# PALO ALTO NETWORKS FIREWALL 11.0 ESSENTIALS

# Lab 4: Connecting the Firewall to Production Networks with Security Zones

**Document Version: 2025-10-13**

# Contents

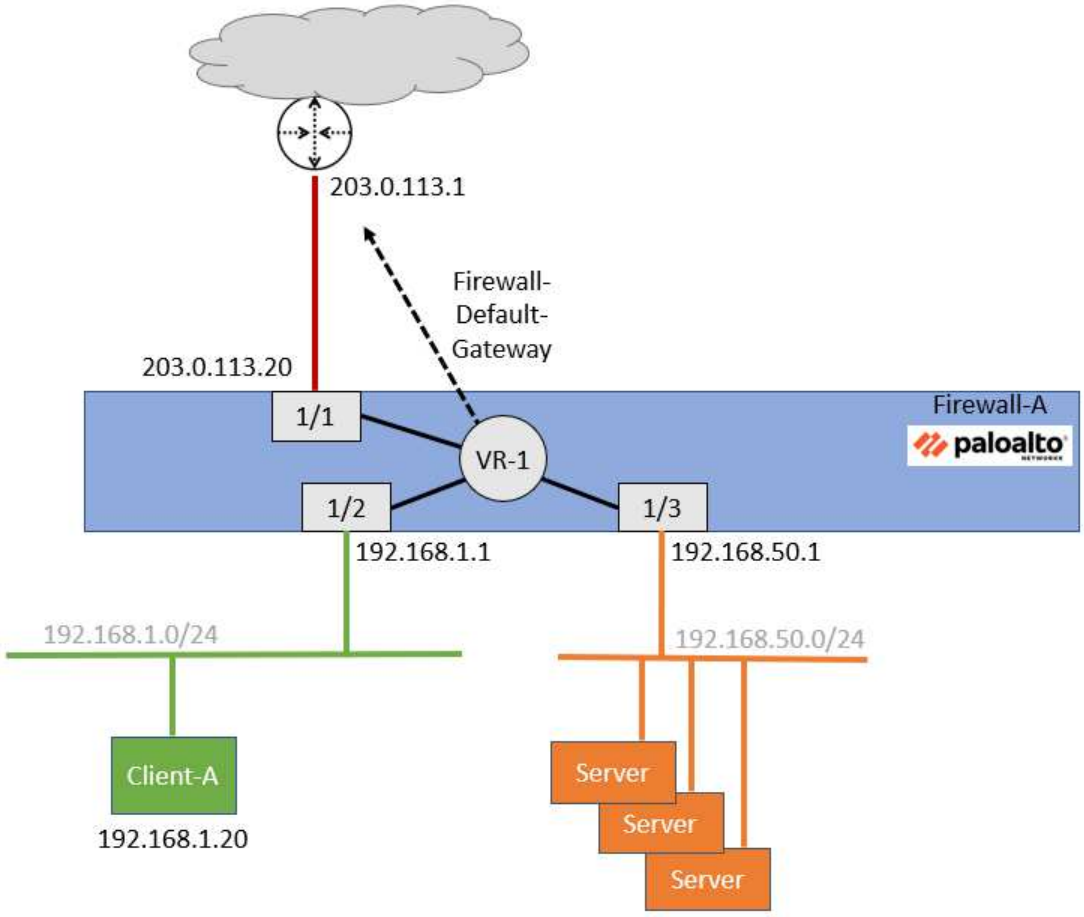


## Introduction

In preparation for deployment, you need to connect the firewall to the appropriate production networks. You already have cabled the firewall interfaces to the appropriate switch ports in the data center. In this section, you will configure the firewall with Layer 3 IP addresses and a virtual router. You also will create security zones that divide your network into separate logical areas so that you have more control over traffic from one segment to another.

When you have the configuration in place on the firewall, you will use ping from different devices to verify connectivity between all the segments.



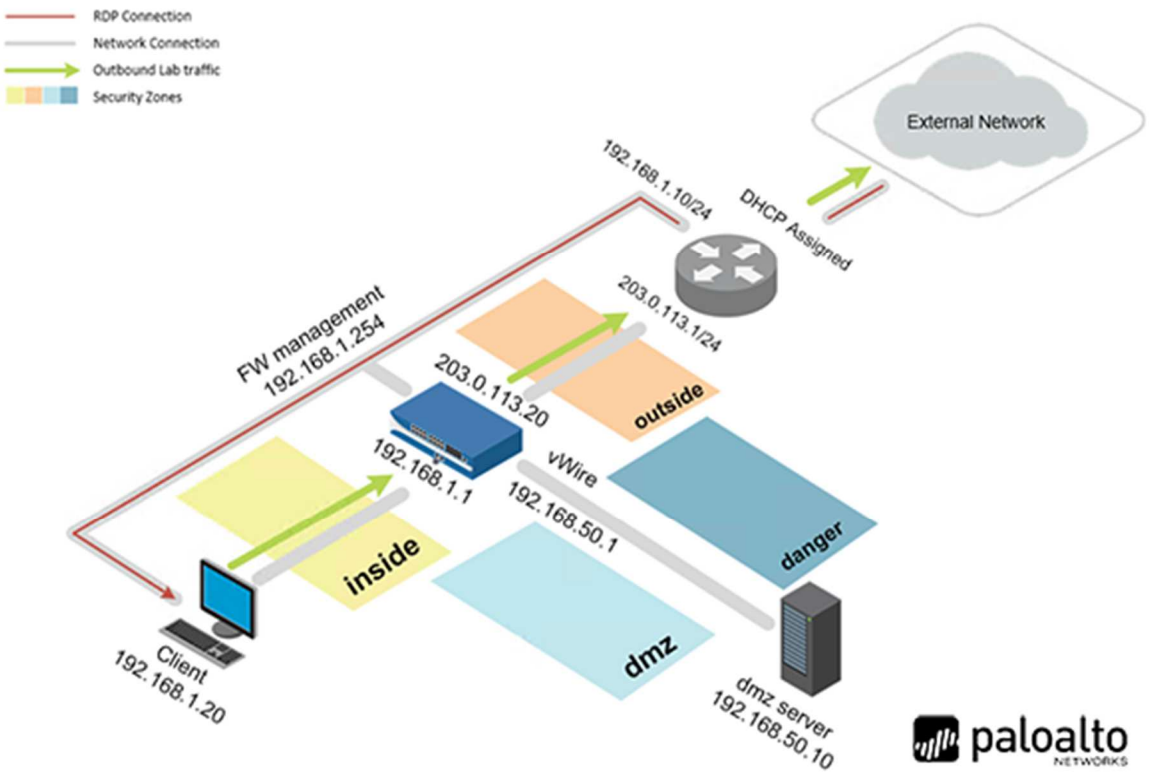

## Objective

In this lab, you will perform the following tasks:

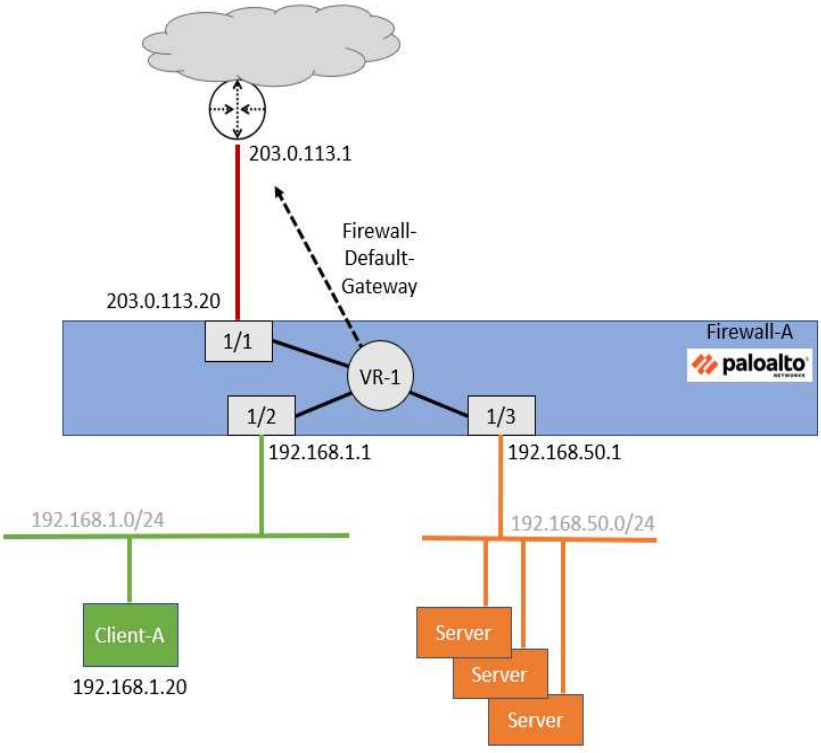
- Load a baseline configuration.
- Create Layer 3 interfaces.
- Create a virtual router.
- Segment your production network using security zones.
- Test connectivity from firewall to hosts in each security zone.
- Create Interface Management Profiles.

## Lab Topology




## Theoretical Lab Topology



## Lab Settings

The information in the table below will be needed 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` | `Pal0Alt0!` |
| DMZ | **192.168.50.10** | `root` | `Pal0Alt0!` |
| Firewall | **192.168.1.254** | `admin` | `Pal0Alt0!` |
| vRouter | **192.168.1.10** | `root` | `Pal0Alt0` |

## Lab Guidance

There are two sections in this lab guide:

- High-Level Lab Steps
- Detailed Lab Steps

The High-Level Lab Steps section provides only general guidance and information about how to accomplish the lab objectives. This section is more challenging and is suited for students who have a working knowledge of Palo Alto Networks firewalls. If you have never worked with a Palo Alto Networks firewall, we strongly encourage you to use the Detailed Lab Steps section.

The instructions in the Detailed Lab Steps section provide guided, detailed steps and screenshots to accomplish the lab objectives.

If you decide to use the High-Level Lab Guide and get stuck, switch to the Detailed Lab Guide for guidance.


You are not required to complete both the High-Level Lab Guide and the Detailed Lab Guide for each lab. Instead, please select the appropriate section based on your familiarity with Palo Alto Networks Firewalls.

# 1 Connecting the Firewall to Production Networks with Security Zones- High Level Lab Steps

It is recommended to use this section if you possess significant experience in working with Palo Alto Networks firewalls. In case you require more comprehensive instructions to achieve the objectives, please utilize the Detailed-Lab Steps section in Task 2.

## 1.1 Apply a Baseline Configuration to the Firewall

- On the Zorin desktop, select *lab-user*, enter **Pal0Alt0!** for the password.
- For the Palo Alto Firewall, enter **admin** for the user and **Pal0Alt0!** for the password.
- Load and commit the configuration file - **edu-210-11.0a-04.xml** to the Firewall.

## 1.2 Create Layer 3 Network Interfaces

- Use the information in the tables below to create Layer 3 network interfaces.

| **Create a Layer 3 Interface on ethernet1/1** | |
|---|---|
| **Ethernet Interface** | **ethernet1/1** |
| **Comment** | **Internet Connection** |
| **Type** | **Layer 3** |
| **IPv4 Type** | **Static** |
| **IP** | **203.0.113.20/24** |

| **Create a Layer 3 Interface on ethernet1/2** | |
|---|---|
| **Ethernet Interface** | **ethernet1/2** |
| **Comment** | **Users network connection** |
| **Type** | **Layer 3** |
| **IPv4 Type** | **Static** |
| **IP** | **192.168.1.1/24** |

| **Create a Layer 3 Interface on ethernet1/3** | |
|---|---|
| **Ethernet Interface** | **ethernet1/3** |
| **Comment** | **Extranet servers connection** |
| **Type** | **Layer 3** |
| **IPv4 Type** | **Static** |

| | |
|---|---|
| **IP** | **192.168.50.1/24** |

## 1.3 Create a Virtual Router

- Use the information in the table below to create a Virtual Router and a firewall default gateway.

| | |
|---|---|
| **Name** | **VR-1** |
| **Interfaces (General Tab)** | **ethernet1/1**<br>**ethernet1/2**<br>**ethernet1/3** |
| **IPv4 Static Route Name** | **Firewall Default Gateway** |
| **Destination** | **0.0.0.0/0** |
| **Interface** | **ethernet1/1** |
| **Next Hop** | **IP Address** |
| **Next Hop IP** | **203.0.113.1** |

## 1.4 Segment Your Production Network Using Security Zones

- Use the information in the tables below to create three Security Zones with the appropriate interface in each Zone.

| | |
|---|---|
| **Zone Name** | **Internet** |
| **Type** | **Layer 3** |
| **Interface** | **ethernet1/1** |

| | |
|---|---|
| **Zone Name** | **Users_Net** |
| **Type** | **Layer 3** |
| **Interface** | **ethernet1/2** |

| | |
|---|---|
| **Zone Name** | **Extranet** |
| **Type** | **Layer 3** |
| **Interface** | **ethernet1/3** |

## 1.5 Commit the Configuration

- Commit the changes to the firewall before proceeding.

## 1.6 Test Connectivity to Each Zone

- Use the *Remmina SSH* application on the Client-A desktop to connect to Firewall-A.
- In the firewall CLI, use the **ping** command to check network connectivity from the firewall to a host in each Security Zone.
    - From **192.168.1.1** (ethernet1/2) to **192.168.1.20.**
    - From **192.168.50.1** (ethernet1/3) to **192.168.50.150.**
    - From **203.0.113.20** (ethernet1/1) to **8.8.8.8.**

## 1.7 Test Interface Access before Management Profiles

- Ping the firewall interface on ethernet1/2 from a terminal connection on Client-A. You will not get a response.
- Attempt to connect to the firewall for CLI management through an SSH connection from Client-A. The firewall will not accept the connection.

## 1.8 Define Interface Management Profiles

Use the information below to create two Interface Management Profiles.

| | |
|---|---|
| **Name** | **Allow-ping** |
| **Enabled Administrative Management Services** | **None** |
| **Enabled Network Services** | **Ping** |

| | |
|---|---|
| **Name** | **Allow-mgt** |
| **Enabled Administrative Management Services** | **HTTPS**<br>**SSH** |
| **Enabled Network Services** | **Ping**<br>**SNMP**<br>**Response Pages** |

## 1.9 Apply Allow-ping to ethernet1/1

- Apply the **Allow-ping** Interface Management Profile to **ethernet1/1.**

## 1.10 Apply Allow-mgt to ethernet1/2

- Apply the **Allow-mgt** Interface Management Profile to **ethernet1/2.**

## 1.11 Apply Allow-mgt to ethernet1/3

- Apply the **Allow-mgt** Interface Management Profile to **ethernet1/3.**

## 1.12 Commit the Configuration

- Commit the changes before testing Interface Management Profiles.

## 1.13 Test Interface Access after Management Profiles

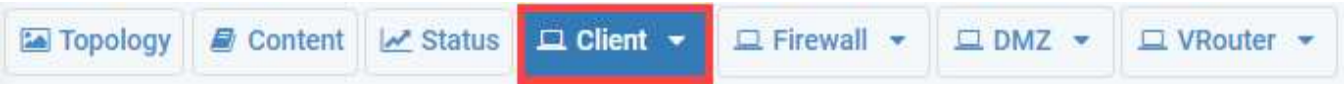
- Ping the firewall interface on ethernet1/2 from a terminal connection on Client-A. You should now get a response.
- Attempt to connect to the firewall for CLI management through an SSH connection from Client-A. The firewall will now accept the connection.

# 2 Connecting the Firewall to Production Networks with Security Zones – Detailed Lab Steps

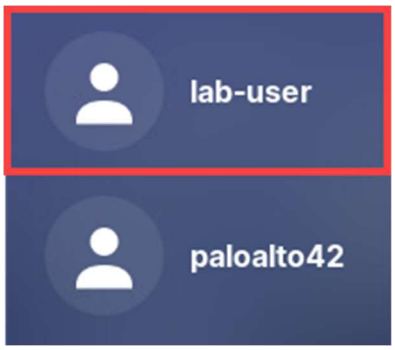
## 2.1 Apply a Baseline Configuration to the Firewall

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

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




2. On the *Zorin* desktop, click **lab-user.**

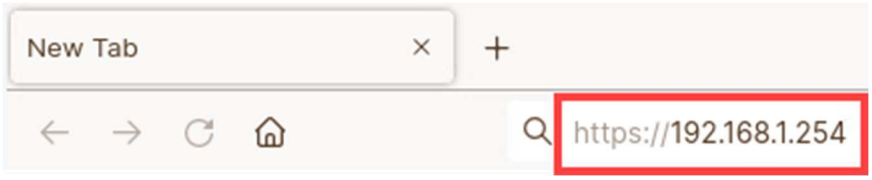



3. For the *lab-user* password, enter **Pal0Alt0!** and press **Enter**.


4. Double-click the **Firefox Web Browser** icon located on the *Desktop*.

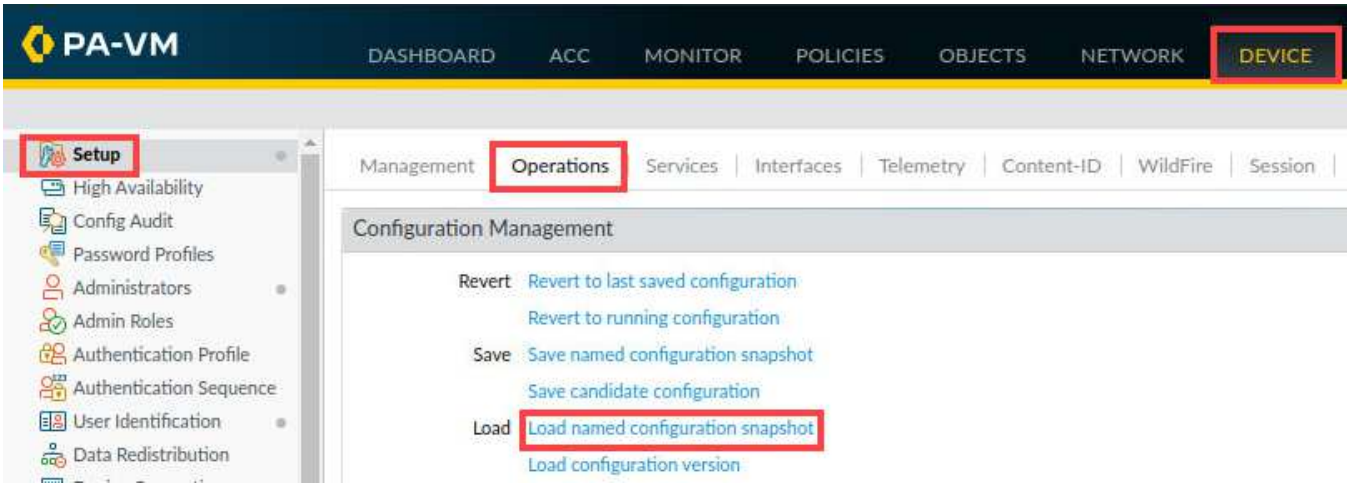
5. In the *Firefox* address field, type **`https://192.168.1.254`** and press **Enter**.




6. Log in to the Firewall web interface as username **admin**, password **`Pal0Alt0!.`**

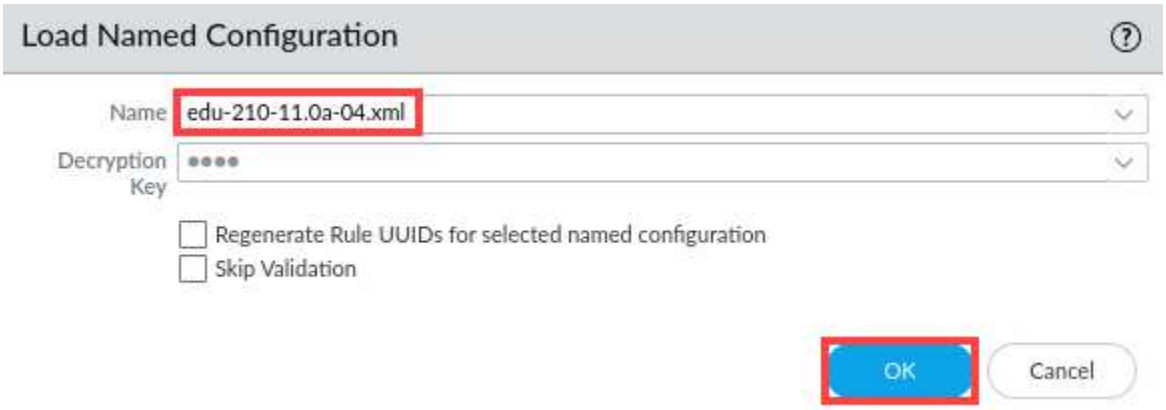

If you do not immediately see the login page, please wait an additional 1-3 minutes for the *Firewall* to fully initialize. If needed, refresh the page.

7. Navigate to **Device > Setup > Operations** in the web interface and click on **Load named configuration snapshot** underneath the *Configuration Management* section.

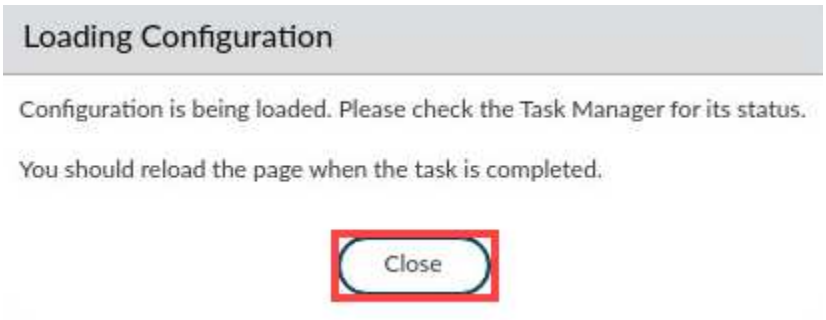


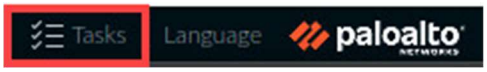
8. In the *Load Named Configuration* window, select **edu-210-11.0a-04.xml** from the *Name* drop-down box and click **OK**.



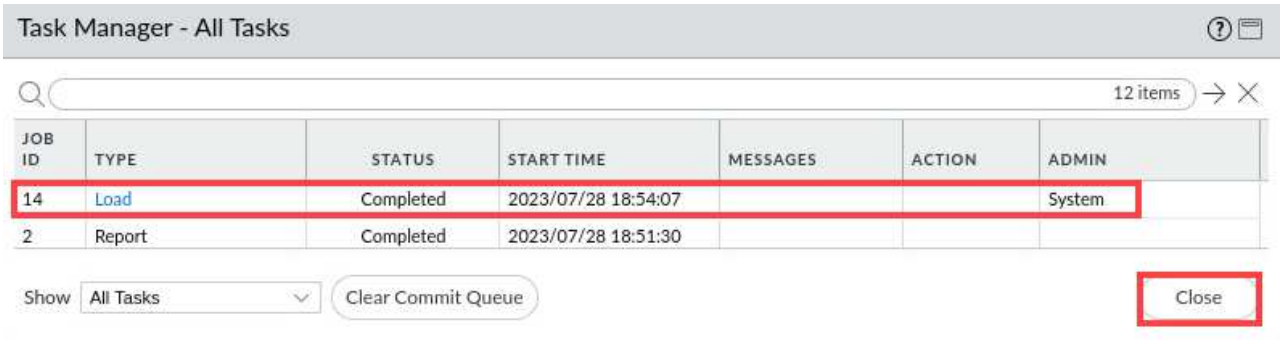

9. In the *Loading Configuration* window, a message will show *Configuration is being loaded. Please check the Task Manager for its status. You should reload the page when the task is completed.* Click **Close** to continue.




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



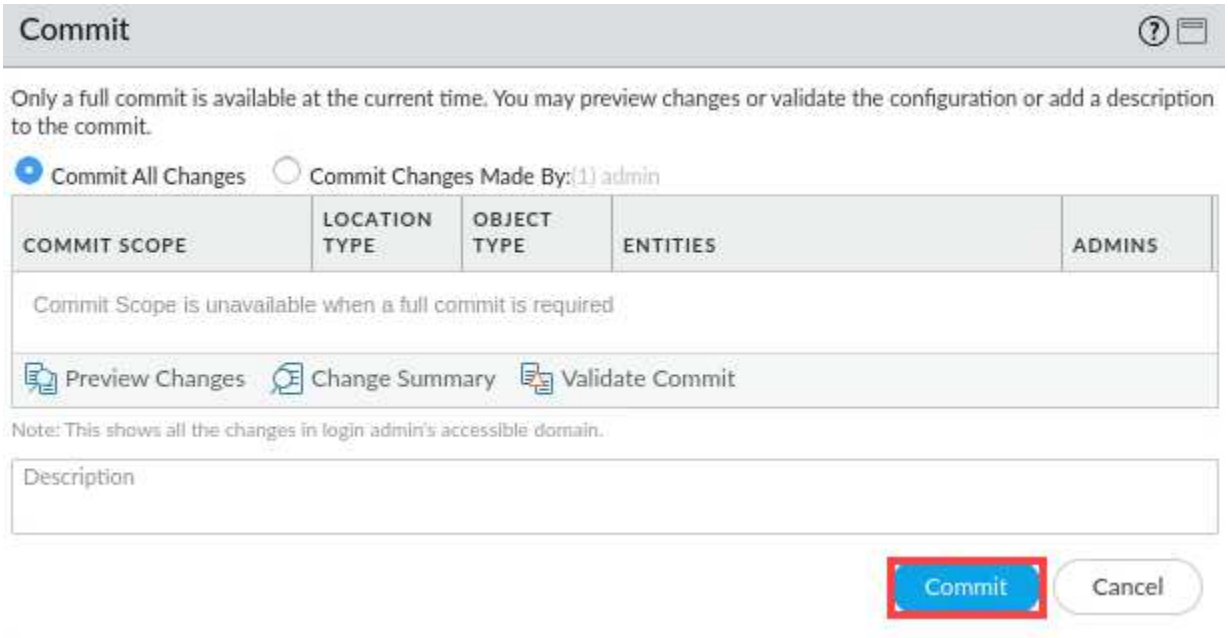

11. In the *Task Manager – All Tasks* window, verify the *Load* type has been completed. Click **Close**



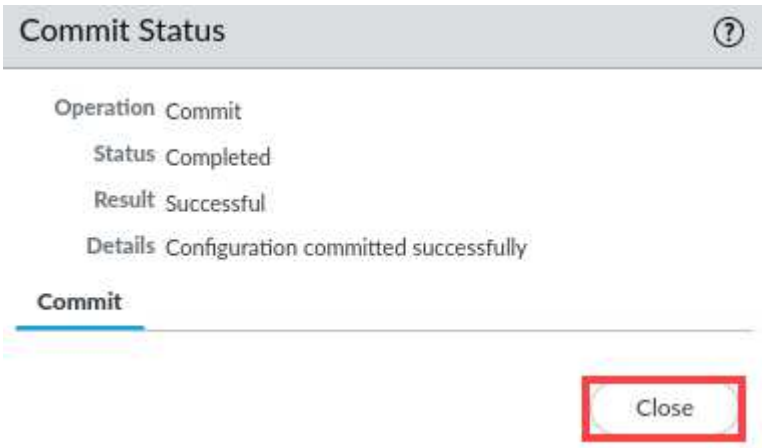

12. Click the **Commit** link located at the top-right of the web interface.

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




14. When the commit operation is complete, click **Close** to continue.



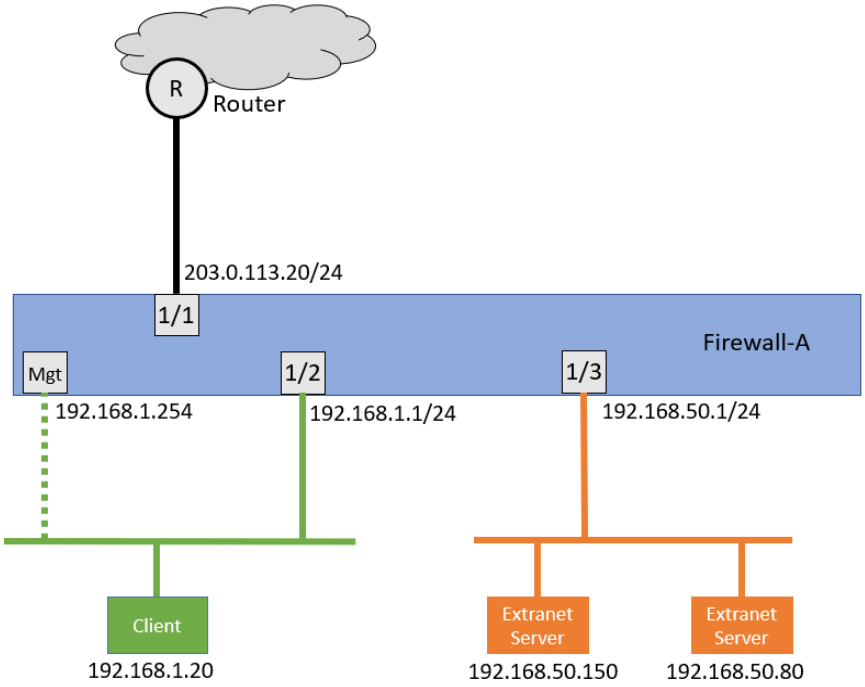

The commit process takes changes made to the Firewall and copies them to the running configuration, which will activate all configuration changes since the last commit.

15. Leave the *Palo Alto Networks Firewall* open and continue to the next task.

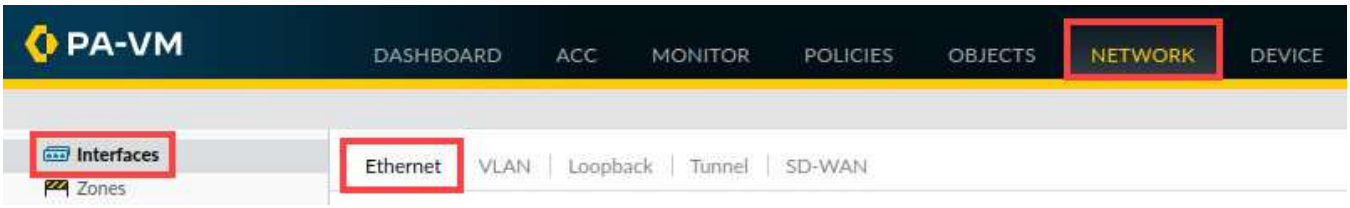
  

## 2.2 Create Layer 3 Network Interfaces

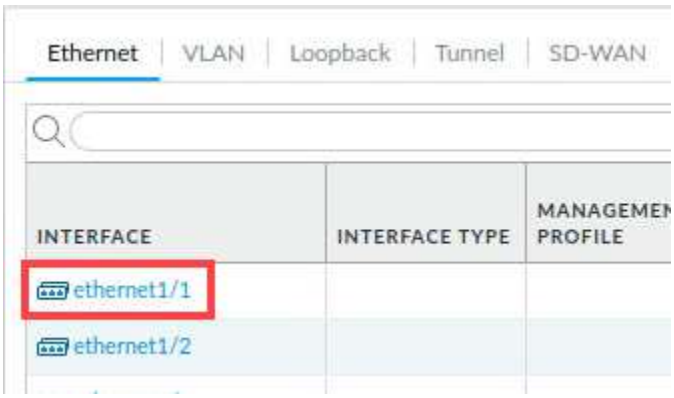
In this section, you will create Layer 3 interfaces on the firewall that will provide basic network connectivity to your production networks. You have a network with users (192.168.1.0/24), a network with production servers (192.168.50.0/24) and a network connecting the firewall to an upstream internet router (203.0.113.0/24). The following diagram provides details.




1. In the web interface, select **Network > Interfaces > Ethernet**.




2. Click **ethernet1/1** to configure the interface.

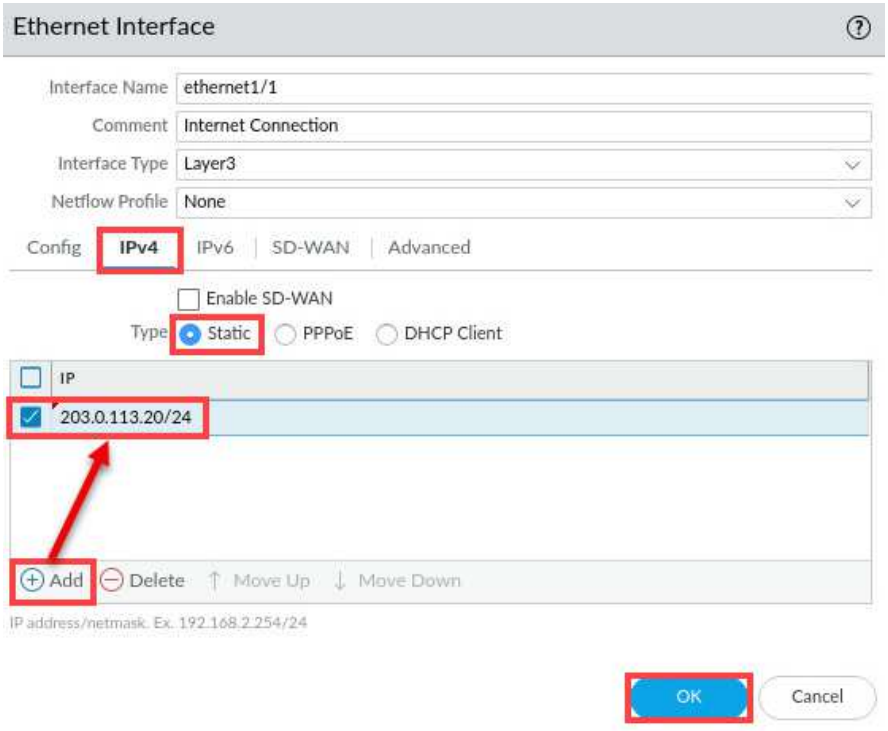


3. Notice the *Ethernet Interface* window appears. Configure the following:

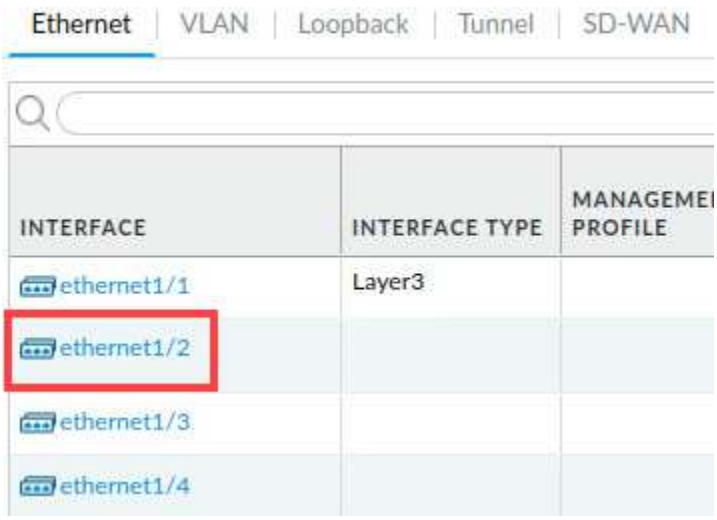
| Parameter | Value |
|---|---|
| Comment | **`Internet Connection`** |
| Interface Type | **Layer3** |
| Virtual Router | **None** |


4. Select the tab for **IPv4**. Leave the *Type* set to **Static.** Under the *IP* heading, click **Add.** Enter **`203.0.113.20/24`.** Click **OK**.



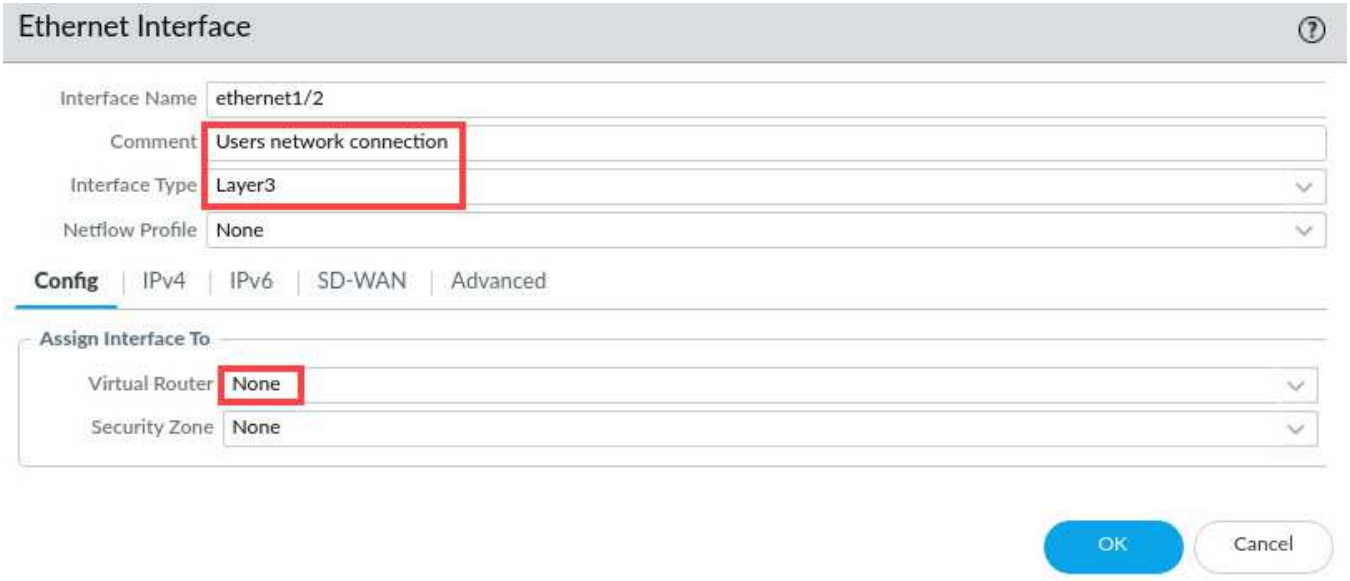

  

5. Click **ethernet1/2** to configure the interface.



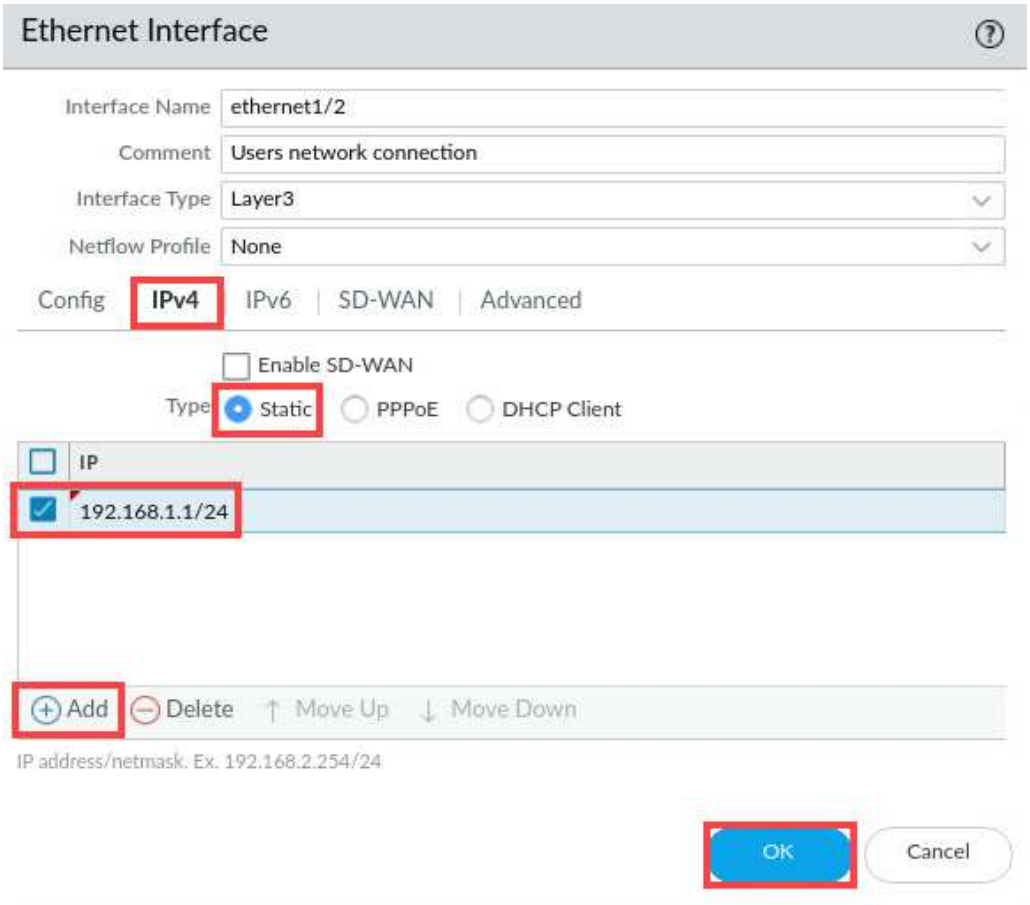

6. Notice the *Ethernet Interface* window appears. Configure the following:

| Parameter | Value |
|---|---|
| Comment | **`Users network connection`** |
| Interface Type | **Layer3** |
| Virtual Router | **None** |

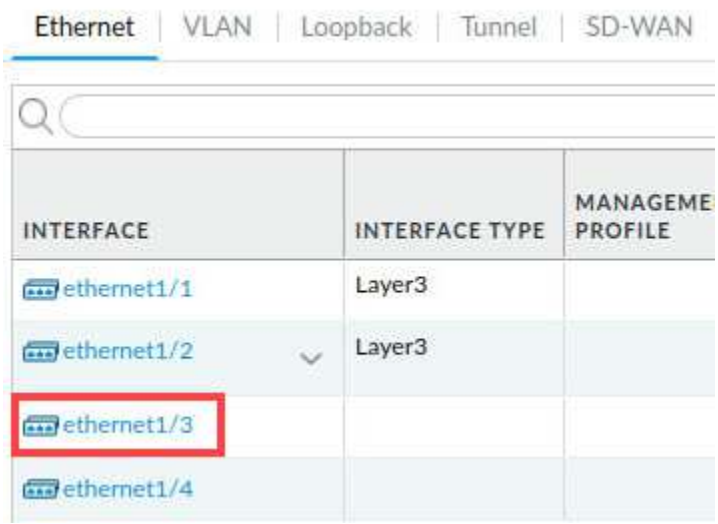


7. Select the tab for **IPv4**. Leave the *Type* set to **Static.** Under the *IP* heading, click **Add.** Enter **`192.168.1.1/24`.** Click **OK**.



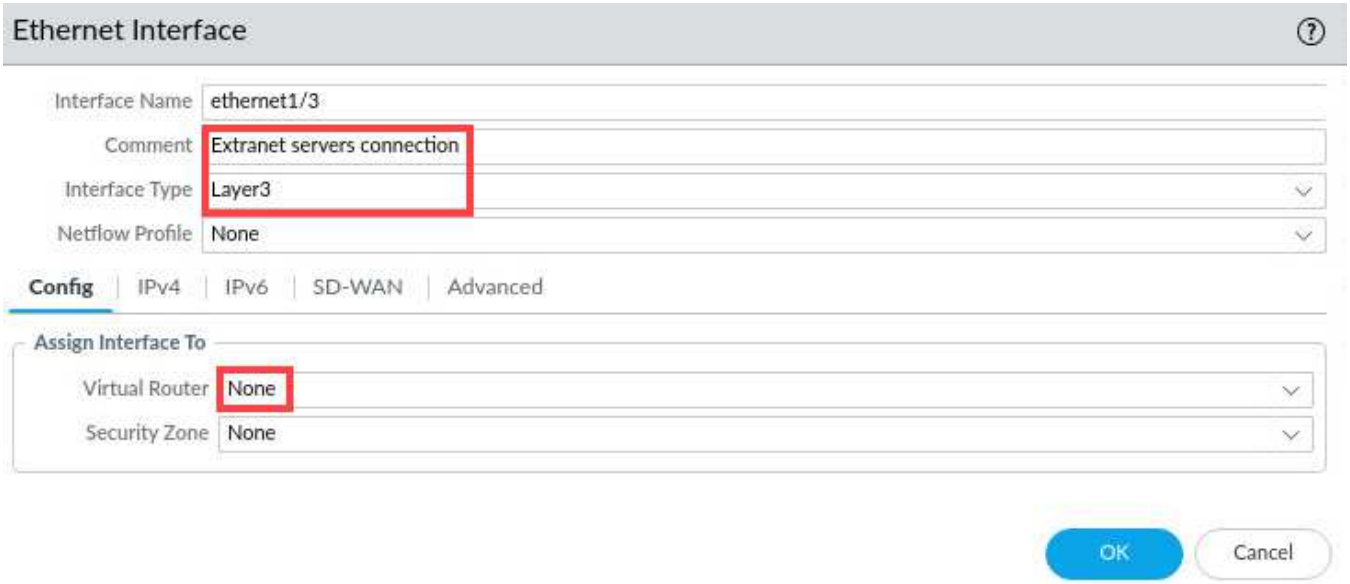

8. Click **ethernet1/3** to configure the interface.



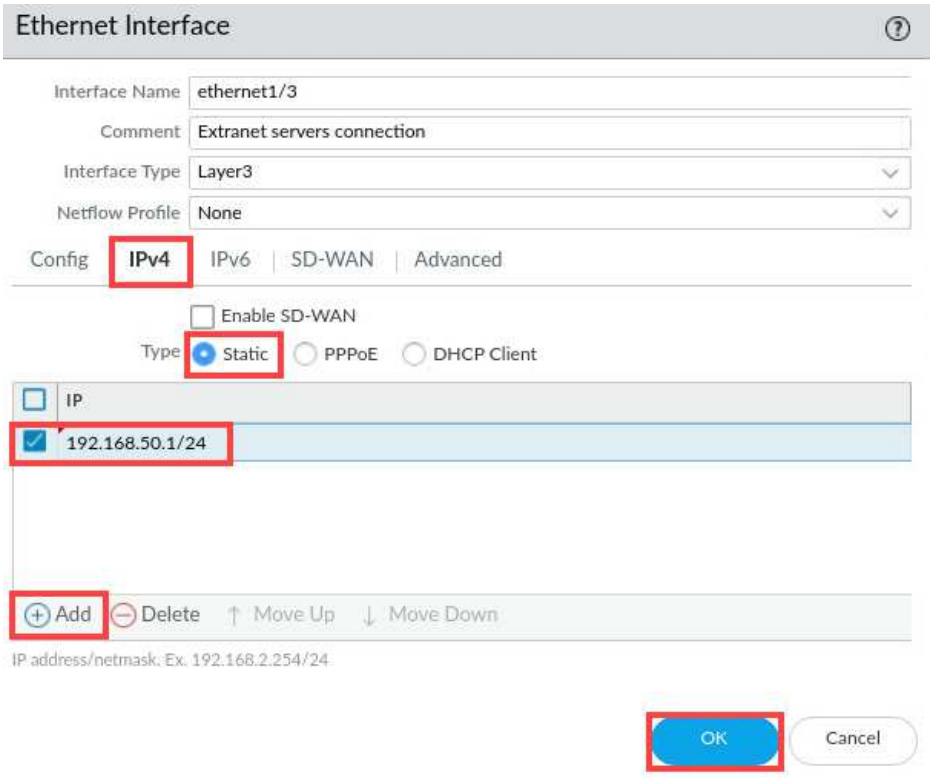

  

9. Notice the *Ethernet Interface* window appears. Configure the following:

| Parameter | Value |
|---|---|
| Comment | **`Extranet servers connection`** |
| Interface Type | **Layer3** |
| Virtual Router | **None** |

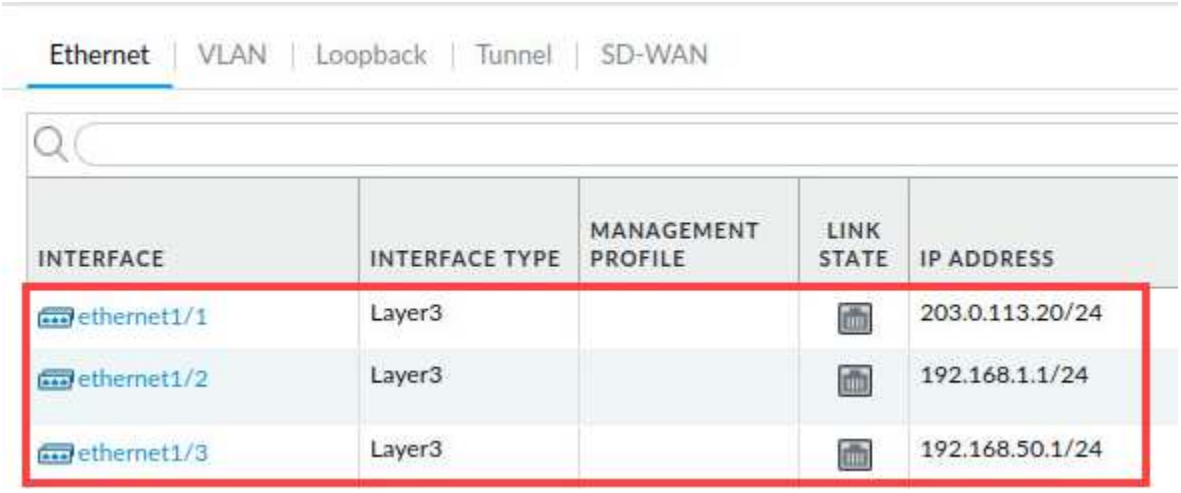



10. Select the tab for **IPv4**. Leave the *Type* set to **Static.** Under the *IP* heading, click **Add.** Enter **`192.168.50.1/24.`** Click **OK**.



11. When complete, your *Ethernet* table will have three entries. Confirm that *Ethernets 1/1, 1/2,* and *1/3* are showing as seen below.




12. Leave the web interface open and continue to the next task.

## 2.3 Create a Virtual Router

In this section, you will create a virtual router and connect your Layer 3 interfaces to it. You also will define a default gateway for the virtual router itself.

The firewall requires a virtual router to obtain routes to other subnets, either using static routes that you manually define or through participation in Layer 3 routing protocols that provide dynamic routes. The firewall has a predefined virtual router named default.

A virtual router is a separate routing instance that allows the firewall to route traffic from one network to another through its Layer 3 interfaces. In this environment, we have three networks - 192.168.1.0/24, 192.168.50.0/24, and 203.0.113.0/24. You will modify the default virtual router and add the firewall's interfaces from each of these networks to the virtual router.

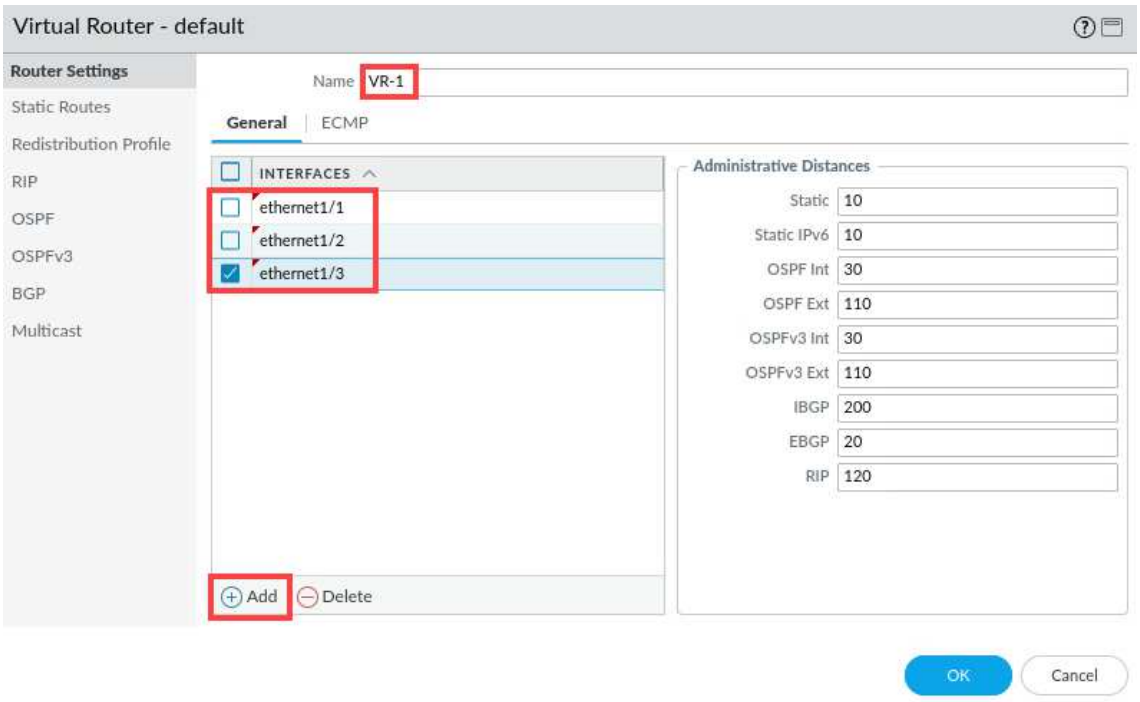
Because we are using Layer 3 interfaces, the firewall must have a way to route traffic from one network to another; this process is done with a virtual router. However, because each interface is in a different security zone, the Security rules will prevent traffic in one network from going to another network through the firewall.

1. In the web interface, select **Network > Virtual Routers**.

2. Click **default** to open the default router.


3. In the *Virtual Router - default* window, rename the default router to **VR-1**. Click **Add** to add the following interfaces: **ethernet1/1**, **ethernet1/2**, and **ethernet1/3**.



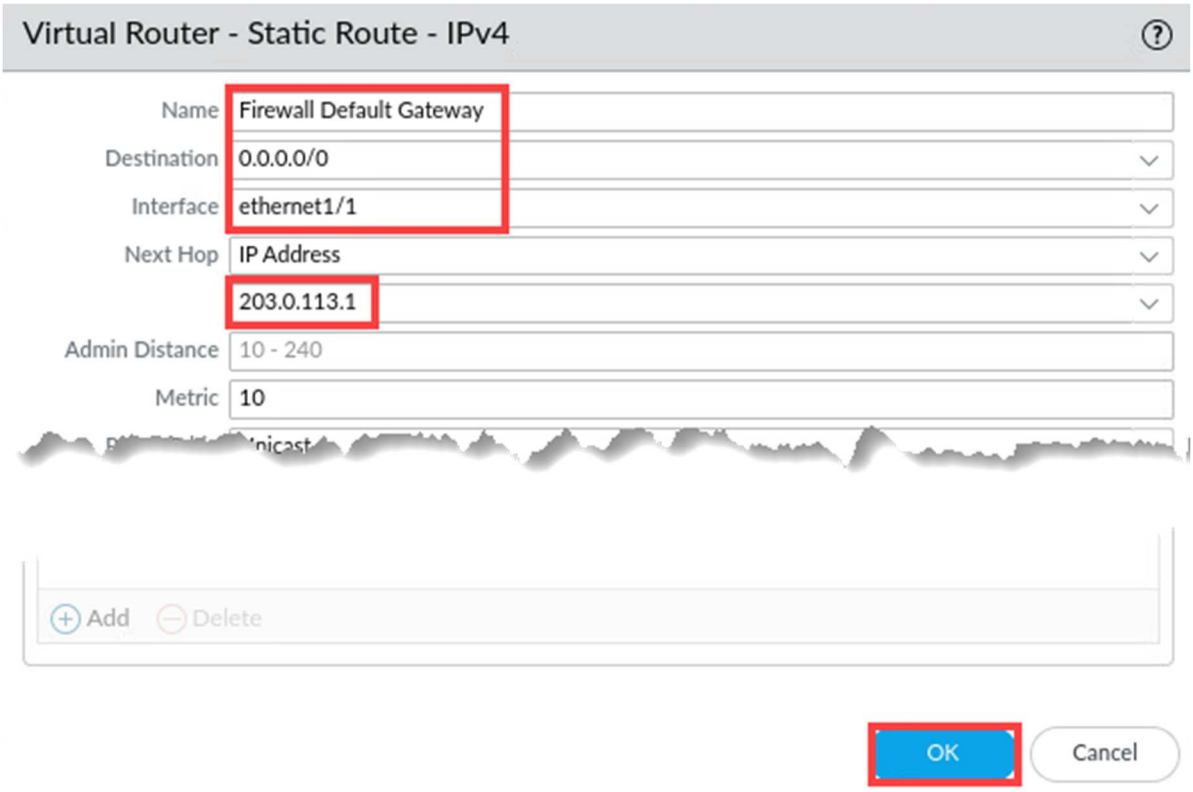

This step can also be completed via each **Ethernet Interface** configuration window.


The order in which you add these interfaces to the list is not important. You could start by adding ethernet1/3 and the result will be the same. You are simply adding the appropriate interfaces to this virtual router.

4. In the *Virtual Router - default* window, click the link on the side for **Static Routes**. Under the tab for **IPv4**, click **Add** at the bottom of the window.

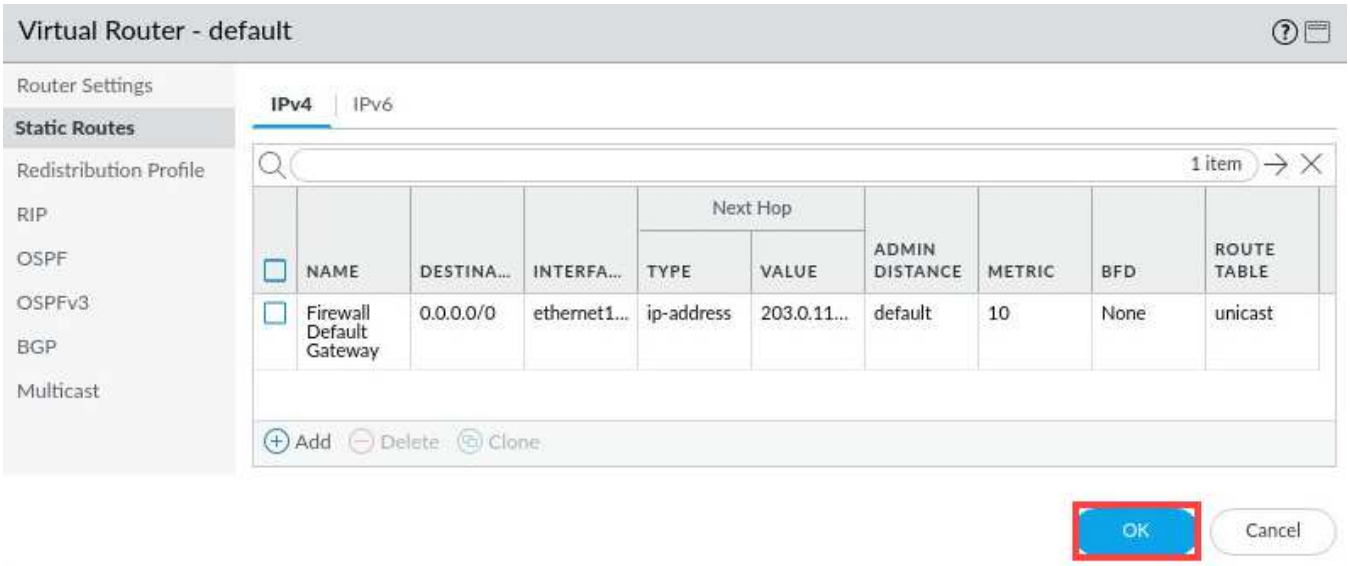

5. In the *Virtual Router – Static Route - IPv4* window, for *Name*, enter **`Firewall Default Gateway`**, for *Destination*, enter **`0.0.0.0/0`**, for *Interface*, select **ethernet1/1,** for the *Next Hop* address, enter **`203.0.113.1`**. Leave the remaining settings unchanged. Click **OK**.



This entry is the default route for the firewall. Like all other network hosts, the firewall needs a default gateway to send traffic to unknown networks. The firewall has local connections to 192.168.1.0, 192.168.50.0 and 203.0.113.0 networks, so it can forward packets to hosts on those networks directly. However, for any other destination IP addresses (such as 8.8.8.8 for DNS), this route statement instructs the firewall to forward packets to 203.0.113.1, which is the internet.

6. In the *Virtual Router – default* window, click **OK.**

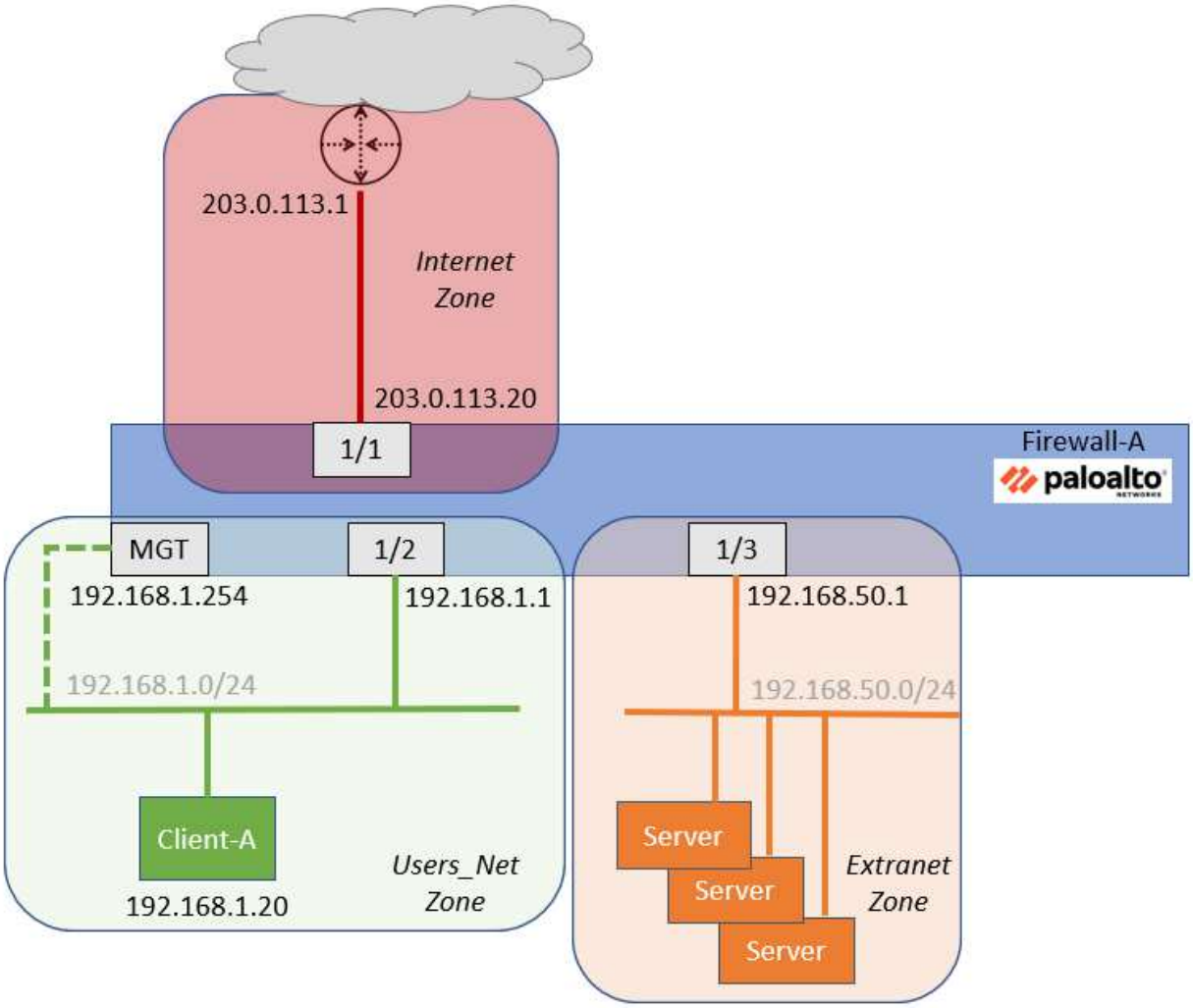



7. Leave the *Palo Alto Networks Firewall* open and continue to the next task.

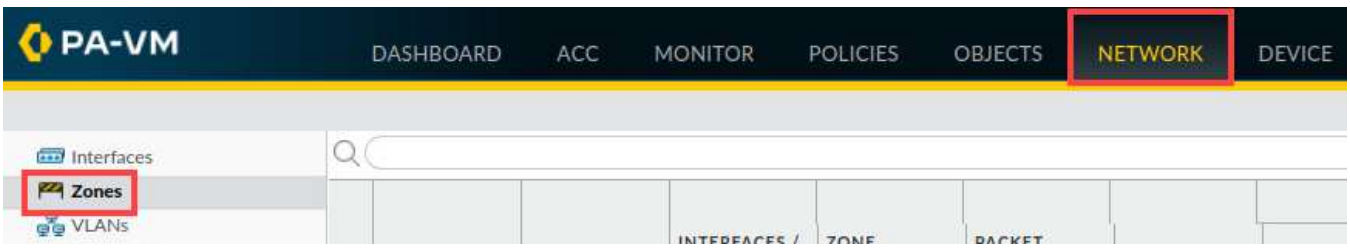
## 2.4 Segment Your Production Network Using Security Zones

Security zones are a logical way to group physical and virtual interfaces on the firewall to control and log the traffic that traverses your network through the firewall. An interface on the firewall must be assigned to a security zone before the interface can process traffic. A zone can have multiple interfaces of the same type (for example, Tap, Layer 2, or Layer 3 interfaces) assigned to it, but an interface can belong to only one zone.




With your network interfaces and virtual router in place, you can now create security zones. You will create three security zones.

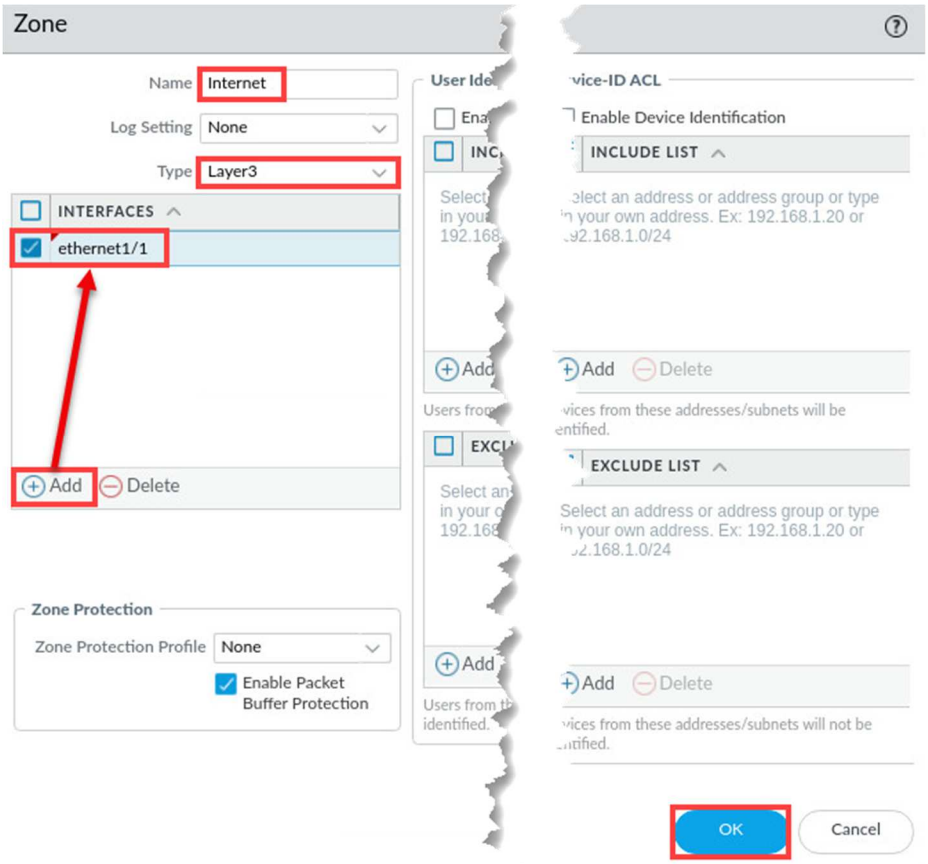
1. In the web interface, select **Network > Zones**.



2. Click **Add** to create a new zone**.**

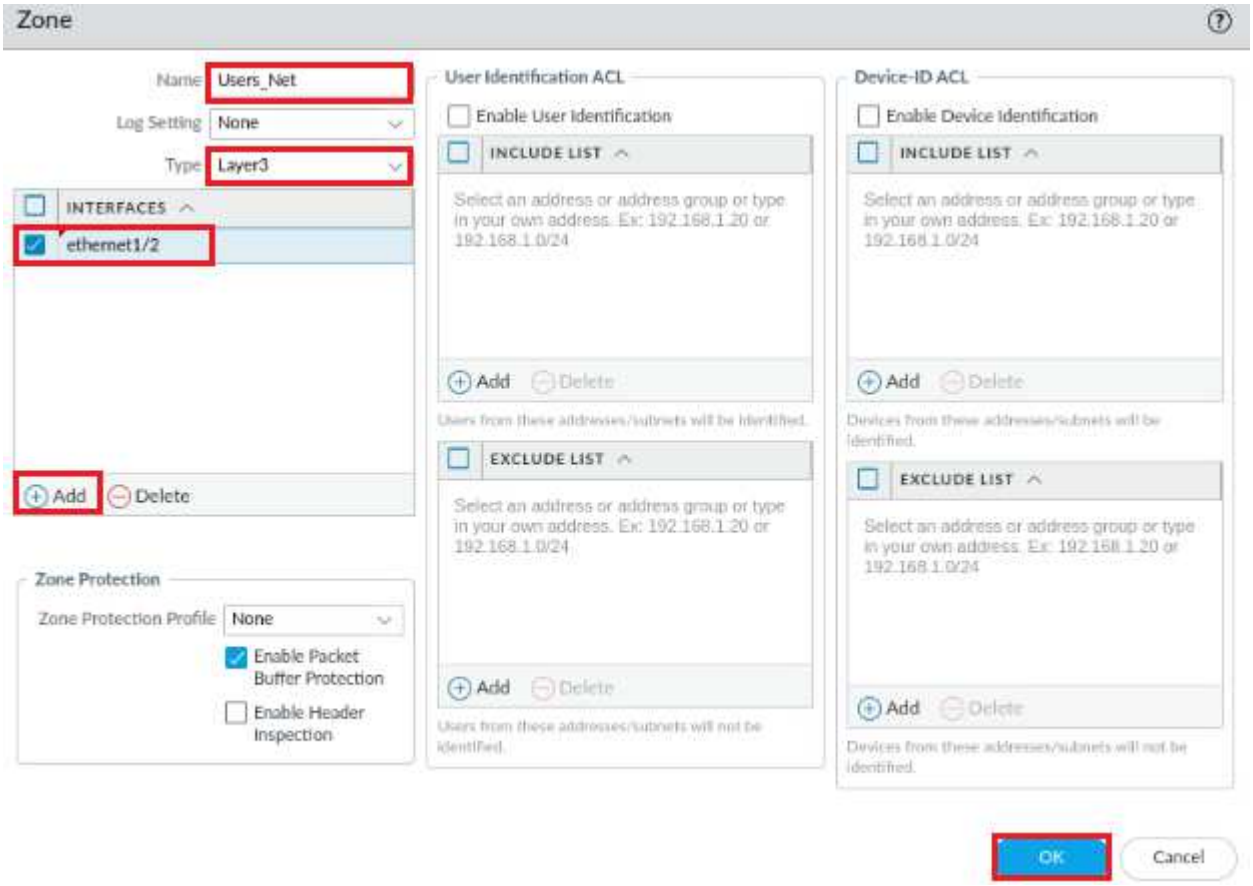

3. In the *Zone* window, enter **`Internet`** for the *Name*, for *Type*, select **Layer3**. Under the *Interfaces* section, click **Add**. Select **Ethernet 1/1** and leave all other settings unchanged. Click **OK**.




4. Click **Add** to create a new zone**.**

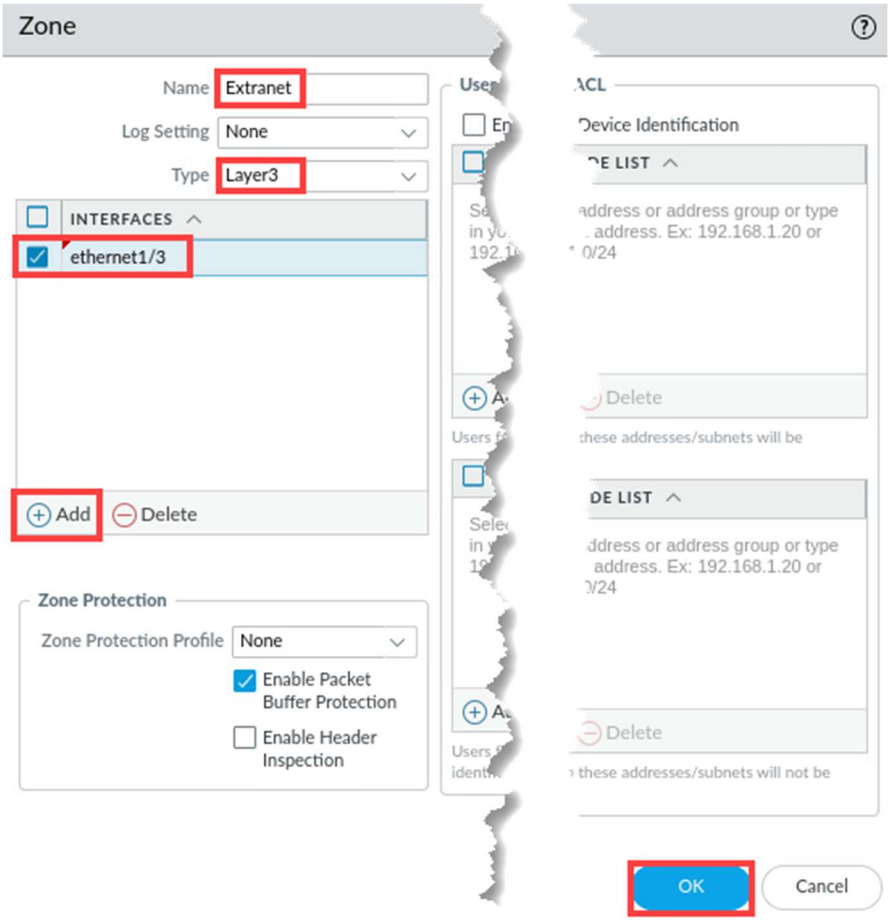
5. In the *Zone* window, enter **Users_Net** for the *Name*, for *Type*, select **Layer3**. Under the *Interfaces* section, click **Add**. Select **Ethernet 1/2** and leave all other settings unchanged. Click **OK**.



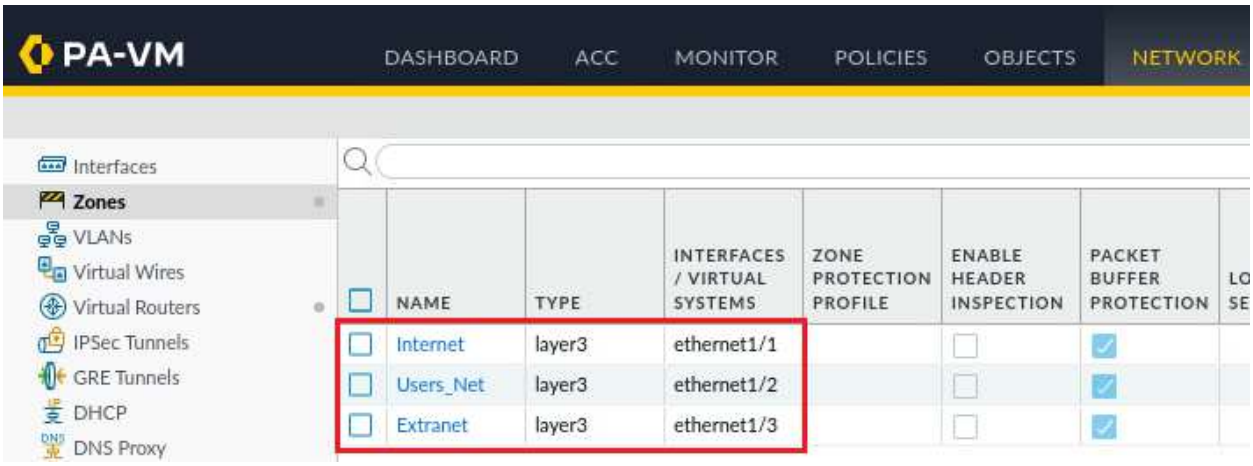

6. Click **Add** to create a new zone**.**

7. In the *Zone* window, enter **Extranet** for the *Name*, for *Type*, select **Layer3**. Under the *Interfaces* section, click **Add**. Select **Ethernet 1/3** and leave all other settings unchanged. Click **OK**.



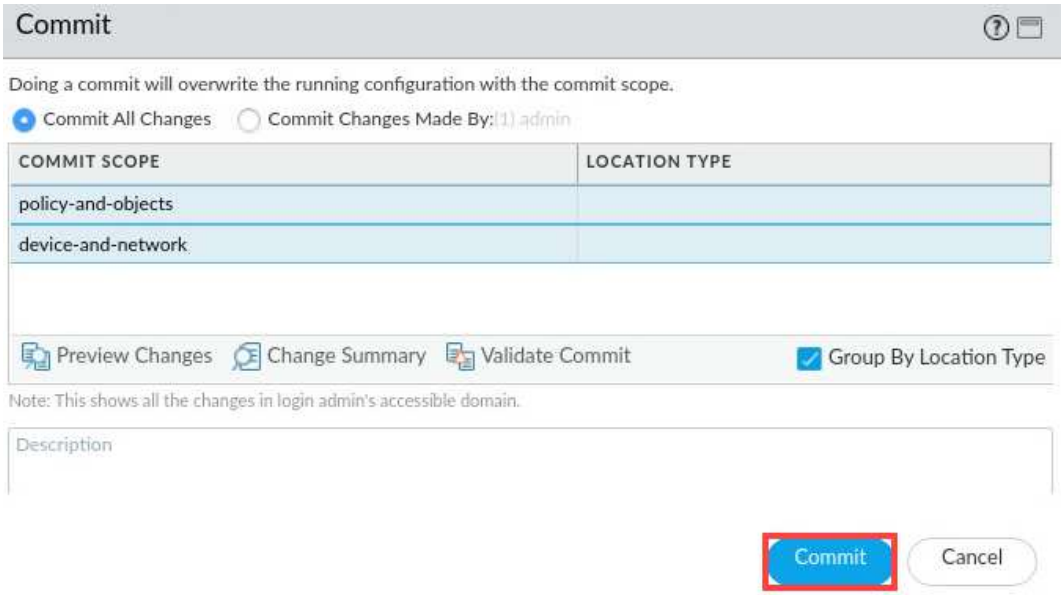

8. You should now have three security zones.



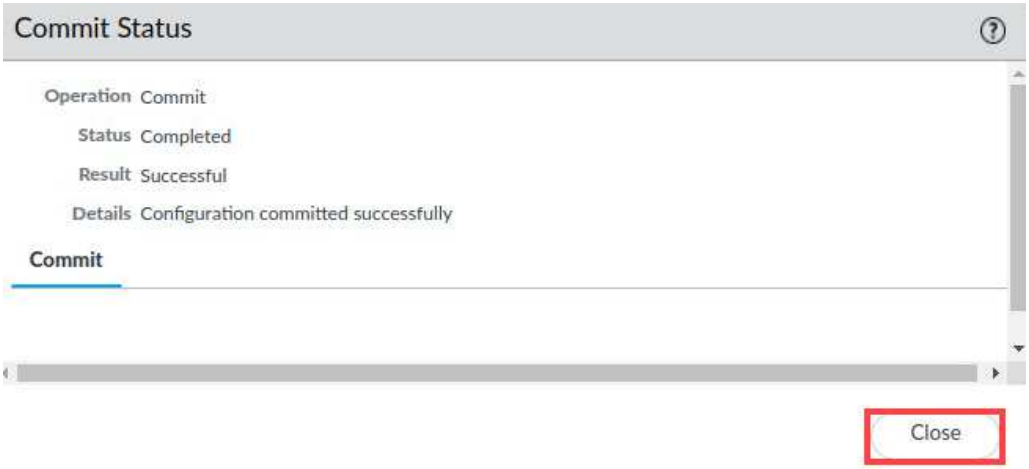

9. Click the **Commit** button at the upper right of the *PA-VM* web interface.

10. In the *Commit* window, click **Commit**.




11. In the *Commit Status* window, click **Close**.




12. Minimize the PA-VM firewall by clicking the **minimize** icon in the upper right of the web interface and continue to the next task.

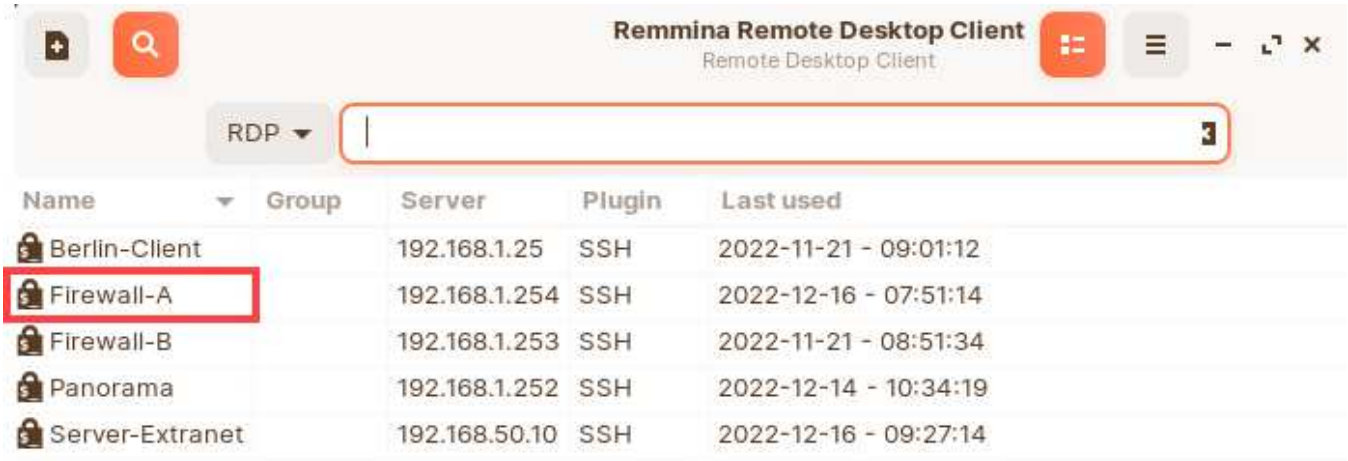
  

## 2.5 Test Connectivity to Each Zone

In this section, you will verify network connectivity from the firewall to hosts in each zone, you will use an SSH connection and ping hosts on each network.

1. On the client desktop, open the **Remmina** application.


2. Double-click the entry for **Firewall-A.**




> **Please Note** The Firewall-A connection in Remmina has been pre-configured to provide login credentials to the firewall so that you do not have to log in each time. This is for convenience in the lab only.

3. In the CLI connection to the firewall, use the **ping** command to check network connectivity to a host in the *Users_Net Security Zone* by using the following command at the **admin@firewall-a>** prompt. Press **Enter**.

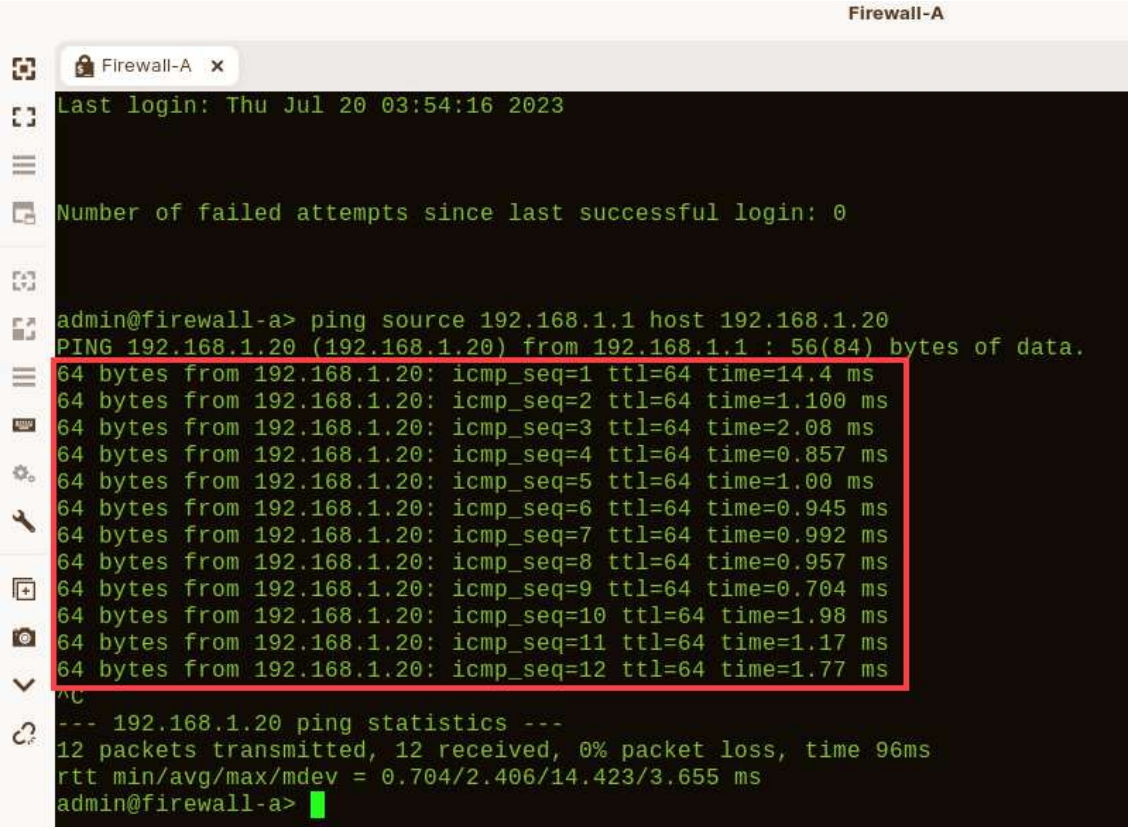
```
admin@firewall-a> ping source 192.168.1.1 host 192.168.1.20
```

Please Note

Note the syntax for this command. 192.168.1.1 is the IP address of ethernet1/2 on the firewall. The command instructs the firewall to use that IP address on ethernet1/2 to ping the host 192.168.1.20. If you do not use the source option, the firewall uses its management interface address as the source IP.

4. Allow the *ping* to continue for three or four seconds and then use **Ctrl+C** to interrupt the command. Notice the *pings* are successful.




5. Use the *ping* command to check connectivity to a host in the Extranet zone by using the following command at the **admin@firewall-a>** prompt. Press **Enter**.

```
admin@firewall-a> ping source 192.168.50.1 host 192.168.50.150
```


Please Note

192.168.50.1 is the IP address on ethernet1/3 which is assigned to the Extranet security zone. 192.168.50.150 is a server in the Extranet zone.

6. Allow the *ping* to continue for three or four seconds and then use **Ctrl+C** to interrupt the command. Notice the *pings* are successful.

```
admin@firewall-a> ping source 192.168.50.1 host 192.168.50.150
PING 192.168.50.150 (192.168.50.150) from 192.168.50.1 : 56(84) bytes of data.
64 bytes from 192.168.50.150: icmp_seq=1 ttl=64 time=1.60 ms
64 bytes from 192.168.50.150: icmp_seq=2 ttl=64 time=0.957 ms
64 bytes from 192.168.50.150: icmp_seq=3 ttl=64 time=1.02 ms
^C
--- 192.168.50.150 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2002ms
rtt min/avg/max/mdev = 0.957/1.193/1.602/0.291 ms
```

7. Use the *ping* command to check connectivity to a host on the Internet by using the following command at the **admin@firewall-a>** prompt.

```
admin@firewall-a> ping source 203.0.113.20 host 8.8.8.8
```

```
admin@firewall-a> ping source 203.0.113.20 host 8.8.8.8
```

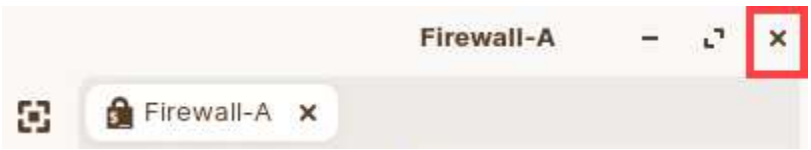
Please Note

203.0.113.20 is the IP address on ethernet1/1 which is assigned to the Internet security zone. 8.8.8.8 is a DNS server on the Internet zone.

8. Allow the *ping* to continue for three or four seconds and then use **Ctrl+C** to interrupt the command. Notice the *pings* are successful.

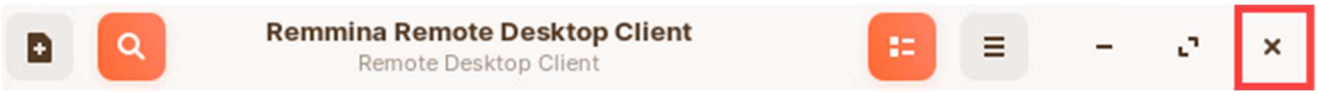
```
admin@firewall-a> ping source 203.0.113.20 host 8.8.8.8
PING 8.8.8.8 (8.8.8.8) from 203.0.113.20 : 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=113 time=8.68 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=113 time=9.14 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=113 time=8.82 ms
^C
--- 8.8.8.8 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2002ms
rtt min/avg/max/mdev = 8.681/8.885/9.147/0.222 ms
```

9. Close the *Firewall-A Remmina* terminal console by clicking on the **close** icon in the upper right.



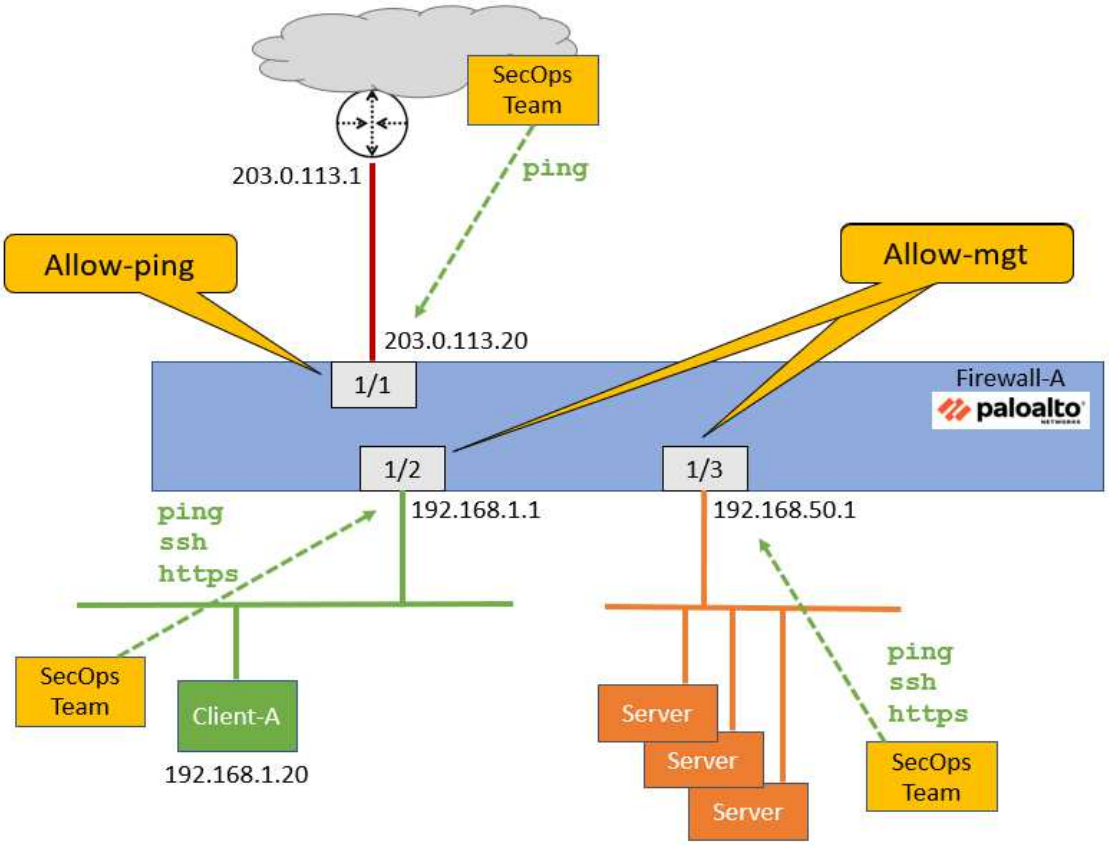
10. Close the *Remmina Remote Desktop Client* by clicking on the **close** icon in the upper right.




11. Stay on the *Client* desktop and continue to the next task.

## 2.6 Test Interface Access before Management Profiles

Management interface profiles allow you to enable specific network services on individual firewall interfaces.



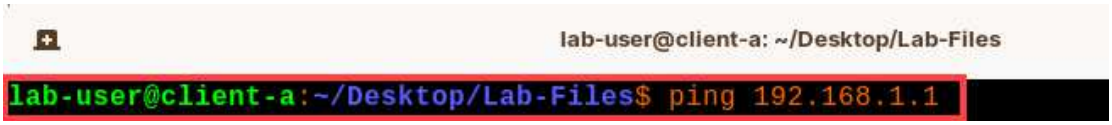

To illustrate the default behavior of firewall interfaces, you will ping 192.168.1.1 from the client workstation. You will also attempt to access the firewall CLI by SSH through 192.168.1.1. Without any Interface Management Profiles in place, both ping and SSH will fail.

1. Open the **Terminal Emulator** on the *client* desktop.

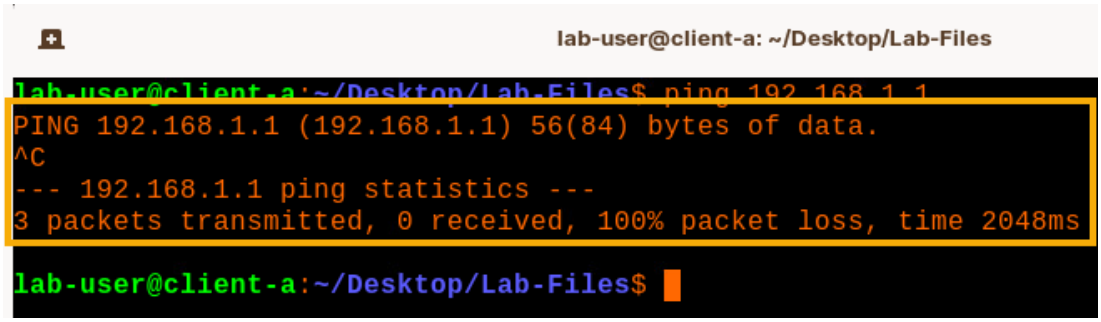

  

2. Issue the following command below.

```
lab-user@client-a:~/Desktop/Lab-Files$ ping 192.168.1.1 <Enter>
```



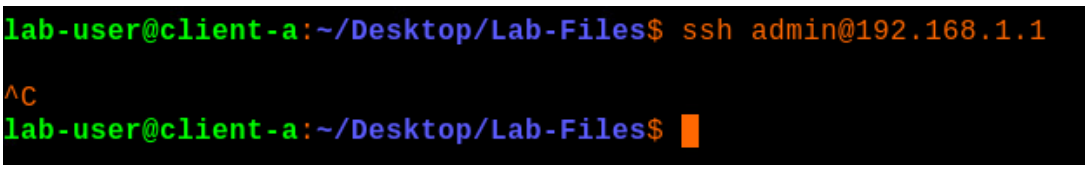

3. Wait a few seconds and use **Ctrl+C** to stop the command. You will not get a response because *Management profiles* have not been configured.




4. Attempt to open an *SSH* connection to the firewall through **192.168.1.1** by issuing the following command.

```
lab-user@client-a:~/Desktop/Lab-Files$ ssh admin@192.168.1.1 <Enter>
```


5. After a few seconds, use **Ctrl+C** to stop the connection because it will not succeed.




6. Leave the *Terminal* window open on the *client* because you will perform these same tests after applying an *Interface Management profile* to *ethernet1/1* and continue to the next task.

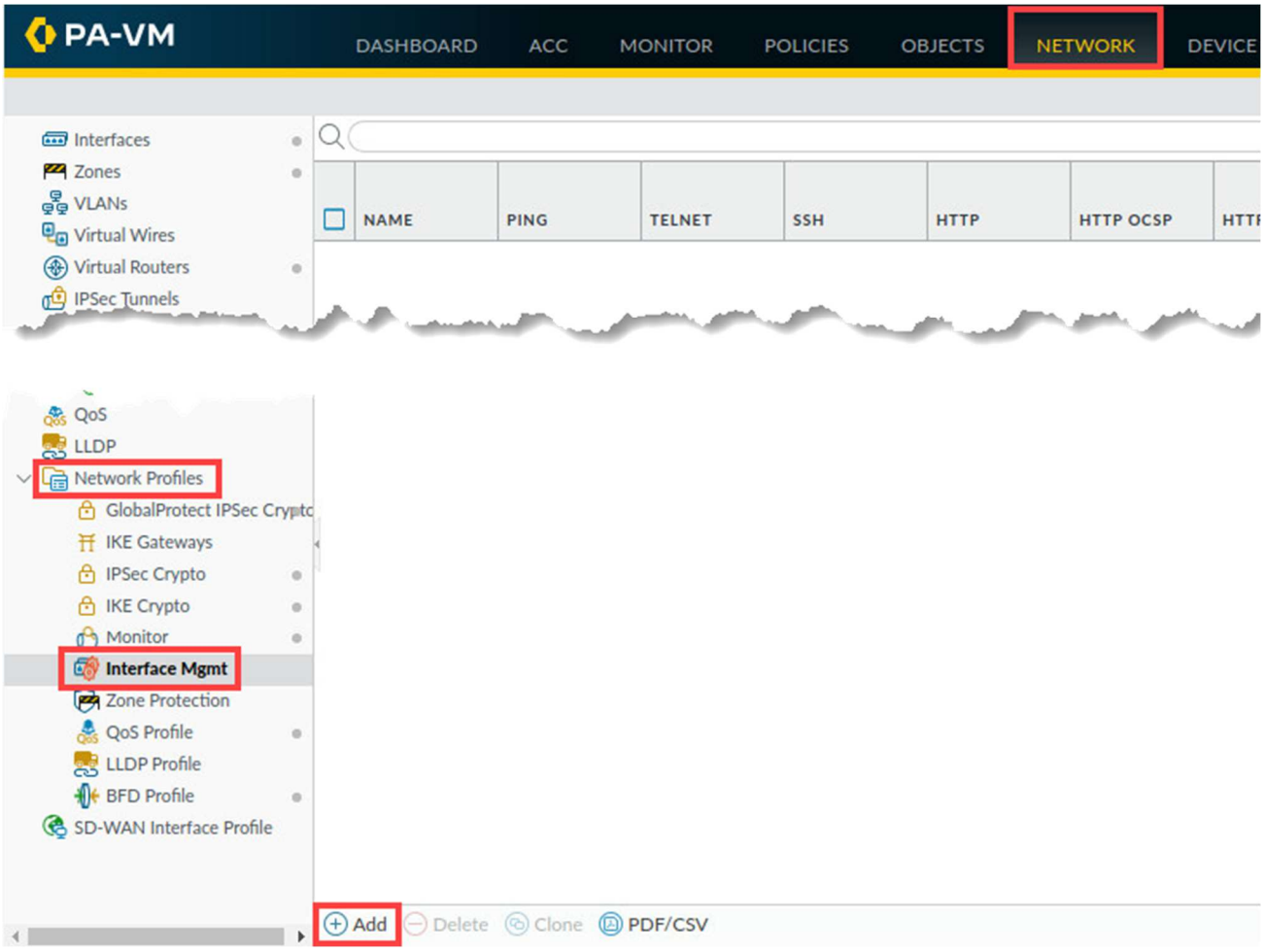
## 2.7 Define Interface Management Profiles

Often, your team members need to manage the firewall but do not always have network connectivity to the management network. In this exercise, you will define two management interface profiles. One profile will allow ping. You will apply this allow-ping profile to the Internet interface so that your SecOps team members can ping the external firewall interface for troubleshooting from outside your organization's network.

You will create a second management interface profile that allows ping and secure management traffic including SSH and HTTPS. You will apply this Allow-mgt profile to the Users_Net interface and to the Extranet interface. This profile will allow your SecOps team to manage the firewall from those networks if they need to.

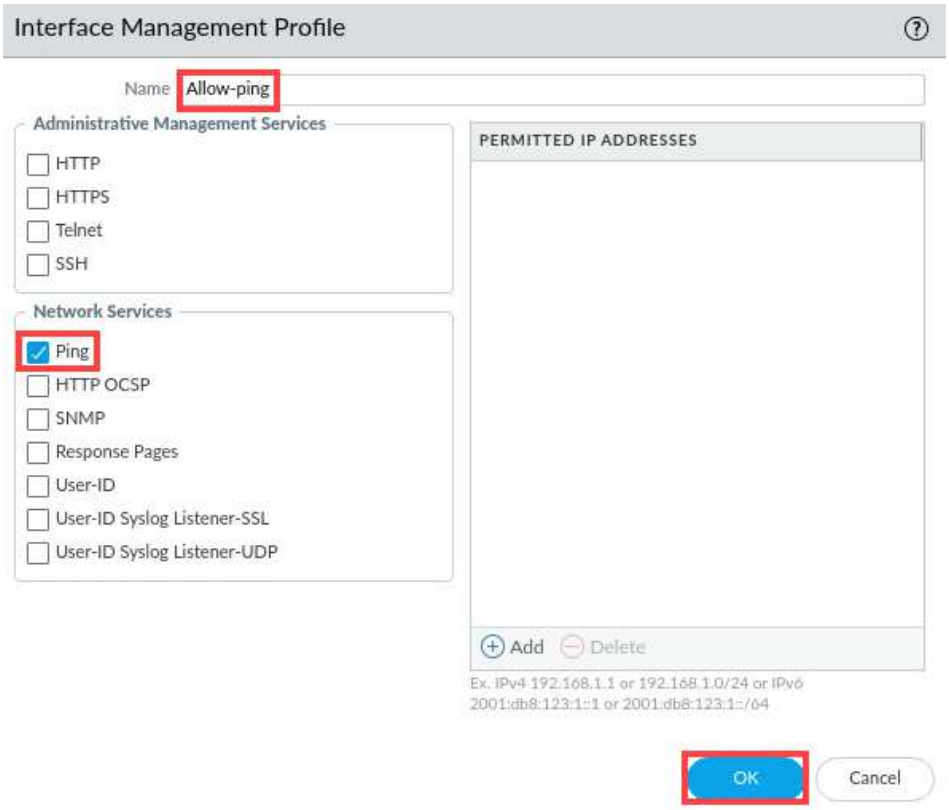
1. Re-open the *PA-VM firewall* web interface by clicking on the **firewall-a – Mozilla Firefox** icon in the task bar.


2. Select **Network > Network Profiles > Interface Management**. Click **Add** at the bottom of the window.



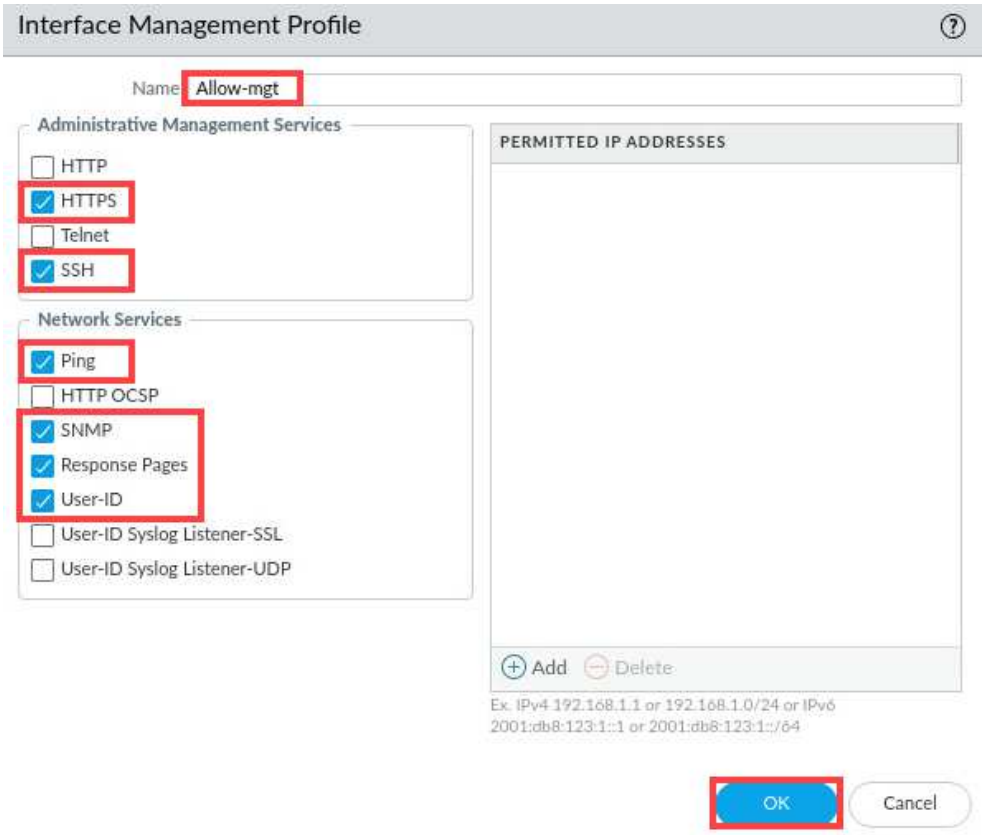

  

3. In the *Interface Management Profile* window, enter **`Allow-ping`** for the *Name*. Under the *Network Services* section, **check** the box for **Ping**. Click **OK**.

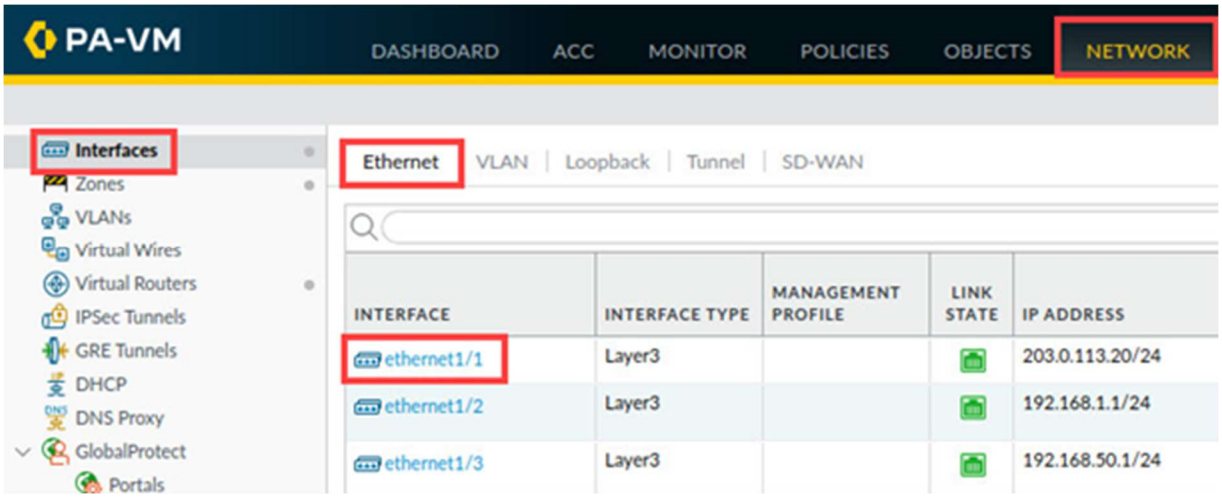


4. In the *Interface Management* section, click **Add** again to create another entry. In the *Interface Management Profile* window, enter **`Allow-mgt`** for the *Name*. Under the *Administrative Management Services* section, **check** the boxes for **HTTPS** and **SSH**. Under the section for *Network Services*, check **Ping**, **SNMP**, **Response Pages** and **User-ID**. Click **OK**.

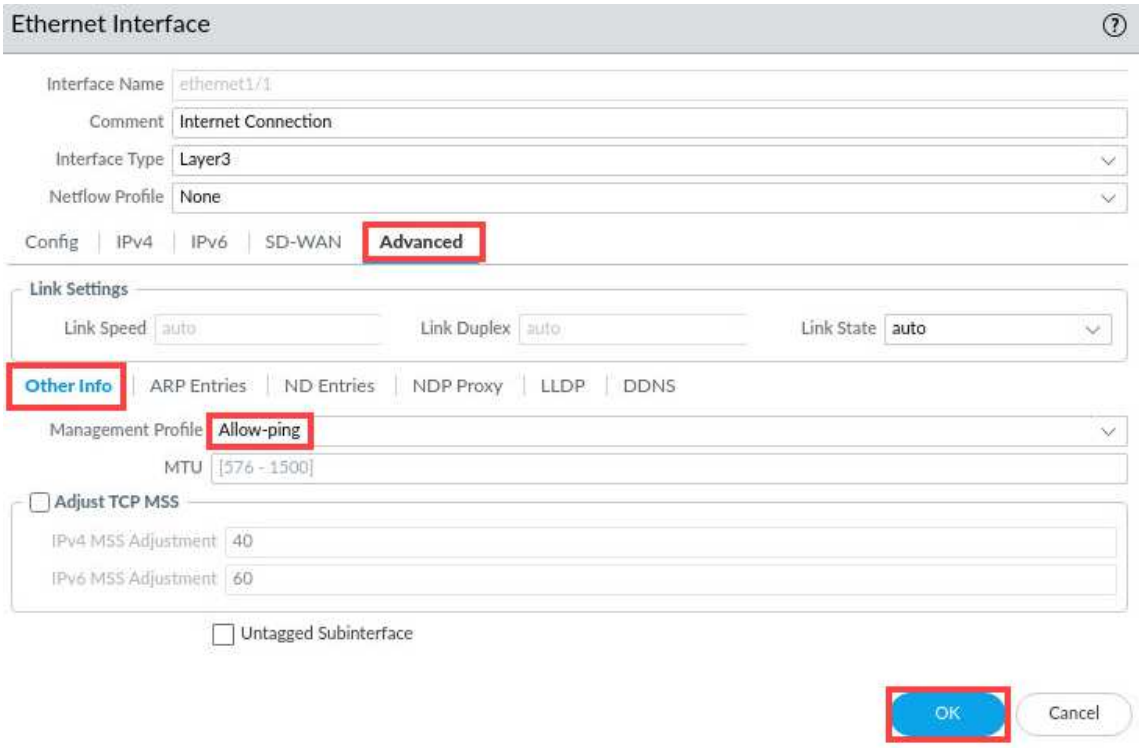



5. Select **Network > Interfaces > Ethernet**. Click **Ethernet 1/1**.



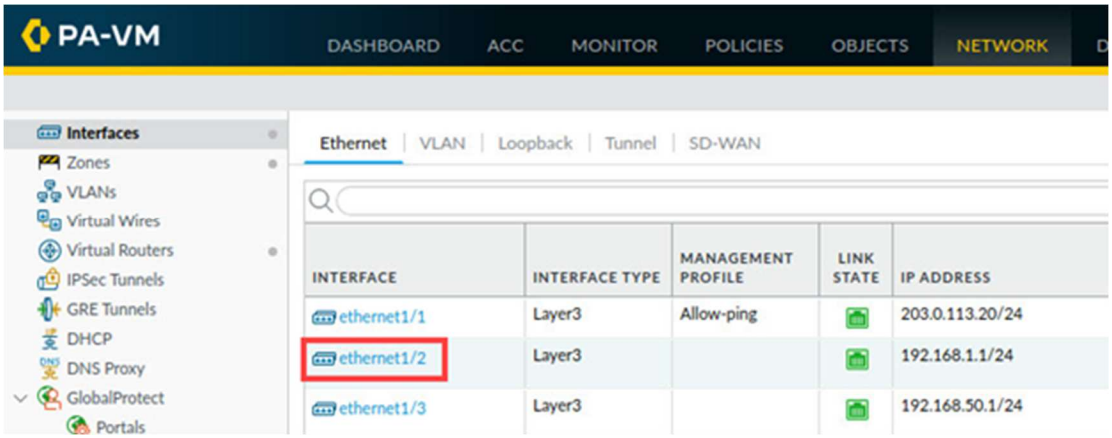
6. In the *Ethernet 1/1* window, click **Advanced**. Under the *Other Info* section, use the drop-down list for *Management Profile* and select **Allow-ping**. Click **OK**.




**Please Note**

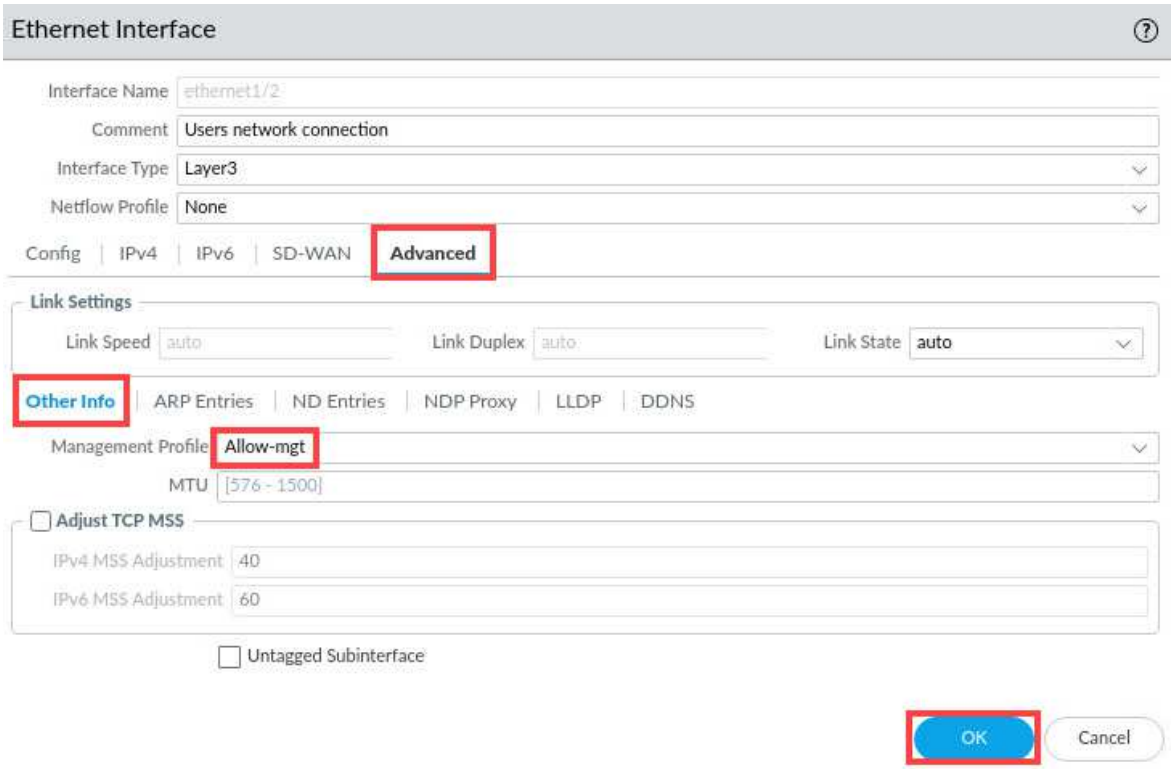
This action applies the Allow-ping interface management profile to ethernet1/1. As a result, ethernet1/1 will answer ping requests. Note that in a production environment, you may not want an Internet-facing interface to reply to any type of traffic. Applying this profile in the lab allows you to see how different profiles can be applied to different interfaces.

7. Click **Ethernet 1/2**.



8. In the *Ethernet 1/2* window, click **Advanced**. Under the *Other Info* section, use the drop-down list for *Management Profile* and select **Allow-mgt**. Click **OK**.



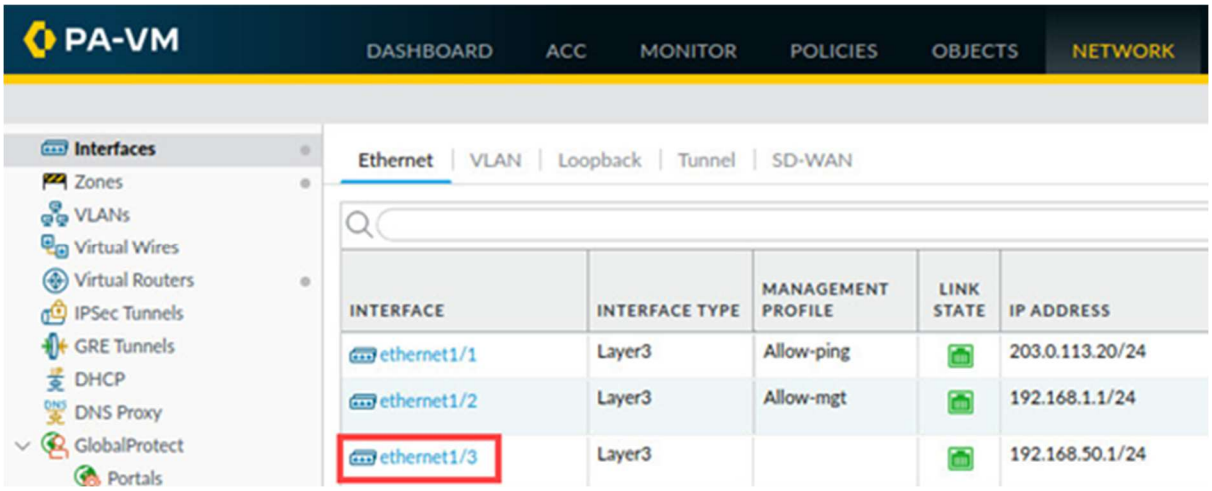

9. Read the *Warning* message and click **Yes**.


Please Note

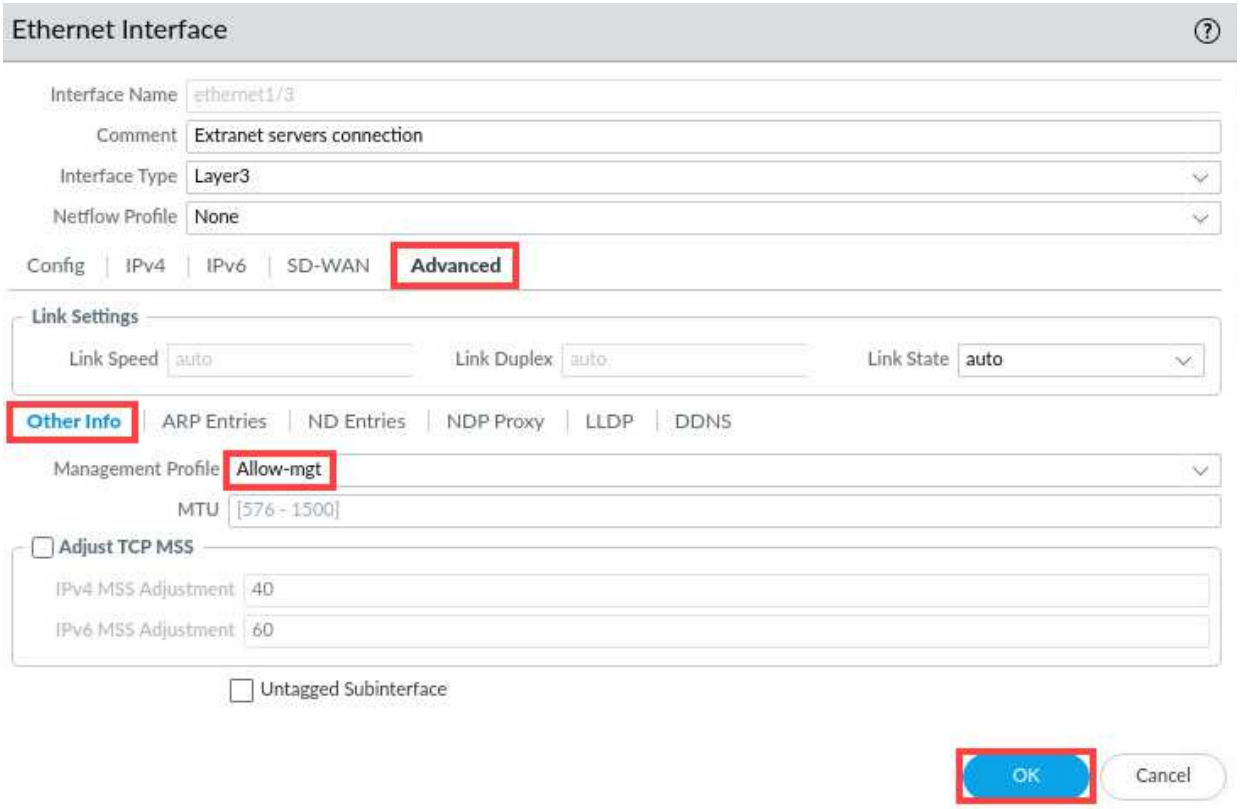
Because this interface is connected to one of your internal networks (Users_Net), the risk of applying this profile is acceptable.

10. Click **Ethernet 1/3**.



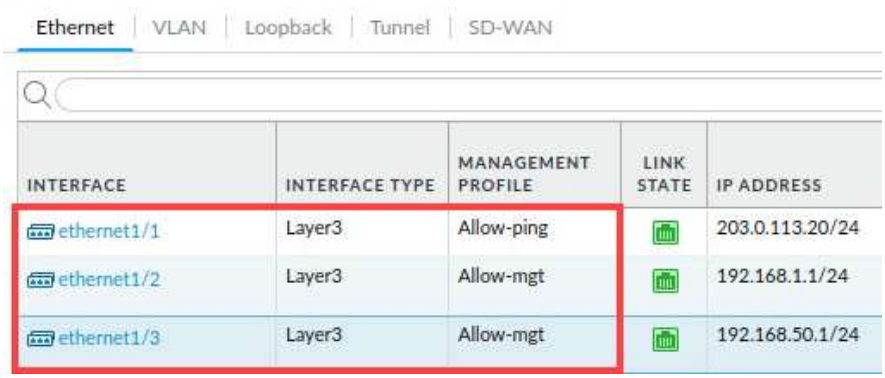

11. In the *Ethernet 1/3* window, click **Advanced**. Under the *Other Info* section, use the drop-down list for *Management Profile* and select **Allow-mgt**. Click **OK**.



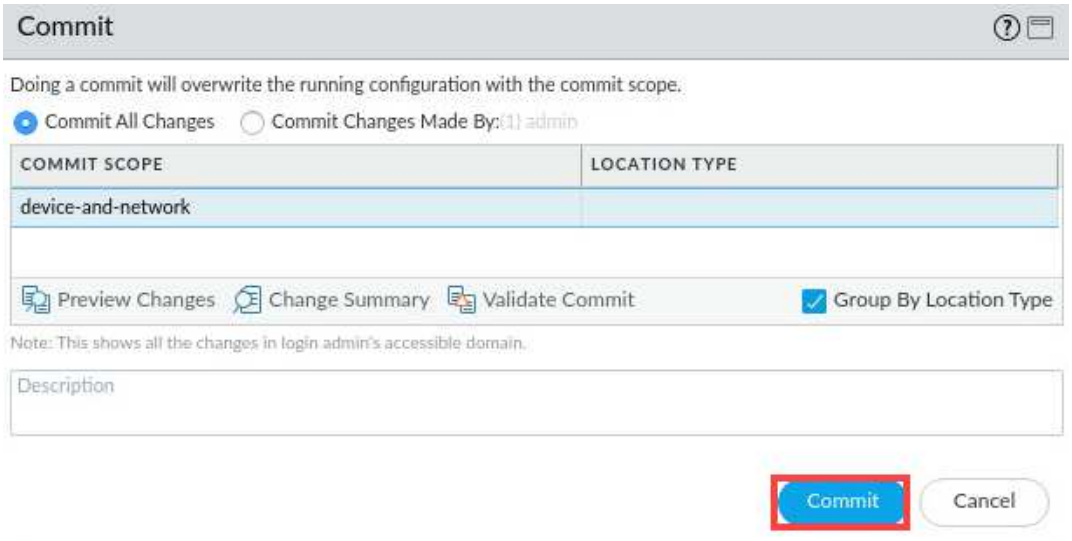
12. Read the *Warning* message and click **Yes**.


13. When you complete steps *5* - *12*, your interface table should have an entry under the management profile column for each interface.



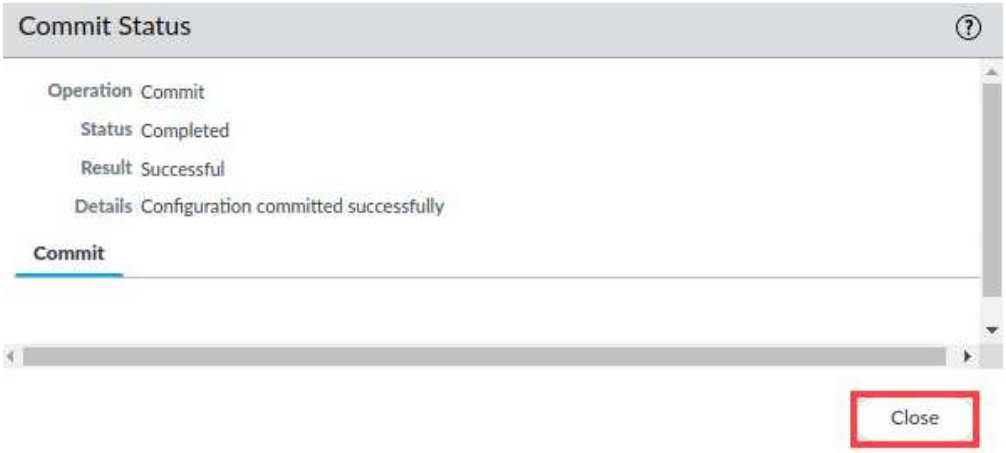

14. Click the **Commit** button at the upper right of the web interface.


15. In the *Commit* window, click **Commit**.



16. Wait until the *Commit* process is complete. Click **Close**.




17. Minimize the *Palo Alto Networks Firewall* and continue to the next task.

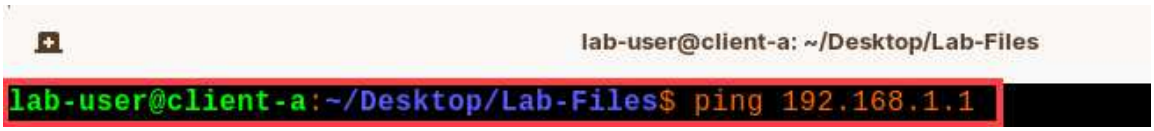
## 2.8 Test Interface Access after Management Profiles

In this section, you will use the ping command to test the management profiles that you defined. Both ping and SSH will succeed.

1. Return to the *lab-user@client-a terminal* window used previously in the *Client* taskbar.


2. Issue the following command below.

```
lab-user@client-a:~/Desktop/Lab-Files$ ping 192.168.1.1 <Enter>
```



3. Wait a few seconds and use **Ctrl+C** to stop the command. You will get a response because *Management* profiles have been configured.

```
lab-user@client-a:~/Desktop/Lab-Files$ ping 192.168.1.1
PING 192.168.1.1 (192.168.1.1) 56(84) bytes of data.
64 bytes from 192.168.1.1: icmp_seq=1 ttl=64 time=10.2 ms
64 bytes from 192.168.1.1: icmp_seq=2 ttl=64 time=1.51 ms
64 bytes from 192.168.1.1: icmp_seq=3 ttl=64 time=0.871 ms
^C
--- 192.168.1.1 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2003ms
rtt min/avg/max/mdev = 0.871/4.179/10.153/4.232 ms
lab-user@client-a:~/Desktop/Lab-Files$
```

4. Elevate to *super user* by issuing the following command.

```
lab-user@client-a:~/Desktop/Lab-Files$ sudo su
```

```
lab-user@client-a:~/Desktop/Lab-Files$ sudo su
```

5. Attempt to open an *SSH connection* to the firewall through **192.168.1.1** by issuing the following command.

```
root@client-a:/home/lab-user/Desktop/Lab-Files# ssh admin@192.168.1.1 <Enter>
```

```
root@client-a:/home/lab-user/Desktop/Lab-Files# ssh admin@192.168.1.1
```

6. When prompted to accept the *RSA key fingerprint*, type **yes** and press **Enter**.

```
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.1.1' (RSA) to the list of known hosts.
```

7. For password, type **Pal0Alt0!** and press **Enter**.

```
Authorized Access Only
Password:
```

8. The *firewall* will present the *CLI interface*.

```
Last login: Mon Sep 11 00:57:40 2023 from 192.168.1.20


Number of failed attempts since last successful login:

There have been failed attempted logins from your username, which could mean someone is trying to
brute-force your login. If this is not expected, consider contacting your system administrator.


admin@firewall-a>
```

9. The lab is now complete; you may end your reservation.