Lab 0: Slingshot and Raspberry Pi Setup

Purpose: The purpose of this exercise is to introduce the Slingshot Linux distribution. This Linux distribution will be used throughout the course for lab exercises.

Description: In this exercise, you will configure and boot the Slingshot Linux virtual machine included on the SEC556 USB drive (or contained in the .iso downloaded from your student portal). You will learn the basics of navigating the Slingshot Linux desktop interface and how to prepare your system to complete the lab exercises for this course.

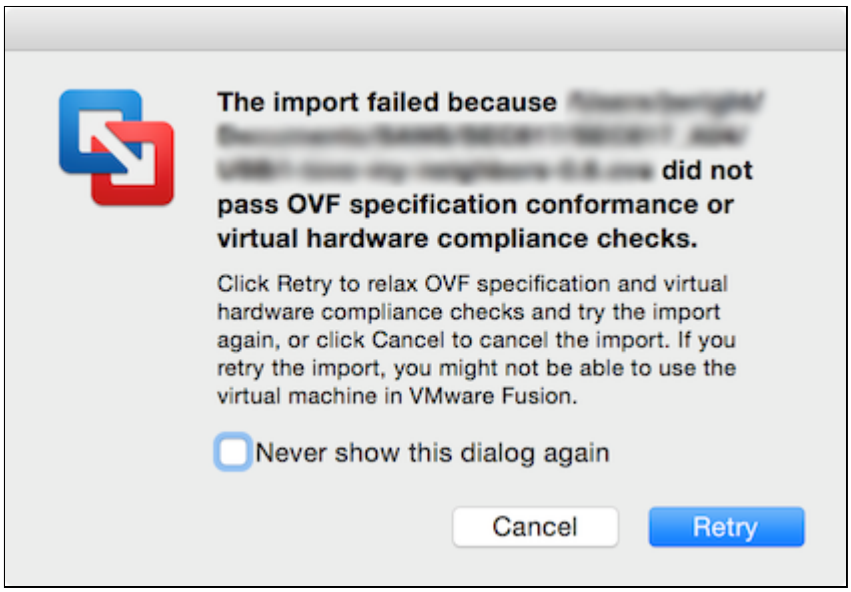
> **Important:** It is important to note that hacker tools are not written with the same quality and reliability as commercially available tools. Many hacker tools work unreliably and may cause unexpected results against both the target system and the local system running the tools.
>
> We have taken steps to ensure that the tools used in this lab will not damage your system and will work as advertised against a target system. However, it is our recommendation that you use a non-critical system that does not hold valuable data that would be disadvantageous to you or your organization if it were lost or otherwise disclosed.
>
> **Important:** In order to complete these lab exercises, you will need a copy of VMware Player, VMware Workstation, or VMware Fusion on your laptop. If you do not already have a copy of VMware installed, you may download and install VMware Player for free from http://downloads.vmware.com.

Import the Compressed SEC556 Slingshot OVA File

The Slingshot Linux VM is included on the SEC556 USB drive (or contained in the .iso downloaded from your student portal)as an Open Virtualization Archive (OVA) file. Copy the OVA file to a convenient directory on your host system. After the copy completes, import the OVA as a VMware virtual machine from the **File | Import . . .** or **File | Open . . .** menu option.

When prompted, name the imported VM *Slingshot Linux SEC556*, select a directory for the VM, and then click **Save**.

Depending on your version of VMware, you may be prompted with an error indicating that the import failed, as shown here. Simply click **Retry** to continue the import process with relaxed compliance check restrictions. When the import process completes, click **Finish** to close the wizard.



> **Important:** Consider a snapshot of the initial state of the Slingshot VM. The snapshot can be helpful in restoring a known working state should something go wrong later in the course.

Boot Slingshot

Start the SEC556-modified Slingshot virtual machine in VMware by opening the file with the **.vmx** filename extension. After opening the VM, start the Slingshot guest operating system. When prompted, supply the following authentication credentials:

> Login: **sec556**
>
> Password: **sec556**

Once the startup completes, you will be presented with the Slingshot desktop and navigation interface, as shown here.

TIP: You may resize the VMware window to any size, and Slingshot will fill the available screen real estate.

Exploring Slingshot Tools

The Applications button in the top-left corner of the taskbar is analogous to a Windows Start menu button. Take a minute to explore some of the preinstalled tools supplied with Slingshot Linux.

Note that for many of our exercises, you will start tools from the command line. Starting a tool from the command line gives us enhanced functionality with the ability to tweak a tool's features with additional command-line arguments.

Updating Your Lab Files

You can quickly update your SEC556 Slingshot Linux VM at any time. Simply open a terminal and run the `workbook-update` script as shown here.

```
$ workbook-update
```

Introducing Your PIoT Device

As part of your hardware kit, you have received a Raspberry Pi kit that will be used for several lab exercises. We'll refer to this Raspberry Pi device as the *PIoT* device.

The PIoT device will be your attack platform for several exercises, augmenting the Slingshot Linux VM when native Linux access is needed. When called for in a lab exercise, you will SSH to the PIoT device to access the underlying Linux operating system and run local commands.

Complete the following steps to prepare the PIoT device.

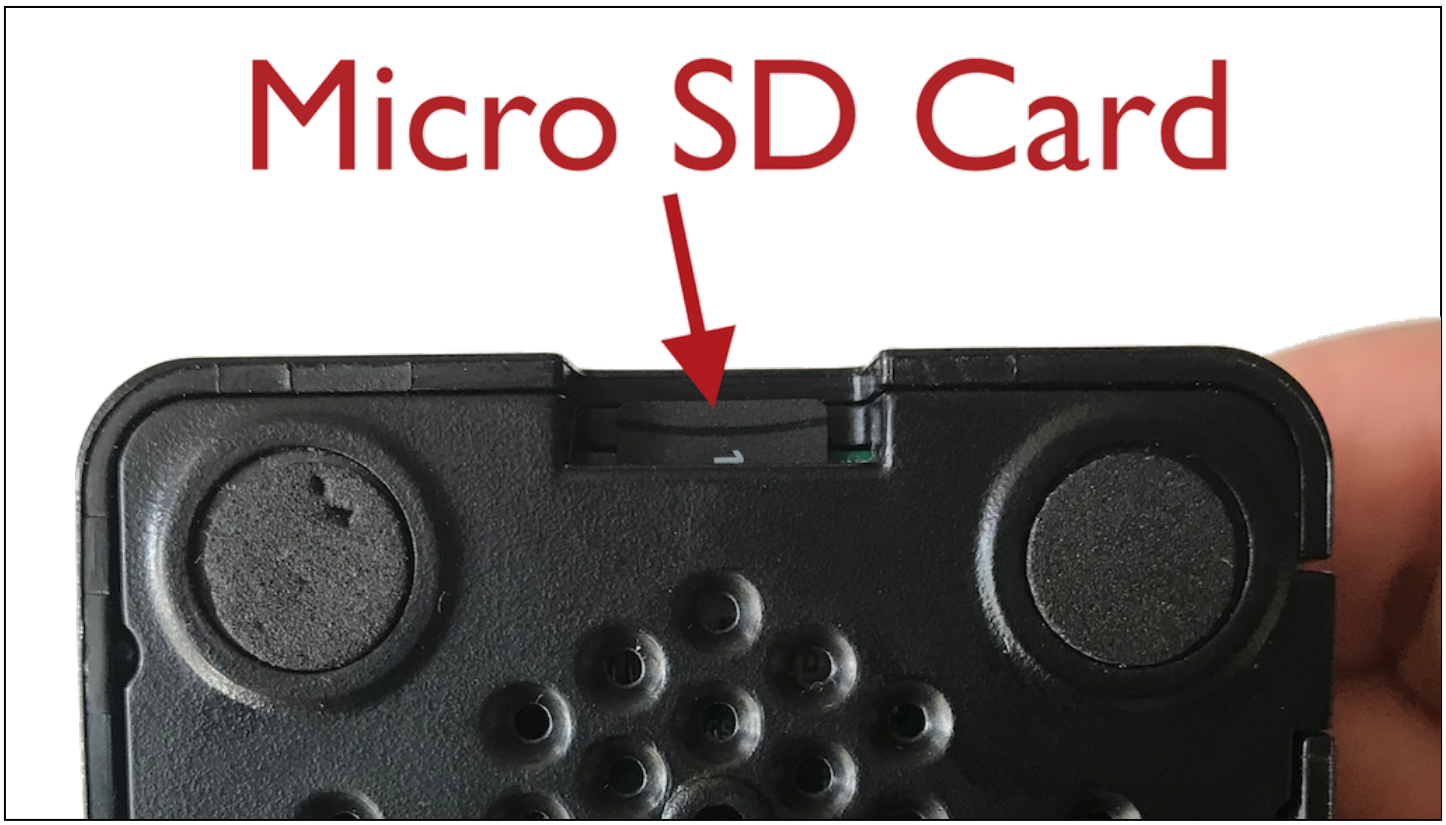
Assemble the Raspberry Pi Device

Assemble the components included with your Raspberry Pi. Follow the directions supplied in the boxes, being careful not to apply too much force when inserting the Raspberry Pi boards into the cases.

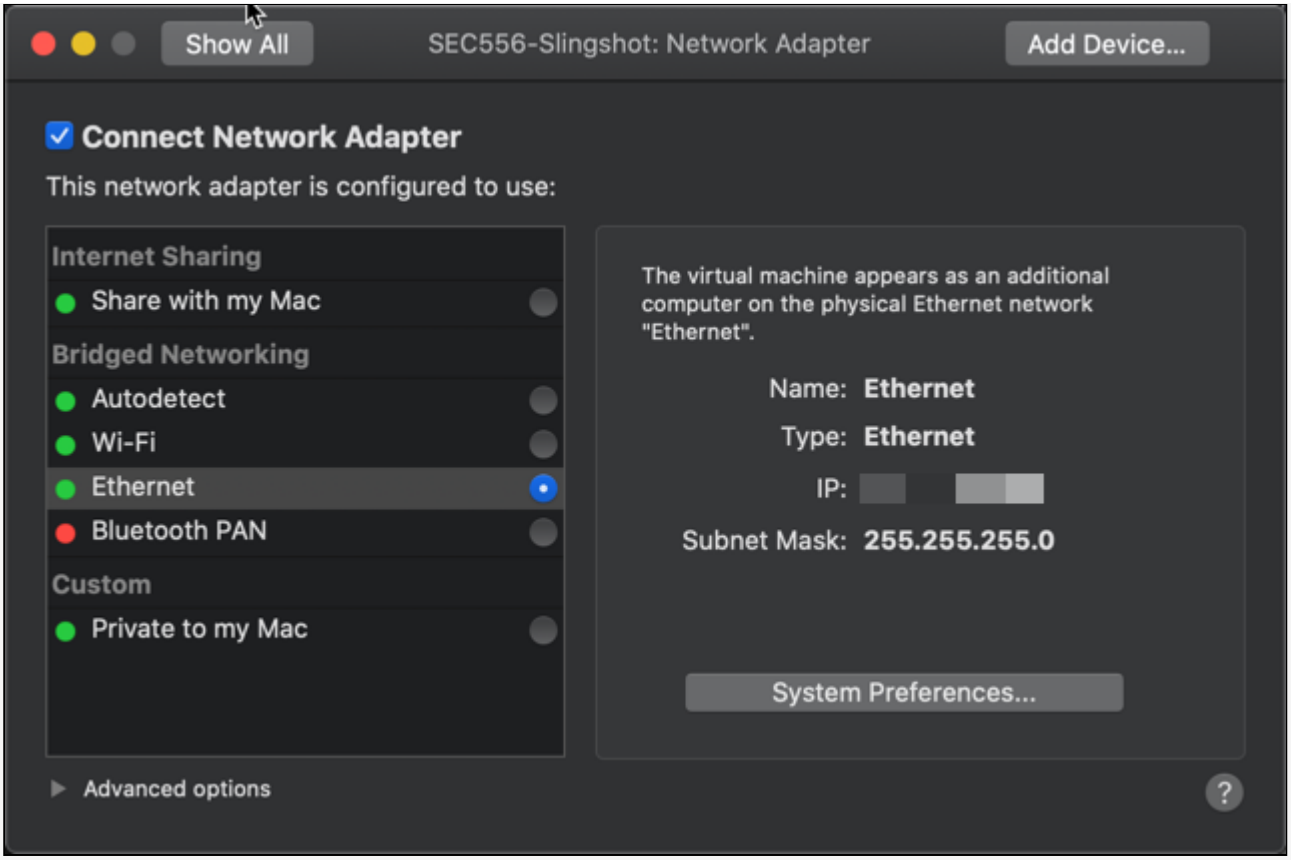
Prepare the PIoT Device

Insert the micro SD card into the Raspberry Pi devices, marking it as your PIoT platform. You can leave this device unplugged until called on to complete a lab exercise.

> Use caution inserting the micro SD card into the slot -- it is easy to insert the card *below* the slot, sending it inside the case (if that happens, disassemble the Raspberry Pi case, remove the SD card, and start over.)



NOTE: You will only need your PIoT device for a few labs. When called for, please connect the PIoT device to your host machine via an Ethernet cable (One is included in your hardware kit, but any Ethernet cable should work.) If you should experience any connectivity issues between the PIoT device and your Slingshot VM, please ensure network interface `eth1` in Slingshot is tasked to the correct physical network interface in VMWare settings for Network Adapter 2:



(your adapter choices and interface will vary)

STOP

This completes the lab exercise. Congratulations.