



PAN9 CYBERSECURITY GATEWAY

Lab 6: Using the Application Command Center (ACC) to Find Threats

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Introduction

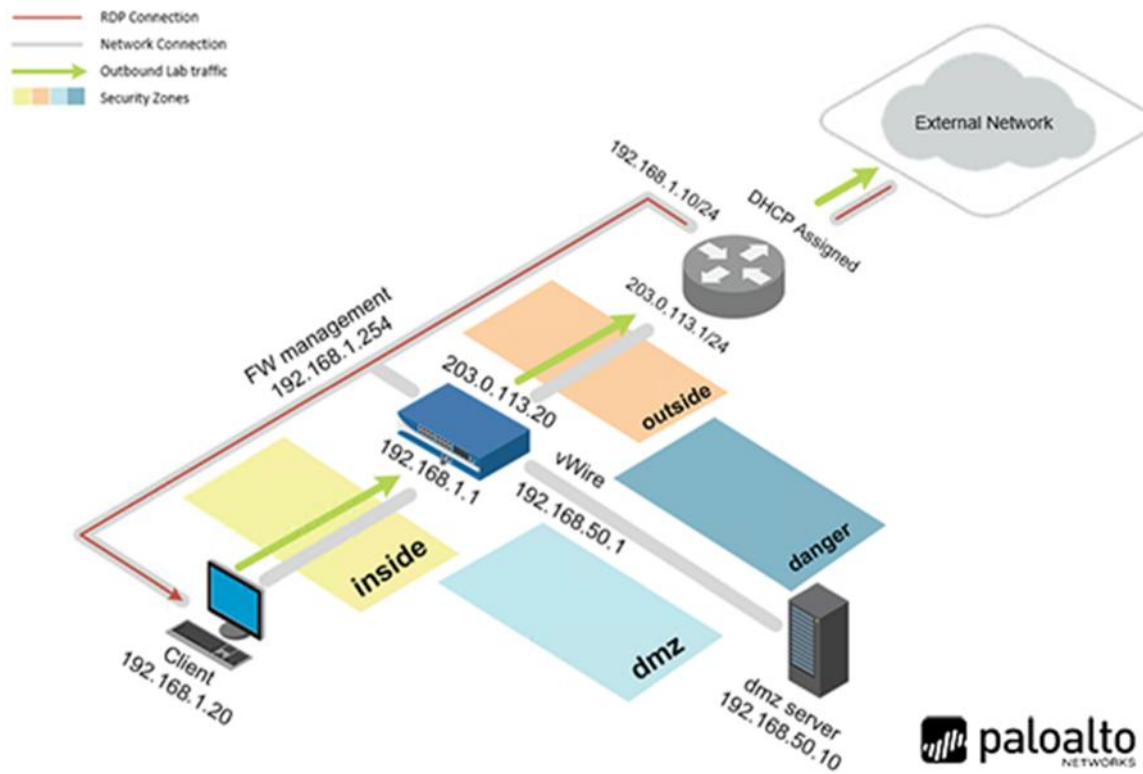
In this lab, you will generate malware traffic and use the Application Command Center to find the threat.

Objective

In this lab, you will perform the following tasks:

-) Generate Malware Traffic to the Firewall
-) Find Malware Threat in the Application Command Center

Lab Topology



Lab Settings

The information in the table below will be needed in order to complete the lab. The task sections below provide details on the use of this information.

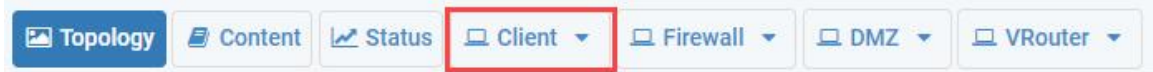
Virtual Machine	IP Address	Account (if needed)	Password (if needed)
Client	192.168.1.20	lab-user	Train1ng\$
DMZ	192.168.50.10	root	Pal0Alt0
Firewall	192.168.1.254	admin	Train1ng\$

6 Lab: Using the Application Command Center to find Threats

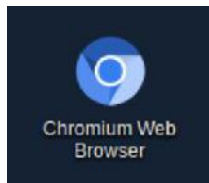
6.0 Load Lab Configuration

In this section, you will load the Firewall configuration file.

1. Click on the **Client** tab to access the Client PC.



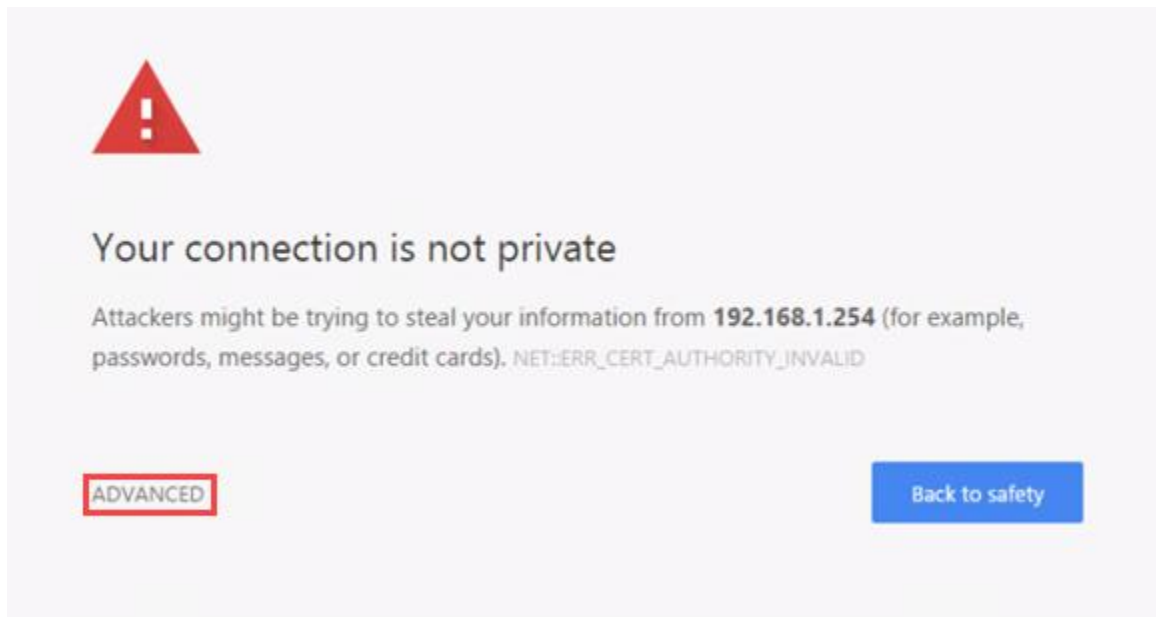
2. Log in to the Client PC with the username **lab-user** and password **Train1ng\$**.
3. Double-click the **Chromium** icon located on the Desktop.



4. In the *Chromium* address field, type **https://192.168.1.254** and press **Enter**.



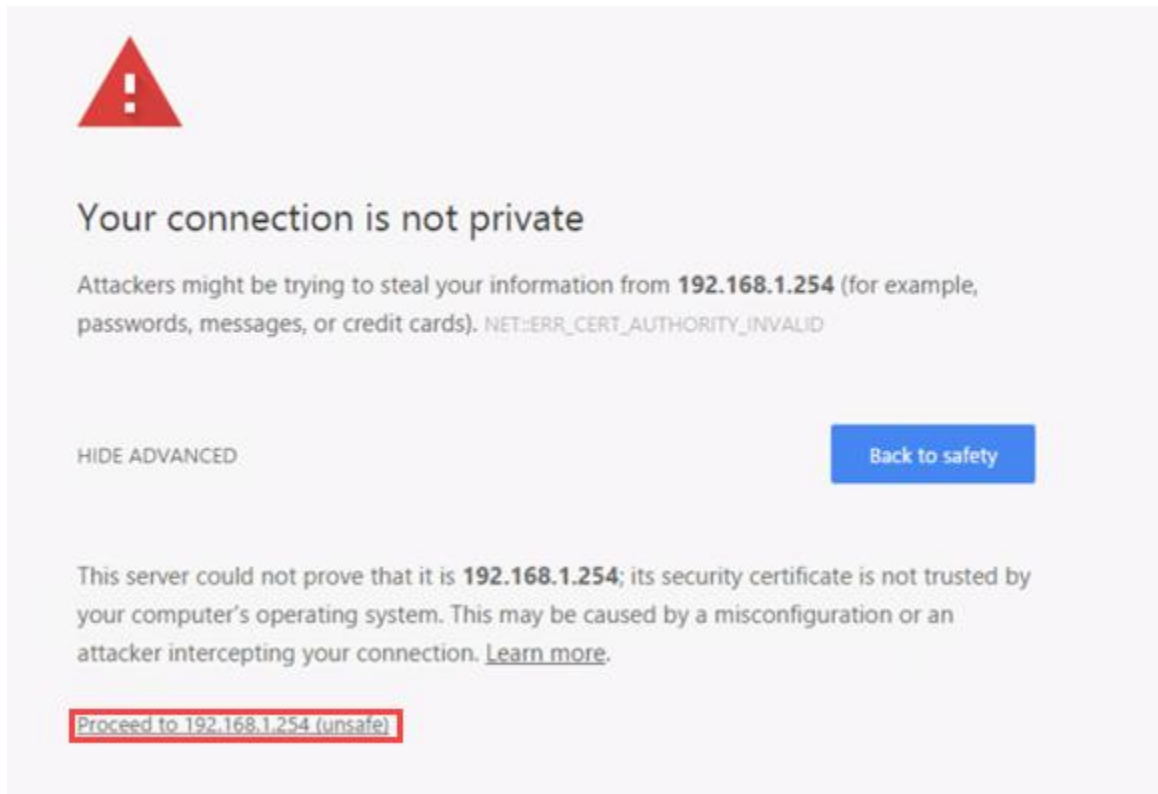
5. You will see a “Your connection is not private” message. Click on the **ADVANCED** link.





If you experience the “Unable to connect” or “502 Bad Gateway” message while attempting to connect to the specified IP above, please wait an additional 1-3 minutes for the Firewall to fully initialize. Refresh the page to continue.

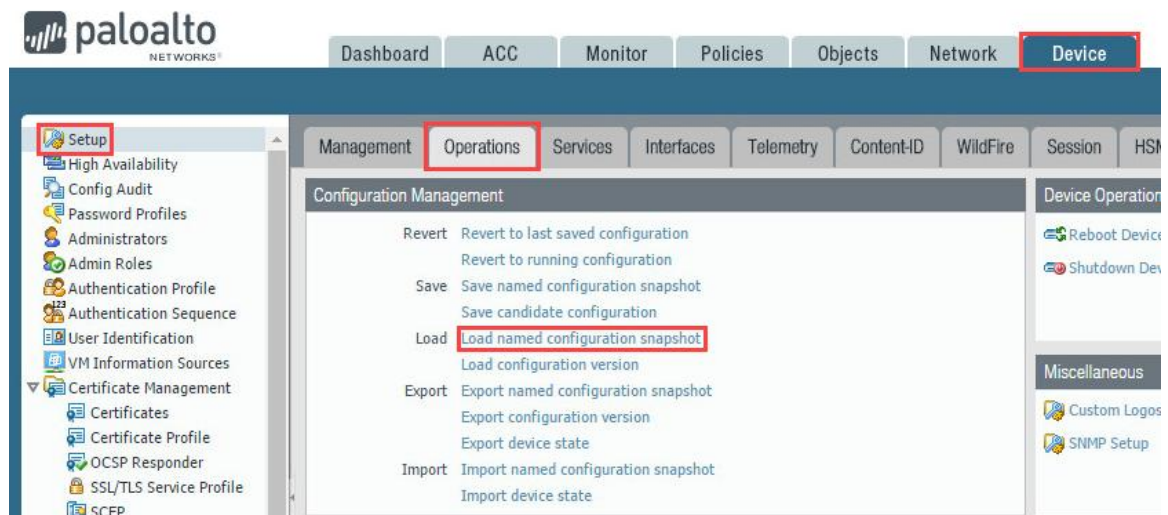
6. Click on **Proceed to 192.168.1.254 (unsafe)**.



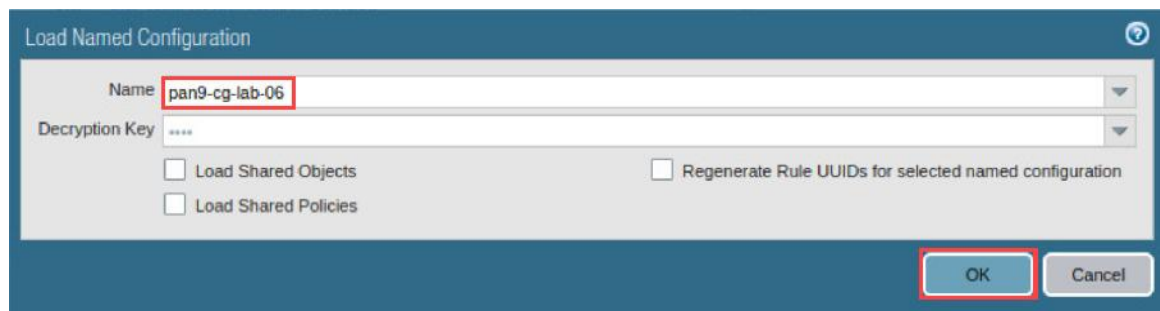
7. Log in to the Firewall web interface as username **admin**, password **Train1ng\$**.



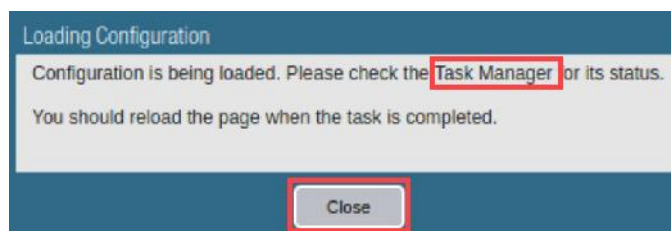
8. In the web interface, navigate to **Device > Setup > Operations** and click on **Load named configuration snapshot** underneath the *Configuration Management* section.



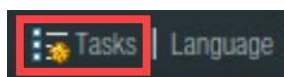
9. In the *Load Named Configuration* window, select **pan9-cg-lab-06** from the *Name* dropdown box and click **OK**.



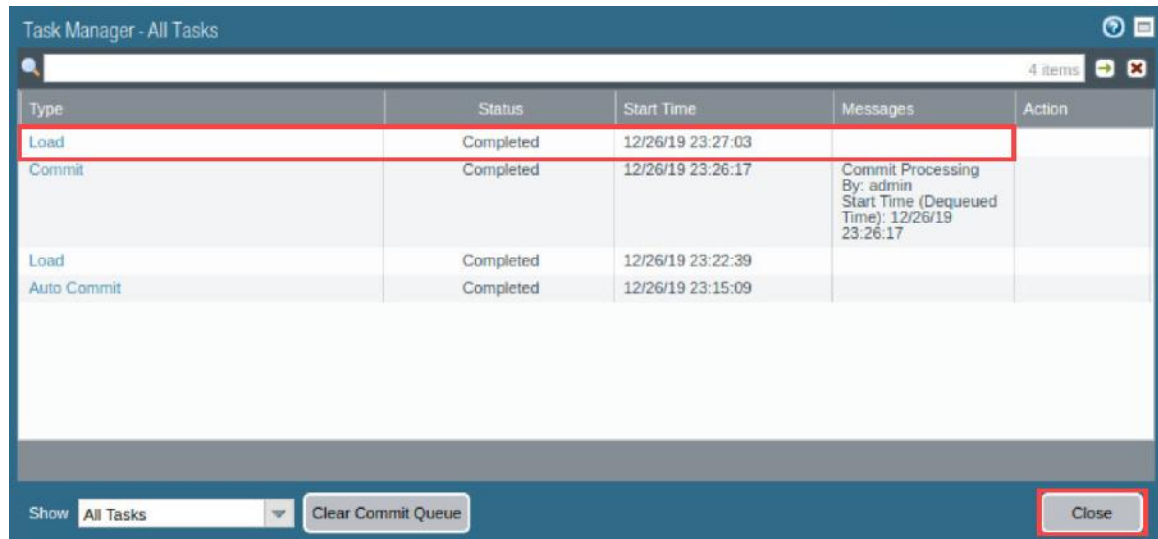
10. In the Loading Configuration window, a message will show *Configuration is being loaded*. Please check the *Task Manager* for its status. You should reload the page when the task is completed. Click **Close** to continue.



11. Click the **Tasks** icon located at the bottom-right of the web interface.



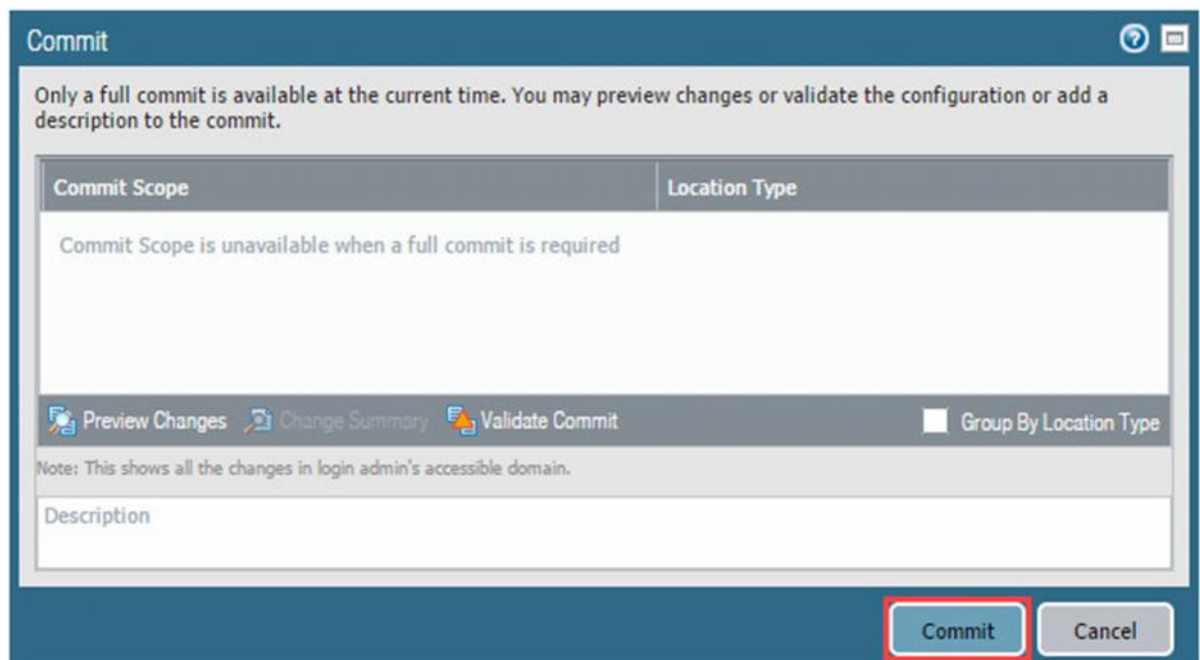
12. In the *Task Manager – All Tasks* window, verify the *Load* type has successfully completed. Click **Close**.



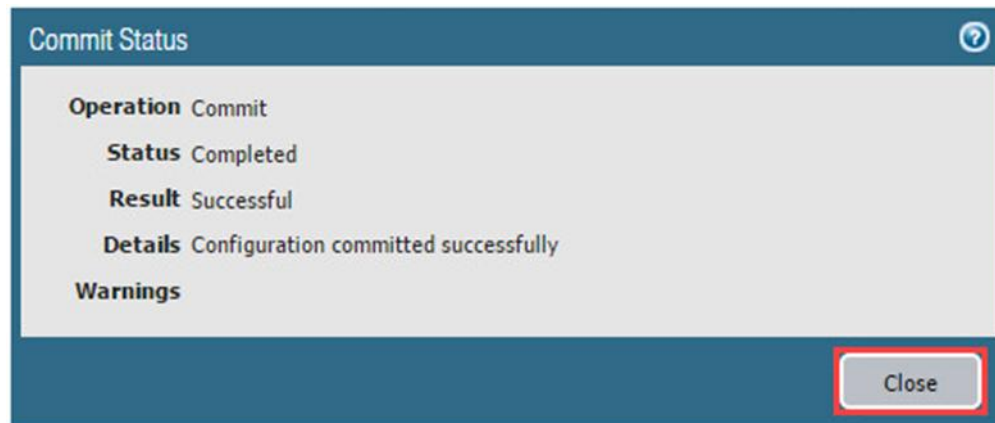
13. Click the **Commit** link located at the top-right of the web interface.



14. In the *Commit* window, click **Commit** to proceed with committing the changes.



15. When the commit operation successfully completes, click **Close** to continue.

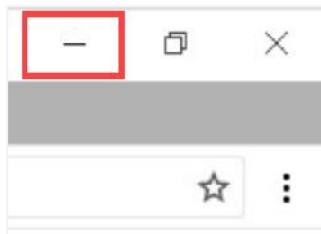


The commit process takes changes made to the Firewall and copies them to the running configuration, which will activate all configuration changes since the last commit.

6.1 Generate Malware Traffic to the Firewall

In this section, you will generate malware traffic to the Firewall using a script that is replaying previously captured traffic.

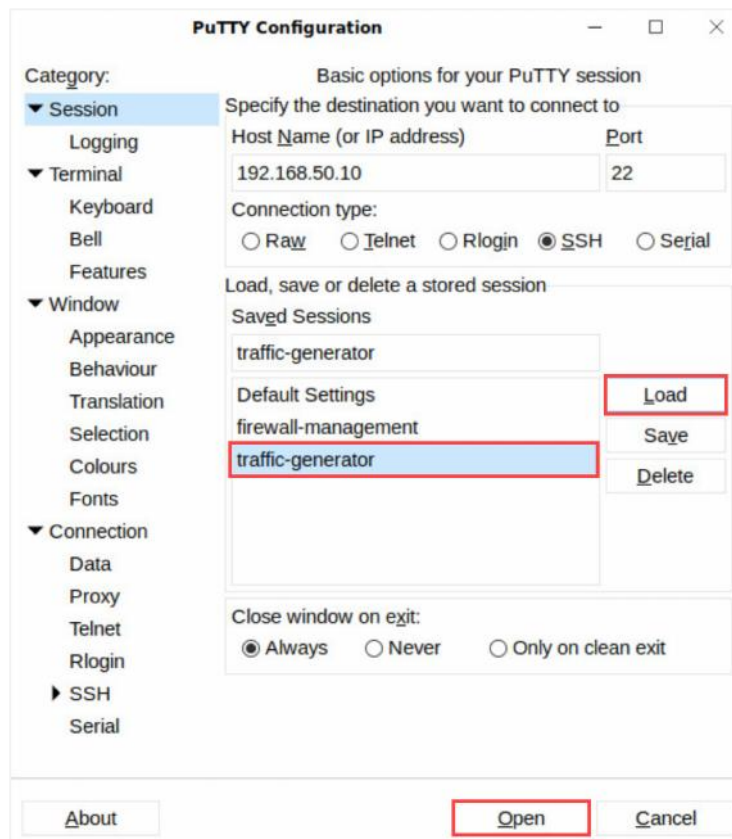
1. Minimize *Chromium* in the upper-right.



2. Double-click the **PuTTY** application on the Client Desktop.



- From the *PuTTY Configuration* window, select **traffic-generator** from the *Saved Sessions* section. Then, click the **Load** button. Finally, click the **Open** button.

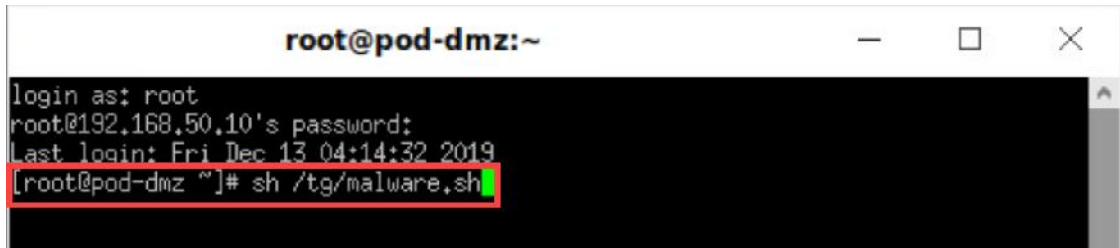


- At the *login as:* prompt, type **root**. Type **Pa10A1t0** for the password, and press **Enter**.



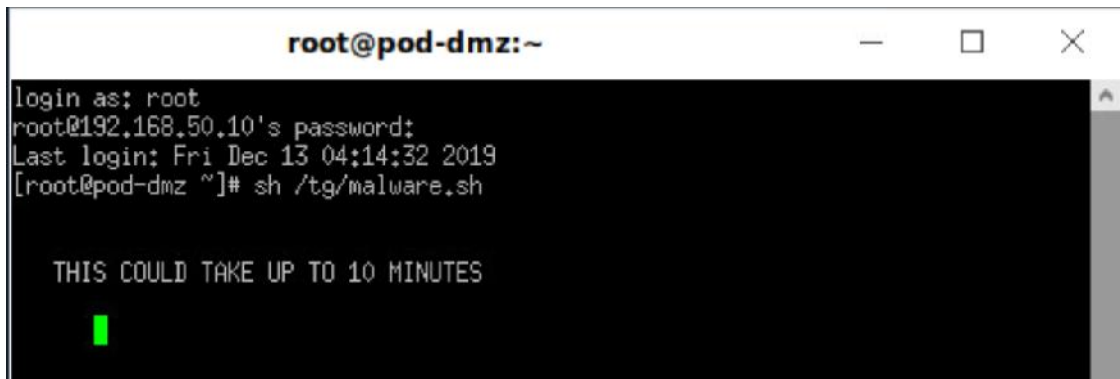
Notice the cursor will not move while you type the password.

5. Type `sh /tg/malware.sh` and press **Enter**.



```
root@pod-dmz:~  
login as: root  
root@192.168.50.10's password:  
Last login: Fri Dec 13 04:14:32 2019  
[root@pod-dmz ~]# sh /tg/malware.sh
```

6. Wait 10 minutes to let the script generate malware traffic.



```
root@pod-dmz:~  
login as: root  
root@192.168.50.10's password:  
Last login: Fri Dec 13 04:14:32 2019  
[root@pod-dmz ~]# sh /tg/malware.sh  
  
THIS COULD TAKE UP TO 10 MINUTES  
█
```

7. The script will generate test malware traffic to the Firewall so that you can see malware traffic in the Firewall. You will see the following output when the script has generated the traffic.

```
root@pod-dmz:~  
login as: root  
root@192.168.50.10's password:  
Last login: Fri Dec 13 04:14:32 2019  
[root@pod-dmz ~]# sh /tg/malware.sh  
  
THIS COULD TAKE UP TO 10 MINUTES  
  
Actual: 822 packets (735581 bytes) sent in 134.03 seconds.  
Rated: 5400.0 Bps, 0.043 Mbps, 6.11 pps  
Flows: 27 flows, 0.20 fps, 822 flow packets, 0 non-flow  
Statistics for network device: ens224  
Successful packets: 822  
Failed packets: 0  
Truncated packets: 0  
Retried packets (ENOBUFFS): 0  
Retried packets (EAGAIN): 0  
Actual: 67 packets (47535 bytes) sent in 17.04 seconds.  
Rated: 2700.0 Bps, 0.021 Mbps, 3.83 pps  
Flows: 6 flows, 0.34 fps, 67 flow packets, 0 non-flow  
Statistics for network device: ens224  
Successful packets: 67  
Failed packets: 0  
Truncated packets: 0  
Retried packets (ENOBUFFS): 0  
Retried packets (EAGAIN): 0  
Actual: 372 packets (264661 bytes) sent in 0.259538 seconds.  
Rated: 1019700.0 Bps, 8.15 Mbps, 1433.31 pps  
Flows: 2 flows, 7.70 fps, 372 flow packets, 0 non-flow  
Statistics for network device: ens224  
Successful packets: 372  
Failed packets: 0  
Truncated packets: 0  
Retried packets (ENOBUFFS): 0  
Retried packets (EAGAIN): 0  
Actual: 44 packets (11666 bytes) sent in 0.118690 seconds.  
Rated: 98200.0 Bps, 0.785 Mbps, 370.71 pps  
Flows: 2 flows, 16.85 fps, 44 flow packets, 0 non-flow  
Statistics for network device: ens224  
Successful packets: 44  
Failed packets: 0  
Truncated packets: 0  
Retried packets (ENOBUFFS): 0  
Retried packets (EAGAIN): 0  
[root@pod-dmz ~]#
```



Notice that you have successfully generated malware packets by initializing the malware.sh file.

6.2 Find Malware Threat in the Application Command Center

In this section, you will review **Threat Activity** and **Blocked Activity** in the *Application Command Center*.

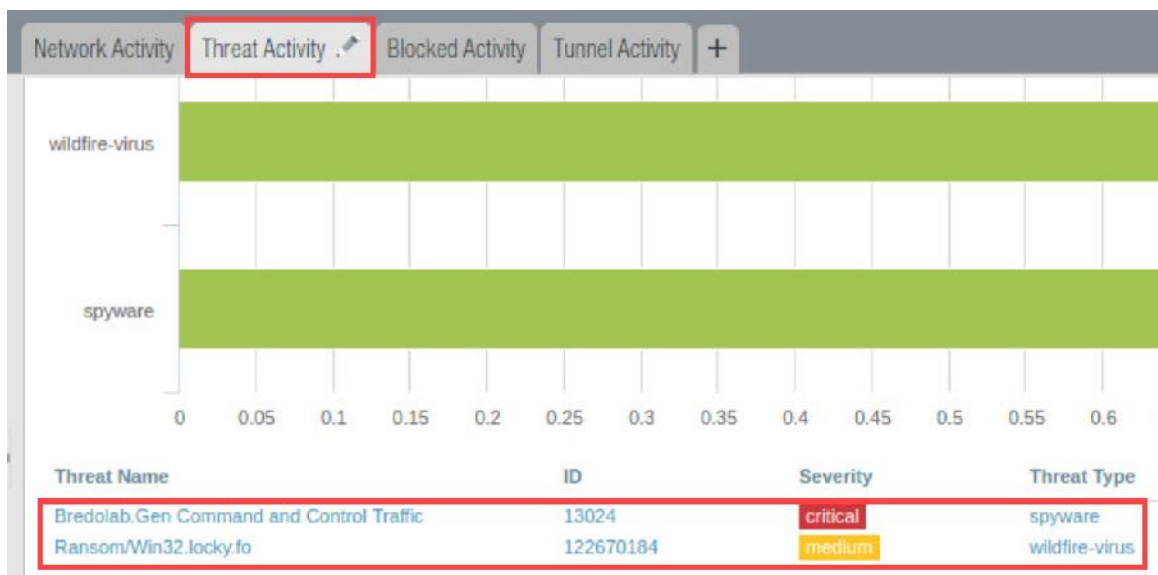
1. Maximize *Chromium* from the Taskbar.



2. Navigate to **ACC > Threat Activity**.

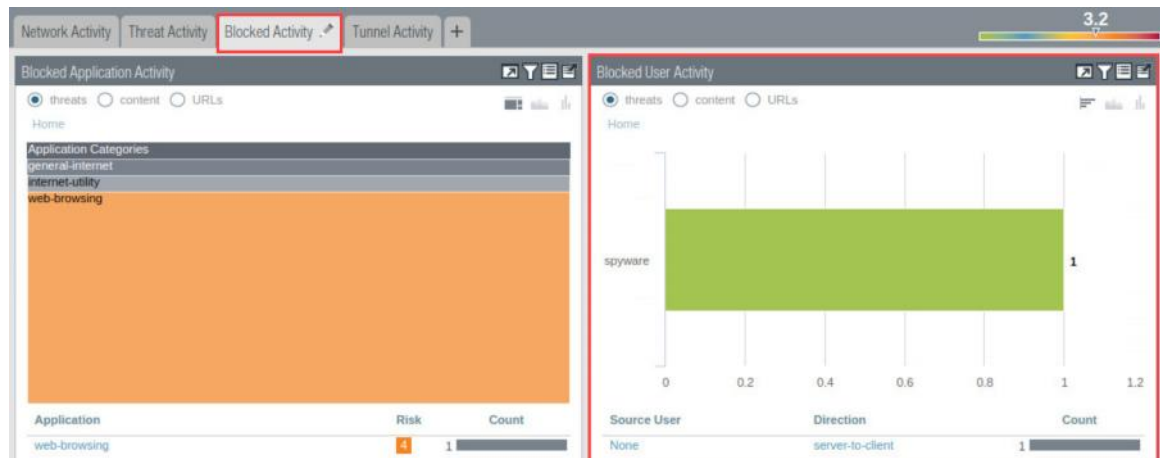


3. You should see a bar graph of the types of threats identified and a list of threats under *Threat Name*.



If you do not see any data onscreen, you may need to wait up to 5-10 minutes and click the Refresh icon in the upper-right. If that does not help, try clicking on the web browser's Refresh icon to fresh the entire browser.

4. Navigate to the **Blocked Activity** tab. Observe the *Blocked User Activity* section.



5. The lab is now complete; you may end the reservation.