Using iptables to limit application services

# Background

This Labtainer exercise illustrates the use of iptables to limit which application services, (ports), will be forwarded through a component serving as a firewall.

You will configure the firewall within this topology:

client <============> firewall <============> server

such that the client can only access SSH and HTTP services on the server. You must also enable access to a custom service whose port number you must discover.

It is assumed that you have already learned about iptables elsewhere, e.g., in a course or independent study. You can learn about the iptables command via the manpage:

man iptables

and there are also plenty of resources on the internet. It is also assumed that you have some experience with the use of the nmap utility.

# Performing the lab

The lab is started from the labtainer working directory on your Linux host, e.g., a Linux VM. From there, issue the command:

labtainer iptables2

The resulting virtual terminals will include bash shells on two components: a client computer and a “firewall”.

# Tasks

## Explore

The wireshark utility is installed on the firewall component. Start it using:

wireshark &

and select the “eth0” interface to monitor.

The iptables utility is installed on the “firewall” component. Use it to prevent the firewall from forwarding any traffic to the server other than SSH and HTTP sessions.

Demonstrate that you have done this by running this command on the client computer:

nmap -n 172.25.0.3

the resulting display should indicate that SSH and HTTP are the only ports that are open.

**Stop the labtainer**

When the lab is completed, or you’d like to stop working for a while, run:

stoplab

from the host labtainer working directory. You can always restart the lab to continue your work. When the labtainer is stopped, a zip file is created and copied to a location displayed by the stoplab command. When the lab is complete, send that zip file to the instructor.

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