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# >>> WARNING <<<

There were major changes from Wheezy to Jessie especially with the network configuration. Most tutorials on the internet are for Wheezy and are not appropriate for Jessie. Be aware!

# What’s running:

* Raspberry Pi 3 B
* Raspbian GNU/Linux8 (Jessie) based on Debian Wheezy
* Pixel 1.1 Nov 16

# WeeWX Install Notes

## Weewx.conf

Only changes shown:

[Vantage]

type = serial

port = /dev/ttyUSB0

host = 1.2.3.4

[[CWOP]]

 enable = true

 station = W2DEN

passcode = 123456 **<<<< enter your passcode here**

[[Wunderground]]

 enable = true

station = KFLNOKOM2

password = XXXXXXXXX **<<<< enter your password here**

rapidfire = False

[StdArchive]

archive\_interval = 300

record\_generation = hardware

loop\_hilo = True

data\_binding = wx\_binding

# VNC

rPi documentation says VNC server is installed but that may not be the case. Install it then everything will be accessible.

Sudo apt-get install -y realvnc-vnc-server

Reboot. Then install VNC client on your home computer. Search RealVNC

# WeeWX Backup

This is straight from the WeeWX docs put into a script file in /var/www/html/weewx/weather

#!/bin/bash

d=$(date +"%Y-%m-%d-%H-%m")

mkdir -p /media/pi/ORANGE/$d

cp /etc/weewx/weewx.conf /media/pi/ORANGE/$d

cp -r /etc/weewx/skins /media/pi/ORANGE/$d

cp -r /usr/share/weewx/user /media/pi/ORANGE/$d

cp /var/lib/weewx/weewx.sdb /media/pi/ORANGE/$d

cp -r /var/www/html/weewx /media/pi/ORANGE/$d

Note: ORANGE is a USB dongle that auto-mounts to /media/pi/ORANGE

# Auto-Start on Boot

In /root/.config/lxsession/LXDE-pi/Autostart add @iceweasel or whatever browser you want to display.

@lxpanel --profile LXDE-pi

@pcmanfm --desktop --profile LXDE-pi

@xscreensaver -no-splash

@point-rpi

@iceweasel

# Screen Saver

rPi has a built-in screen blanker that is impossible to defeat and very uncontrollable. What good is that? The solution:

## xScreensaver

Install xscreensaver. This overrides the built-in screen blanker. Xscreensaver can be disabled in its configuration. Xscreensaver has a lot of command line options you can control in via a script and/or crontab control.

## Screen Blanking

At night, when it is nice to have the house dark, I wanted to blank the screen. Say from 10PM until 7AM. That was quite easy in Windows. Not so in Raspbian. After many unsuccessful attempts, I finally found a solution, not a perfect on but one that functions.

All of the HTML blanking instructions I found either didn’t work or blanked the screen but left the back-light on. I actually wanted the opposite. Who cares what’s on the screen so long as the light is off.

So what worked?

* vcgencmd display\_power 0
* vcgencmd display\_power 1
* xscreensaver-command -activate
* xscreensaver-command -deactivate

The top line turns off the screen. The second line turns it on The last two turn on and off xscreensaver. So how’s this work. At night turn off the screen. In the morning turn the screen on and activate the screen saver. This lights the backlight but leaves the screen blank until you press a key or move the mouse. Sometime late in the AM deactivate xscreensaver to put the image on the screen.

For a kiosk probably just the top two would do… off then on.

Disadvantage… I have not figured out how to turn the back light back on after the first command, except the second command.

# Misc

## Stop / Start WeeWX daemon

sudo /etc/init.d/weewx start

sudo /etc/init.d/weewx stop

## Static IP address

The switch from Wheezy to Jessie seems to have messed up a lot of people. ([reference](http://raspberrypi.stackexchange.com/questions/39785/dhcpcd-vs-etc-network-interfaces))

See the files at the end of this document foor stting up a static on at least the wifi

## WiFi with no internet

This was weird. All of a sudden, the WiFi internet access stopped. The WiFi was working as VNC worked just fine but NO internet.

Here’s what fixed it for me:

by [**DougieLawson**](https://www.raspberrypi.org/forums/memberlist.php?mode=viewprofile&u=73731) » Sun Jun 26, 2016 1:03 pm

What's the gateway router for your 192.168.1.0/24 network?

Take a look on your Windows machine by running ipconfig in a command window and looking for the line:

Default Gateway . . . . . . . . . : 192.168.1.xxx

Then set that address as the gateway on your RPi with
sudo ip route add default via 192.168.1.xxx # using the result from Windows.

Then you need to look at your home router/switch/access point to see why it's not working properly and why it's not handing out the gateway address on the DHCPOFFER packet for your RPi.

## Mounting

* Add mountings to /etc/fstab
* Force mount all in fstab:
	+ - Sudo mount -a

## How to make a script executable

* chmod +x myscript.sh

# WeeWX layout for DEB (Raspbian) package

Role Symbolic Name Nominal Location

Executables BIN\_ROOT /usr/share/weewx/

Configuration directory CONFIG\_ROOT /etc/weewx/

Skins and templates SKIN\_ROOT /etc/weewx/skins/

SQLite databases SQLITE\_ROOT /var/lib/weewx/

Web pages and images HTML\_ROOT /var/www/html/weewx/

Documentation DOC\_ROOT /usr/share/doc/weewx/

PID file /var/run/weewx.pid

Log file /var/log/syslog

# Cannot login as Pi:

Cause: running xstart from terminal as root.

Explanation: This changed the ownership of file /home/pi/.Xauthority to root which killed the auto login

Solution: change ownership back to pi with command "chown pi:pi /home/pi/.Xauthority" (while logged in as root)

Thanks: Greg.

# Chromium kiosk

@chromium-browser --kiosk --disable-overlay-scrollbar --noerrdialogs --incognito http://localhopst/weewx

@chromium --noerrdialogs --kiosk http://www.page-to.display --incognito

EXIT: Alt+F4

# iceweasel full screen

F11 from the keyboard toggle any browser full screen

Not sure of any of the following.

* there are several addons for firefox that give you the features your probably need like fullscreen, no url bar and more... for example, try this addon: r-kiosk
* use xdotool to simulate the F11 key (fullscreen mode).
* Edit ~/.config/lxsession/LXDE-pi/autostart. Mine looks like this:
	+ @lxpanel --profile LXDE-pi
	+ @pcmanfm --desktop --profile LXDE-pi
	+ @xscreensaver -no-splash
	+ @sh /home/pi/start.sh
* In start.sh I created a script that launches Iceweasel to a specific URL and switches it to fullscreen by "pressing" F11:
	+ iceweasel https://metrics.librato.com/s/public/mv0aetg14?duration=86400 & sleep 60
	+ xdotool search --onlyvisible --name iceweasel key F11

# 6hour.sh

What runs every 6 hours

---

#!/bin/bash

wget -O /var/www/html/weewx/weather/today.png http://www.weather.gov/images/tbw/graphicast/image13.png

wget -O /var/www/html/weewx/weather/tonight.png http://www.weather.gov/images/tbw/graphicast/image14.png

wget -O /var/www/html/weewx/weather/tomorrow.png http://www.weather.gov/images/tbw/graphicast/image15.png

wget -O /var/www/html/weewx/weather/forecast.jpg http://www.wpc.ncep.noaa.gov/noaa/national\_forecast.jpg

wget -O /var/www/html/weewx/weather/moon.gif http://tycho.usno.navy.mil/cgi-bin/phase.gif

wget -O /var/www/html/weewx/weather/uv.xml https://iaspub.epa.gov/enviro/efservice/getenvirofactsUVDAILY/ZIP/34275

var2="http://www.lawrencevilleweather.com/wx.php?config=png&alt=hwizone7day&forecast=zone&pands=34275&maxdays=7&daysonly=2&hwvusename=zone7d&hwvbg=&hwvbgimage=clouds"

wget -O /var/www/html/weewx/weather/7DayLaw.gif $var2

cp /var/www/html/weewx/weather/nexttides.gif /var/www/html/weewx/weather/tides.gif

curl -o /var/www/html/weewx/weather/nexttides.gif http://www.capeweather.com/tides/php\_tide2/tide\_venice\_inlet.php

# crontab

As of 1/30. Note the MAILTO=””. Not sure it is still needed.

MAILTO=""

# m h dom mon dow command

30 22 \* \* \* vcgencmd display\_power 0

30 06 \* \* \* vcgencmd display\_power 1

25 06 \* \* \* xscreensaver-command -activate

05 14 \* \* \* xscreensaver-command -deactivate

01 \*/6 \* \* \* sudo sh /var/www/html/weewx/weather/6Hour.sh

\*/5 \* \* \* \* sudo wget -O /var/www/html/weewx/weather/radar.gif http://radar.weather.gov/ridge/lite$

\*/5 \* \* \* \* sudo wget -O /var/www/html/weewx/weather/thermal.gif http://sirocco.accuweather.com/sa$

1 0 \* \* \* sudo sh /var/www/html/weewx/weather/weewxbackup.sh

#\* \*/6 \* \* \* sudo wget -O /var/www/html/weewx/weather/today.png http://www.weather.gov/images/tbw/$

#\* \*/6 \* \* \* sudo wget -O /var/www/html/weewx/weather/tonight.png http://www.weather.gov/images/tb$

#\* \*/6 \* \* \* sudo wget -O /var/www/html/weewx/weather/tomorrow.png http://www.weather.gov/images/t$

#\* \*/6 \* \* \* sudo wget -O /var/www/html/weewx/weather/tonight.png http://www.weather.gov/images/tb$

#\* \*/6 \* \* \* sudo wget -O /var/www/html/weewx/weather/forecast.jpg http://www.wpc.ncep.noaa.gov/no$

# /etc/network/interfaces

# Please note that this file is written to be used with dhcpcd

# For static IP, consult /etc/dhcpcd.conf and 'man dhcpcd.conf'

# Include files from /etc/network/interfaces.d:

source-directory /etc/network/interfaces.d

auto lo

iface lo inet loopback

iface eth0 inet manual

allow-hotplug wlan0

iface wlan0 inet manual

 wpa-conf /etc/wpa\_supplicant/wpa\_supplicant.conf

allow-hotplug wlan1

iface wlan1 inet manual

 wpa-conf /etc/wpa\_supplicant/wpa\_supplicant.conf

# /etc/dhcpcd.conf

Added the following:

# Custom static IP address for wlan0.

interface wlan0

static ip\_address=192.168.10.115/24

static routers=192.168.10.1

static domain\_name\_servers=192.168.10.1

# /etc/wpa\_supplicant/wpa\_suplicant.conf

ctrl\_interface=DIR=/var/run/wpa\_supplicant GROUP=netdev

update\_config=1

country=US

network={

 ssid="PeteNet"

 psk="xxxxxxxxx"

 key\_mgmt=WPA-PSK

}

network={

 ssid="TeensyNet"

 psk="xxxxxxxxxxx"

 key\_mgmt=WPA-PSK

}