Video – Setting up PL-App with the Raspberry Pi

- [Narrator] This is the Cisco Networking Academy setting up the prototyping lap app with a Raspberry Pi. We're going to walk through this lab and get a prototyping lab app installed on a microSD card that's going to be loaded up on a Raspberry Pi. Now, the prototyping lab app is a specific piece of software that can run on a Raspberry Pi and provide us with a web interface with a basic concept of notebooks. Now, the neat thing about this is these notebooks are interactive, and they're pretty much an interactive web page, where you can utilize labs that are loaded up on the Raspberry Pi, as well as you can do programming.

So, we're going to get started, and in this lab, we're going to walk through the installation of the PL-App Image on a microSD card, so that we can use this microSD card on a Raspberry Pi and load up this environment with the PL-App. So, we're going to use a desktop or a laptop station in order to be able to flash a microSD card with PL-App Image. Now, in order to do all this, we need some basic resources. So, we're going to have the prototyping lab kit. We'll have the PL-App launcher application that we're going to download from NetAcad, load the PL-App Image file. We're going to download this from NetAcad as well. We'll also need a Raspberry Pi with a power adapter, and a wired or WiFi local area network connection. We need to make sure it's using DHCP as well for IP addressing. We'll also need a web browser, commonly Google Chrome or another current, modern version.

So, to get started, the first thing we have to do is actually get the PL-App launcher from netacad.com. You can download it from there. I've already downloaded the Windows version of it, so I can double click on the installer, and we can through the process of the PL-App launcher install. Now, the PL-App launcher is a tool that's going to allow us to flash a microSD card with a PL-App Image. So, it's really a next, next install. So, we'll just accept the agreement, click next, leave the default directory, then next, we'll like the desktop shortcut, that's perfect. We'll click next and install. It's a very quick install, and then we'll leave the default check mark of launch PL-App launcher, and we'll click finish, and the PL-App launcher is going to automatically load and come up on our screen.

Now, the PL-App launcher itself is an awesome tool in order to take the PL-App Image that we're also going to download and flash that image to a microSD card. With the PL-App launcher, we have a couple sections that we can go and do an overview on. And, what it comes down to is we're going to have a drop-down menu at the top, and the drop-down menu is where we're going to be able to select our microSD card, commonly using a microSD card reader. There's many different versions of microSD card readers. Here's two of them in our lab instructions alone, one which is a SD-card adapter for a microSD card, or by actually plugging a microSD card into a USB adapter and plugging that USB adapter into your machine. Either way, we want to be able to pull up that microSD card in this drop-down menu, so we can then flash it with the PL-App Image, that we will also download from netacad.com.

If you don't have the current USB card reader plugged in, plug it in now and hit that refresh button. You should find a, in this case, directory for that microSD card. If you don't know which one it is, you can always open your file explorer and take a look and find that USB card reader, and again, the minimum size we want to go with is an eight gig card or greater. I have mine plugged in, and it's showing as USB drive J. So, I have that one selected to my drop-down window. Next, make sure you have the PL-App Image file downloaded from netacad.com, and that's hosted there. When you download the PL-App Image, we'll go ahead and click browse, and we're going to find this image.

Mine is called chestnut, and that is the default name of it, and I have it placed on my desktop. I can double click it, or I can just select it and click the open button inside of my file explorer. Now that I have the chestnut image, which is the PL-App Image file selected, I want to give my Pi a unique name, because this is what it's going to show up on on the network. So, for example, I can give it i2iot. We also want a device password, which is going to protect this device, so we have authenticated access to it. I like cisco123.

Now, if you're using WiFi instead of a wired network connection to get your Raspberry Pi on the network, you have to type in your WiFi wireless name, known as your SSID. The one I'm using is called guest. For my password, I have guest8105. Please enter your own here. When you're ready, we're going to click the Write

Disk Image button, and this is going to give us a warning that we're going to erase the J drive. In your case, it's going to be a different letter drive for your microSD card.

I'll click Write Disk Image, and I'll get my popup. So, it's a quick warning that we're going to lose the contents of the J drive. I'll click yes, because I know that that is the correct drive, and I do want to put the PL-App Image on that drive. In the bottom left corner of the screen, you'll see the speed of it writing, and this is going to take some time. So, I'm going to pause the video, and we'll continue.

Once the writing to the SD card is complete, you're able to get a popup, and that popup might ask you to format. Please click cancel, we don't want to erase everything we just did. You might also get a Write Configure, but that's okay. That's a Config file that the PL-App launcher is trying to put on your microSD card. We'll click okay to that error message, and then we'll click Update Config Only, and this is going to write the Config for our name and password, as well as our wireless and wireless password to our actual microSD card. I click it, and I get a success message it was added. I'll go ahead and click okay.

If you want to see what that actually did, you can open your file explorer again, and we'll head over to the PL-App microSD Image that's been written. We can double click on that, and you'll find a text file known as chestnut. When you open that text file, what you'll actually get is a new window, and this new window, when resized for easy viewing, will show you your device name, the password for your device, the wireless name it's going to connect to, and the wireless password that you've chosen. You can go ahead and close that window, and now we're ready to take the next step.

Inside of the lab instructions, the next step refers us to actually take out the microSD card. Before you take out that microSD card, though, you want to do the Safe Ejection from your machine. You can just literally go back to your file explorer, and you can right click, and you can go ahead and click the Eject button. You'll find that inside your file explorer, and it's very simple to do. With the Eject button clicked on, now you're safe to remove that microSD card from the reader which is connected to your machine. When you do that, the next thing we're going to do is take that microSD card, and we're going to slide it into the slot on the bottom of the Raspberry Pi board.

The reason we're going to do this is because when we boot up the Raspberry Pi, it should become available in our Available Devices section here for the PL-App launcher. So, at this time, make sure you slide in that microSD card into your Raspberry Pi and then power on the Raspberry Pi. So, with the microSD card slid into the Raspberry Pi, and the Raspberry Pi being powered on, give it a good minute to three minutes and allow it to connect to your network. Now, you're either using a wired network cable to put this on your network, or you're using a WiFi connection, but either way, for security purposes, it's always recommended to put the PL-App devices on a separate network than the rest of your current house or school network. Also, make sure that this device is able to receive DHCP, so the network it's on has to be providing dynamic addressing for the Pi to automatically receive it.

When the Pi is detected by your computer as being on a network that your computer can reach, you're able to click the Connect button, and that Connect button will launch a browser. It's preferable to use any browser of choice, as long as it's a modern browser, Google Chrome or Firefox work fine. When your browser opens up, feel free to resize it for your window, and then it requests a password from the PL-App dashboard. That password is the password that you set with your device name. For me, it was cisco123, and I can then click Log in. Now, this then gives me a prompt where I need to click I Agree. I'm accepting the filing license, and now I'm here on the PL-App dashboard.

This is running on the Raspberry Pi, and this is loaded up, and I'm connecting to it via my web browser. Inside of this web browser now, what we're able to see is course materials, which we can click on, and this provides us labs for different courses that we can do topic coverage in. And, these labs are going to be Jupiter Notebook Labs that are interactive here in the PL-App area. We can also go back with the back button for our browser, or by using these cookies at the top known as breadcrumbs. Either way, it'll take you back to that home directory.

In the My Files area, this is where you're going to find files that you, yourself build and work on, and they'll be saving them to this directory. Either way, this is going to be an awesome area for us to work on and practice both our programming, and also our skill building, utilizing interactive labs here inside of the PL-App Image. So, thank you for viewing. Your PL-App is now successfully loaded up on your Raspberry Pi and reachable across your network.