

TUTORIAL

Author: Thad Haines
Subject: VNC Raspberry Pi Setup
Date: August 31, 2016

Purpose

The purpose of this tutorial is to outline a way to configure an auto starting VNC server on a Raspberry Pi 3 (rpi) that logs into the current session and enables file transfer.

Note: \$ indicates rpi terminal and is not actually typed by user. ↵ indicates pressing enter.

Requirements

- rpi 3 (or any rpi with wireless capability)
- Keyboard / Mouse for initial rpi setup
- Accessible wireless network (internet required for download / apt-get of programs)
- Another computer on said wireless network that will VNC into the rpi

Steps

1. Boot rpi and connect to wireless network. Make sure to 'remember password' if an option.
2. Install x11vnc on rpi via terminal with command:

```
$ sudo apt-get install x11vnc ↵
```

Answer yes, specifically 'y', to any install queries.

3. Create x11vnc password on rpi via terminal with command:

```
$ x11vnc -storepasswd ↵
```

Screen should prompt you to enter desired password. Password may have to be confirmed.
Entered password may not display while typing.

4. Create an auto start file on rpi for x11vnc:

```
$ cd /home/pi/.config/ ↵  
$ sudo mkdir autostart ↵  
$ cd autostart ↵  
$ sudo nano x11vnc.desktop ↵
```

A text editor should open. Enter below text, then press ctrl+x to exit and save:

```
[Desktop Entry]  
Type=Application  
Name=X11VNC  
Exec=x11vnc -forever -usepw -display :0 -ultrafilexfer  
StartupNotify=false
```

5. Configure rpi to wait for network at boot:

```
$ sudo raspi-config ↵
```

Go to 'Wait for Network at Boot' (option 4) and ↵. Set to < yes > ↵

6. Restart rpi.
7. After restart, the rpi should be automatically connected to the wireless network. Locate, and take note of, the rpi wireless IP address by:

```
$ sudo ifconfig ↵
```

IP address should be displayed after `inet addr:` in the `wlan0` block.

8. Install, or open, a VNC client on the computer you wish to use to VNC into the rpi with. UltraVNC is a suitable windows option that supports file transfers to and from the rpi. Connect to rpi IP address and enter the x11vnc password you created in step 3.
9. If everything worked correctly, enjoy VNC-ing into your rpi!

Closing Notes

This may, or may not, work for you.

After headless boot, resolution may be 'less than ideal' – see [Change Raspberry Pi Default Resolution](#) tutorial for helpful information.

rpi IP address may change - a solution would be to configure a static IP address.

rpi will boot outside of wireless network range (i.e. configured wireless network not available). However, it does take longer since the boot seems to wait a certain amount of time.

Version History

00	August 31, 2016	Initial writing.
01	October 8, 2016	Re-Format. Addition of section lines, version history, copyright.