

## Connection to the university wireless network WIFI-UNIPA-WPA and WIFI-UNIPA-WPA-A with LINUX

### Prerequisites:

Linux/Unix operating system.

Recognized wireless network card with loaded firmware (launching from the terminal command iwlist scan the system must display a list of available networks)

**For SISIS and Erasmus students:** they can get username and password by visiting us at the CUC -University Center of Calculus, Viale delle Scienze, Building 11- Parco d'Orleans.

**For teachers, technical and administrative staff:** Valid username and passwords of the [username@unipa.it](mailto:username@unipa.it) type or [username@department.unipa.it](mailto:username@department.unipa.it)

It is also necessary to have at least one [access to your mailbox via "Mail via Web" from the site:](#)

<http://www.unipa.it>



**For students:** Valid username and passwords of the [username@studenti.unipa.it](mailto:username@studenti.unipa.it) type previously created on student portal:

<http://studenti.unipa.it>





**For new subscribers you must** also click on the link "Activation wi-fi" to enable the own users to wireless connectivity.

Although you can authenticate to the student portal with your **tax code**, to access to the university's wireless network **you must use the username you choose at time of registration to the portal** or, for new users, **the username assigned by system at the time of registration**;  
if you do not remember it will be enough to enter `http://studenti.unipa.it`  
**The password for authentication is the same used to access the portal.**

Once logged in, your valid wifi authentication username will be displayed by clicking on the link **"Personal data"**



In this guide we will use the **Networkmanager** graphical network connection management tool. This tool is present by default on several distributions that use Gnome as display manager (e.g. Ubuntu, Fedora Core etc). **Networkmanager** is the equivalent for KDE.

You can download Networkmanager with the help of **yum (or apt)**, or directly from the project page:

<http://www.gnome.org/projects/NetworkManager>

- Activate the wireless card
- Networkmanager will search for available wireless networks



- Click on the Networkmanager icon and choose the desired wireless network (wifi-unipa-wpa, to connect using the standard IEEE 802.11b/g, or wifi-unipa-wpa-a, if you have a wireless network card of type 802.11a, more modern and performing)



- The "Key request for wireless network" window will open; Enter data as shown in figure:
  - Wireless security: **WPA2 Enterprise (or WPA Enterprise)**
  - EAP method: **PEAP**
  - CA Certificate: **(None)**
  - PEAP Version: **Version 0**
  - Inner Authentication: **Mschapv2**

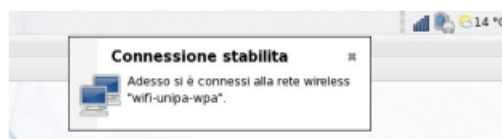
Enter your DOMAIN NAME and password.

Domain for students: @studenti.unipa.it

Domain for the structured: @unipa.it or @dipartimento.unipa.it

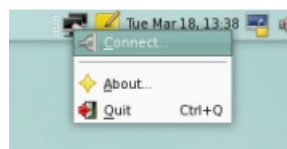


- Click "Login to network" to connect.

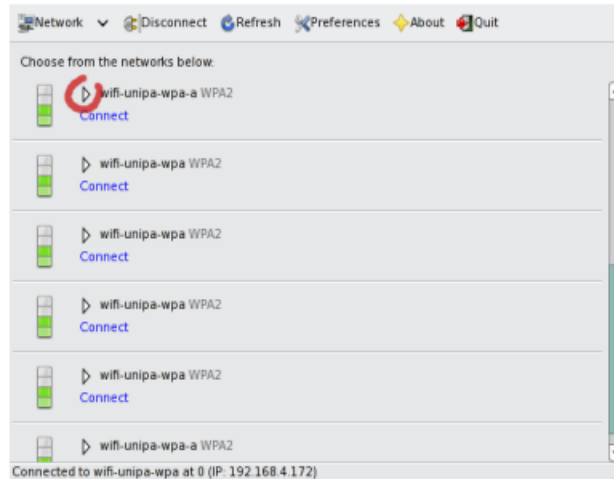


Alternatively you can use another very good graphic tool: **wicd** (on the page <http://wicd.sourceforge.net/download.php> you can find installation instructions on different platforms).

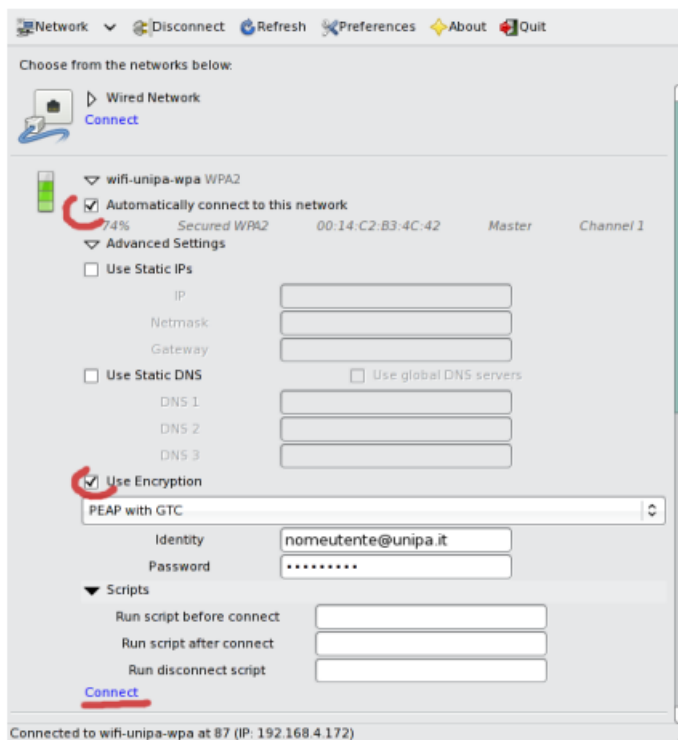
Once the program is installed, right-click on the wicd icon and continue by clicking on "Connect.."



Click on the dart next to the SSID (network name) to configure the advanced settings.



As shown in the figure, you can set the automatic connection to the network; Use "PEAP with GTC" as encryption, enter your login details and finally click "Connect"



### Advanced configuration:

It is also possible to connect via the command line, using the **wpa\_supplicant** tool (present by default on all major distro).

The file to edit is `/etc/wpa_supplicant/wpa_supplicant.conf`, obviously entering its data for authentication.

```
ctrl_interface=/var/run/wpa_supplicant
ctrl_interface_group=wheel
network={
    ssid="wifi-unipa-wpa"
    key_mgmt=WPA-EAP
    eap=PEAP
    identity=" mio.nome.utente @unipa.it"
    phase1="peaplabel=0" phase2="auth=MSCHAPV2"
    password="VOSTRAPASSWORD"
    priority=10
}
```

Since the file in question contains your *plain text* password it is good rules to reduce permissions as follows:  
`chmod 700 /etc/wpa_supplicant/wpa_supplicant.conf`

Now you can run `wpa_supplicant` according to the following syntax:

```
wpa_supplicant -D [driver] -i [interface] -c [configuration file]
```

The option `-D` indicates the driver to use, instead the option `-i` indicates the alias of the network interface.

The option `-c` indicates the full path of the configuration file.

**wext** is a generic driver that works for almost all wireless cards. You can still choose from the following driver:

hostap = Host AP driver (Intersil Prism2/2.5/3)

prism54 = Prism54.org driver (Intersil Prism GT/Duette/Indigo)

madwifi = MADWIFI 802.11 support (Atheros, etc.)

atmel = ATMEL AT76C5XXx (USB, PCMCIA)

wext = Linux wireless extensions (generic)

ndiswrapper = Linux ndiswrapper

wired = wpa\_supplicant wired Ethernet driver

`-i`, as mentioned, refers to the name of your network interface (so it could be **eth1**, **wlan0**, **ath0** or even **rausb0**). Simply launch the **iwconfig** command to get this information).

In the case of an **Intel Pro Wireless 3945abg** network card, the command to be launched will be:

```
wpa_supplicant -D wext -i eth1 -c /etc/wpa_supplicant/wpa_supplicant.conf &
```

Once the authentication is successful, simply use **dhclient** to obtain a valid address for browsing.

```
dhclient eth1
```

If your computer supports the 802.11a standard, repeat the various steps to also configure the **wifi-unipa-wpa-a SSID**

Before requesting assistance, check the FAQ related to wifi service  
(<http://immaweb.unipa.it/immaweb/public/faq.seam> )

For any communication or information request please use the following email address:

[wifi-support@unipa.it](mailto:wifi-support@unipa.it)