Xaxxon Project – Oculus Robot Documentation – Part 1

Version 1.2

August 11, 2017

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Contents

Setting up WiFi

Click the WiFi icon and click on Edit to open Network Connections.

If WiFi does not have oculusprime and SFUNET-SECURE then do the following steps below.

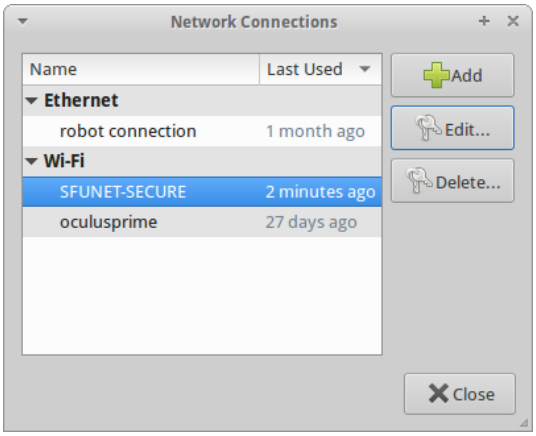


Figure 1: Setting up WiFi, opening Network Connections

For the **oculusprime WiFi setup** follow the directions in this link:

http://www.xaxxon.com/documentation/view/oculus-prime-headless-wifi-manager

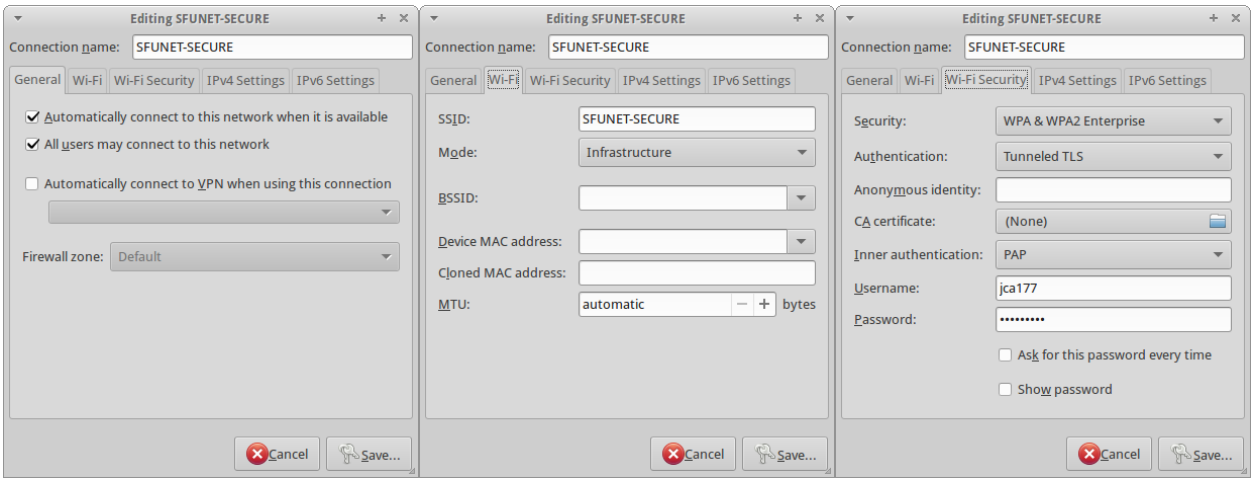
We now do **SFUNET-SECURE WiFi setup**.

Click on the WiFi icon on the upper right corner of the screen on the menu bar

Then click 'edit' -> this should open a separate window of network connections

Then click the '+Add' button -> this should start the new connection wizard.

Make sure the screenshots below of the Editing SFUNET-SECURE tabs match with yours. The only difference should be in the Wi-Fi Security tab because of the SFU login Username and Password.



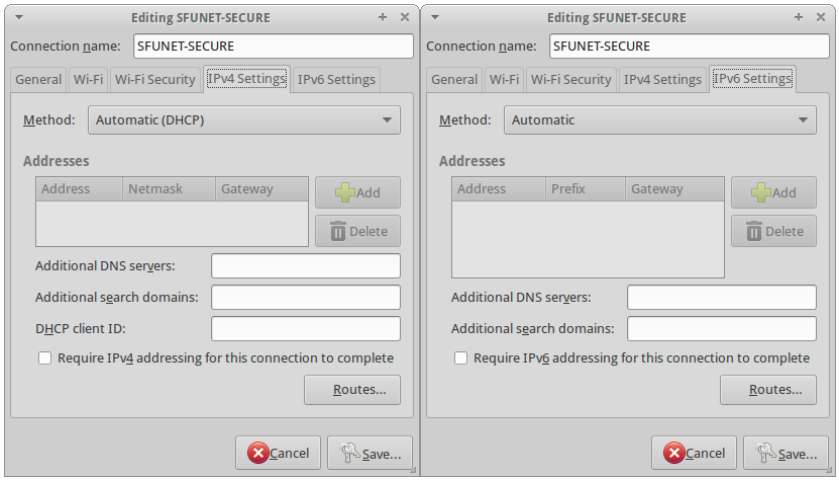


Figure 2: Setting up WiFi, tabs for SFUNET-SECURE

Now we have oculusprime and SFUNET-SECURE setup.

The Oculus robot is in an "access-point mode; that is, it will broadcast its own WiFi network with the ssid 'oculusprime' (case sensitive), so that you can connect to it with another device, without having to plug in a keyboard and monitor." Therefore, to connect to the SFUNET-SECURE WiFi, you must connect to oculusprime first with another device or even from the Oculus robot itself.

The steps below are instructions to connect to the oclusprime network then to SFUNET-SECURE **from inside the Oculus robot**.

> Click the WiFi icon and click on oculusprime. If you cannot see oculusprime then click on Connect to Hidden Wi-Fi Network and choose Connection to be oculusprime.
>
> Open Google Chrome browser and input in the address 10.42.0.1.
>
> Wait at least 2 minutes or 120 seconds for the WiFi adapter to find SFUNET-SECURE
>
> Click on SFUNET-SECURE to connect to that network.

It would be inconvenient on every boot to go to oculusprime, go to 10.42.0.1, then finally connecting to SFUNET-SECURE to access the internet. So, you have to Run the WiFi Manager. Follow the one line code instructions in the link below to allow the Oculus robot to connect to SFUNET-SECURE every time it is booted.

http://www.xaxxon.com/documentation/view/oculus-prime-headless-wifi-manager#run

Server auto-start on boot

Click the Whisker Menu (blue circle with rat face and whisker; similar to Windows menu)

Click Settings

Scroll down to and click on Session and Startup

Click the Application AutoStart tab

Scroll down and make sure the checkbox is ticked for OculusPrime start (Start the server on boot)

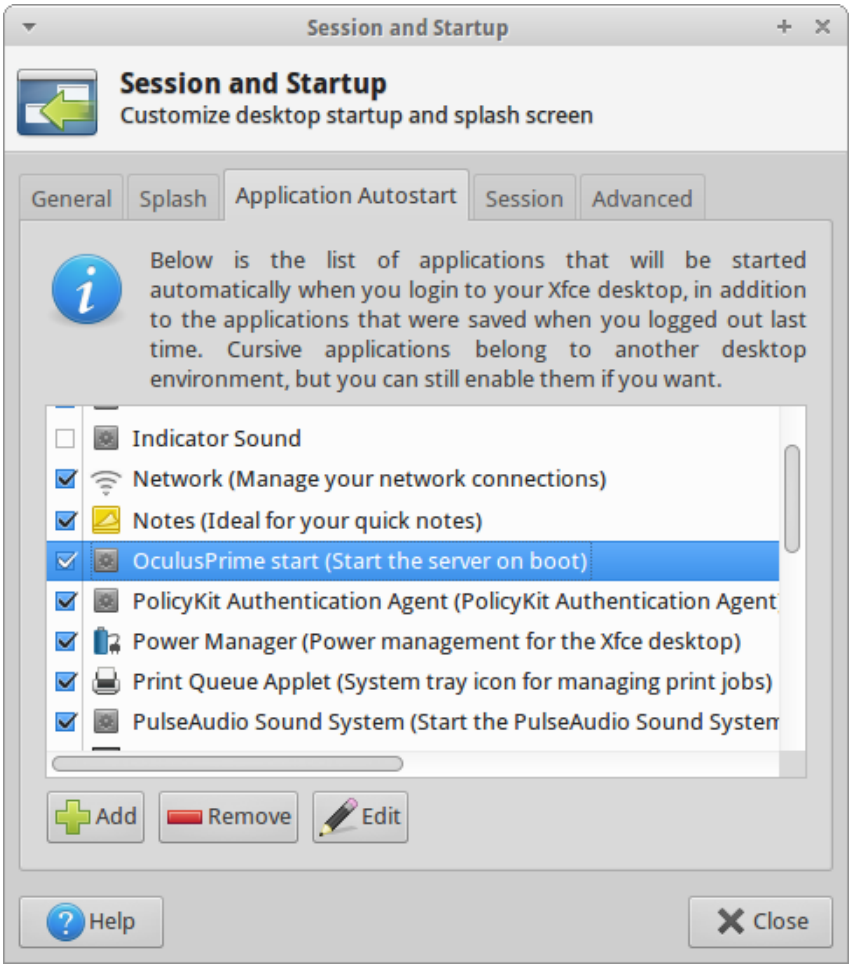


Figure 3: Server auto-start on boot

This solves the having to plug in the dvi and mouse to the robot to turn on the server every boot. Thus, can be remoted into right away.

Desktop browser remote control

Figure out your IP address or domain name.

Open Terminal Emulator and type in "ifconfig"

You will see ethl, lo, and wlan1. Look at wlan1 and look for "inet addr:YOUR_IP_ADDRESS" YOUR_IP_ADDRESS in our case was 207.23.183.201. So ours was "inet addr:207.23.183.201"

You need this IP address because the URL to remote into the browser takes the form:

http://ip-address-or-domain-name:port/oculusPrime/

Open a browser and input the form above in the address.

Change **ip-address-or-domain-name** with the IP address you got from ifconfig

Change **port** to 5080

For example, when we remote in to the Oculus robot, we open the Chrome browser and go to URL

http://207.23.183.201:5080/oculusPrime/

Going to the address above links me to the Oculus robot web application page where we can choose to control it or be a passenger.

The username and password:

Username: [redacted]

Password: [redacted]

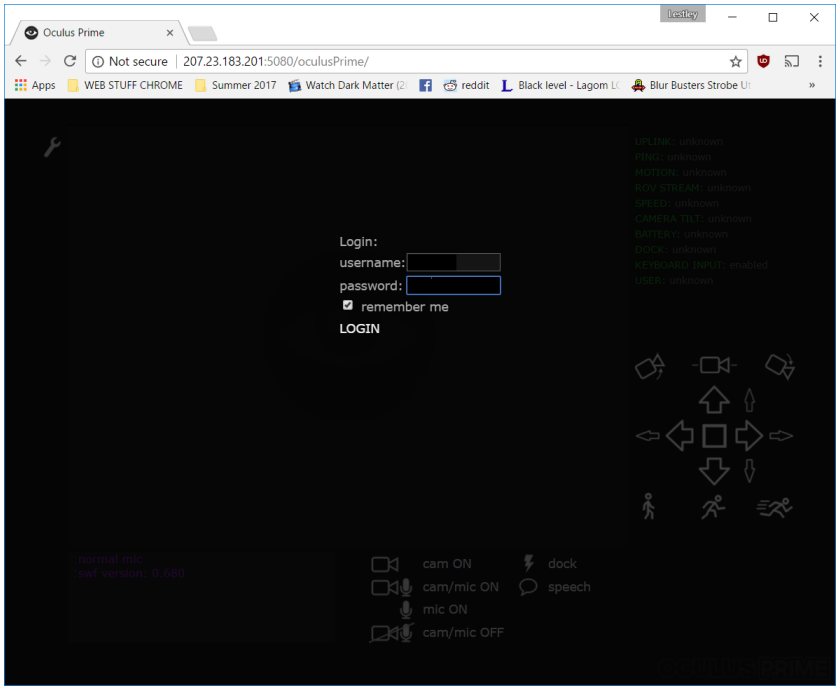


Figure 4: Desktop browser remote control

Editing the web application page

For now, we are using iframe to access the platform controls web app. We insert our own web app through iframe by editing the index.html of the Xaxxon web app.

This index.html file is in the directory:

/home/oculus/oculusPrime/webapps/oculusPrime

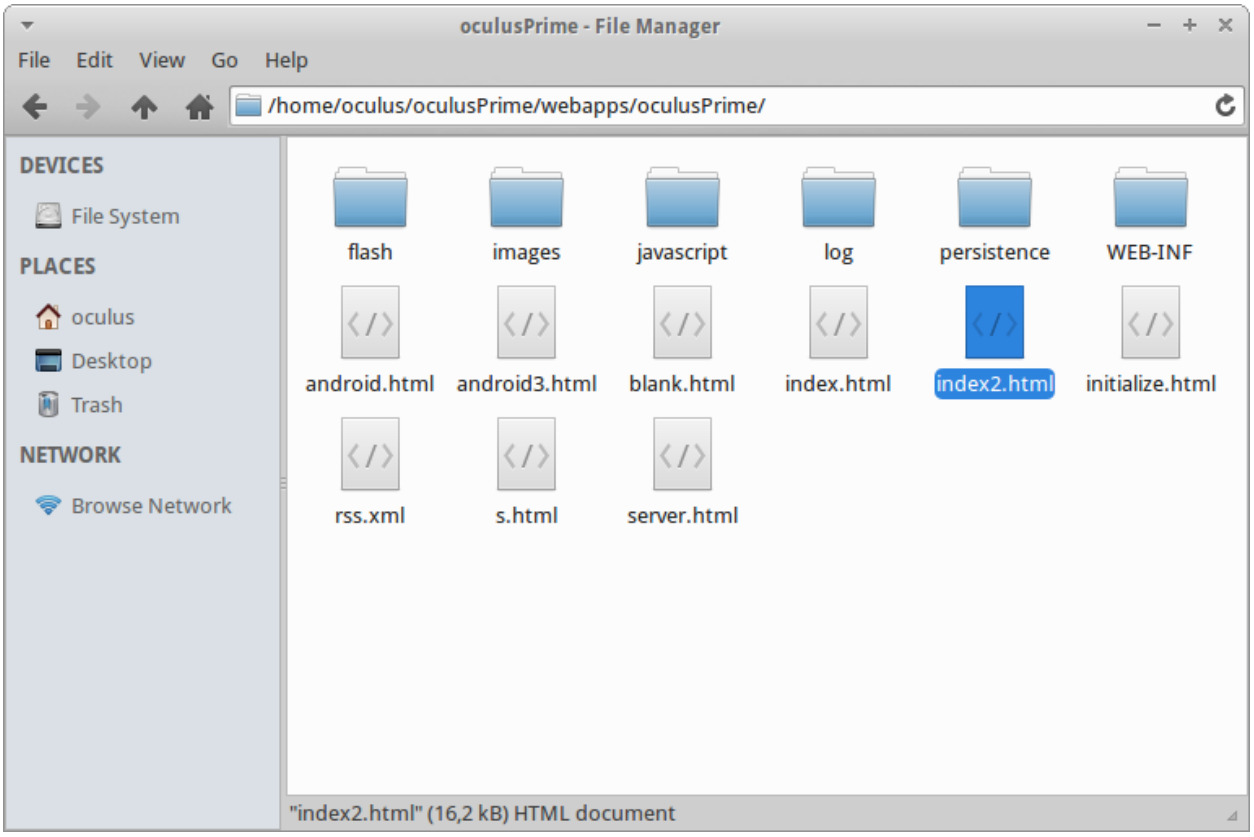


Figure 5: Web application index location

It is a good idea to create a backup of the index.html file. We just copy pasted the index.html and renamed it index2.html.

The way we are using iframe is not feasible and we in the future should be embedded onto the Xaxxon web app instead of having to click the menu>test to open the Platform Controls web app.