

# CREATING A WI-FI ACCESS POINT ON OS X

February 14, 2016 by [Laszlo Pusztai](#) ▪ [1 Comment](#)

With [Kuuvik Capture](#) 2.2 around the corner, I’m going to post a few short tutorials on wireless “tethering” setups. Yes, the wireless connection option will make a return in version 2.2!

So let’s start with a solution to one of the most aching issues.

Imagine the following situation: you are out in the field, photographing an old castle. You want to place the camera on a crane to photograph from a high vantage point. The crane is higher than your longest USB cable can reach, so wireless connection would be the most appropriate solution.

First obstacle: all Canon Wireless File Transmitters (both built-in ones and external bricks) require an existing network to connect to in EOS Utility mode. Yes, it’s utterly stupid, since in other modes they can operate as an access point and create their own network. But other modes simply suck in terms of remote control features.

Back to our example: there’s no phone coverage (for the Personal Hotspot trick), there are no nearby networks of any kind to connect to. You could create an ad-hoc wireless network on your Mac, but setup is complicated and error prone (needs manual TCP/IP configuration on both the computer an on the camera), and in the last few versions of OS X there’s no way to create a secure Wi-Fi network (another utter stupidity). The lack of security is a total showstopper, so this isn’t the appropriate way to make the connection work.

There’s a neat trick, however. OS X has a built-in Internet Sharing feature that practically creates a Wi-Fi access point to share an existing network connection. The next obstacle is that you need the network you want to share to be in the “connected” state (think cable plugged in both to the computer and into a router). Unfortunately the built-in *loopback* interface (which is always connected and provides access to the local computer only) is not accessible from the Network preference pane in System Preferences (one more stupidity).

The key to the trick is to make the loopback interface appear in the Network pane. Actually, it’s pretty straightforward: launch the **Terminal** app and copy & paste the following two commands (working on both Yosemite and El Capitan):

```
sudo networksetup -createnetworkservice Loopback lo0
sudo networksetup -setmanual Loopback 172.20.42.42 255.255.255.255
```

Enter your password to allow these modifications if OS X asks for it.

Now your Network preference pane should list the brand new Loopback service:

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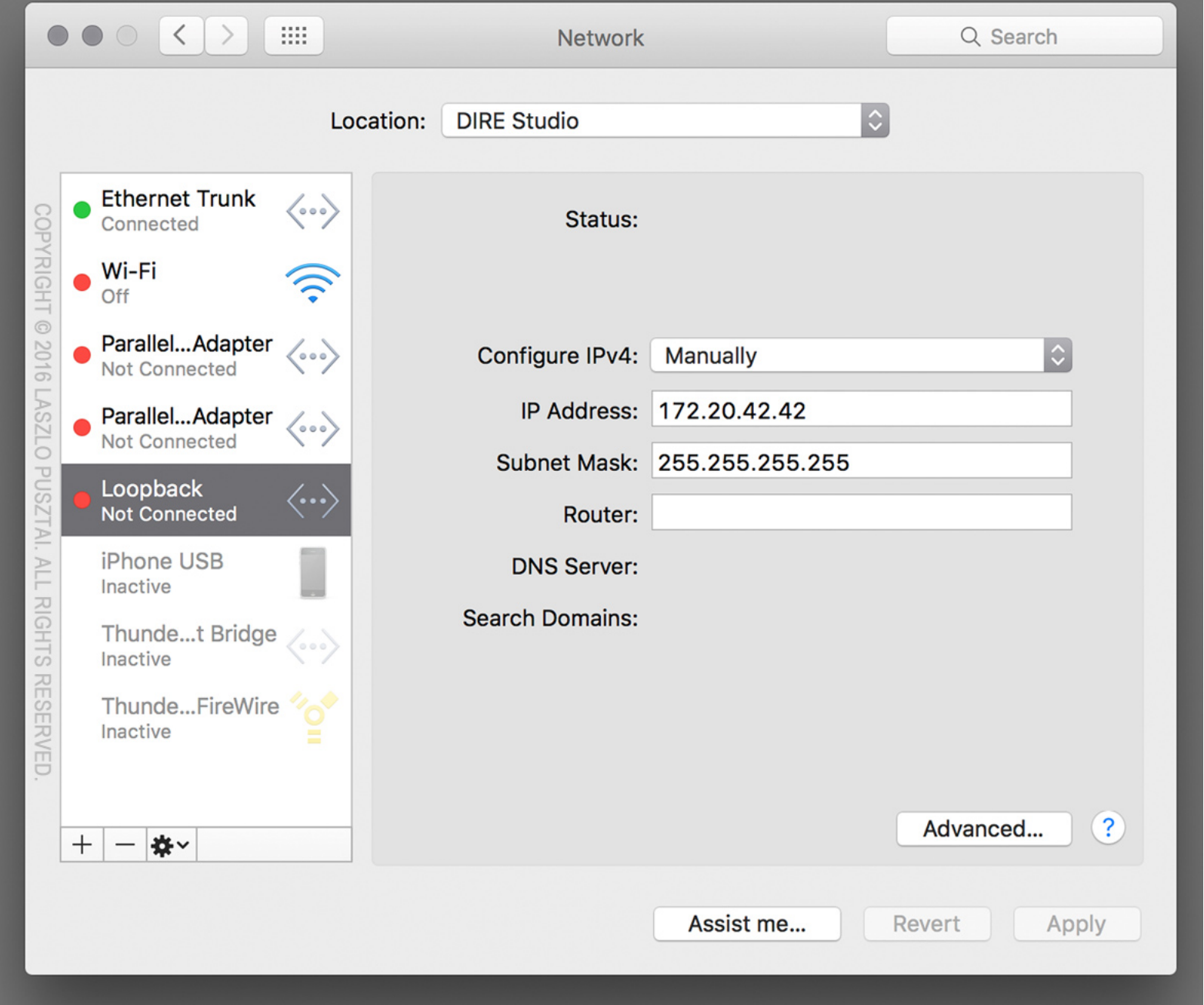
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It’s still listed as “not connected”, but don’t worry, that’s just a bug.

*Side note: if you use multiple “network locations”, you need to repeat the above commands for each location. If you just use the Automatic location, then you can move to the next step.*

Go to the Sharing preference pane, and on the list of services click **Internet Sharing**. If the service is already on, turn it off. Choose the Loopback service as the one you want to share your connection from. And share to computers using Wi-Fi.

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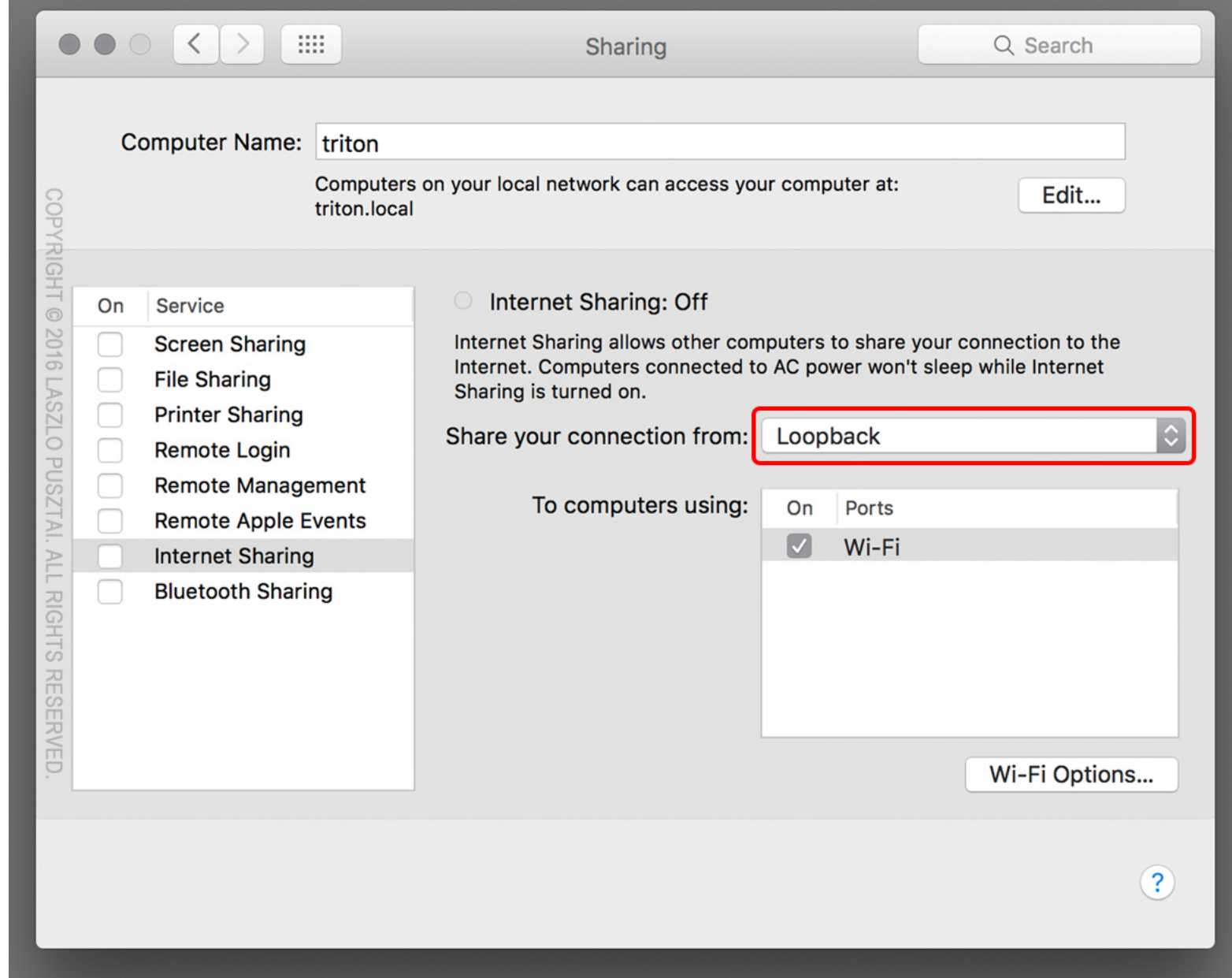
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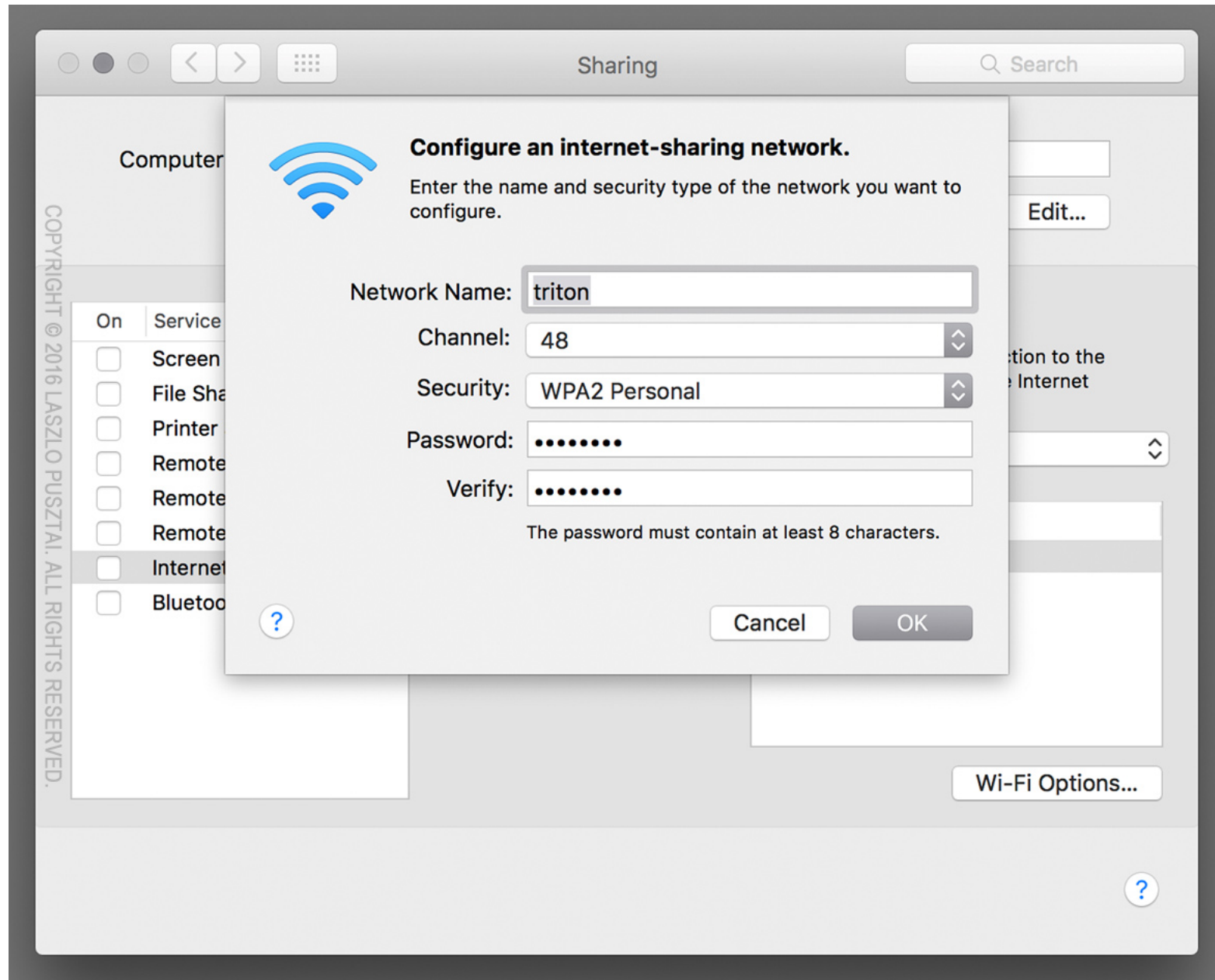
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You can set up the shared Wi-Fi network (the network we'll connect the camera to) by clicking the **Wi-Fi Options** button. Here is the Wi-Fi Options screen:



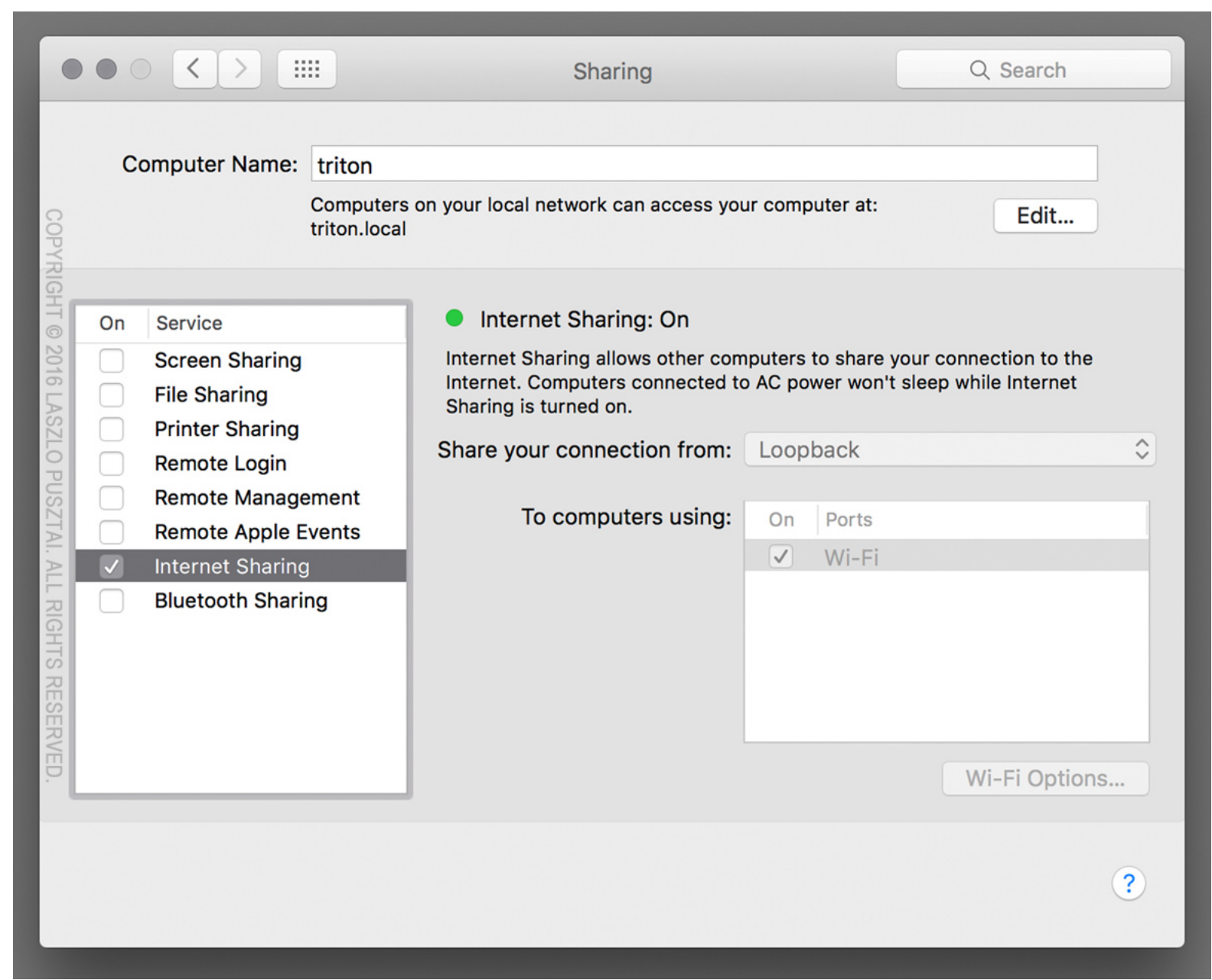
The network name is your computer's name by default, but I'd recommend to enter a simple alphanumeric name (containing no special characters), as Canon cameras



have issues with displaying characters outside of the simple letters and numbers range.

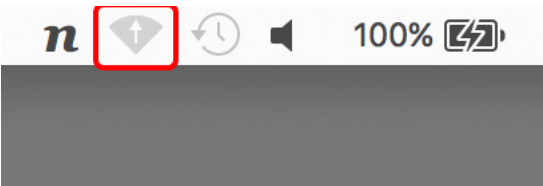
All other options are the usual Wi-Fi setup options. A few notes though. Channels 1-11 use the 2.4 GHz band, while 36-48 use the 5 GHz band. Transmitters in the 70D and 6D only operate on the 2.4 GHz band, while the external WFT-E7 brick operates on both. The 5 GHz band is faster and generally has less interference from other networks and appliances operating in the crowded 2.4 GHz band. For security, choose WPA2 Personal (the other option is None, which is unacceptable).

Once the Wi-Fi options are entered, you can start the sharing service. To do it, click the check box in front of its name in the list. OS X may ask to turn on your Wi-Fi radio if it was off, and will ask your confirmation to start the sharing service. After the service has been successfully started you'll see a screen similar to the one below:



**IMPORTANT:** due to an OS X bug, your selection in the share from list may change to another (random) network service. So you must check whether it still shows the Loopback service after each start!

The Wi-Fi icon on the menu bar will change to the sharing icon once the sharing service is ready to accept connections.

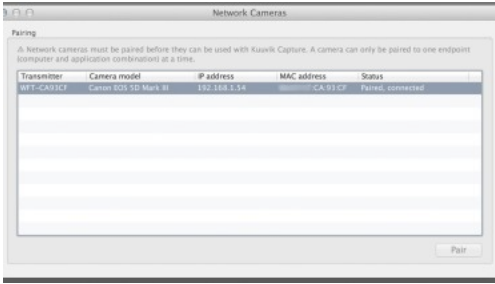


And that's it! Your personal access point is now ready. The steps to configure your camera will be discusses in an upcoming post.

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COMMENTS

**Co Braspenning says:**

January 31, 2017 at 4:26 pm

Thank you very much!

I am using it to connect a laptop to an Apple TV, connected to a big screen in an environment without Internet connection.

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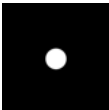

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