

How to get unlimited 5G tethering with an unjailbroken iPhone

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So I'm in a bit of a predicament at the moment. I moved into a new apartment that doesn't have internet. Well, it does but my ISP is seemingly inept and the line running to my apartment is terrible and actually got cut. So I'm currently waiting for an "outside technician" to come to my apartment to fix my internet. Apparently, that can be within "5-7 business days...."

That's frustrating but I figured that it's alright because I have unlimited tethering with my iPhone's data plan. Imagine my surprise when it turns out that "unlimited" means "after a certain point, we'll lower your hotspot speed to near-dial up levels." Sigh. What's a WFH employee supposed to do? A tiny bit of hacking! :)

When you use the Personal Hotspot feature on your iPhone, it actually informs your ISP that the data being used is thru a hotspot. I'm going to show you how to tether your Mac to your iPhone and make it look like all of the data that goes through it is actually from the iPhone itself.

This tutorial uses the following:

- Unjailbroken iPhone — Can be any iPhone but I'm using the iPhone 12 Pro Max so I get 5G
- A Mac — You can definitely use Windows or Linux to do this but I won't be providing details on how to do it. This is a write up on what I did to survive WFH while waiting for my ISP to do its job and I just so happen to use a Mac for my day-to-day computing.

Note: I'm not held liable if your ISP gets mad at you! I'm sure they won't notice but you're taking a risk here by doing some malarky on their cellular network. You've been warned!

Let's get started!!

1. Download the iSH app from the App Store.
2. Once downloaded, open the app and install `apk` which is the Alpine Linux package manager. I've personally never used it before but it's what iSH uses to add new functionality to its filesystem. In iSH enter the following command:

```
wget -q0- http://dl-cdn.alpinelinux.org/alpine/v3.12/main/x86/apk-  
tools-static-2.10.5-r1.apk | tar -xz sbin/apk.static &&  
./sbin/apk.static add apk-tools && rm sbin/apk.static && rmdir sbin 2>  
/dev/null
```

3. Once that's done, you now have the ability to install SSH! SSH is a tool that lets you remotely login to different devices and control them from the command line. (That's

kind of an over-simplification, but that's all you really need to know). To install SSH on your iPhone, enter the following commands in iSH:

- A. `apk add openssh` — Download SSH to iSH
- B. `ssh-keygen -A` — This creates the keys needed to use ssh. It should take a minute or two.
- C. `passwd` — Create a password for the root account. You should probably make this secure lol.
- D. `echo 'PermitRootLogin yes' >> /etc/ssh/sshd_config` — Allow the root user to login to SSH. This is usually disabled because, well, it's normally a bad idea to let someone remotely login to your device with full admin privileges. Fortunately, iSH is running in a sandbox so it isn't thaaaat bad.
- E. `apk add nano` — We're going to have to update one text file to allow network sharing thru SSH. To do it, let's use nano. It's an easy to use text editor.
- F. `nano /etc/ssh/sshd_config` — Open the config file in nano. Now, use iSH's 4 arrows button like a joystick to drag the text cursor down until you find the following line in the file: `AllowTcpForwarding no` . Delete the `no` and type `yes` . Now, to save the file, touch iSH's `^` button above the keyboard, click `O` on the keyboard, and then hit return on the keyboard. You've now saved the file! (Weird, I know). Now, to exit, hit the `^` button again and then `X` on the keyboard.
- G. You now have SSH downloaded and setup!

4. Make sure both of your devices are on the same internet-less WiFi network!

5. On the iPhone, go to Settings > Wi-Fi > the info button next to your Wi-Fi network. Scroll down until you see the IPV4 Address area. Write down what the information is for the IP Address, Subnet Mask, and Router. Now, click Configure IP > Manual > and then fill in the info you wrote down. This step allows you to connect to the WiFi network but still use your own cellular data. Weird, right?

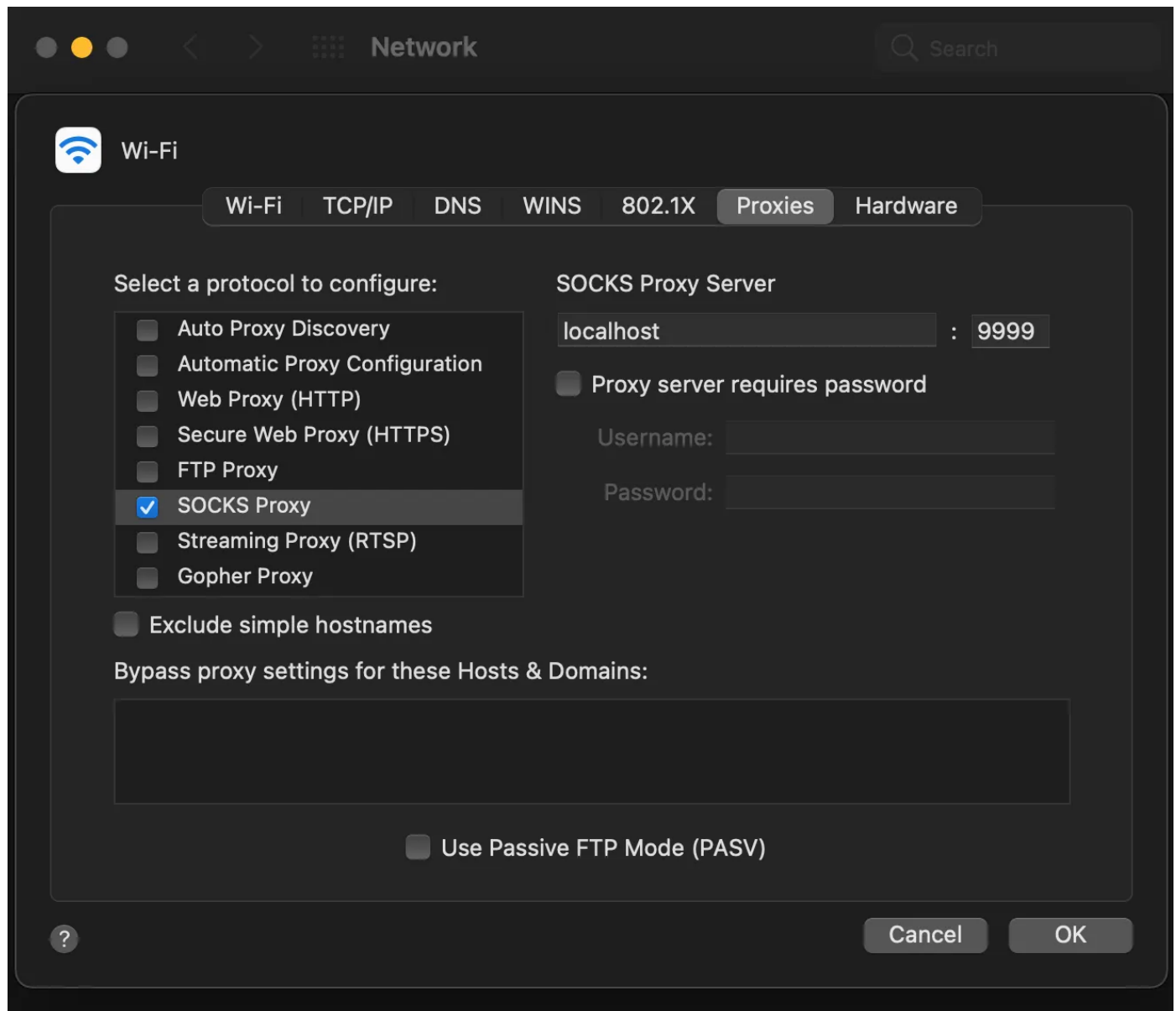
6. While in the Settings, go to Display & Brightness > Auto-Lock > Never. This is because your phone has to stay on in the iSH app so the SSH connection can stay alive. Feel free to change this setting (and the ones in step 5) back after you're done tethering.

7. Open iSH again and enter `/usr/sbin/sshd`

8. Now, on your Mac, open Terminal and enter `ssh`

`root@IP.ADDRESS.YOU.WROTE.DOWN.BEFORE -D 9999 -C` Obviously replace the IP address with the iPhone's IP. When asked about adding the key, type `y`. Finally, enter the root password you created in Step 3. You just remotely logged into your iPhone from your Mac! The `-D 9999 -C` also said you want to funnel all of your Mac's network traffic through the iPhone using port 9999. The `-C` should make the connection a little faster cuz it compresses the data.

9. Last step! Open System Preferences on your Mac, Click Network, and then Advanced... in the Wifi section. This should open a bunch of Wifi settings. Click the Proxies section, and then enable the SOCKS Proxy with `localhost : 9999`



10. Hit OK and then Apply.

11. Your Mac should now have unthrottled access to your iPhone's cellular network!

Some notes:

1. You can't close the iSH app or turn off the iPhone's display or else the SSH connection will be closed. It's a simple fix if you do, though. Force close iSH through the app switcher, open it up again, and type `/usr/sbin/sshd` again. Now, on your Mac, go back to Terminal, close the window that's open, open a new one and type the `ssh root@.....` command again. All should be well, again.
2. Whenever you want to go back to normal Wi-Fi, remember to remove the SOCKS proxy from your Mac. (Step 9)
3. Whenever you're done tethering on your iPhone, remember to change the Wifi's IP back to Automatic (Step 5) and the Auto-Lock back to something reasonable (Step 6).
4. Oh, and I'm not gonna like... keeping your iPhone display on all the time at the same screen is *awful* for it. If you have an OLED iPhone (iPhone X/XS/XS Max/11 Pro/11 Pro Max/any 12) then it can lead to burn in. It would have to sit on the same screen for a looooong time but you've been warned lol

iPhone

Hacking

Tether

5g