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Eduroam Wireless Network: settings for Debian and Ubuntu

This guide illustrates the steps to configure the "eduroam" Wi-Fi network on Debian and Ubuntu

What is eduroam?



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eduroam (education roaming) is the international Wi-Fi network reserved for the research and education community: it lets you connect automatically and securely at any university or institution belonging to the federation, in Italy and abroad, using the same credentials issued by your home University.

The network uses the WPA2/WPA3-Enterprise protocol with PEAP/MSCHAPv2 authentication, more secure than a regular network protected by a single shared password.

Credentials: the same ones used to access the University portal services (MyPortal, UGOV/ESSE3, etc.), always followed by the "@unibs.it" domain.

Download the CA certificate



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Before configuring the connection you need to download the Certificate Authority (CA) certificate file, which will be requested while configuring the network.

- **File: “unibs-ca.der” (on some systems “unibs-car.crt”)**
- Download link: Networks page on the University SharePoint portal (IT Services > Networks)

Tip: save the file somewhere easy to find (e.g. ~/Downloads), since you will need to select it in the “CA certificate” field when connecting.

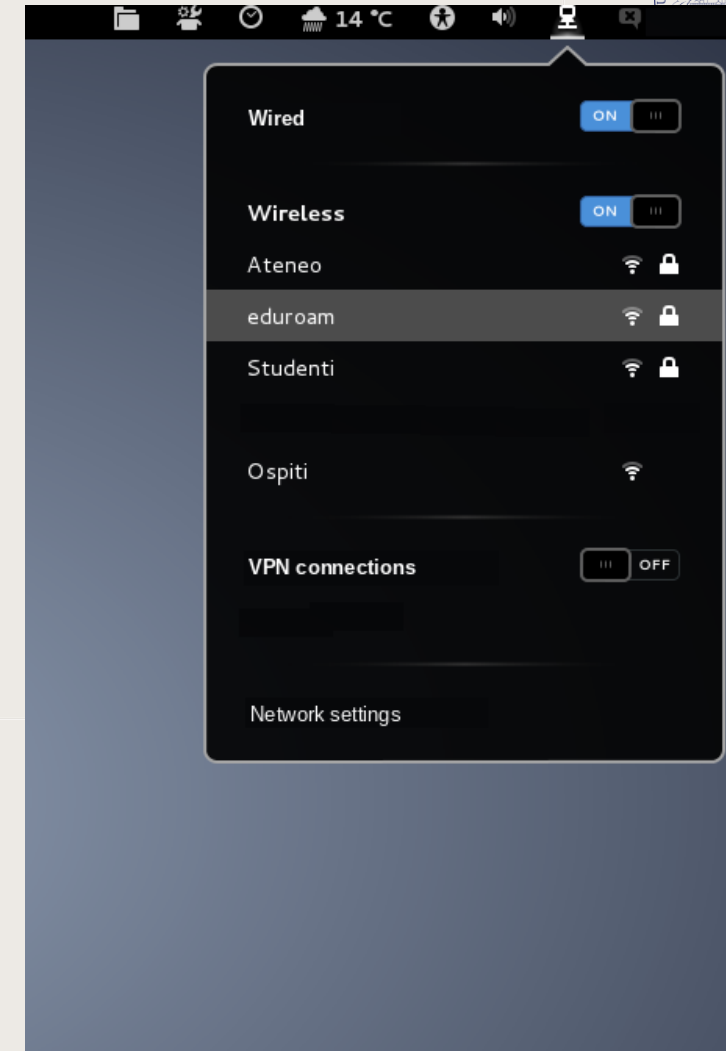
Select the eduroam network



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- Click the network icon in the top-right corner of the screen to open the Wi-Fi panel.
- From the list of available wireless networks select “eduroam”, as shown in the image.

You will then be prompted to authenticate: see the next screen for the parameters to set.



Configure authentication



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Set the parameters as shown in the image:

- Wireless security: WPA & WPA2 Enterprise
- Authentication: Protected EAP (PEAP)
- CA certificate: select the “unibs-ca.der” file downloaded earlier
- PEAP version: Automatic — Inner authentication: MSCHAPv2
- Username: see the criteria shown next, followed by “@unibs.it”
- Password: the one used for the University portal

Finally click “Connect” to complete the connection.

A screenshot of a Windows network authentication dialog box titled "Authentication required by wireless network". It contains fields for configuring wireless security, authentication, and user credentials. The "Connect" button is highlighted with a mouse cursor.

Authentication required by wireless network

Passwords or encryption keys are required to access the wireless network 'eduroam'.

Wireless security: WPA & WPA2 Enterprise

Authentication: Protected EAP (PEAP)

Anonymous identity:

CA certificate: unibs-ca.der

PEAP version: Automatic

Inner authentication: MSCHAPv2

Username: marossi@unibs.it

Password:

☐ Ask for this password every time

☐ Show password

Cancel Connect

Username Criteria



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- Staff employed before December 31, 2009: first two letters of the first name + first eight letters of the last name, for a maximum of ten letters (e.g. Mario Rossi → marossi) + "@unibs.it".
- Staff employed after December 31, 2009: "firstname.lastname" (e.g. Mario Rossi → mario.rossi) + "@unibs.it".
- Students: first initial of the first name + "." + last name (e.g. Paolo Rossi → p.rossi) + "@unibs.it".
- In case of a name clash, a 3-digit number is appended to the username (e.g. p.rossi001).

Password: the same one used to access the University portal services.

Alternative method from terminal (nmcli)



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Useful for headless/server machines or when the graphical interface is not available. Replace interface_name and username with the correct values:

```
nmcli connection add type wifi ifname <interface_name> con-name eduroam ssid eduroam
nmcli connection modify eduroam wifi-sec.key-mgmt wpa-eap
nmcli connection modify eduroam 802-1x.eap peap
nmcli connection modify eduroam 802-1x.phase2-auth mschapv2
nmcli connection modify eduroam 802-1x.ca-cert /path/unibs-ca.der
nmcli connection modify eduroam 802-1x.identity "username@unibs.it"
nmcli connection up eduroam
```

Note: omitting the 802-1x.password command makes NetworkManager prompt for the password when connecting instead of saving it in the profile.