

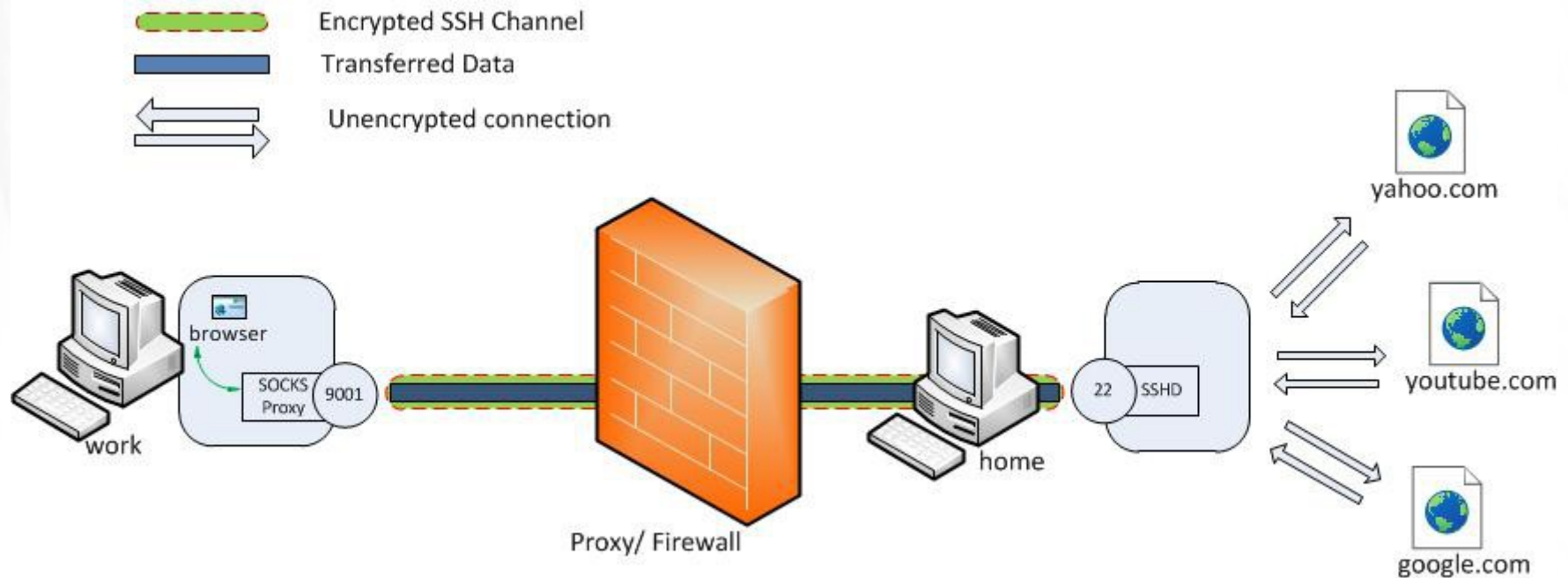
# Personal VPN using SSH Dynamic Tunneling

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# SSH Dynamic Port Forwarding

- Dynamic port forwarding configures a local port for tunnelling data to multiple remote IP Addresses/Ports.
- The client application connecting to local port use the SOCKS protocol.
- The SOCKS proxy is located on the client side to specify where the traffic should be sent when it leaves the other end of the ssh tunnel.
- This technique is support with open/free software on virtually all platforms that supports ssh and fire-fox.

# How it works



<http://chamibuddhika.wordpress.com/2012/03/21/ssh-tunnelling-explained/>

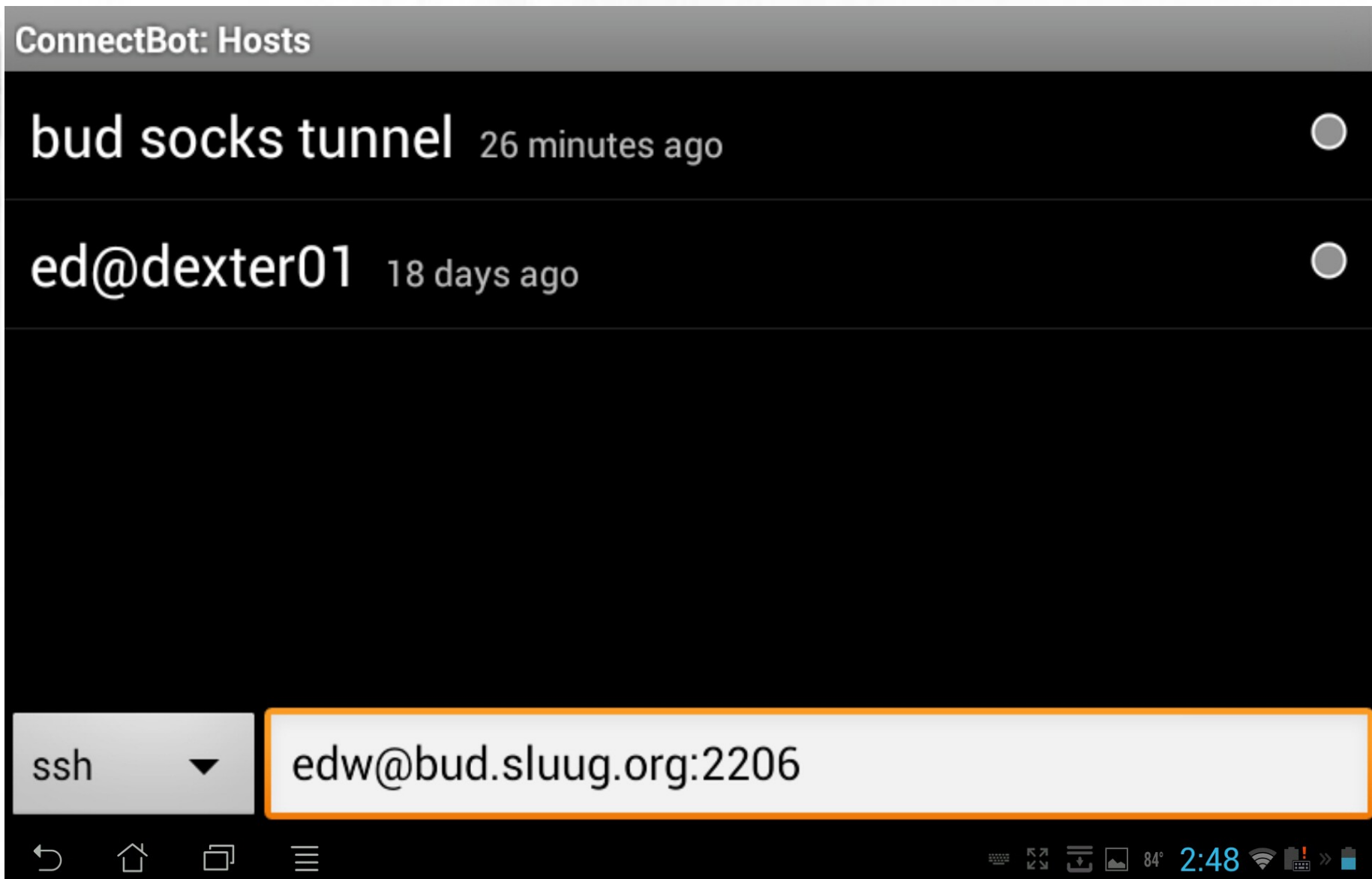
# Android Example

- What you need:
  - ConnectBot – Google Play
  - Firefox – Google Play

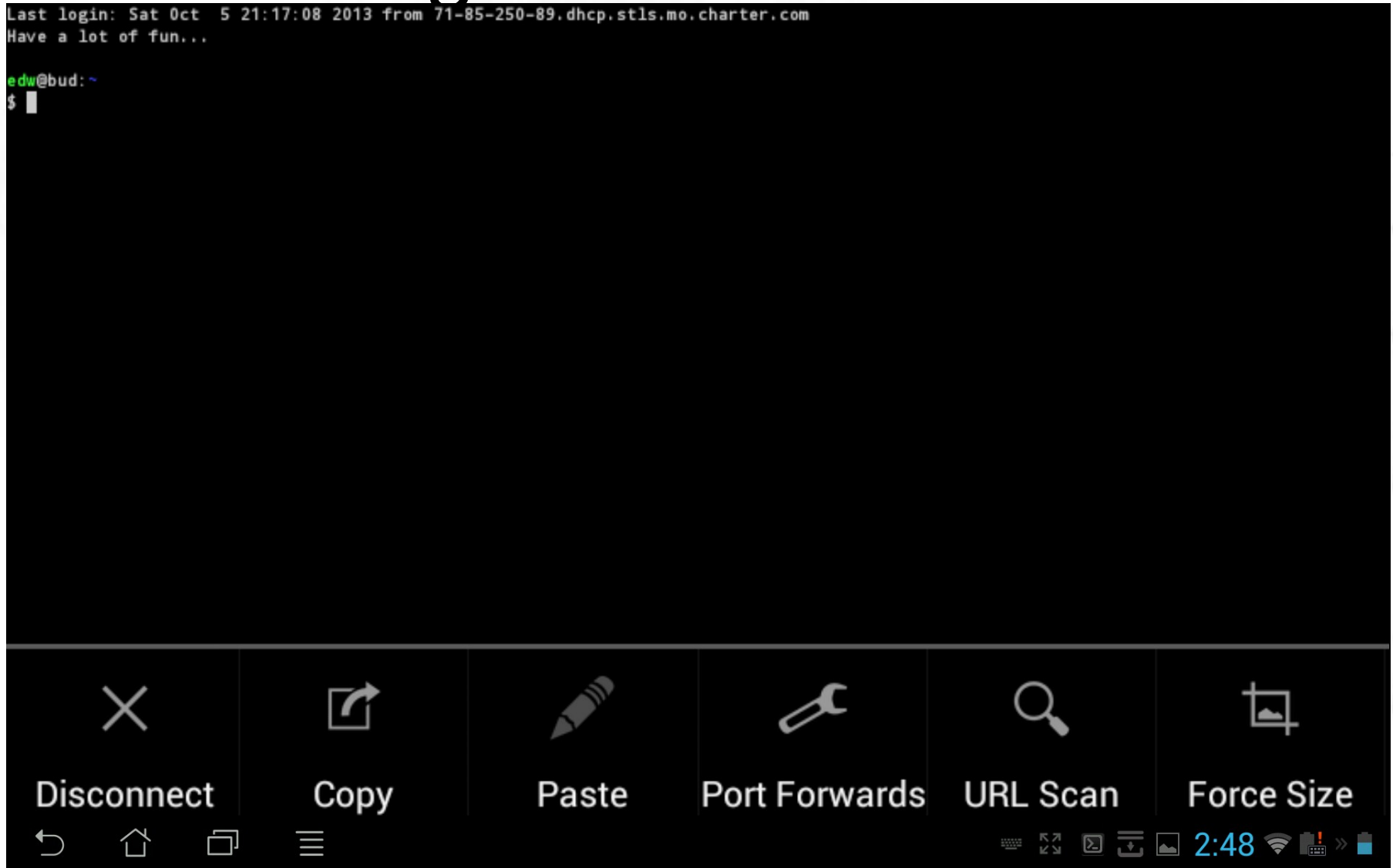
# Android Setup

- Install ConnectBot & Firefox
- Configure a Dynamic Tunnel to your ssh server
  - Local port 8080
- Configure Firefox to use a socks proxy to localhost port 8080
- Configure Firefox for DNS Lookup through the proxy server
- Test your IP address

# Configure ConnectBot



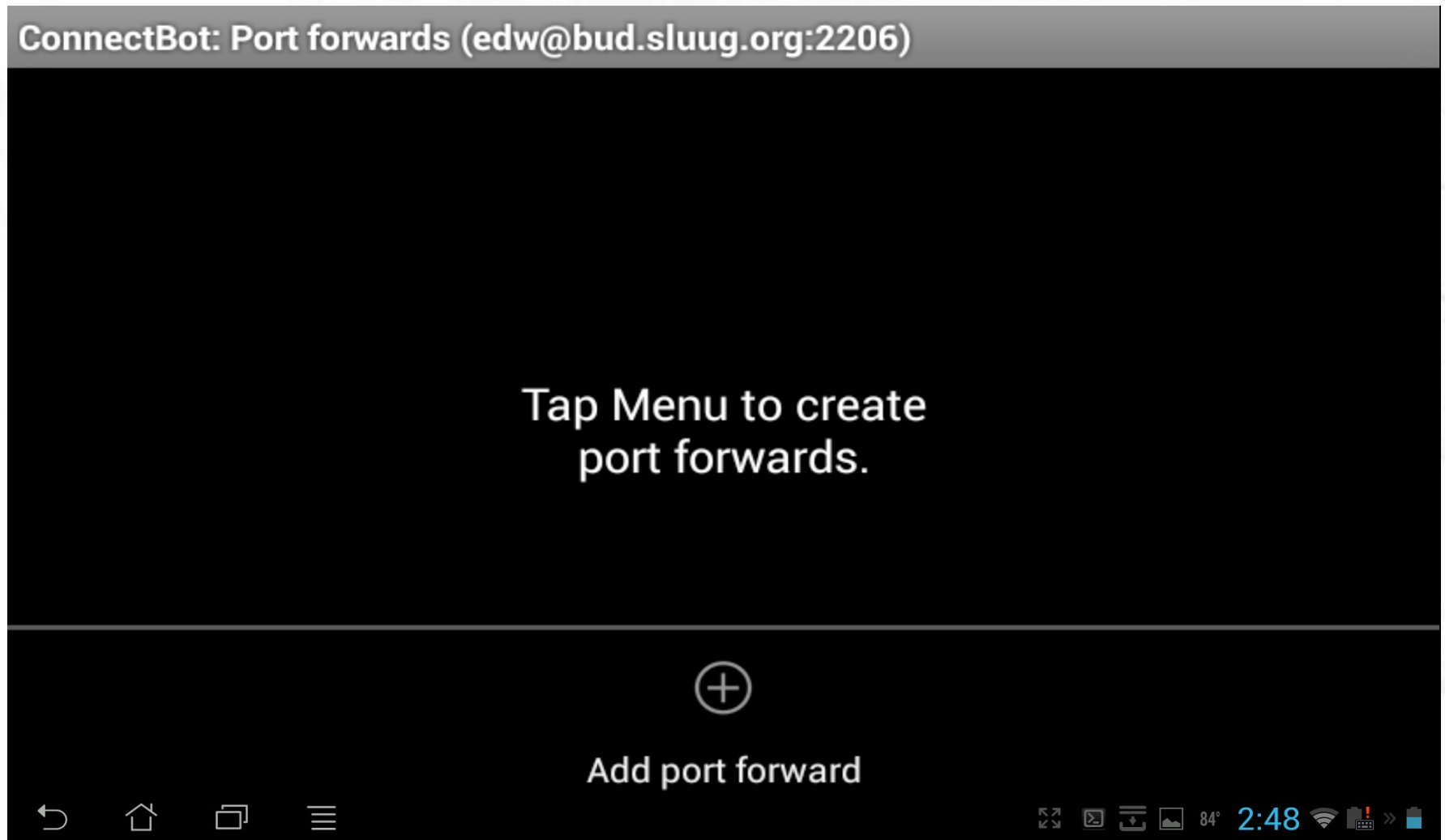
# Configure ConnectBot



Menu



# Configure ConnectBot



Menu



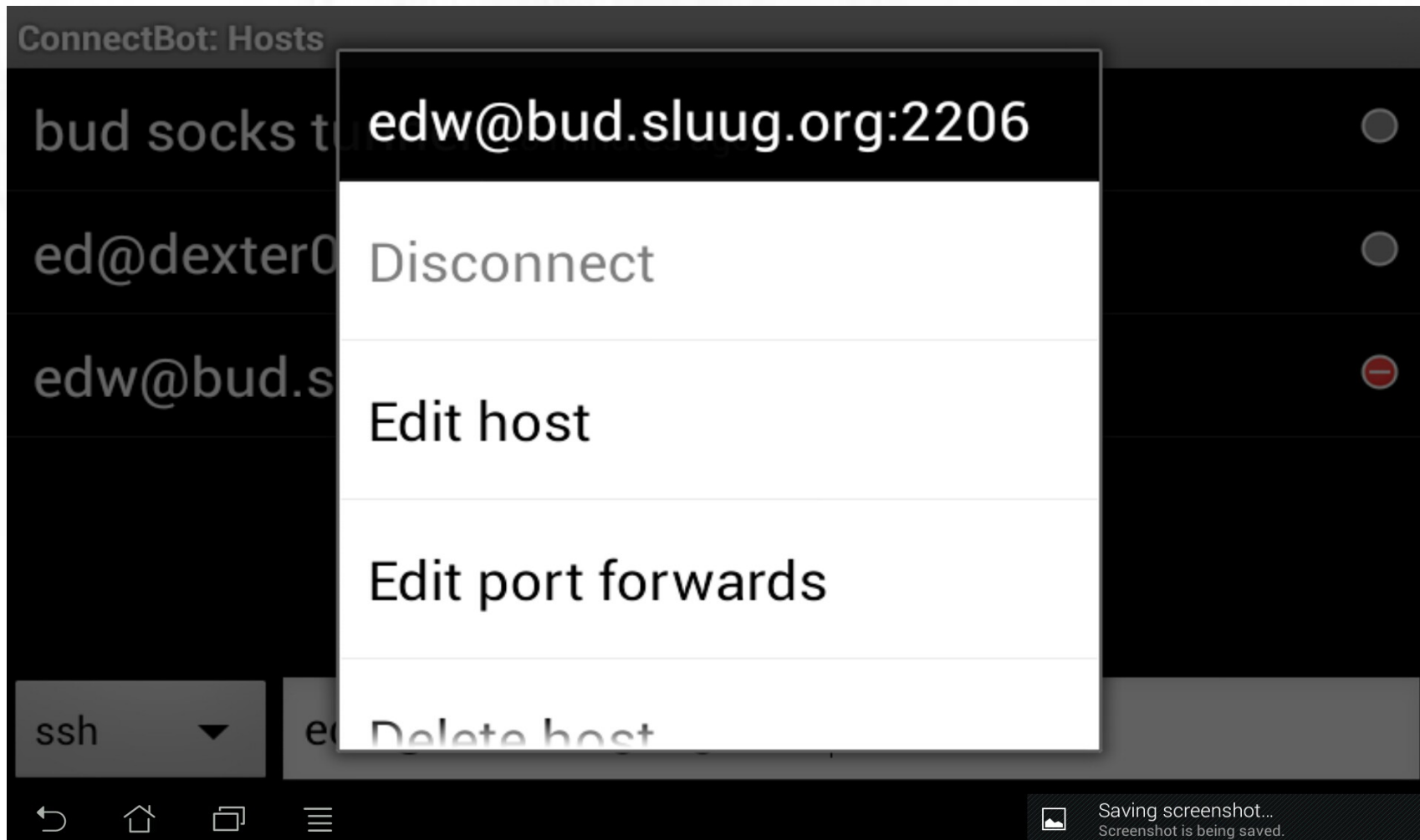
# Configure ConnectBot

ConnectBot: Port forwards (edw@bud.sluug.org:2206)

Nickname:	<input type="text" value="budtunnel"/>
Type:	Dynamic (SOCKS) ▼
Source port:	<input type="text" value="8080"/>
Destination:	<input type="text" value="localhost:80"/>

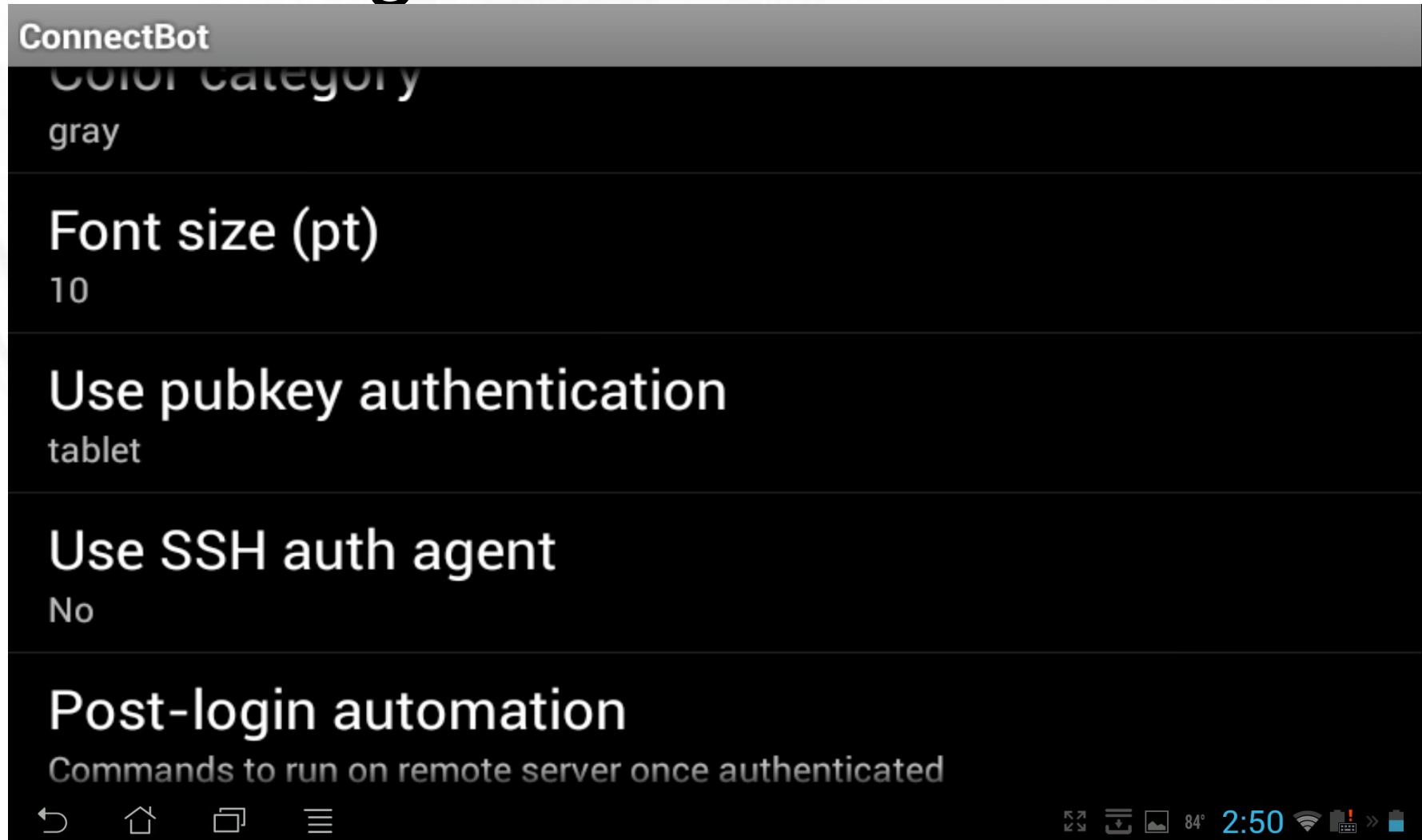
Navigation icons: back, home, recent apps, menu. Status bar: 84° 2:49, Wi-Fi, battery.

# Configure ConnectBot



Long Press to Select Connection

# Configure ConnectBot

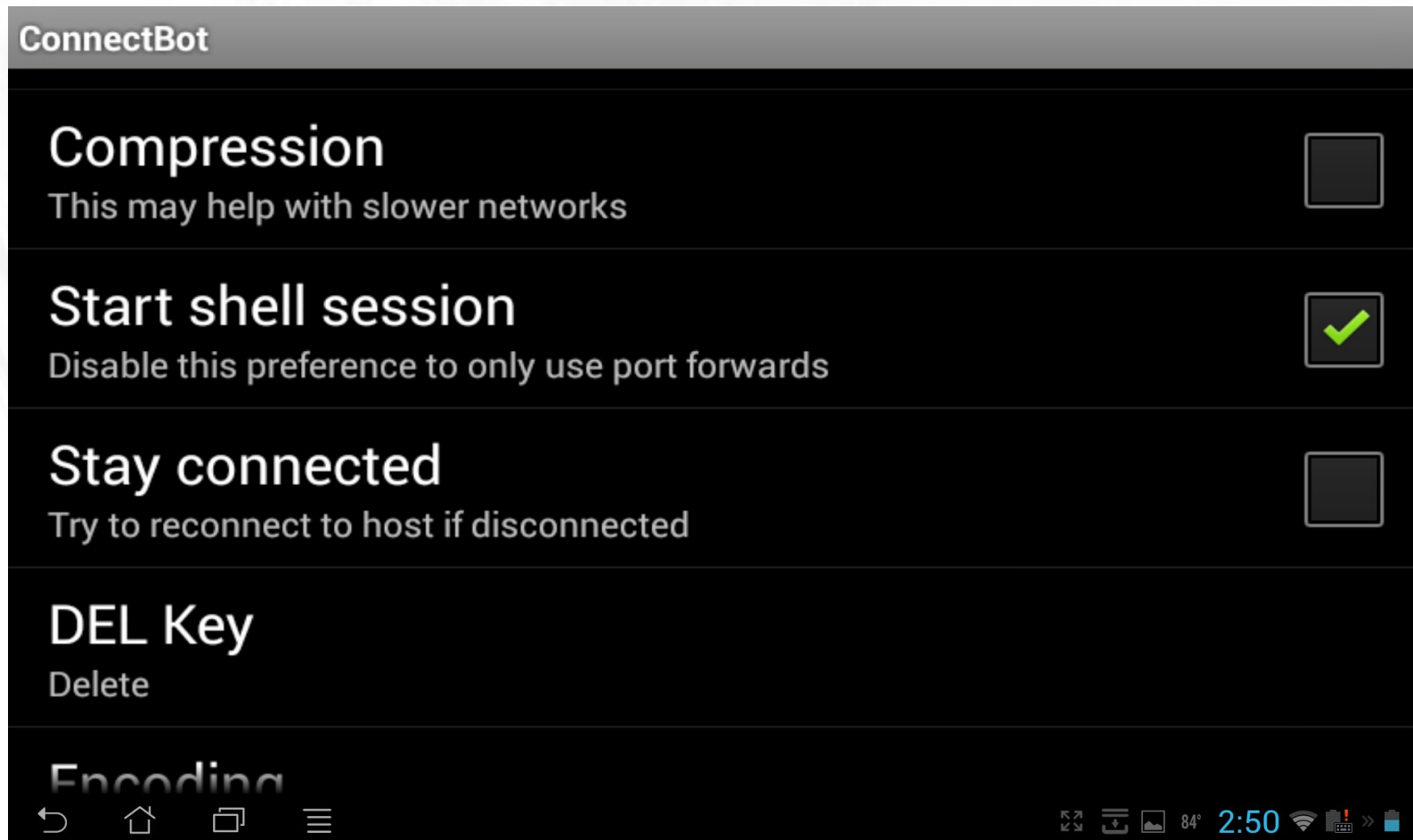


The screenshot shows the ConnectBot configuration interface. It has a title bar 'ConnectBot' and several settings sections. The first section is 'Color category' with a value of 'gray'. The second is 'Font size (pt)' with a value of '10'. The third is 'Use pubkey authentication' with a value of 'tablet'. The fourth is 'Use SSH auth agent' with a value of 'No'. The fifth is 'Post-login automation' with a description 'Commands to run on remote server once authenticated'. At the bottom, there is a navigation bar with icons for back, home, recent apps, and a menu, and a status bar with system icons, temperature (84°), time (2:50), and battery level.

ConnectBot	
Color category	gray
Font size (pt)	10
Use pubkey authentication	tablet
Use SSH auth agent	No
Post-login automation	Commands to run on remote server once authenticated

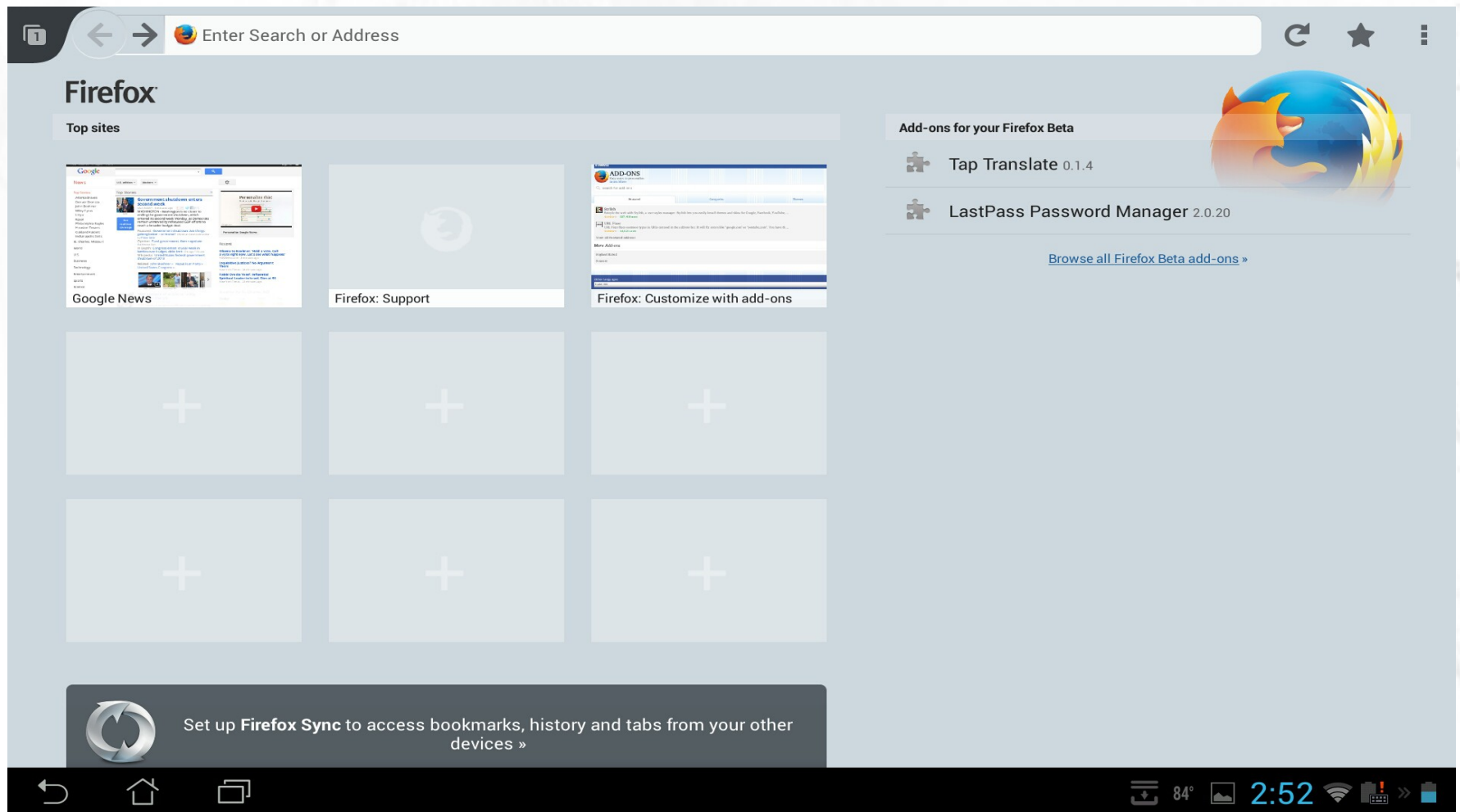
You can configure Pubkey authentication! Use Post-login automation to run a command on connect.

# Configure ConnectBot



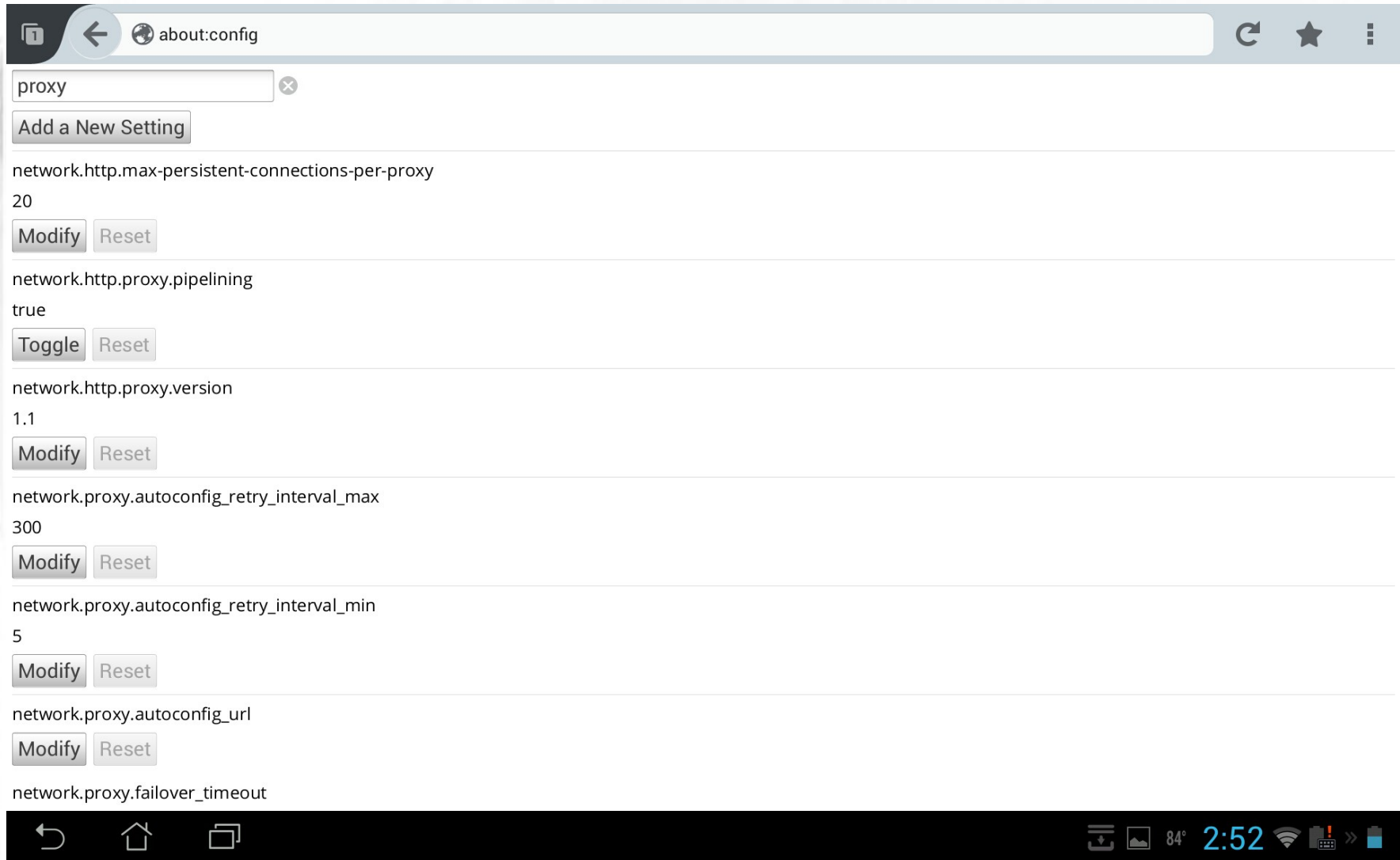
Remove Start Shell for Tunnel Only, Stay connected will retry if tunnel closes

# Configure Firefox



There are no user settable proxy settings available with FF Android

# Configure Firefox



FF supports proxy, but you have to set the values through about:config



# Configure Firefox

Blank

The screenshot shows the Firefox 'about:config' page with several network proxy settings. On the left, there are labels with arrows pointing to specific settings: 'Blank' points to 'network.proxy.http', 'Match Tunnel Port' points to 'network.proxy.socks\_port', 'Set True' points to 'network.proxy.socks\_remote\_dns', and another 'Blank' points to 'network.proxy.ssl'. The settings themselves are as follows:

- network.proxy.http**: (Blank) [Modify] [Reset]
- network.proxy.http\_port**: 3128 [Modify] [Reset]
- network.proxy.no\_proxies\_on**: localhost, 127.0.0.1 [Modify] [Reset]
- network.proxy.socks**: localhost [Modify] [Reset]
- network.proxy.socks\_port**: 8080 [Modify] [Reset]
- network.proxy.socks\_remote\_dns**: true [Toggle] [Reset]
- network.proxy.socks\_version**: 5 [Modify] [Reset]
- network.proxy.ssl**: (Blank) [Modify] [Reset]

At the bottom of the screen, there is a status bar showing navigation icons (back, home, tabs), the temperature 84°, the time 2:53, and various system icons (Wi-Fi, battery, etc.).

FF supports proxy, but you have to set the values through about:config



# Configure Firefox

localhost, 127.0.0.1

Modify Reset

**network.proxy.socks**

localhost

Modify Reset

**network.proxy.socks\_port**

8080

Modify Reset

**network.proxy.socks\_remote\_dns**

true

Toggle Reset

**network.proxy.socks\_version**

5

Modify Reset

**network.proxy.ssl**

Modify Reset

**network.proxy.ssl\_port**

3128

Modify Reset

**network.proxy.type**

1

Modify Reset

0=none  
1=Manual  
5=System



Blank

Must be 1

FF supports proxy, but you have to set the values through about:config

# Test your connection

The screenshot shows a mobile browser interface with a Google search for "what is my ip". The address bar at the top displays the search query. Below the Google logo, the search results are categorized under "Web". The first result is a summary stating: "Your public IP address is **206.196.99.162** - [Learn more](#)". Below this, there are three search snippets from "What Is My IP" and "What Is My IP Address?". The first snippet is from [www.whatismyip.com/](http://www.whatismyip.com/) and describes various IP-related tools. The second snippet is from [whatismyipaddress.com/](http://whatismyipaddress.com/) and describes IP lookup and proxy detection tools. The third snippet is from [whatismyipaddress.com/ip-lookup](http://whatismyipaddress.com/ip-lookup) and describes IP lookup details. To the right of the search results, there is a "Related searches" section with several suggestions: "what is my ip address and port", "what is my ip location", "speed test", "what is my ip speed", "what is my ip range", "what is my internal ip", "what is my router ip", and "what is my local ip". The bottom of the screen shows a mobile OS dock with icons for back, home, and recent apps, along with a status bar displaying the time as 2:55 and a battery level of 84%.

what is my ip - Google Search

+You Search Images More

Sign in

Google

what is my ip

Web Images Maps Shopping Applications More Search tools

Your public IP address is **206.196.99.162** - [Learn more](#)

**What Is My IP** ® | Shows Your IP Address.  
[www.whatismyip.com/](http://www.whatismyip.com/)  
**What Is My IP** ® - IP Address Lookup, Change IP, IP Whois Lookup, Internet Speed Test, Trace An Email, Host Name Lookup, User Agent, Server Headers ...  
[IP Address Lookup](#) - [Internet Speed Test](#) - [How to Change Your IP Address](#) - [IP Tools](#)

**What Is My IP Address?** Lookup IP, Hide IP, Change IP, Trace IP and ...  
[whatismyipaddress.com/](http://whatismyipaddress.com/)  
IP address lookup, location, proxy detection, email tracing, IP hiding tips, blacklist check, speed test, and forums. Find, get, and show **my IP** address.  
[IP Lookup](#) - [Blacklist Check](#) - [How do I change my IP address?](#) - [IP Address Tools](#)  
2,475 people +1'd this

**IP Address Lookup - What Is My IP Address?**  
[whatismyipaddress.com/ip-lookup](http://whatismyipaddress.com/ip-lookup)  
Lookup details about an **IP** address including location, ISP, hostname, type, proxy, blacklist status and more. Trace, Track and Locate an **IP** address.

**What's My IP Address? Networking Tools & More**

Related searches

- [what is my ip address and port](#)
- [what is my ip location](#)
- [speed test](#)
- [what is my ip speed](#)
- [what is my ip range](#)
- [what is my internal ip](#)
- [what is my router ip](#)
- [what is my local ip](#)

84° 2:55

Your IP Address should be the address of your ssh server

# Closing the Tunnel

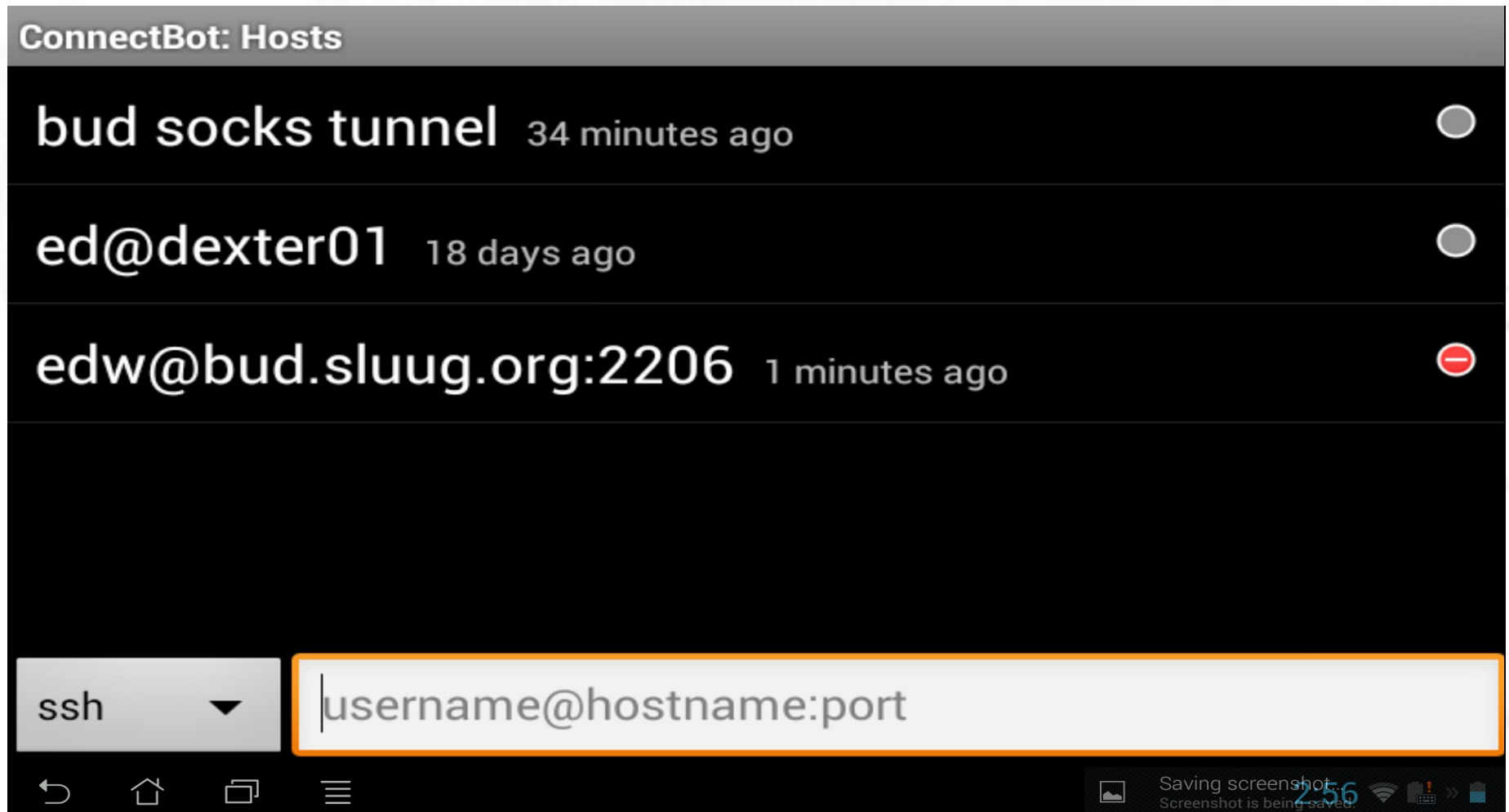
```
Last login: Mon Oct 7 14:48:26 2013 from 71-85-250-89.dhcp.stls.mo.charter.com
Have a lot of fun...

edw@bud: ~
$
```



Go back to ConnectBot and tap menu and disconnect.

# Closing the Tunnel

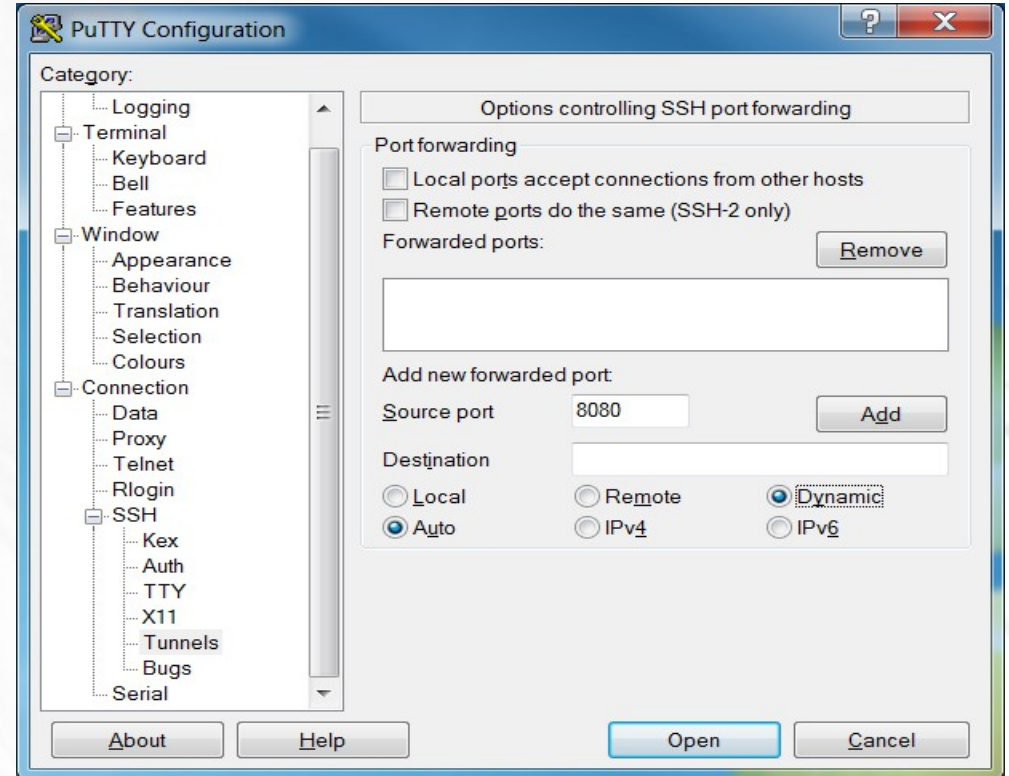
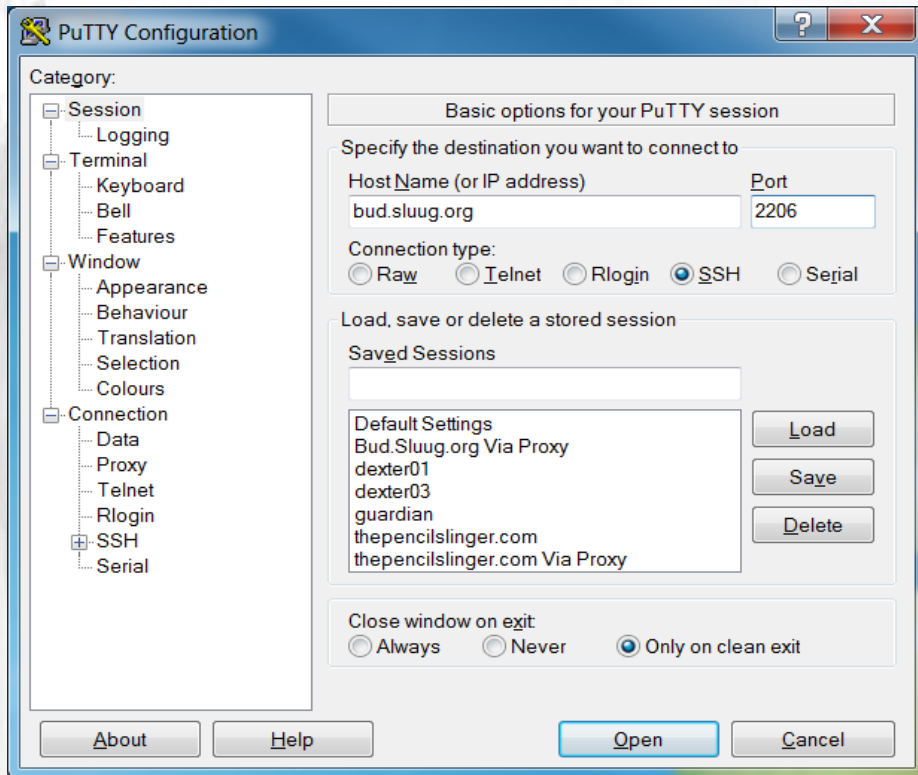


That's it!

# Windows Approach

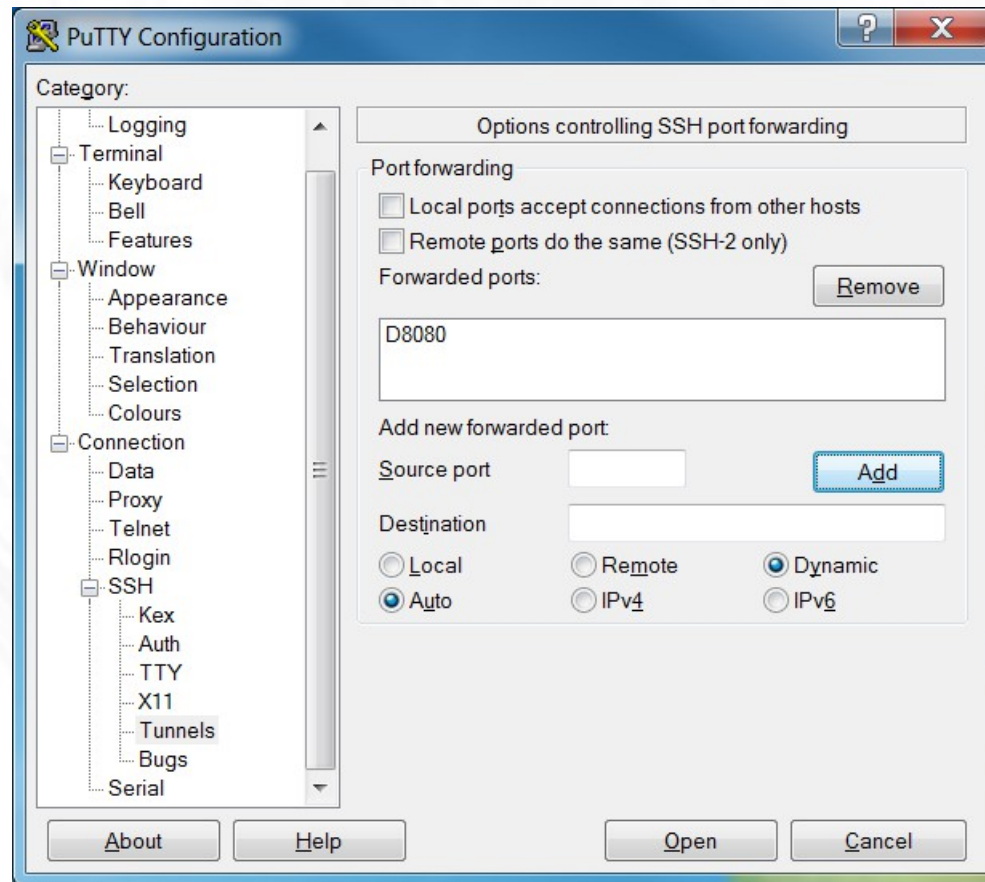
- What you need
  - Putty
  - Firefox
- We will assume you already have these.

# Configure PuTTY session





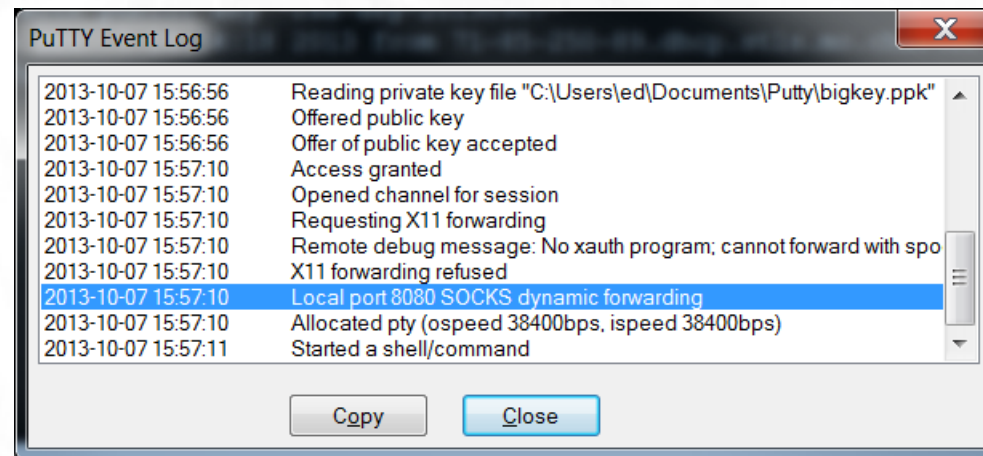
# Port forward should look like this.



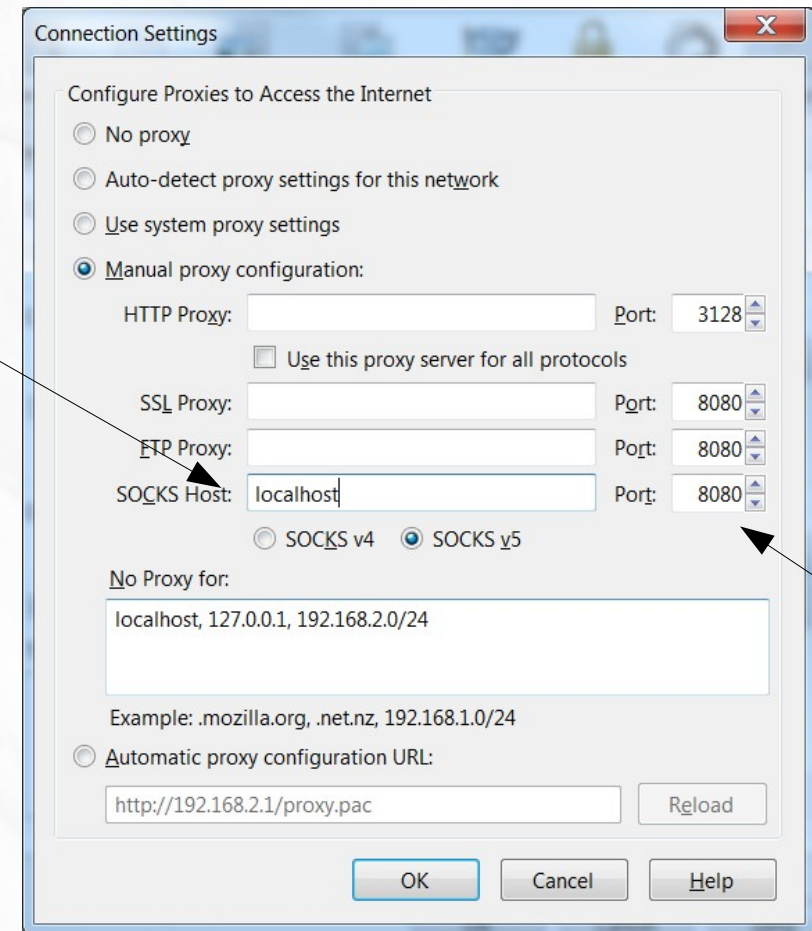
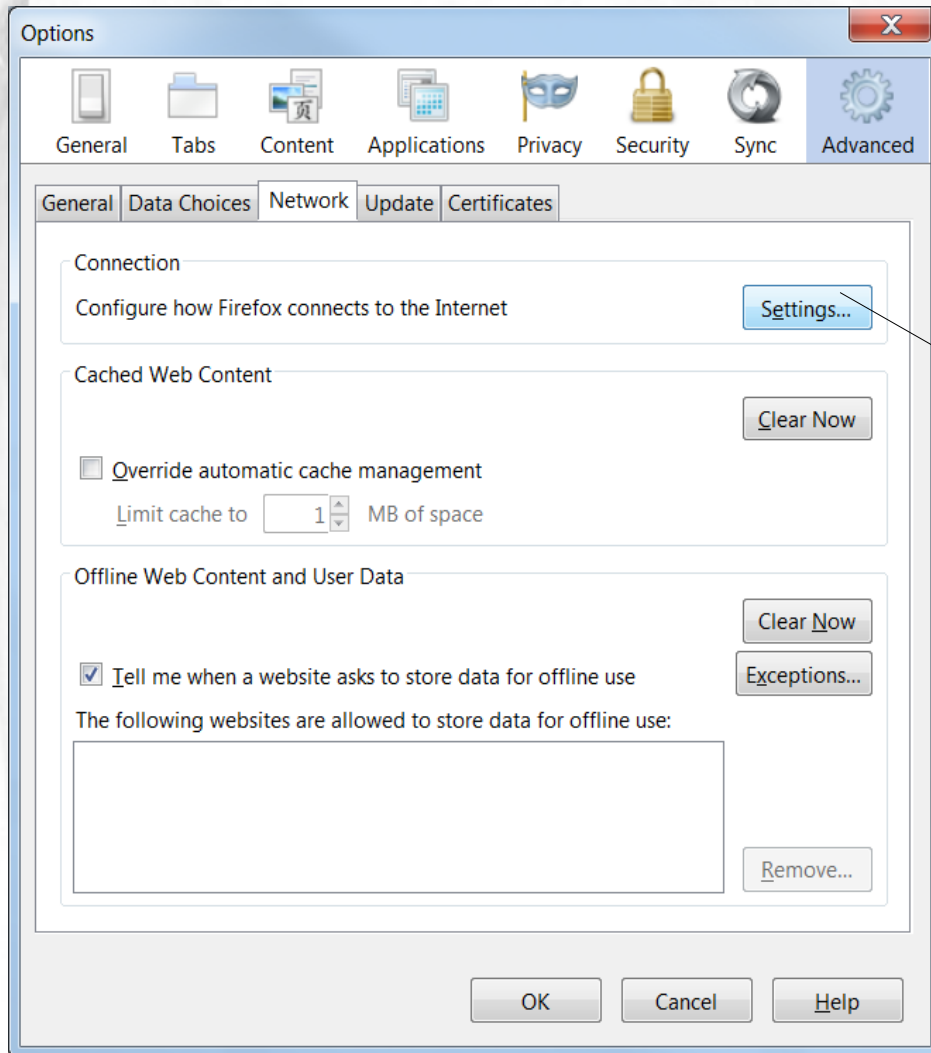
Make what ever other changes are needed for Putty and save sessions



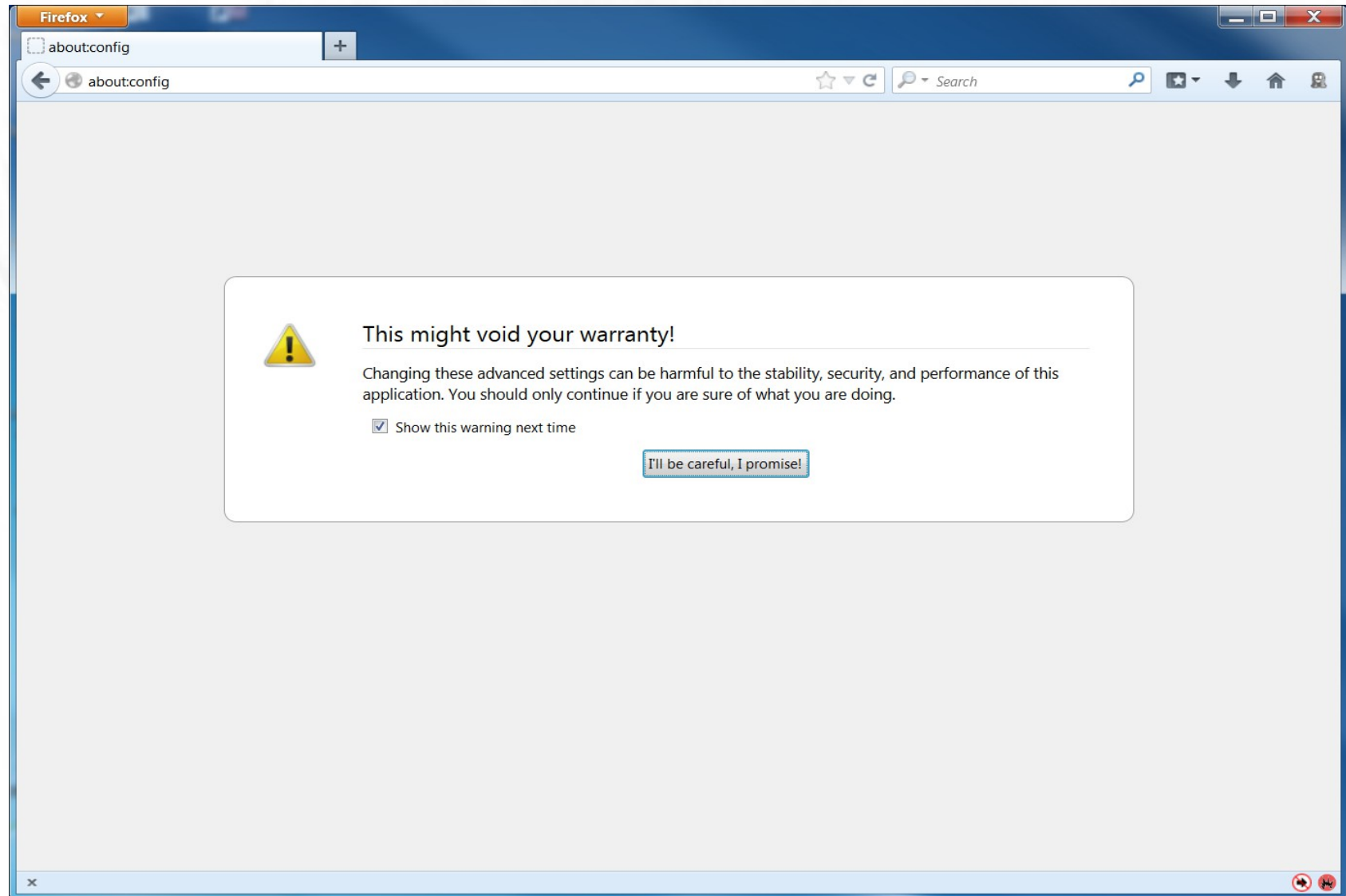
# Check PuTTY Event Log



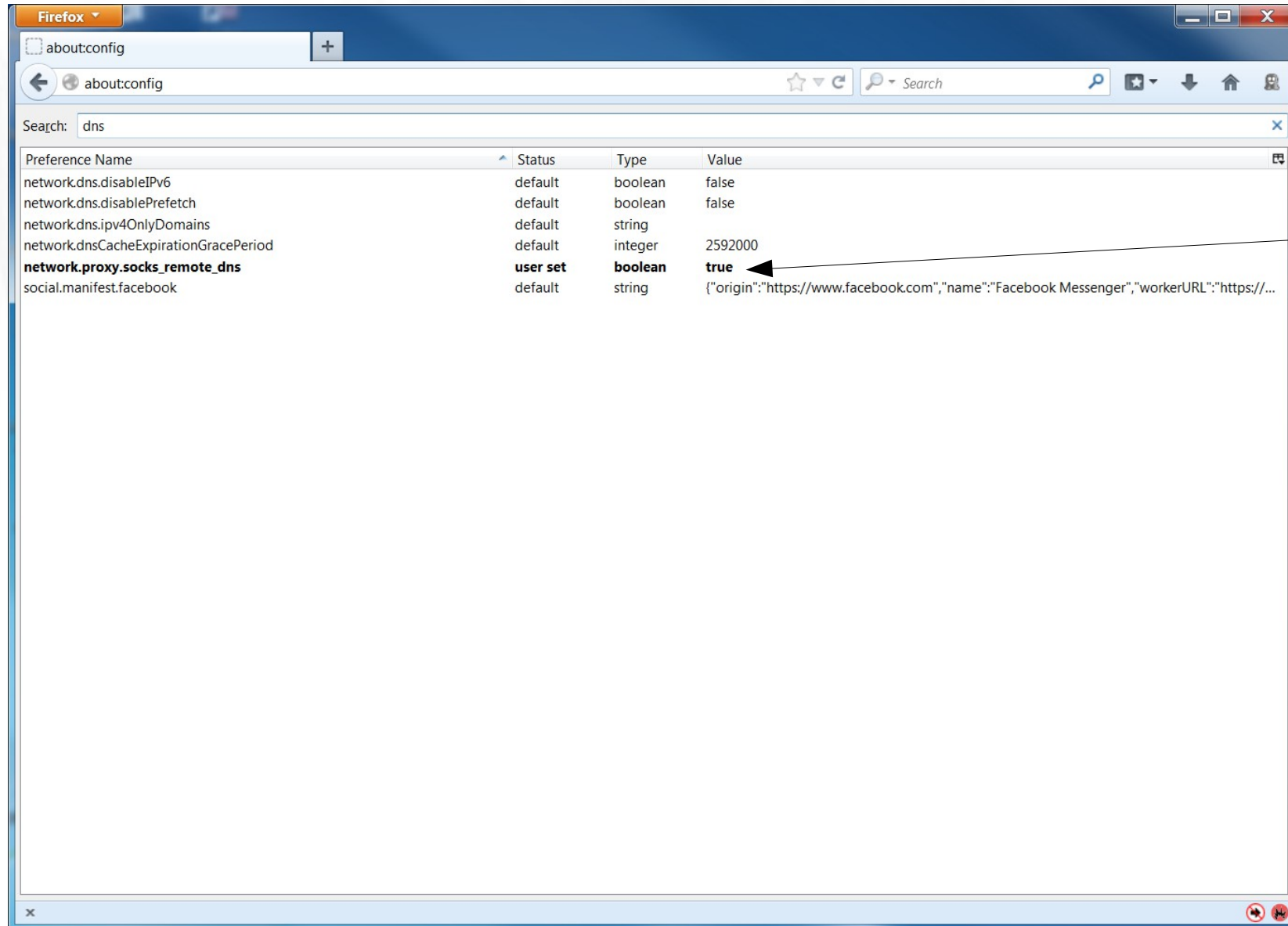
# Configure Firefox to use local Socks Proxy



# Set Firefox to use proxy for DNS

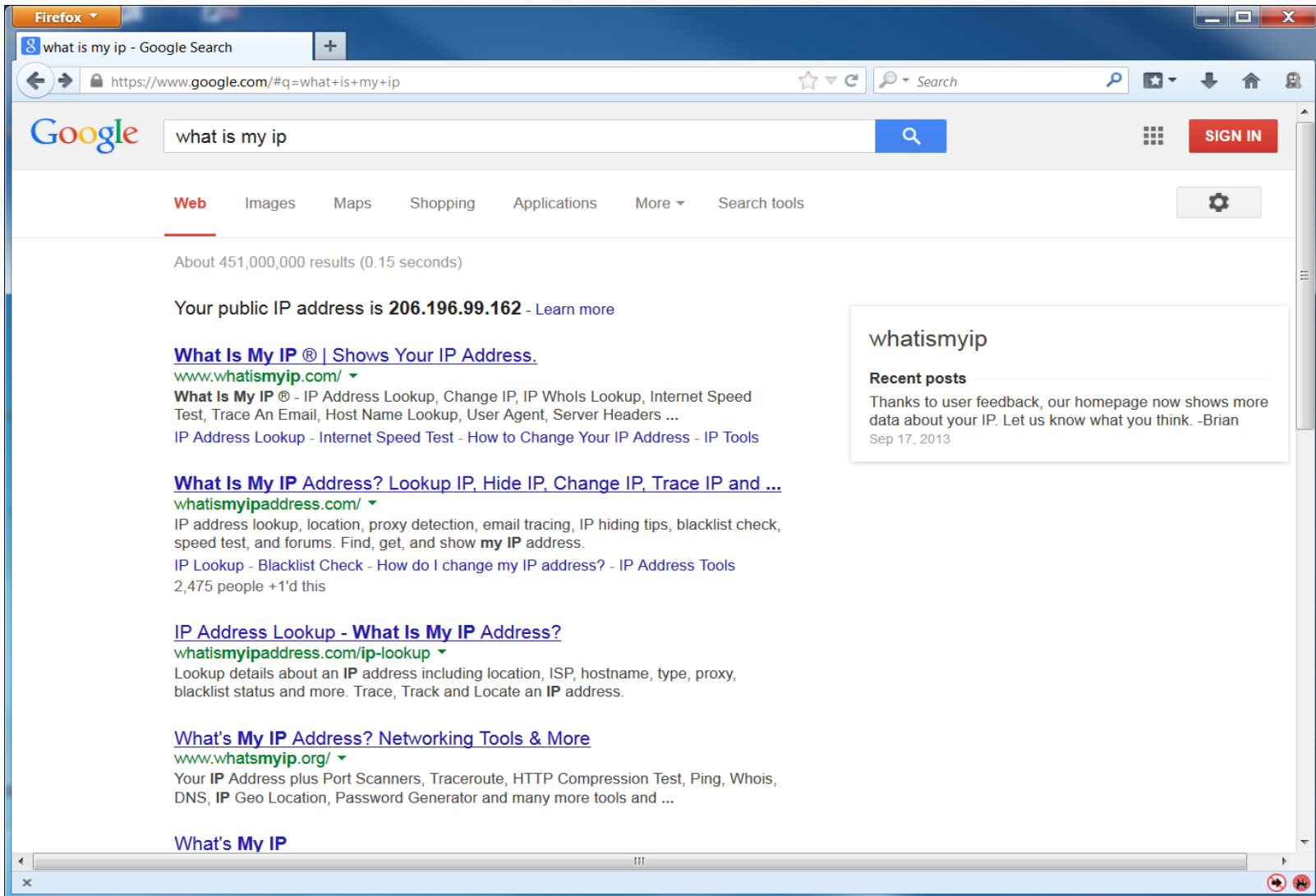


# Set option to true



Right Click->  
Toggle

# Test your IP



# Warnings!

- These settings ONLY affect Firefox!
- Add-ons, such as Flash may bypass proxy settings!
- Other apps will not know about the proxy and may bypass it entirely – leaving you defenseless.
- If you are rooted you can try tsocks to direct all traffic via socks. (I have never done this)
- For windows, there are several Socks Proxy Capture (SocksCap, WideCap, etc) to make non-socks apps socks compliant.