COMTECH™

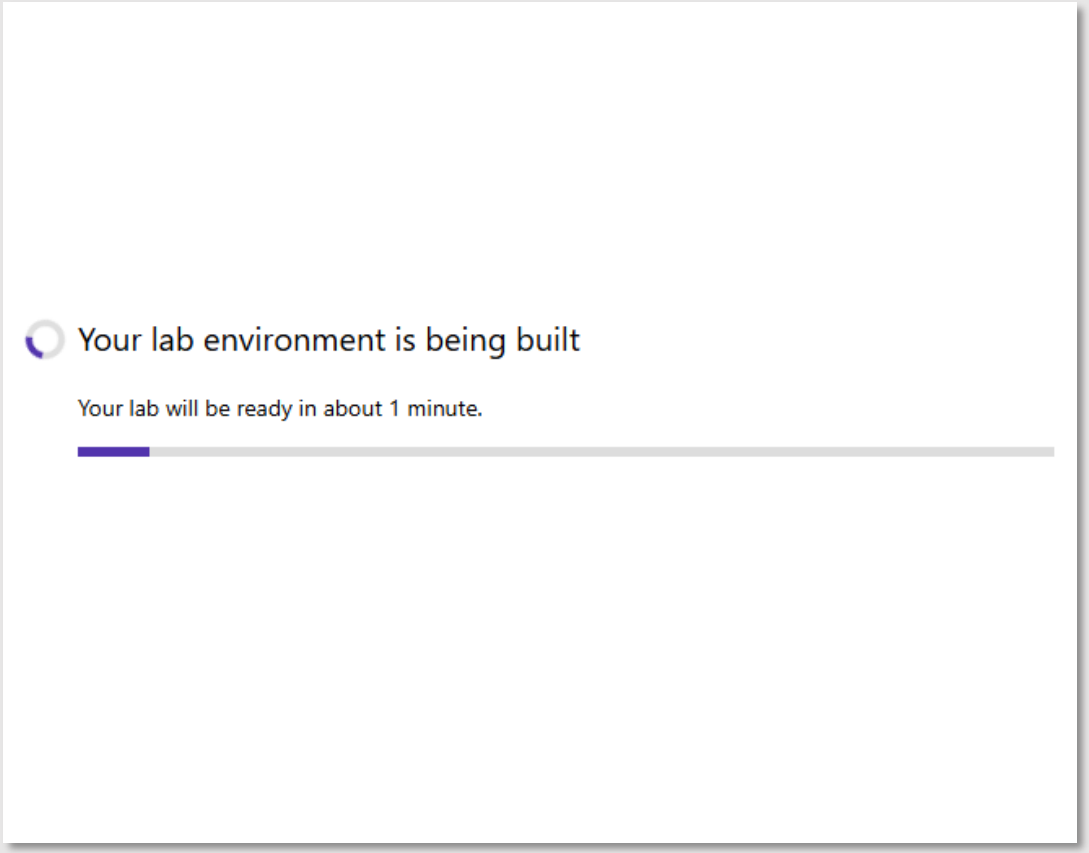
CyberStronger

Cybersecurity Assessments and Training On-demand for Your Workforce

CyberStronger Labs
Tips and Helpful Hints

Initial Lab Launch

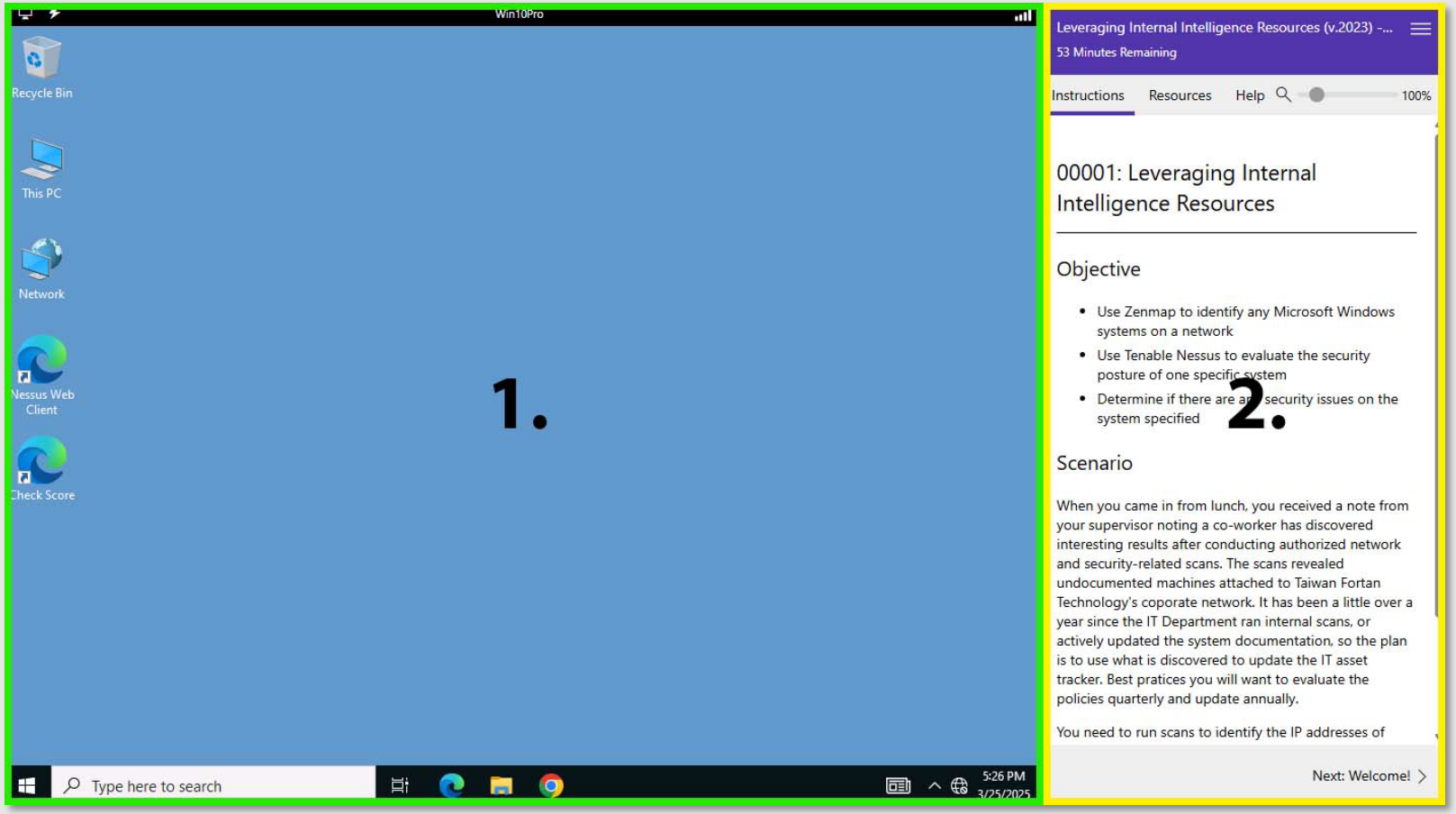
When a lab is first launched, a screen like the one shown here is displayed. The build time of a lab environment varies anywhere from **1 minute up to 15 minutes**. There are some factors that would cause the longer build times, such as the lab containing several different virtual machines with complex networking, and they all need to be started and connected; or the lab isn't cached in high-performance storage as it has not been launched in over 6-months. The labs will eventually launch so **PLEASE BE PATIENT**.



If the build time has gone beyond 15-minutes and the lab hasn't started. Close the lab window and try again. If the issue persists, please send us a support ticket and we will investigate.

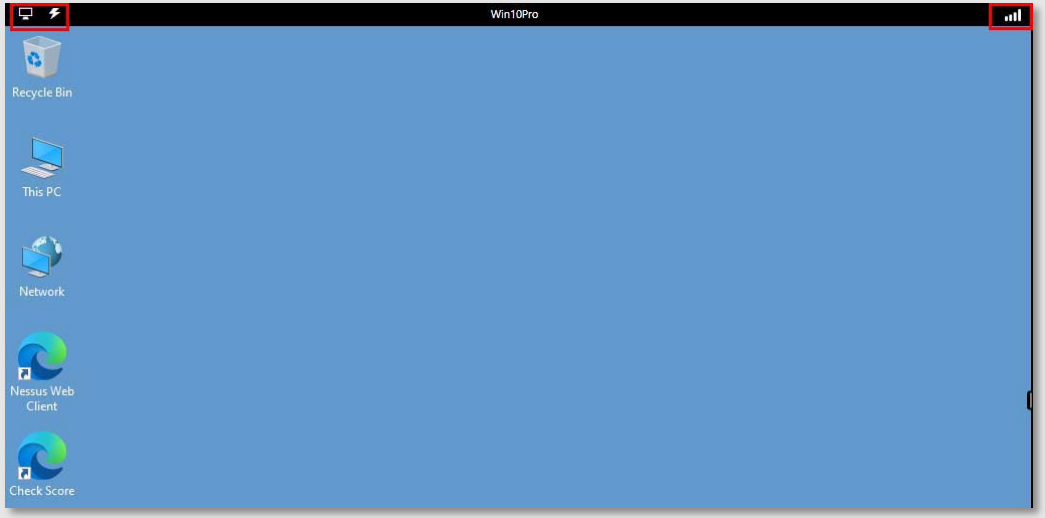
Virtual Lab Environment

CyberStronger labs, once launched, are loaded inside a cloud-hosted virtual environment, similar to the example below. The lab environment is divided into two sections: **1) Active Machine Window**; and **2) Instruction Panel**

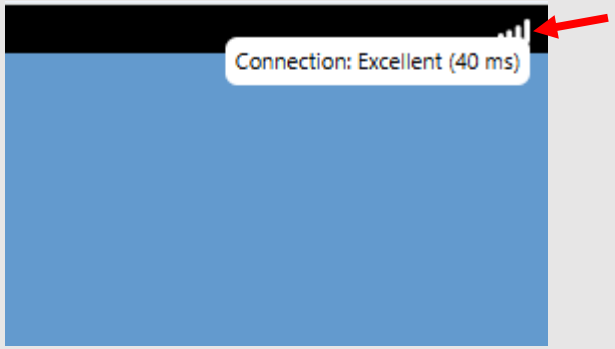


Active Machine Window

The active window is where the user will interact with the virtual machine. It is very similar to working on your own personal computer. From here, users will execute commands, open applications, perform system scans, run exploits, and much more.



In the top-right corner of the active window there is a display of network signal bars. Clicking on the bars will indicate the signal strength between your personal machine and the lab environment. If your connection is low or weak, it may cause the lab to respond slowly to keyboard inputs, mouse movements and other tasks. Make sure you are not connecting through a VPN or running a firewall that may cause interference.



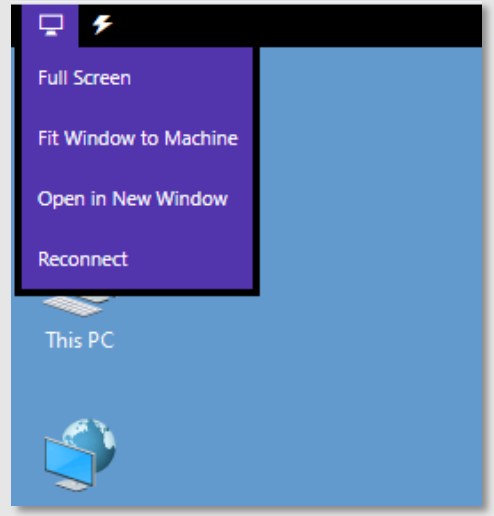
Click here to review the lab connectivity guide.

Active Machine Window (cont'd)

In the top-left corner, there are two menu icons: **Display** and **Commands**.

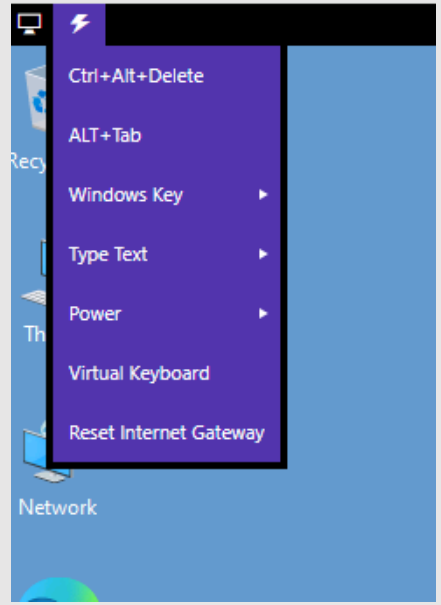
The "**Display**" menu (monitor icon) has the following options:

- **Full Screen** – allows you to maximize the lab environment
- **Fit Window to Machine** – if you have manually resized the lab environment, this option will resize the active virtual machine (VM) to the allotted space.
- **Open in New Window** – the active VM will display in a new pop-up window
- **Reconnect** – refresh the connection between the VM and the active window



The "**Commands**" menu (lightning bolt icon) has the following options:

- **Ctrl+Alt+Delete** – as this is a virtual environment, clicking Ctrl+Alt+Del on your keyboard will activate it on your personal machine. Clicking this option will send the command to the VM.
- **ALT+Tab** – same as above, clicking this will send the command to the VM.
- **Windows Key** – send any of the Windows key commands to the VM.
- **Type Text** – allows you to copy outside text and paste it inside the VM (Note: this feature does not work in some Linux operating systems).
- **Power** – allows you to reboot the VMs or power them off
- **Virtual Keyboard** – if the VM isn't accepting entries from your physical keyboard, this option will display a virtual one on the active window to use.
- **Reset Internet Gateway** – resets the network connection between the VMs in the lab.



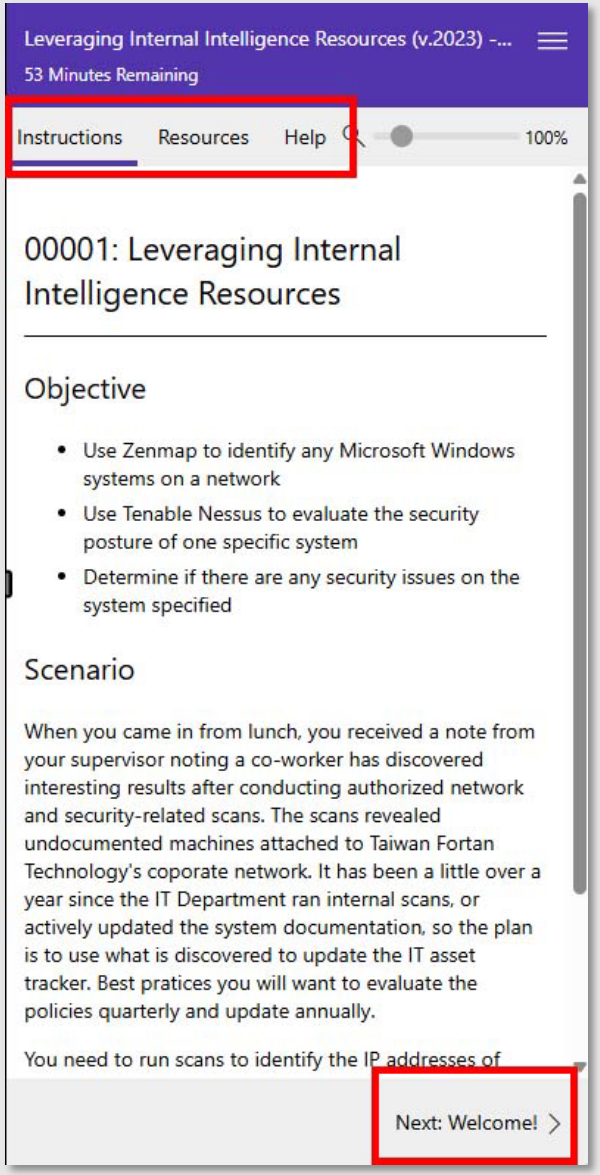
Instructions Panel

The instructions panel contains the following tabs:

- **Instructions** – This is the main tab of the panel. All the labs guided instructions will be located here. You can navigate through the pages of instructions by clicking the buttons in the lower-right corner.

- **Resources** – This tab contains all the different virtual machines the user will need access to. It will also list the credentials for those VMs.

- **Help** – This tab contains vital information regarding your lab instance that will be needed in case you need to contact our support staff.



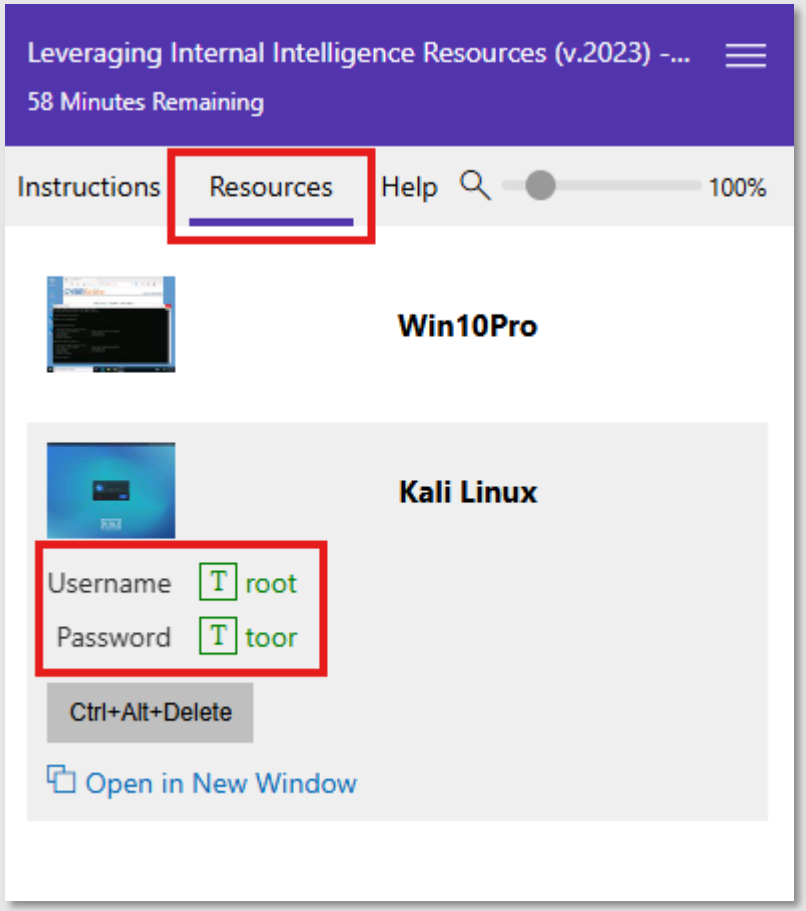
Resources Tab - Virtual Machines (VM)

Switching VMs

If the instructions within the lab ask you to switch to another machine, click the **Resources** tab located in the instructions panel and select the desired VM.

VM Login Credentials

Once you select the VM from under the Resources tab, the username and password are displayed to assist you with signing in.



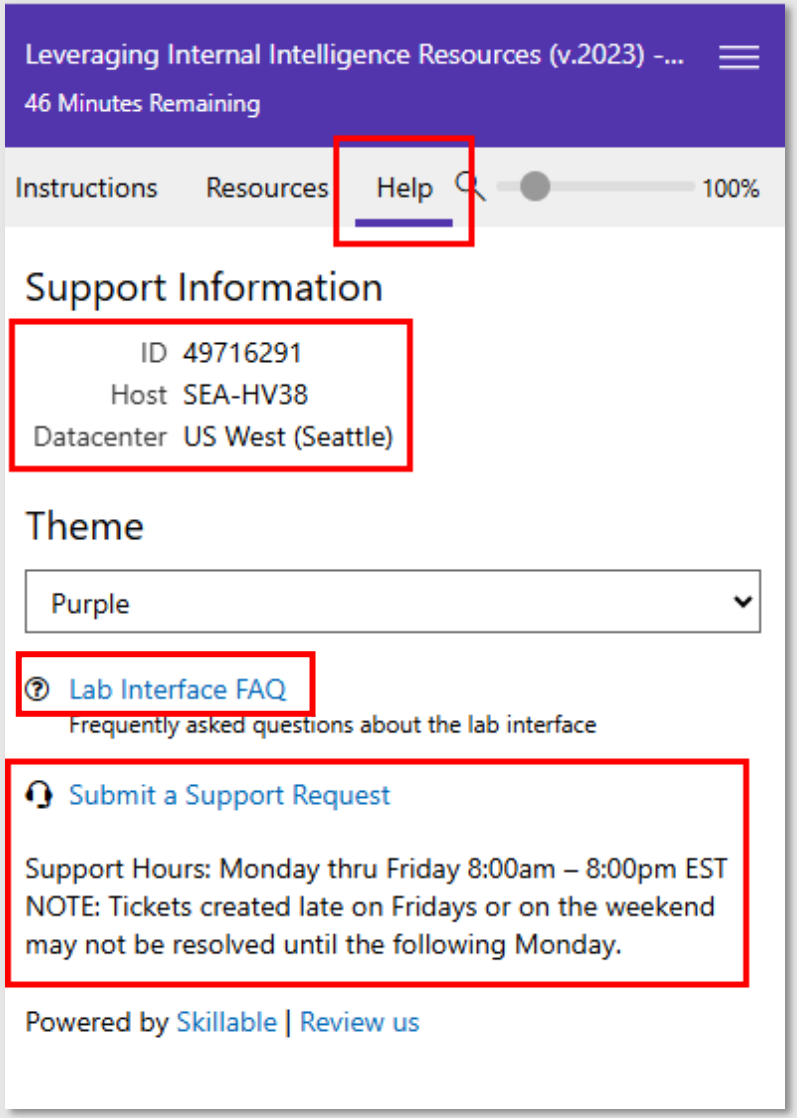
Help Tab

If you encounter a technical issue with the lab environment, click the help tab on the instructions panel for some important information.

Under this tab, you will find your **lab instance ID** and lab host which will allow our support staff to locate your precise lab instance and investigate the issue.

There is a link to some **FAQs** regarding the lab environment interface.

You will also find a link to our **technical support web site**, along with its hours of operation. When submitting a support ticket, make sure to have your lab instance ID copied to include in the form. Provide as much detail as possible regarding the issue along with any screen shots that may assist us in resolving the issue faster.

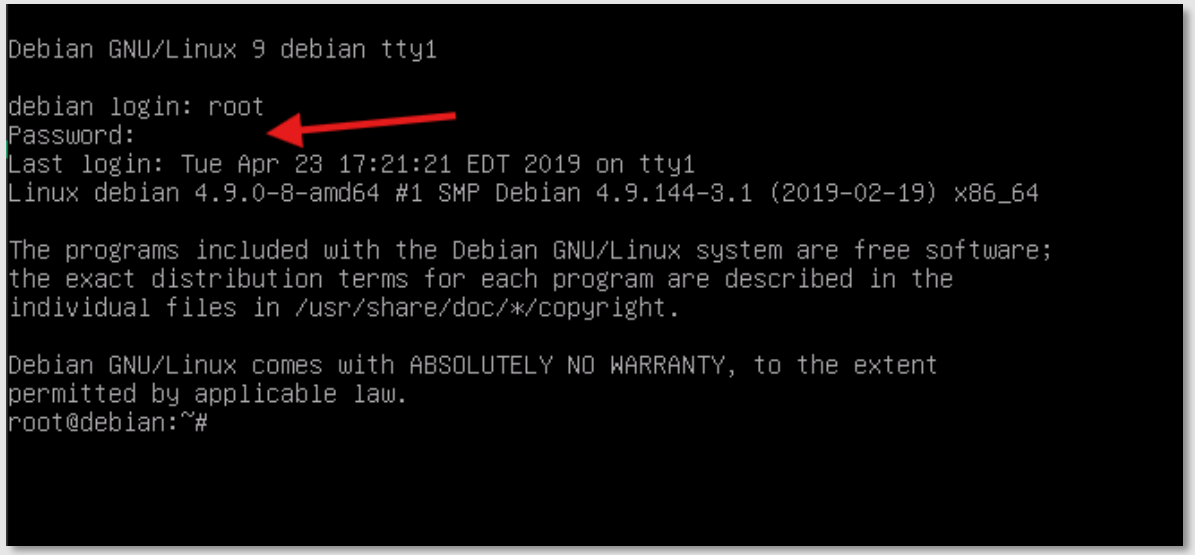


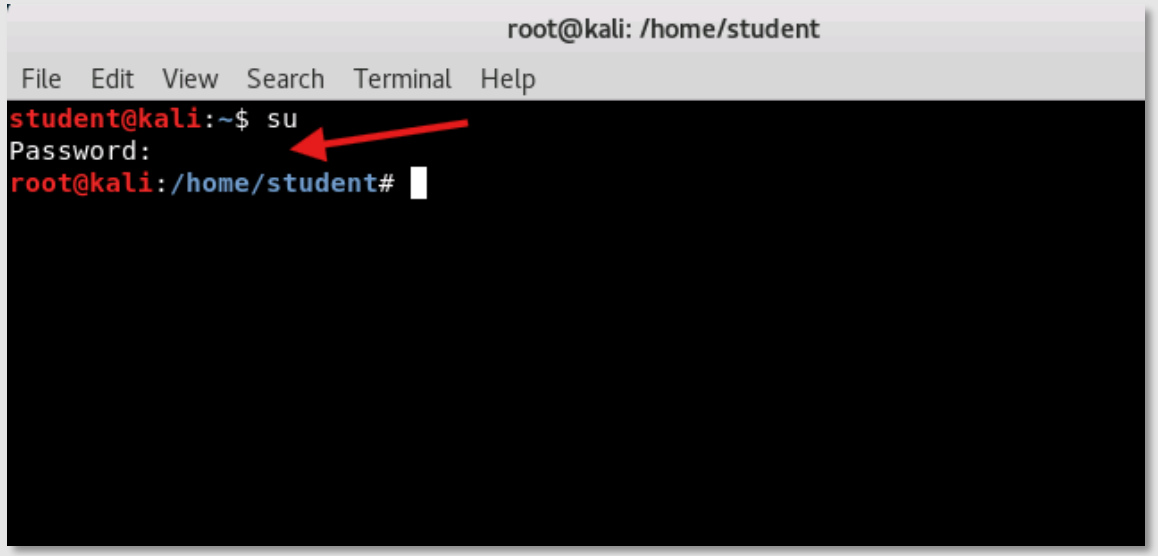
Entering Passwords in Linux

All Linux systems have a native security feature when typing passwords at the command prompt:

NO CHARACTERS WILL BE DISPLAYED!

This can cause confusion with users new to Linux, however, rest assured that even though you're not seeing anything on the screen, the characters are being typed/entered at the prompt.

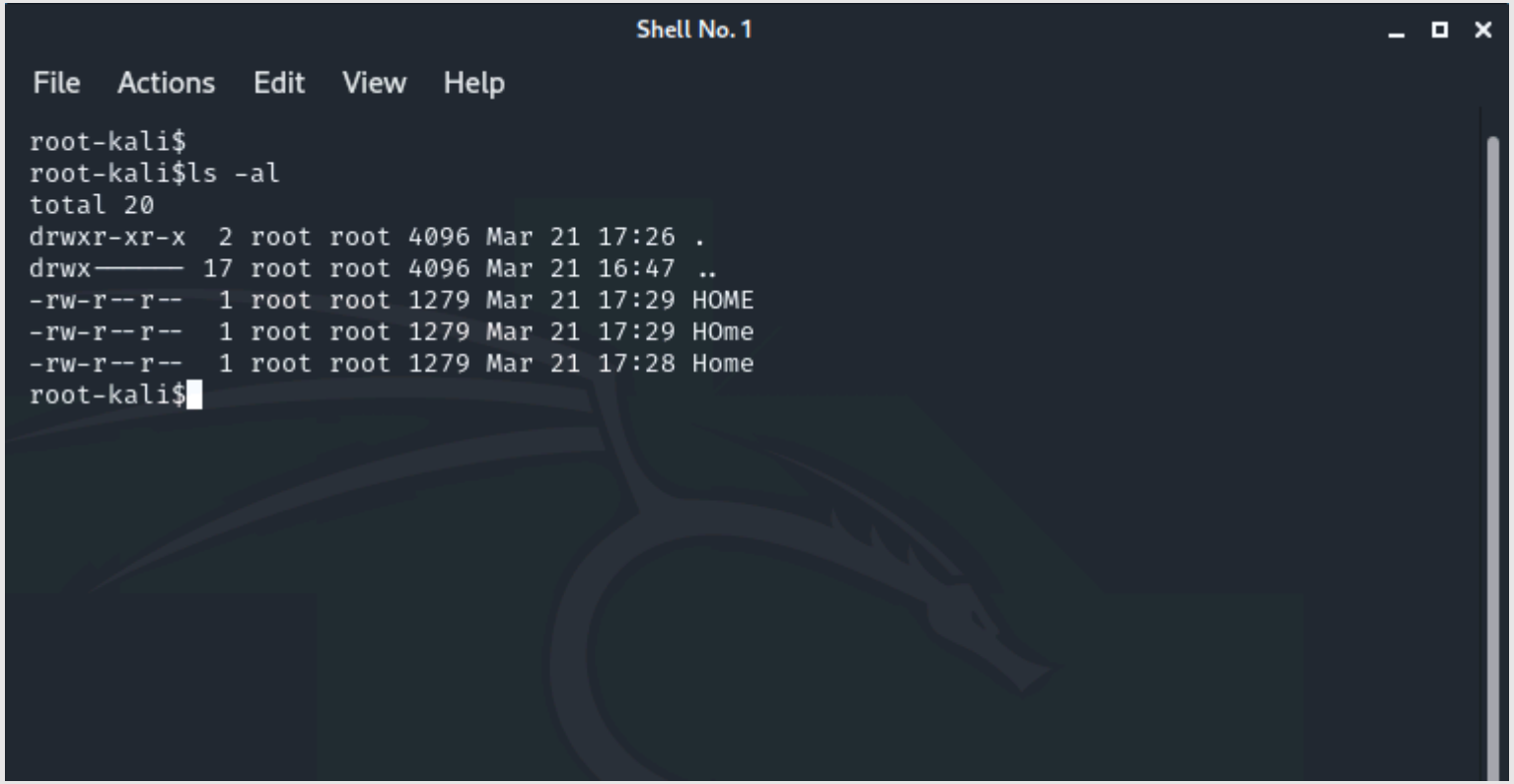




Linux Capitalization

Linux is extremely case sensitive. A file titled **Home** is different from a file titled **HOME** which is also different from a file titled **HOme**.

Linux will treat these as three different files even though it is only the capitalization that is off.



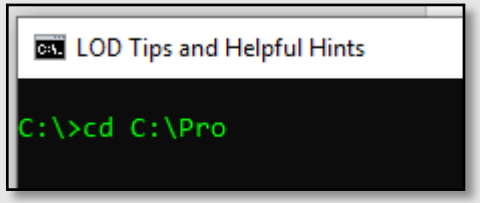
Linux/Windows Auto Complete Feature

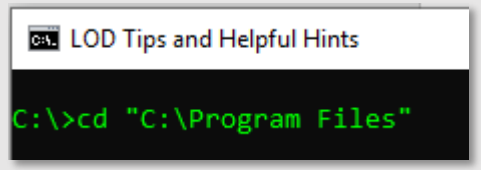
Both Windows and Linux have an auto complete feature that allows you to start typing the path of the directory and it will auto complete it.

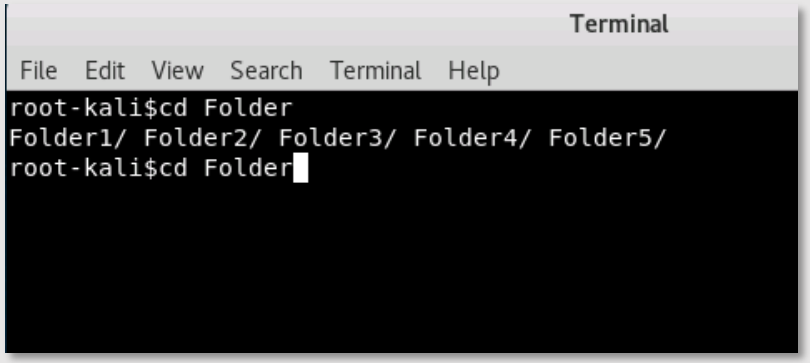
For example, if you want to change the directory to the “Program Files” directory, type in **cd** followed by a space then the directory **C:\Pro** and then press the **TAB Key** on your keyboard. Windows will auto complete the directory and fill in **Program Files.** Hit the tab key again and it will cycle through all the possibilities.

Note, if you hit the tab key and nothing happens it means either you spelled the directory incorrectly or it does not exist.

An extra feature present in **Linux** systems only is that if you press the tab key twice in rapid succession, it will display all the possibilities. This will allow you to select the correct folder.



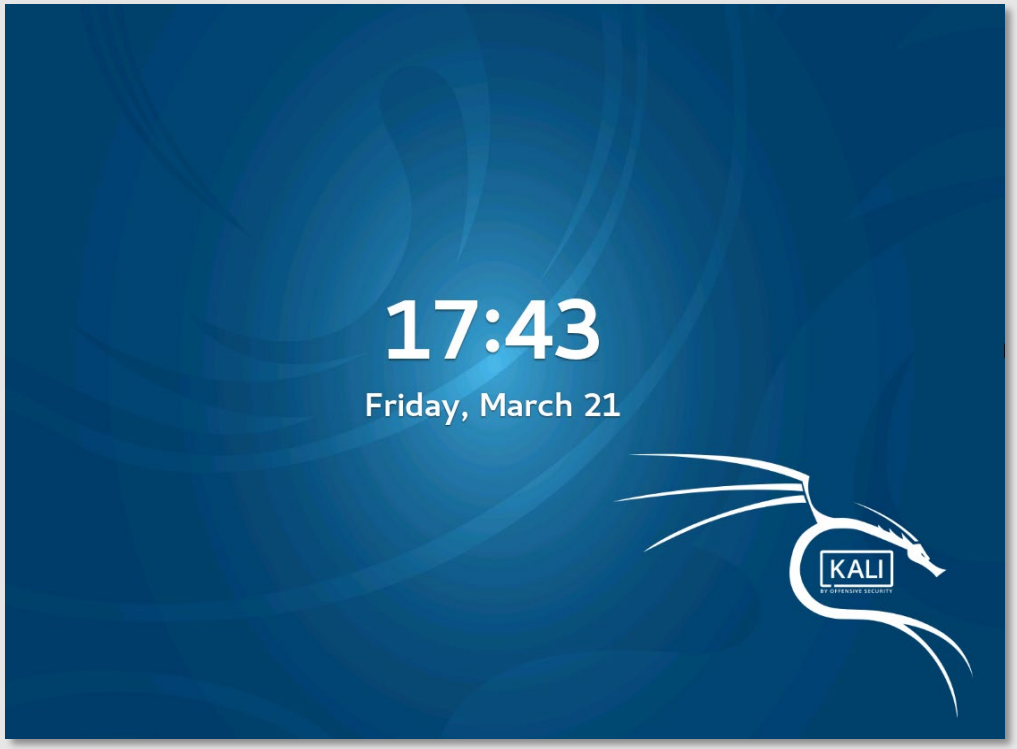


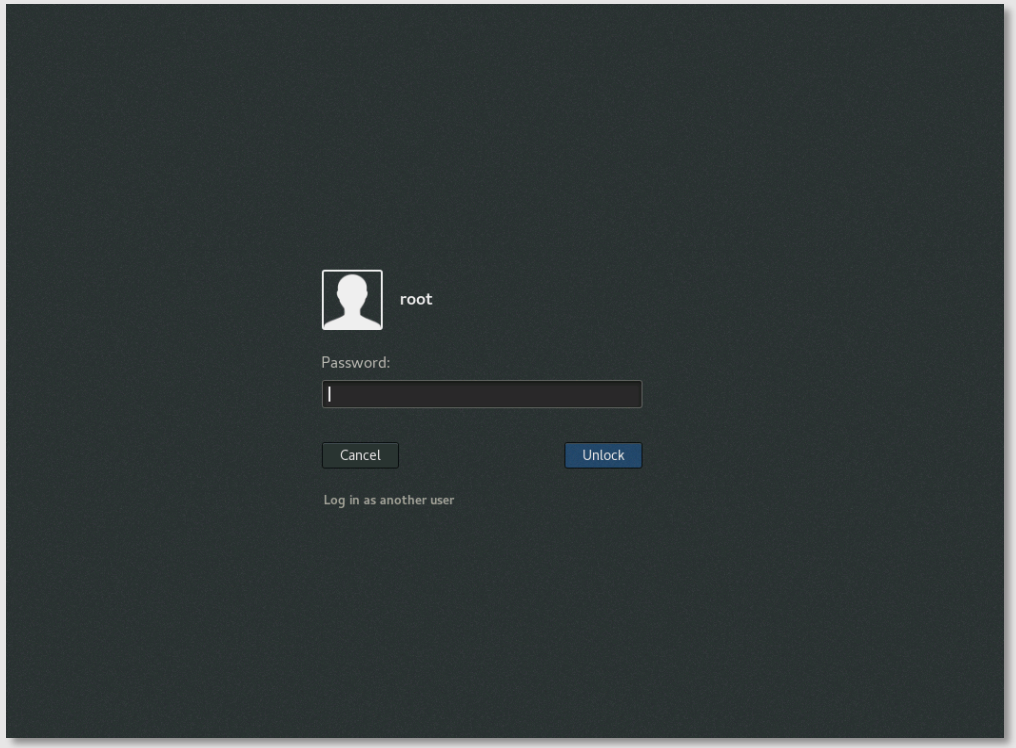


Sleep/Screen Saver Mode

Some Linux VM's will go into a sleep mode or will activate their screen saver if no interaction is made with them (just like a real computer!).

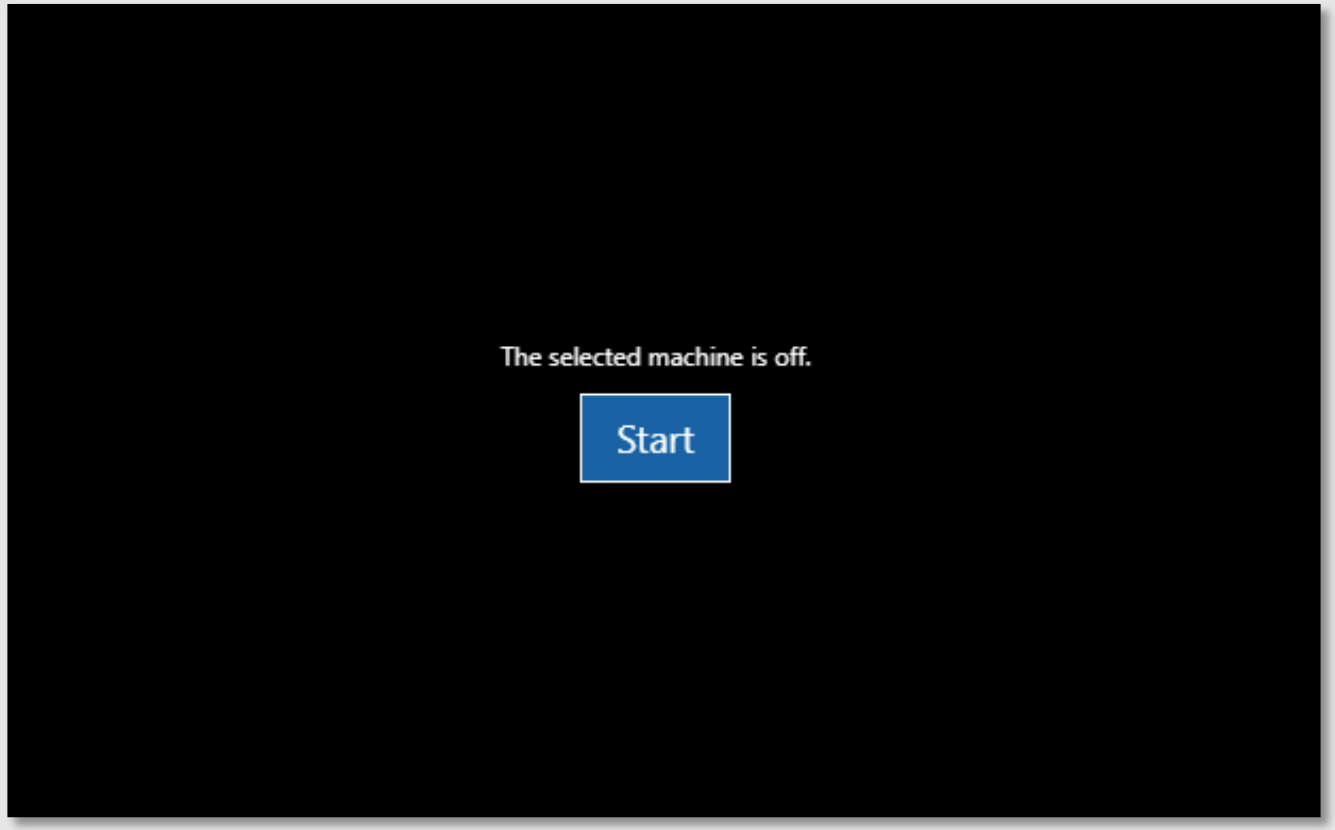
To wake them up, click the mouse on the VM screen and then hit the "E**nter**" button on your keyboard. For some linux machine you may need to click the bottom of the screen and drag your mouse up to login.





Powered Off VMs

On occasion some VM's that are not interacted with for an extended length of time might skip the sleep mode and just turn themselves off. To turn the VM back on, click on the **Start** button in the middle of the screen and the VM will go through the boot-up process and restart.



Internet Availability

Most labs will not have access to the Internet, however, many of the labs use a web browser to access sites within the network of the Lab Environment.

You may see one or all of these web browsers installed on the virtual machines: Google Chrome (Chromium), Firefox, Microsoft Edge, and even Microsoft Internet Explorer.

When you open these browsers, they will inform you that the Internet is not connected. This is normal within the Virtual Lab Environments because we want to keep everything contained in a secure environment. Please remember to follow all the directions and to ignore any "**No Internet Connection Warnings**".

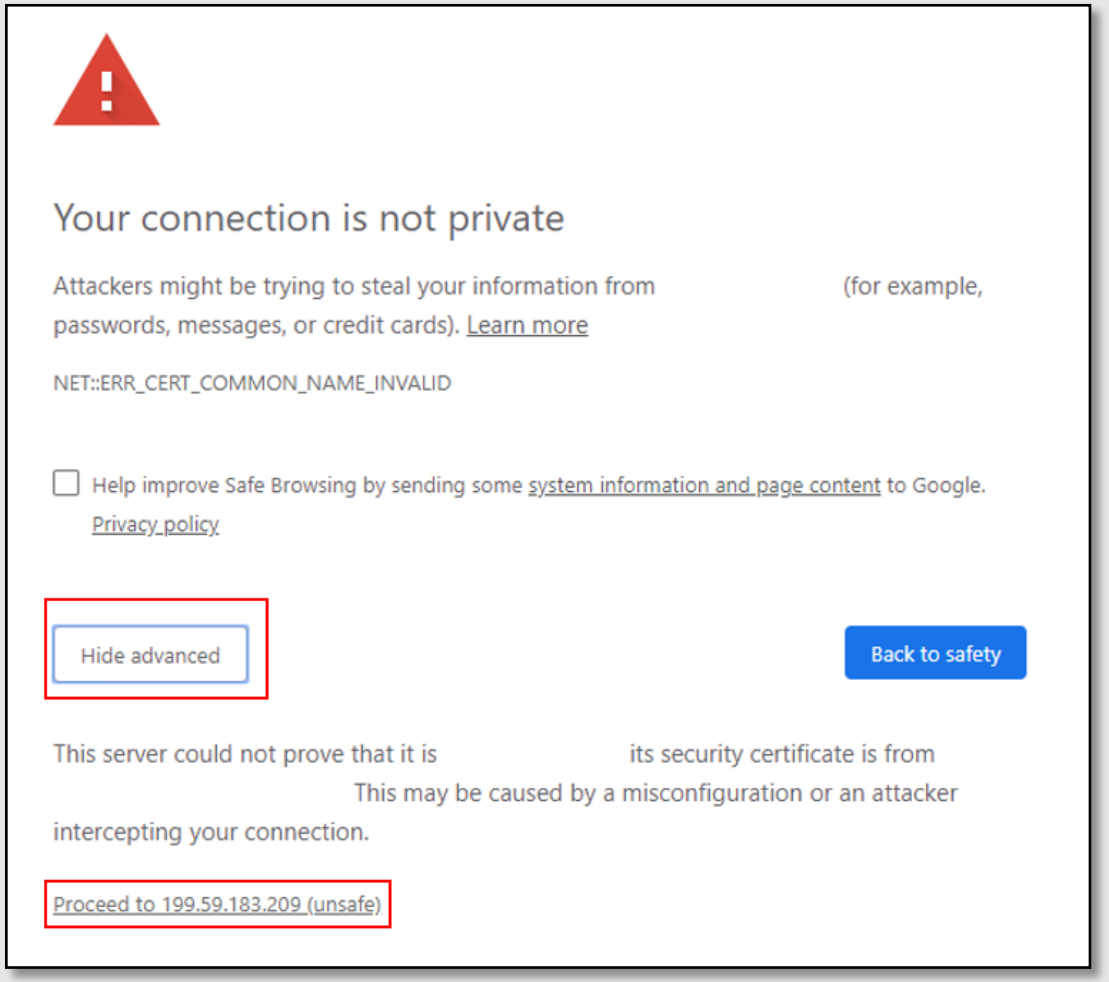
Browser Based Security Certificates

Some of our labs may need to connect directly to a website via an IP address, without any DNS information, for which the browser will then check for its security certificate.

Without going into much detail here, a security certificate is a hashed code that is verified by the owner of the website.

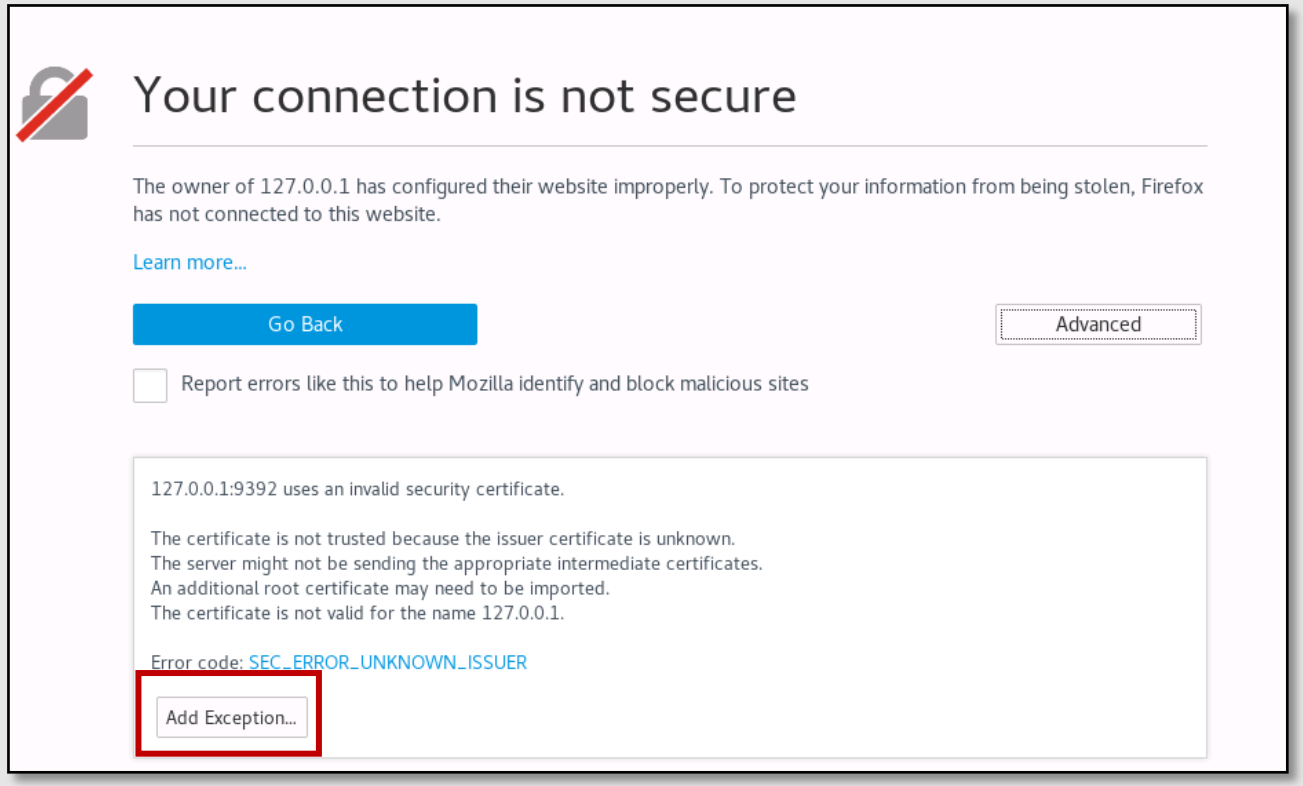
In many of our labs, we are the owners, but we do not have a public facing website (since the labs are self contained), thus there isn't a need to create a self signed security certificate. Because of this, you will see something like this screen shot displayed on the webpage instead of the actual content (this example is from using Google Chrome).

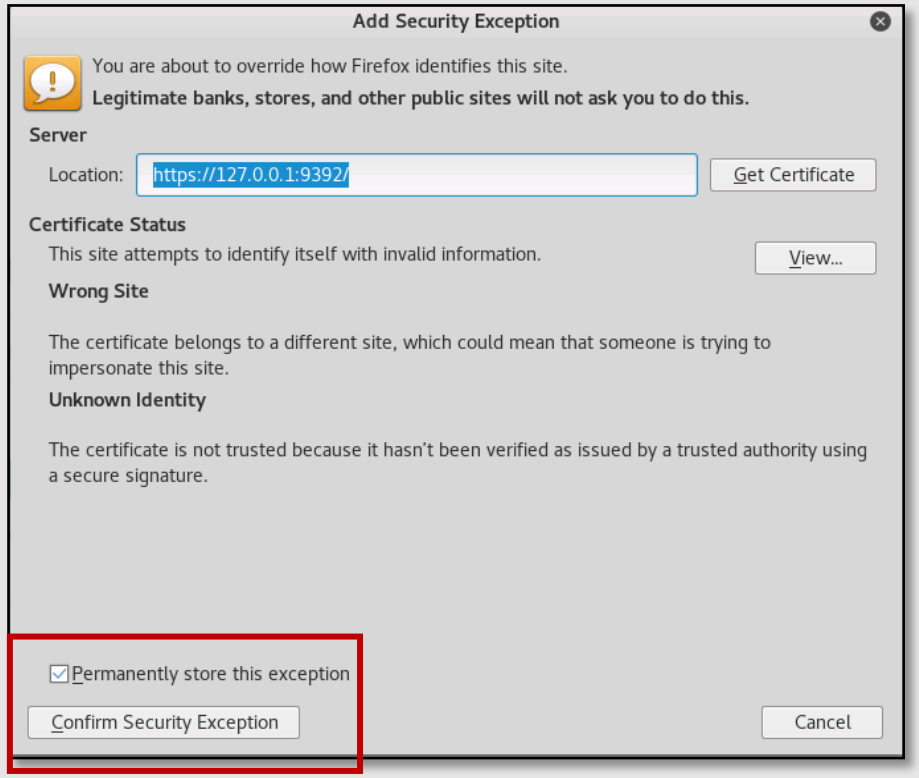
All the browsers work the same way albeit with different wording, but the process is the same. Click on the **Advanced** button and then click on the "**Proceed to <ip.address> (unsafe)**" link to visit the site.



Browser Based Security Certificates (cont'd)

With **Firefox** the process is roughly the same with a few differences. You will receive "**Your connection is not secure**" screen in the browser. Go ahead and click on "**I Understand the Risks**" or "**Advanced**" and then click on the "**Add Exception…**" button. Another window (Add Security Exception) will appear, at this point click the "Get Certificate" button and then "**Confirm Security Exception**".





Technical Support

For technical support, please visit our online ticketing platform at:

https://cyberstronger.zendesk.com/

(Support Hours: Monday thru Friday 8:00am – 8:00pm EST excluding Weekends and Holidays.)

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