Setting up an eduPaSS wireless connection with Ubuntu Linux or any Gnome[1] based system.

I have collated these instructions from mailing lists and *man*. Thanks to Donna Benjamin and Ian Green.

Laurie Savage
August 8, 2006

1. Create a Mac certificate on edupass. My certificate archive was called "savubuntu.zip" - this name is important, it will be the machine name used later. The zip file contains "root.pem" and "usercert.p12" (in my case "savubuntu.p12") andI unzipped the file into /home/user/Documents/eduPaSS.

2. Convert *usercert.p12* to *usercert.pem* and *userkey.pem* using openssl:

   Open a terminal, cd to the directory you extracted the certificates into then:

   ```
   openssl pkcs12 -nocerts -in usercert.p12 -out userkey.pem

   openssl pkcs12 -clcerts -nokeys -in usercert.p12 -out usercert.pem
   ```

   Remember to substitute your certificate's name for *usercert*

3. Install wpa_supplicant via synaptec or apt. I prefer *apt*.

   ```
   sudo apt-get install wpa_supplicant
   ```

4. Install network-manager-gnome.

   ```
   sudo apt-get install
   network-manager-gnome
   ```

5. Comment out all references in /etc/network/interfaces to wireless interfaces. If you don't do this you will not see any wireless networks in network-manager's menu.

6. Restart and run nm-applet (the front end to Gnome Network Manager).

   ```
   killall nm-applet nm-applet &
   ```

   The nm-applet icon appears on the panel in the notification area.

7. Click on the applet and choose "Connect to Other Wireless Network"

   ```
   SSID = eduPaSS-XXXX-01
   Wireless Security = WPA
   Enterprise Eap = TLS
   Key type = Dynamic WEP (Auto will work too)
   ID = [AD ID] -> savubuntu in my case
   Password = (typically blank for eduPaSS)
   Client cert = usercert.pem
   CA cert = root.pem
   Private key = userkey.pem
   Private key password = [password used to create Mac cert]
   ```

8. Hit connect.

9. You will be asked for a key ring password the first time it connects. If you have not created a key ring for other applications this is a local, machine based password and you will be prompted to create one the first time you connect.

[1] KDE should work with the wpa_supplicant file detailed here.

Notes

My /etc/wpa_supplicant/wpa_supplicant file looks like:

```
#PVGC Network eduPaSS-XXXX-01

    #ap_scan=1
    fast_reauth=1

    network={
    ssid=''eduPaSS-XXXX-01''
    key_mgmt=IEEE8021X
    eap=TLS
    identity=''savubuntu''
    ca_cert=''/home/sav/Documents/eduPaSS/root.pem''
    client_cert=''/home/sav/Documents/eduPaSS/savubuntucert.pem''
    private_key=''/home/sav/Documents/eduPaSS/savubuntukey.pem''
    private_key_passwd=''password used to create the Mac certificates''
    eapol_flags=3
    }
```

I needed to manually edit it because earlier attempts to set this up had created some glitches. With this .conf file I can boot into KDE and access the network easily.

The Gnome Network Manager is a lovely tool, it detects new networks and you only need to choose them from the list. I have noticed it drops the connection a bit after rebooting, possibly the change of WEP key or something else on my system that is disturbing it. It connects fine when you click the applet again but a it's a little annoying.