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Sun November 24th 2024

Lab 5.2.7: Configuring a pfSense Security Appliance

From TestOut CompTIA Security+ Course

In this lab I will be setting up and configuring a pfSense security appliance within a hypothetical organization.

The scenario for this lab is as follows:

“You are an IT security administrator for a small corporate network. To increase security for the corporate network, you have installed the pfSense network security appliance in your network. Now you need to configure the device.

In this lab, your task is to configure pfSense as follows:

1. **Sign in to pfSense using the following case-sensitive information:**
    a. **URL: 198.28.56.22**
    b. **Username: admin**
    c. **Password: P@ssw0rd**
2. **Configure the DNS servers as follows:**
    a. **Primary DNS server: 163.128.78.93 - Hostname: DNS1**
    b. **Secondary DNS server: 163.128.80.93 - Hostname: DNS2**
3. **Configure the WAN IPv4 information as follows:**
    a. **Enable the interface.**
    b. **Use a static IPv4 address of 65.86.24.136/8**
    c. **Add a new gateway using the following information:**
        i. **Type: Default gateway**
        ii. **Name: WANGateway**
        iii. **IP address: 65.86.1.1 “**

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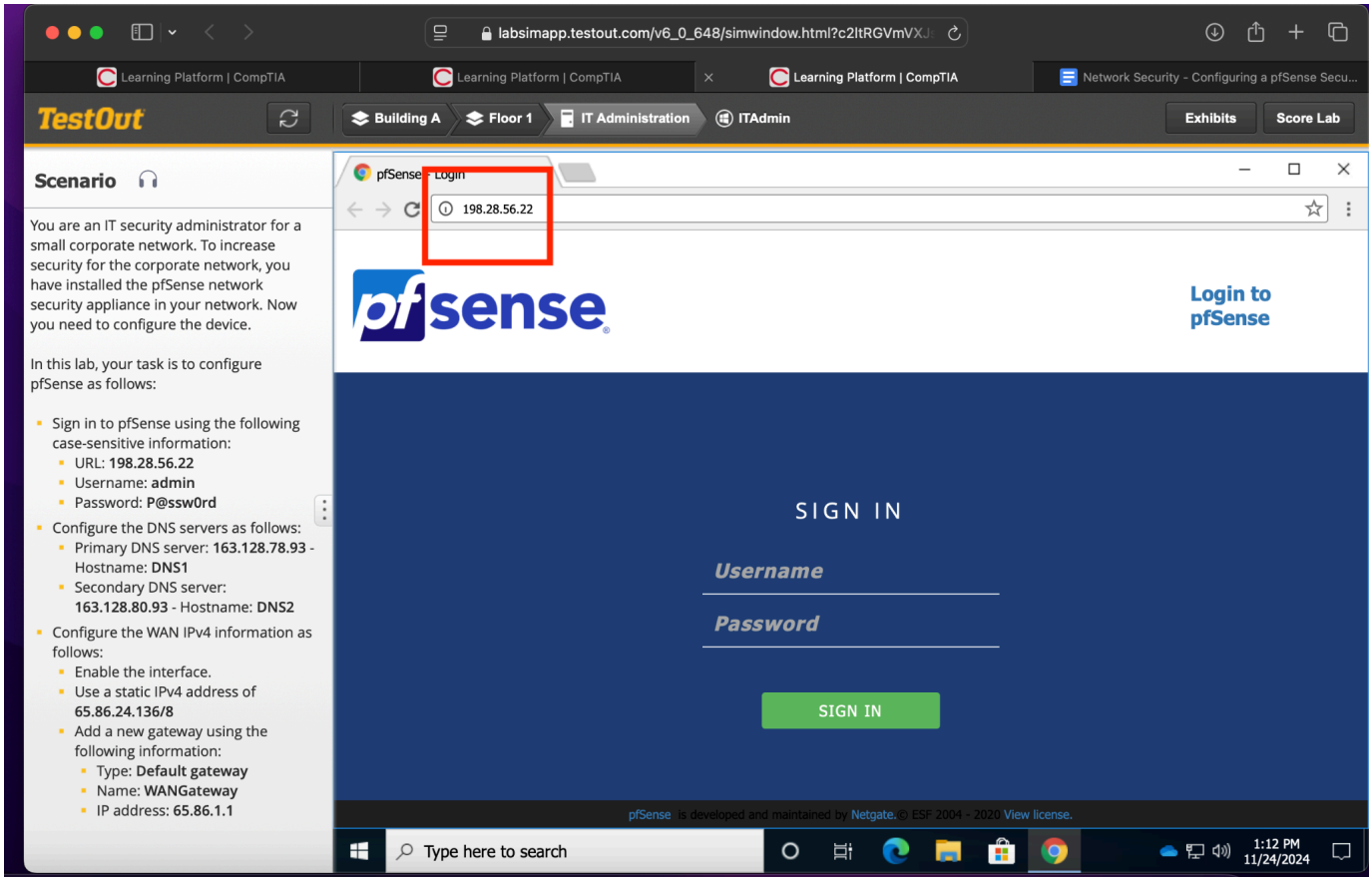
Based off what I've learned so far about pfSense, I know that you must access the GUI through http. We'll fire up a web browser and navigate to the IP address of our pfSense Security Appliance. I see that in the Windows 10 machine the lab gives us, Google Chrome is installed. Also, in the lab scenario the IP address for the pfSense appliance is 198.28.56.22.

(Note to self: It looks like a Private IP address on first glance but remember that Class C Private IP address range is 192.168.0.0 to 192.168.255.255)

In my web browser I'll type 198.28.56.22 and then login with the credentials provided.



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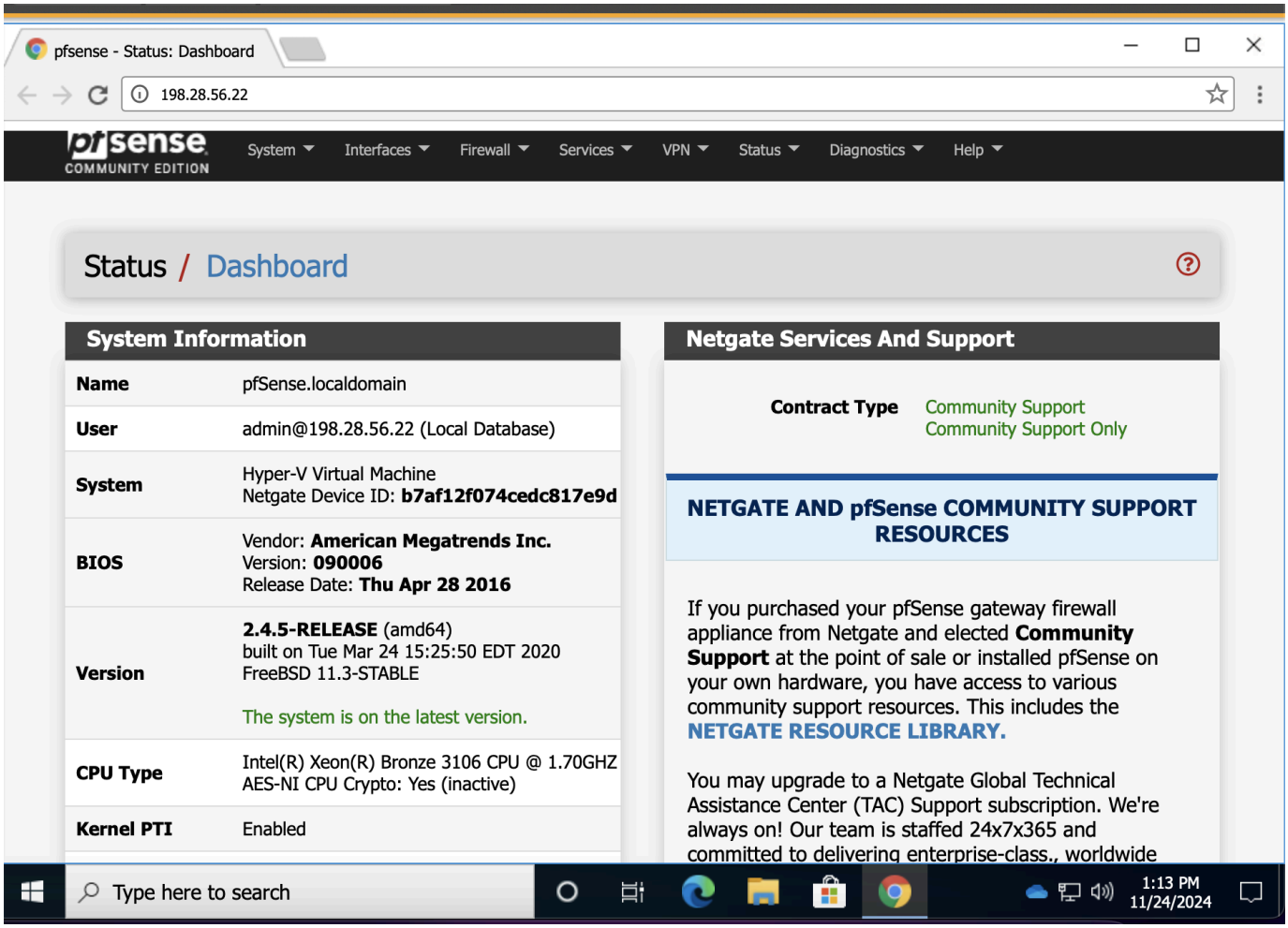

Now that I'm logged into the Administrator account we can proceed to configure our DNS servers setting them to the corresponding hostnames and IPs. I'll navigate to System > General Setup > DNS Server settings.

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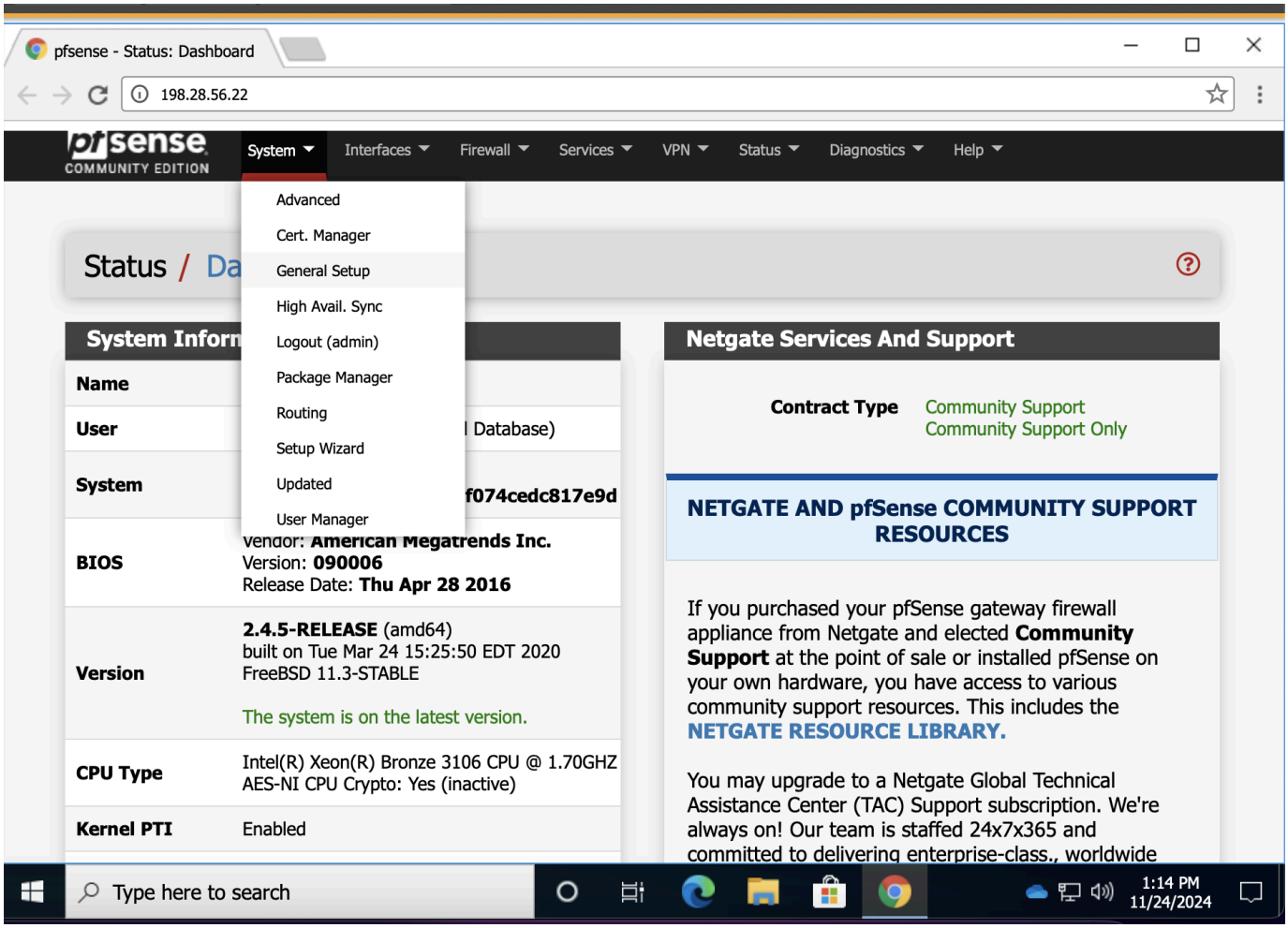

After clicking that and scrolling down the page a bit more, I see the DNS server setting field. I'll go ahead and enter **DNS1** as the hostname and **163.128.78.93** as the IP address. This will be our primary DNS server. After , I'll click "add" and set the secondary DNS server as **163.128.80.93** with a hostname of **DNS2.**

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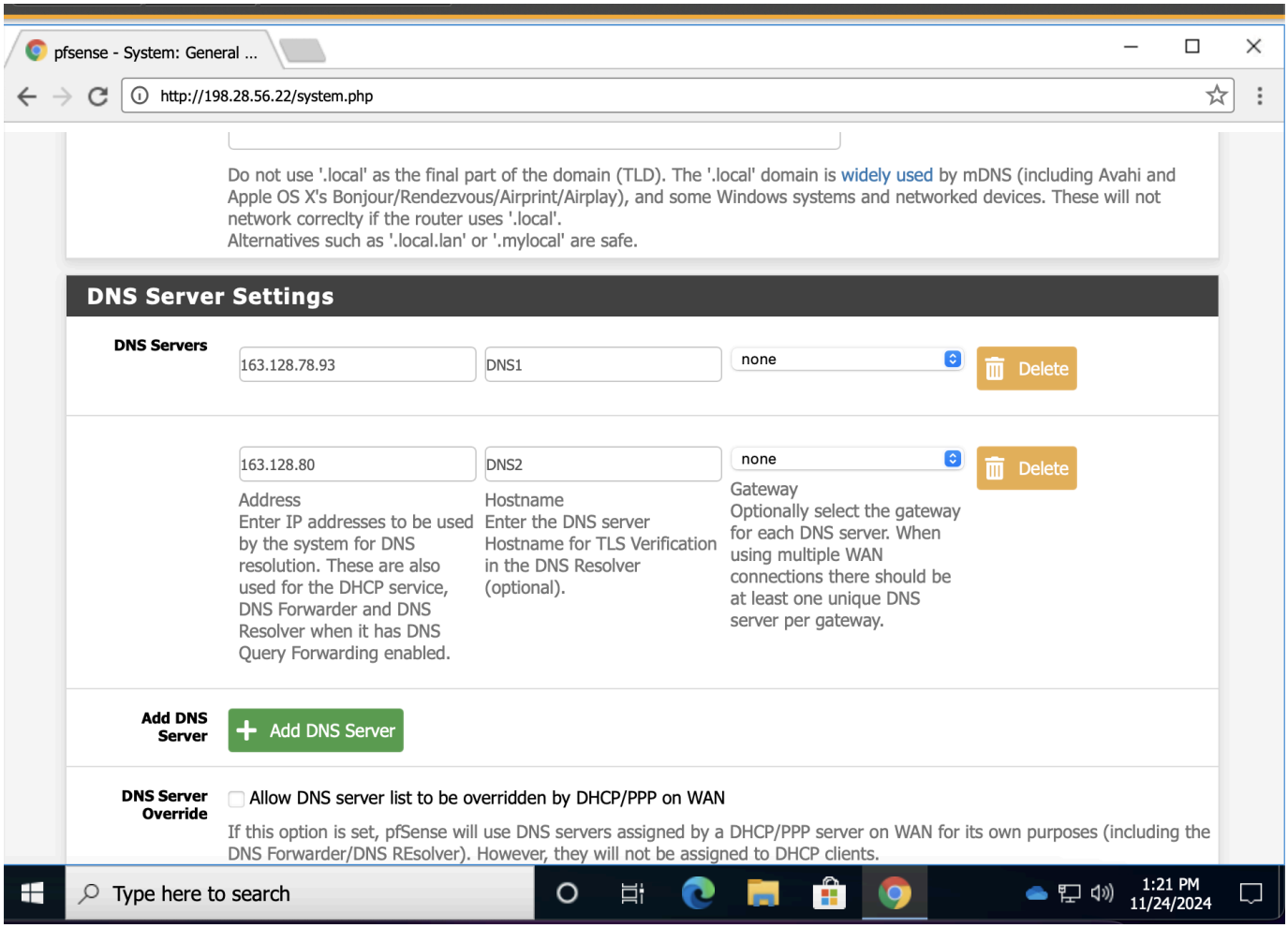
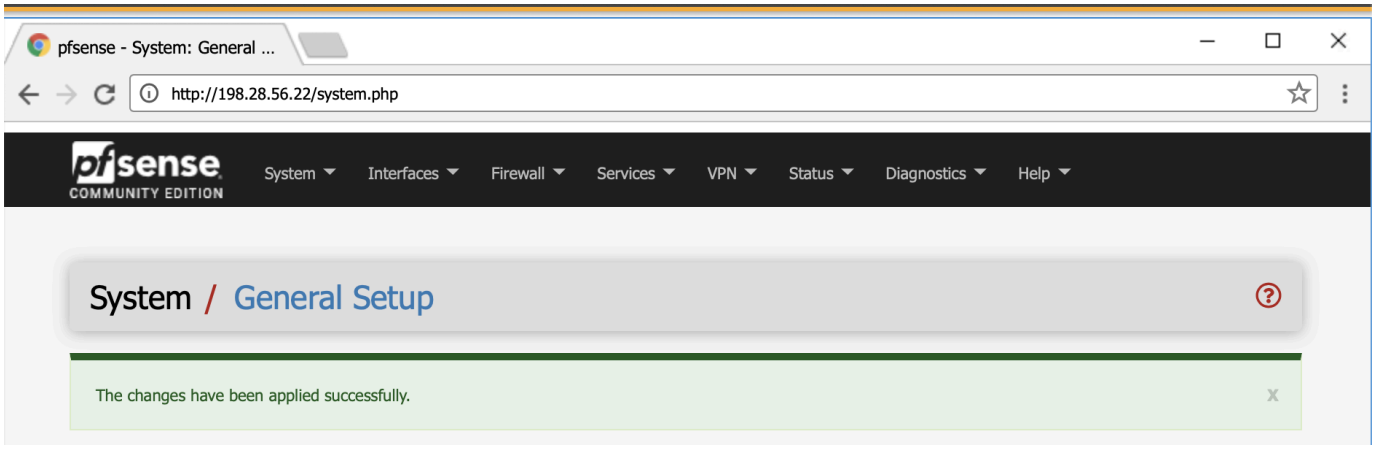


Everything looks good! To save our changes scroll to the bottom of the web page and click the blue “SAVE” button.



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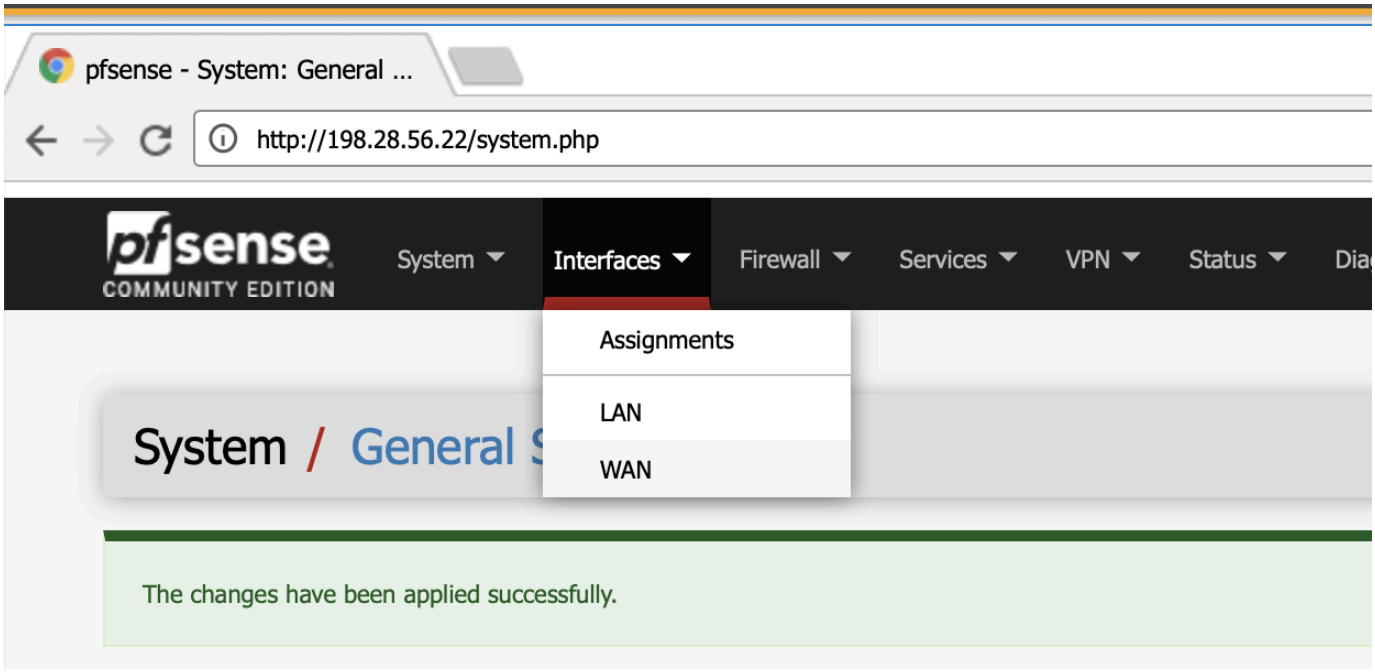
After I get the confirmation message shown above that the changes have been successfully applied. Now we can move on to the next part of the lab which is to configure our WAN. WAN is very important because it serves as a way to connect all the LANs together within the organization. We will want to set it to be static that way DHCP doesn't hand out the IP address to another user on the network. Navigate to the menu bar at the top and go to **Interfaces > WAN**



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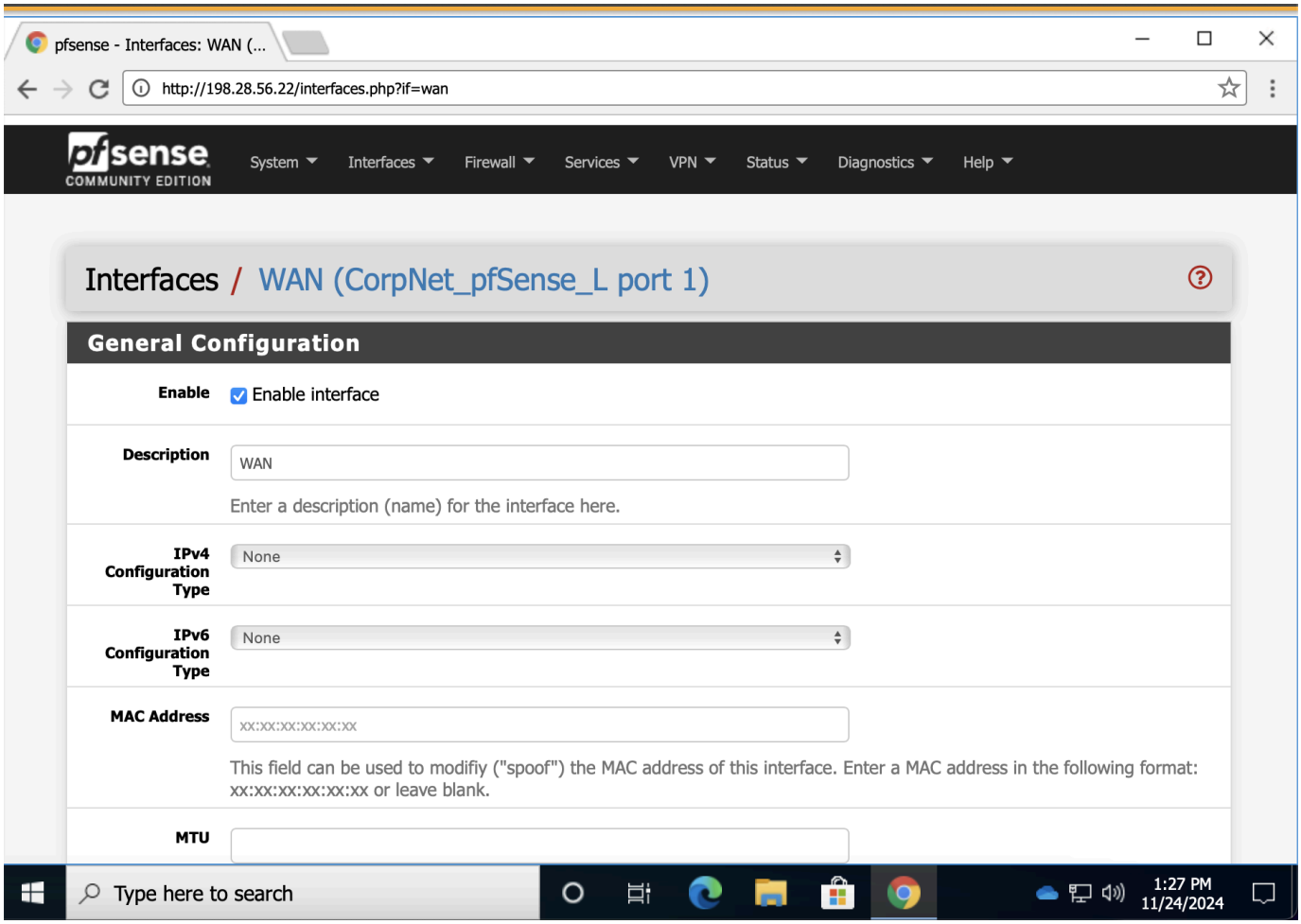

Now that we are in the WAN settings let's configure what we are asked to do in the lab. First, I see that **"Enable Interface"** is checked already. This means our WAN port is working and can communicate on the network. Next, we need to set a static **IPv4** address. On the dropdown menu we can see varying options like **DHCP** but that's not what we want in this case. Select the "**Static IPv4"** option.

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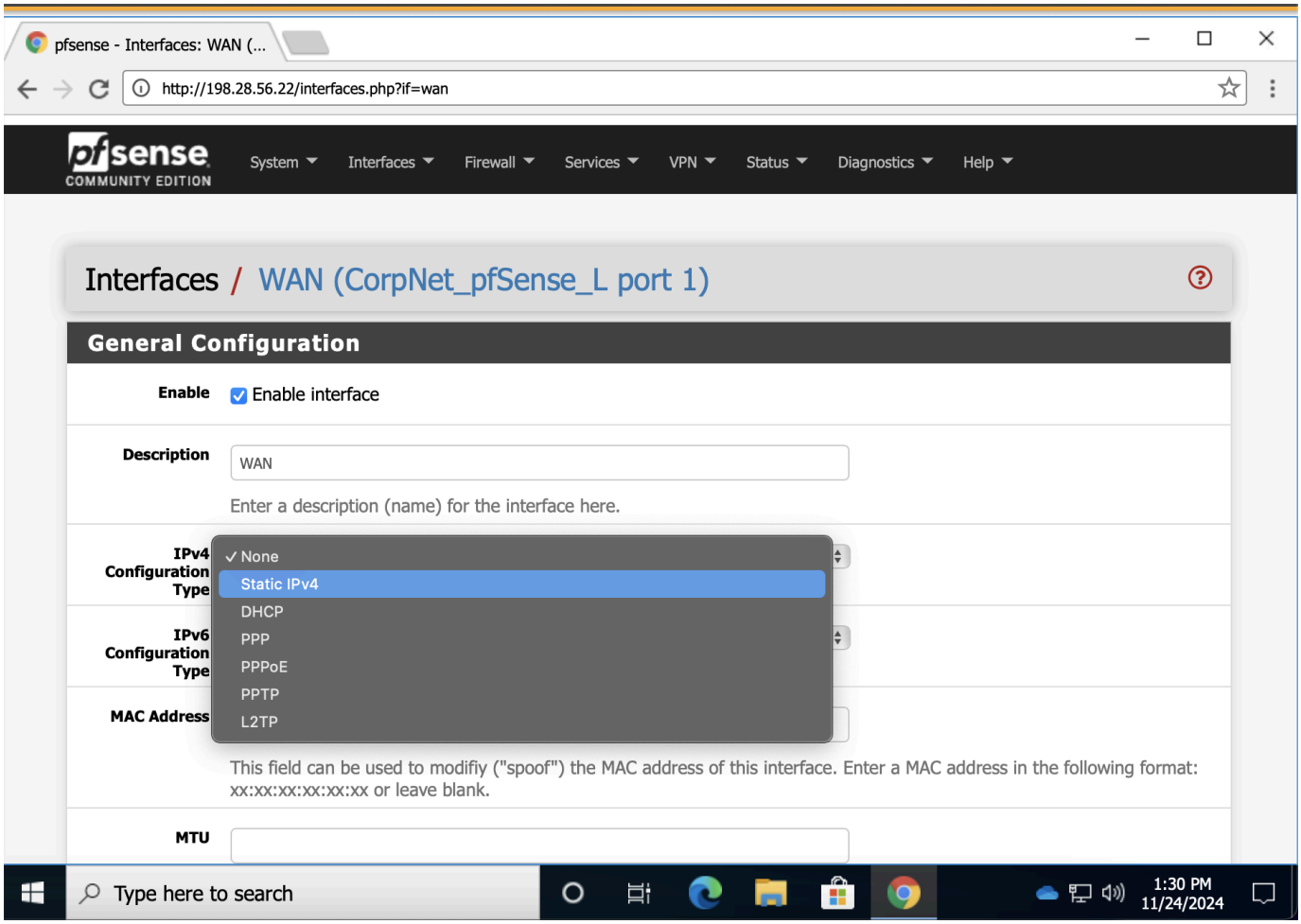

Scroll down more on the page to get to the **Static IP Address** fields. Then, enter in the given IP address of **65.86.24.136/8.** Note that the **/8** is a **CIDR** notation for the subnet mask. This means that our IP address is **65.86.24.136** and our subnet mask is **255.0.0.0** because **/8** means that only the first 8 binary bits of the IPv4 are the network portion. After entering that , we need to add a gateway that way our users are still able to access the internet. We'll set the gateway by clicking "**Add a new gateway"** and entering the settings we are given.

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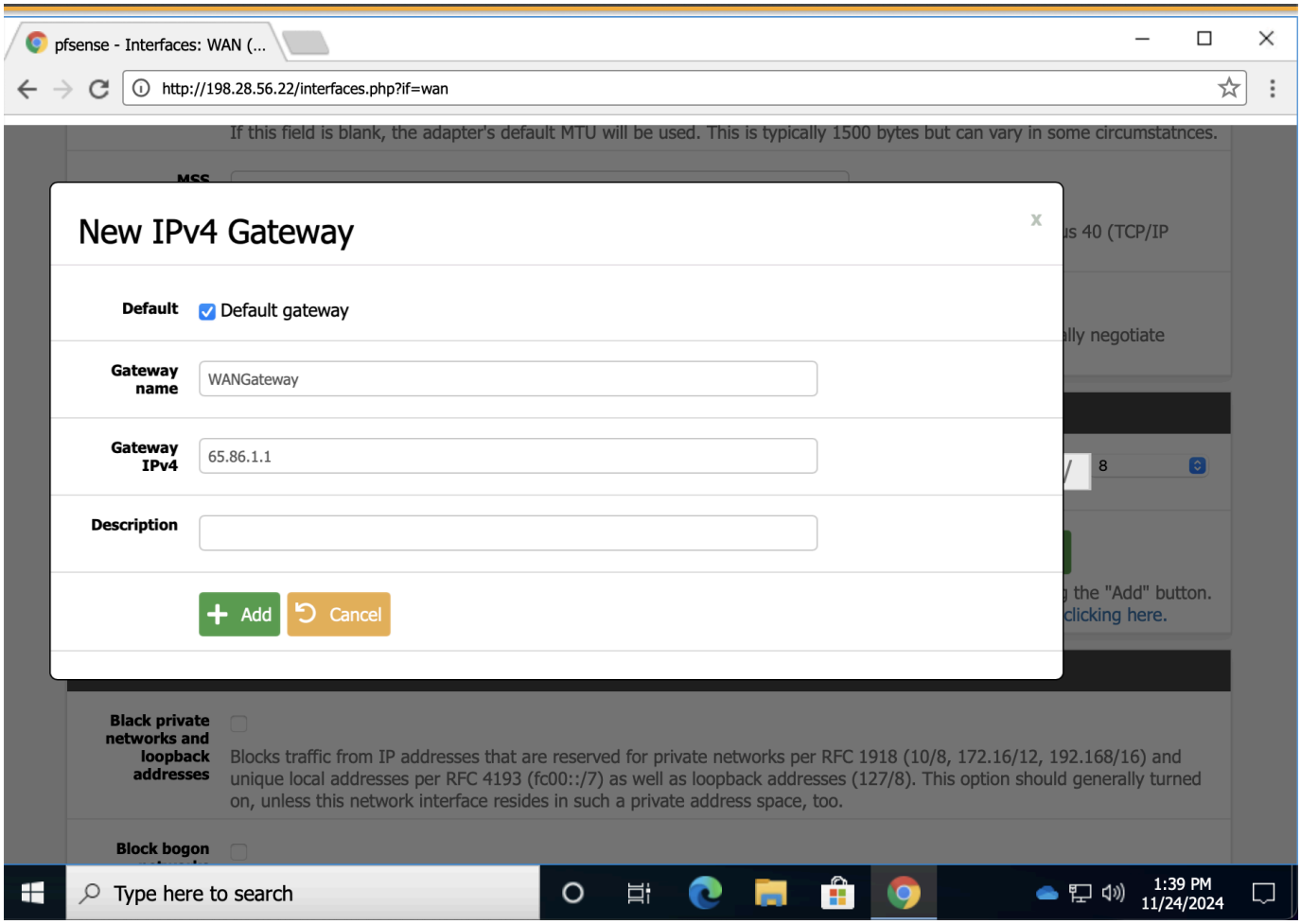

Now that we've applied all the settings we hit the Save button then hit "Apply Changes."

This now concludes this lab!

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