

TUTORIAL

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Subject: VNC Raspberry Pi Setup
Date: August 31, 2016

The purpose of this tutorial is to outline a way to set up a VNC server on a Raspberry Pi (rpi).

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 and 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 text:

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

Press ctrl+x to exit and save.

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.

Untested rpi boot outside of wireless network range / configured wireless network not available.
While this may not cause any problems, the 'wait for network at boot' might wait forever i.e not boot.