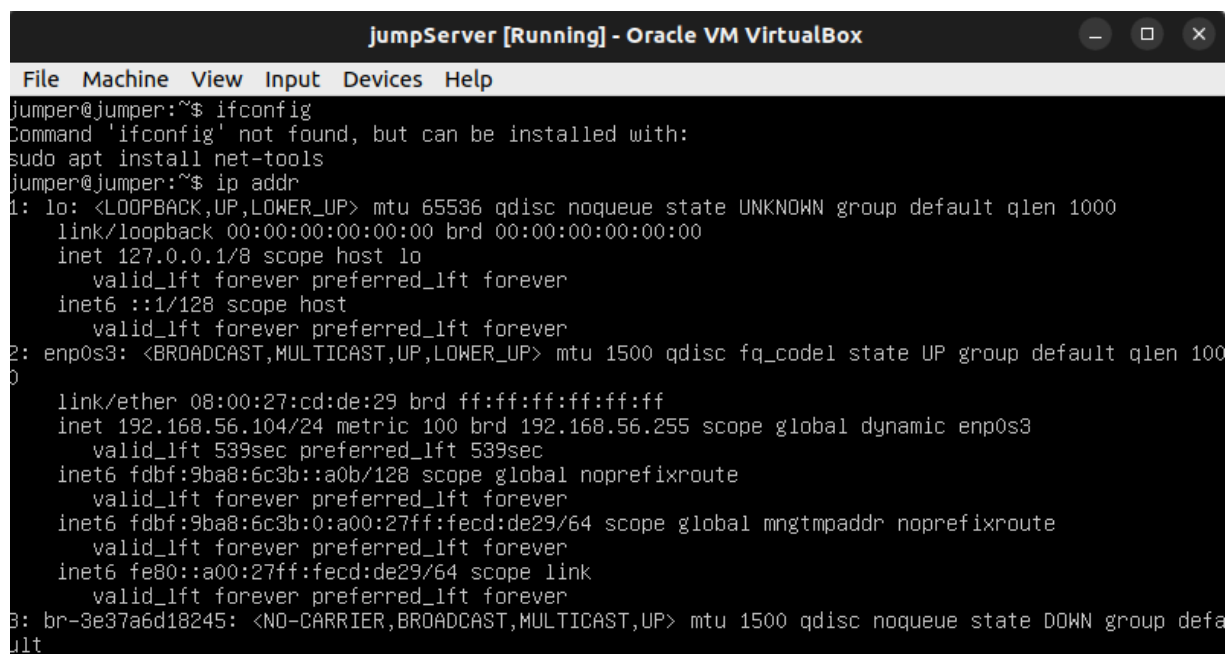
Lab 7: Jump Server

Test 1: Jump Server to Run Inside LAN

Summary of test experience:

In this test, we must run the Warpgate jump server inside LAN. After importing the vbox instance of Warpgate and configuring it to the host-only network, I could run the jump server inside LAN.

Screenshot of test results:



```
JumpServer [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
jumper@jumper:~$ ifconfig
Command 'ifconfig' not found, but can be installed with:
sudo apt install net-tools
jumper@jumper:~$ ip addr
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
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:cd:de:29 brd ff:ff:ff:ff:ff:ff
    inet 192.168.56.104/24 metric 100 brd 192.168.56.255 scope global dynamic enp0s3
        valid_lft 539sec preferred_lft 539sec
    inet6 fdbf:9ba8:6c3b::a0b/128 scope global noprefixroute
        valid_lft forever preferred_lft forever
    inet6 fdbf:9ba8:6c3b:0:a00:27ff:fedc:de29/64 scope global mngtmpaddr noprefixroute
        valid_lft forever preferred_lft forever
    inet6 fe80::a00:27ff:fedc:de29/64 scope link
        valid_lft forever preferred_lft forever
3: br-3e37a6d18245: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN group default
    link/ether 02:00:00:00:00:00 brd ff:ff:ff:ff:ff:ff
```

Provide a brief (1-2 sentences) explanation of the results answering the question: How does the image demonstrate that you completed the test?

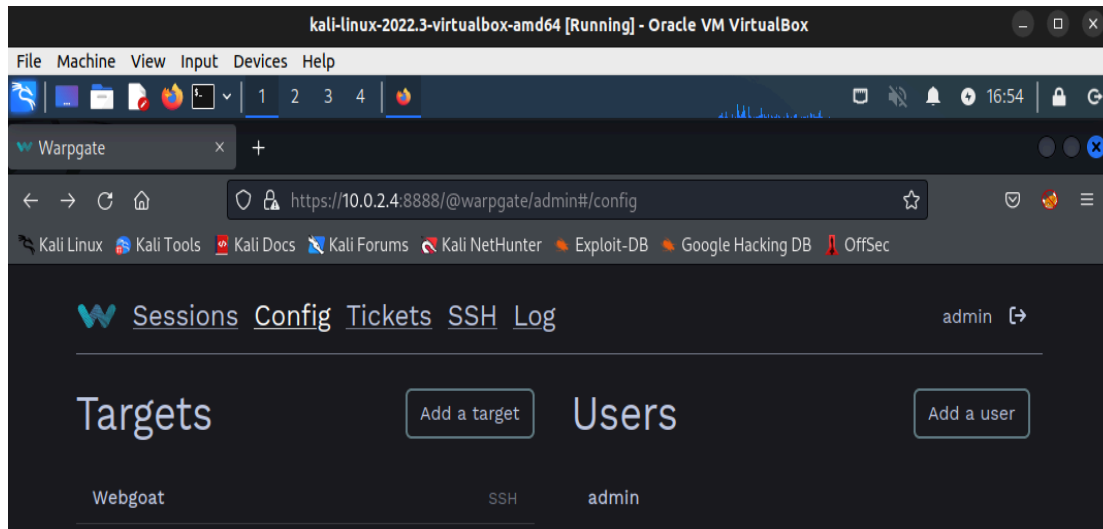
From the above image, we can see that the IP address of the jump server is 192.168.56.104/24, meaning it's running inside the LAN network.

Test 2: Web Server Accessible From the WAN

Summary of test experience:

Test 2 requires us to check if we can access the SSO server from the WAN, i.e., the Kali Linux browser. After I had started the dockerized version of the warpgate SSO service on the jump server, I got into the webpage of the warpgate SSO service. I configured a pseudo-SSO authentication from the WAN to the WebGoat server.

Screenshot of test results:



Provide a brief (1-2 sentences) explanation of the results answering the question: How does the image demonstrate that you completed the test?

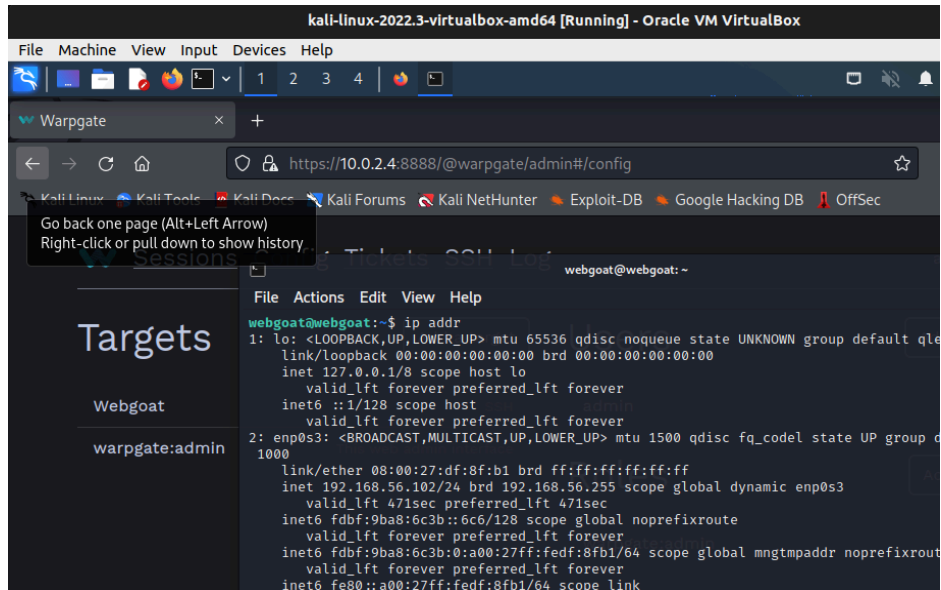
The above screenshot shows that the warpgate SSO web server is accessible from Kali Linux.

Test 3: SSH into the Web Server

Summary of test experience:

In this test, we must SSH into the WebGoat server from Kali Linux via warpgate SSO server. I already configured the pseudo-SSH authentication to the WebGoat server on the warpgate SSO server.

Screenshot of test results:



Provide a brief (1-2 sentences) explanation of the results answering the question: How does the image demonstrate that you completed the test?

The above image shows that a successful SSH connection to the WebGoat server has been made from Kali Linux, which runs inside WAN.