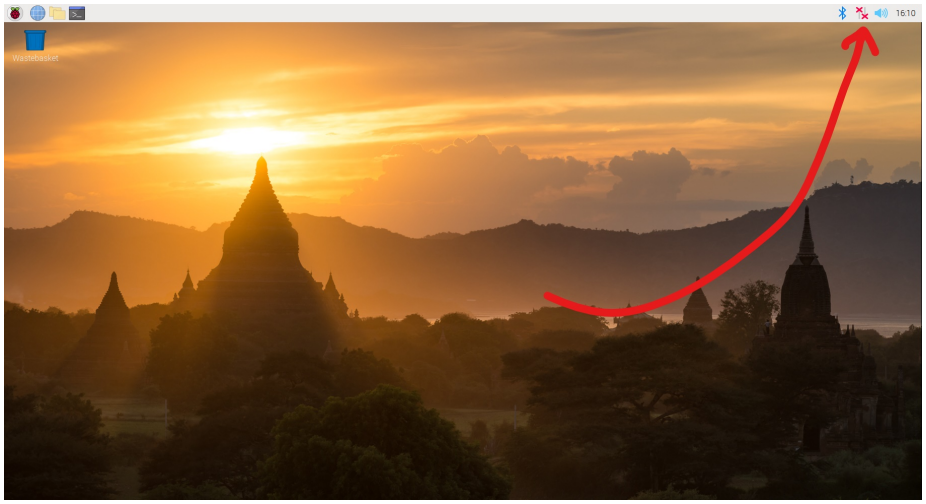
This guide is for Raspberry Pis connecting to eduroam at UMass Amherst running Raspbian OS

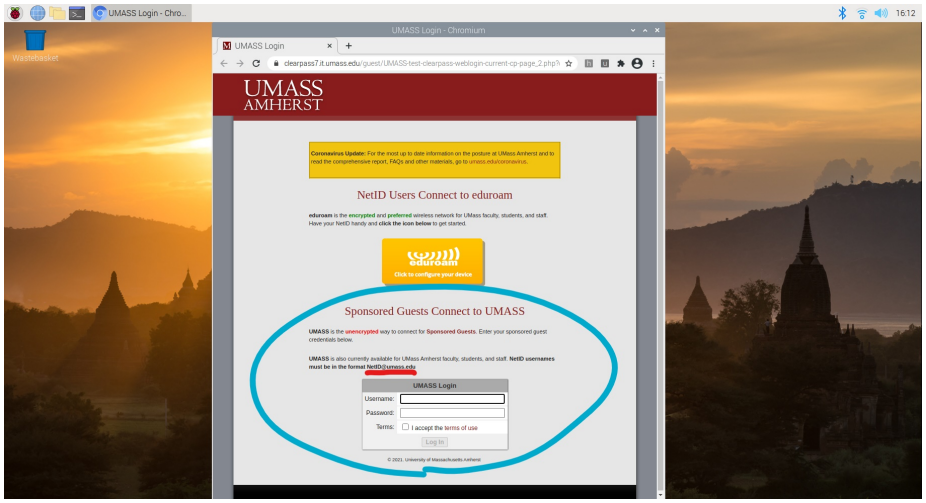
Try reading this guide first on Github, if that does not suite you continue reading this guide below.

Try connecting to the UMASS network by hitting the network icon here:

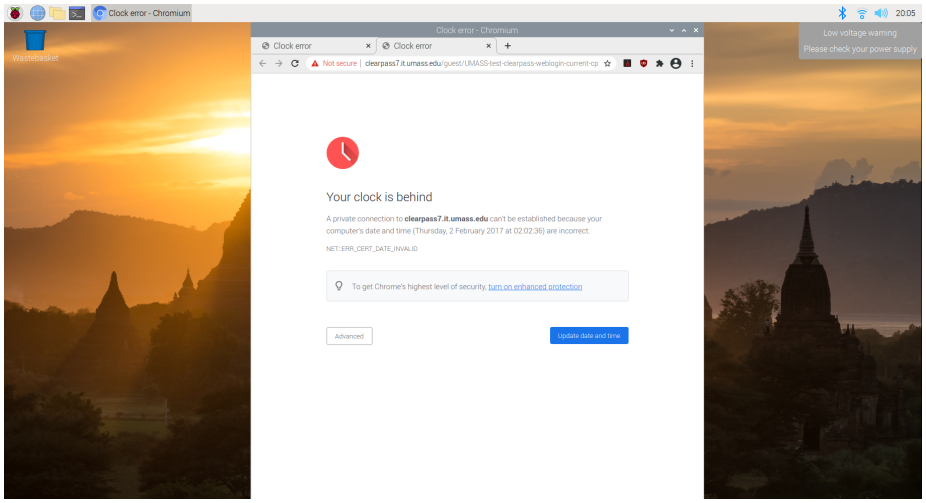


Open a browser and go to umass.edu

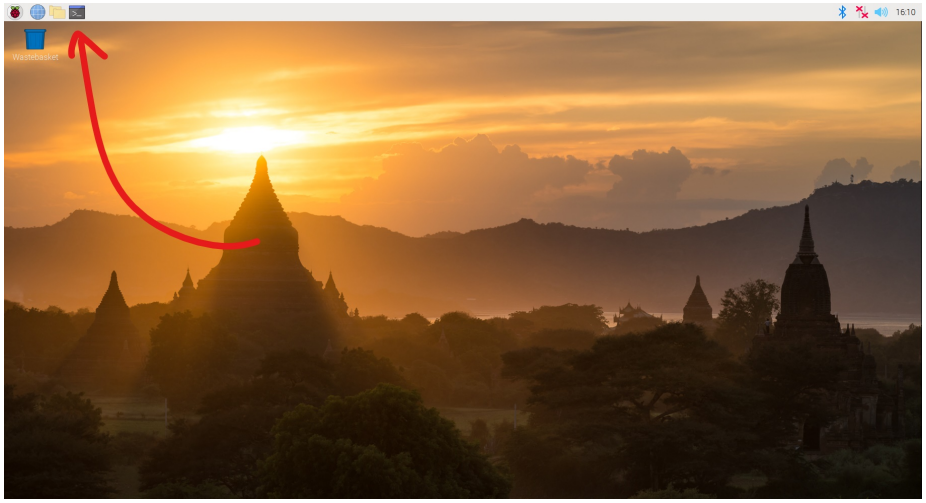
You should reach a page like the page below, go into the login and password fields and enter in your info:



If you see the photo below at all during this process (check your other tabs), the time settings on the raspberry pi may need to be reconfigured.



To do this either click the update buttons on chrome for date and time or, if that's not available, open the terminal on the menu bar shown below and type the following commands:



Here is the command: (replace YYYY with year, MM with month, and so on. **HH must be in 24hr time**):

```
sudo date -s 'YYYY-MM-DD HH:MM:SS'
```

If you see the updated date in the terminal below where you put in the command, great your date is now configured, try reloading the webpage. If you do not see this error, move on to the next step.

Next step, fix wpa supplicant

- To get the Raspberry Pi to connect to the eduroam network, a configuration file called the 'wpa_supplicant' must be configured correctly below is the command for configuring this file appropriately. **Please fill in your NETID and password** into marked fields.

If you don't feel comfortable doing this, try looking at the script below instead.

Inside: */etc/wpa_supplicant/wpa_supplicant.conf*

```
ctrl_interface=DIR=/var/run/wpa_supplicant GROUP=netdev
update_config=1
country=US
network={
    ssid="eduroam"
    proto=RSN
    key_mgmt=WPA-EAP
    pairwise=CCMP
    auth_alg=OPEN
    eap=TTLS
    identity="NETID@umass.edu"
    anonymous_identity="NETID@umass.edu"
    password="NETIDPASSWORD"
    phase2="auth=PAP"
}
```

Handy script: You can get this on your computer by doing:

```
git clone https://github.com/jack-champagne/raspi-eduroam.git
```

and then navigating into the folder called *raspi-eduroam* and then running the commands at the top of the file as you see them (which should be these)

```
cd raspi-eduroam
chmod +x cfg-wpa.sh
sudo ./cfg-wpa.sh
```

As a reminder, do **not** just run scripts and commands that you see blindly off of the internet, for this purpose, here is the source: SCRIPT

Fixing Raspbian OS libraries and scripts

Next we will need to edit the wpa function file in order to fix a bug in the Raspbian OS. Navigate to */etc/wpa_supplicant/* and open *functions.sh* in the text editor of your choice. For those familiar with the vi/vim text editor, here's a sample of opening it. It is important to note that whatever text editor you open it with must be done with admin permissions, hence sudo.

```
cd /etc/wpa_supplicant/
sudo vi functions.sh
```

Navigate to line 218, it should read this before you change it:

```
WPA_SUP_OPTIONS="$WPA_SUP_OPTIONS -D nl80211,wext"
```

Now, change this line by swapping the last two library names to read:

```
WPA_SUP_OPTIONS="$WPA_SUP_OPTIONS -D wext,nl80211"
```

finally, on line 227 change this:

```
WPA_SUP_OPTIONS = "$WPA_SUP_OPTIONS -D nl80211,wext"
```

to this (similarly as before):

```
WPA_SUP_OPTIONS = "$WPA_SUP_OPTIONS -D wext,nl80211"
```

Great, now the wpa functions.sh script will load these libraries in the right order. Now a similar thing needs to be done in another file called */lib/dhcpcd/dhcpcd-hooks/10-wpa_supplicant*.

Fixing dhcpcd hooks wpa supplicant script

Navigate to */lib/dhcpcd/dhcpcd-hooks/10-wpa_supplicant* and open *10-wpa-supplicant* in your editor of choice.

```
cd /lib/dhcpcd/dhcpcd-hooks/
sudo vi 10-wpa_supplicant
```

Around line 60ish there is a line containing the following: (before our changes)

```
wpa_supplicant_driver="${wpa_supplicant_driver:-nl80211,wext}"
```

We need to again swap the library order to read: (after our changes)

```
wpa_supplicant_driver="${wpa_supplicant_driver:-wext,nl80211}"
```

Great, now we can try and reboot.

Congrats!

Barring typos and/or configuration differences between Pi's and versions of the Raspbian OS, the r-pi should now be connected to eduroam.

```
sudo reboot
```