

# 02.1X Wired Configuration on Ubuntu (Graphical Interface)

## Introduction

802.1X is a network authentication protocol that controls access to the network using EAP (Extensible Authentication Protocol)-based authentication. This tutorial explains how to configure a wired 802.1X connection on Ubuntu using the graphical interface.

## Prerequisites

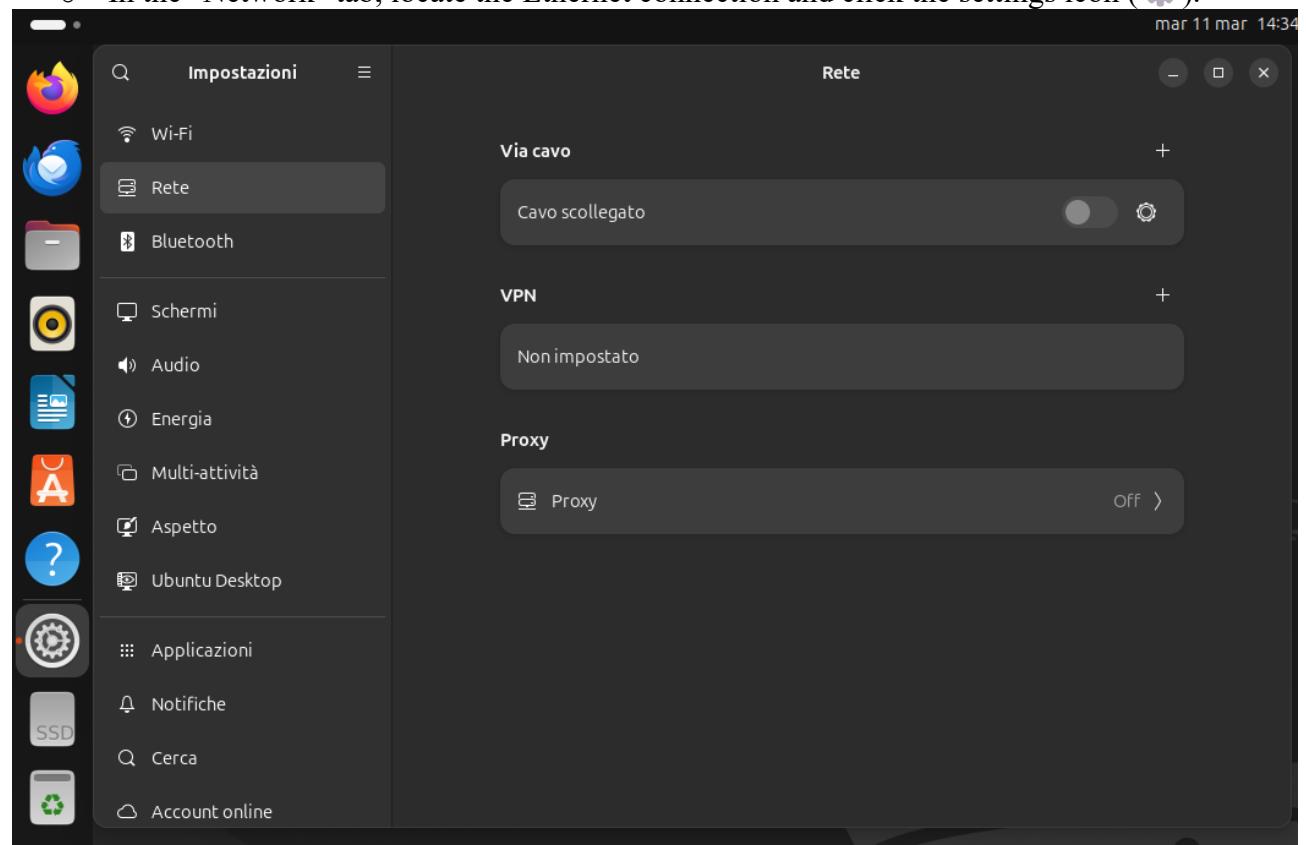
- An Ubuntu system (version 20.04 or later recommended)
- Administrative access
- GIA Account
- Verify that the computer's network port is blinking, indicating it is active. If the port shows no activity, contact IT services by opening a support issue on Portale Supporto at <https://myunivr.univr.it/> /MYDESK using the category "Fault and Anomalies - Other".

## Configuration via Graphical Interface

1. **Open Network Settings**
  - Click on the network icon in the top bar and select "Network Settings."

2. **Select the Wired Connection**

- In the "Network" tab, locate the Ethernet connection and click the settings icon (  ).



#### 4. Configure 802.1X Authentication

- In the settings window, go to the "802.1X Security" tab.
- Enable the "Use 802.1X" option.

#### 5. Enter Authentication Parameters

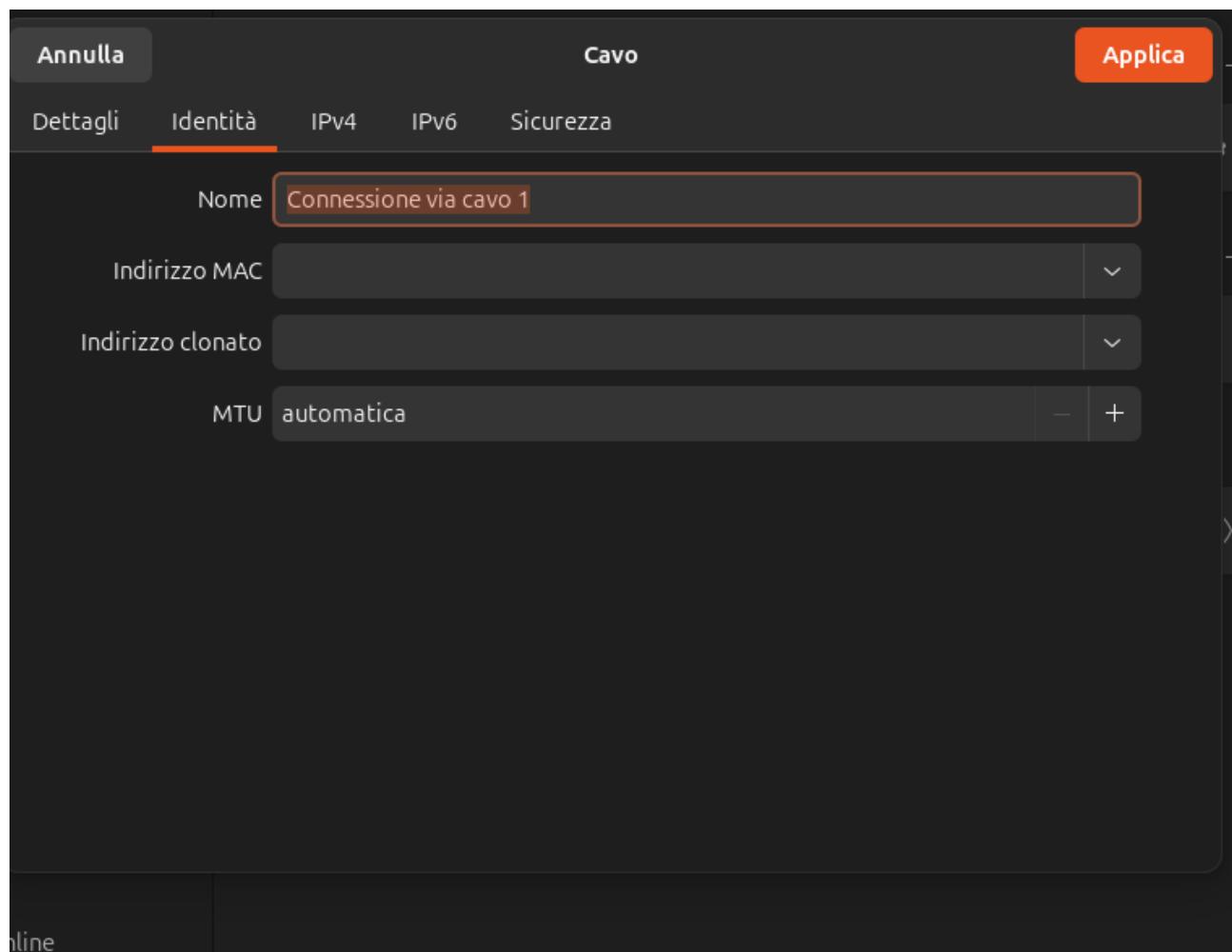
- **Authentication Method:** PEAP
- **CA Certificate:** Select the CA certificate  
`/etc/ssl/certs/HARICA_TLS_RSA_Root_CA_2021.pem`
- **PEAP Version:** Automatic
- **Inner Authentication:** MSCHAPv2
- **Username:** GIA username
- **Password:** GIA password

#### 6. Configure Additional Network Settings

- In the "Details" tab, ensure that the "Connect automatically" option is checked.
- In the "IPv4" tab, set **Method** to "Automatic (DHCP)" and **DNS** to "Automatic."

#### 7. Save and Apply Changes

- Click "Save" and close the window.
- Restart the connection by disabling and re-enabling the Ethernet network.



Annnulla Cavo **Applica**

Dettagli Identità IPv4 IPv6 Sicurezza

**Metodo IPv4**

- Automatico (DHCP)
- Manuale
- Condivisa con altri computer

**DNS** Automatico

Separare gli indirizzi IP con virgole >

**Instradamenti** Automatico

Indirizzo	Netmask	Gateway	Metrica
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> 

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Applica

Dettagli
Identità
IPv4
IPv6
Sicurezza

Sicurezza 802.1x

Autenticazione **EAP Protetto (PEAP)**

Identità anonima

Dominio

Certificato CA **HARICA\_TLS\_RSA\_Root\_CA\_2021.pem**

Password certificato CA

Mostra le password

Nessun certificato CA richiesto

Versione PEAP **Automatico**

Autenticazione interna **MSCHAPv2**

Nome utente

Nome utente

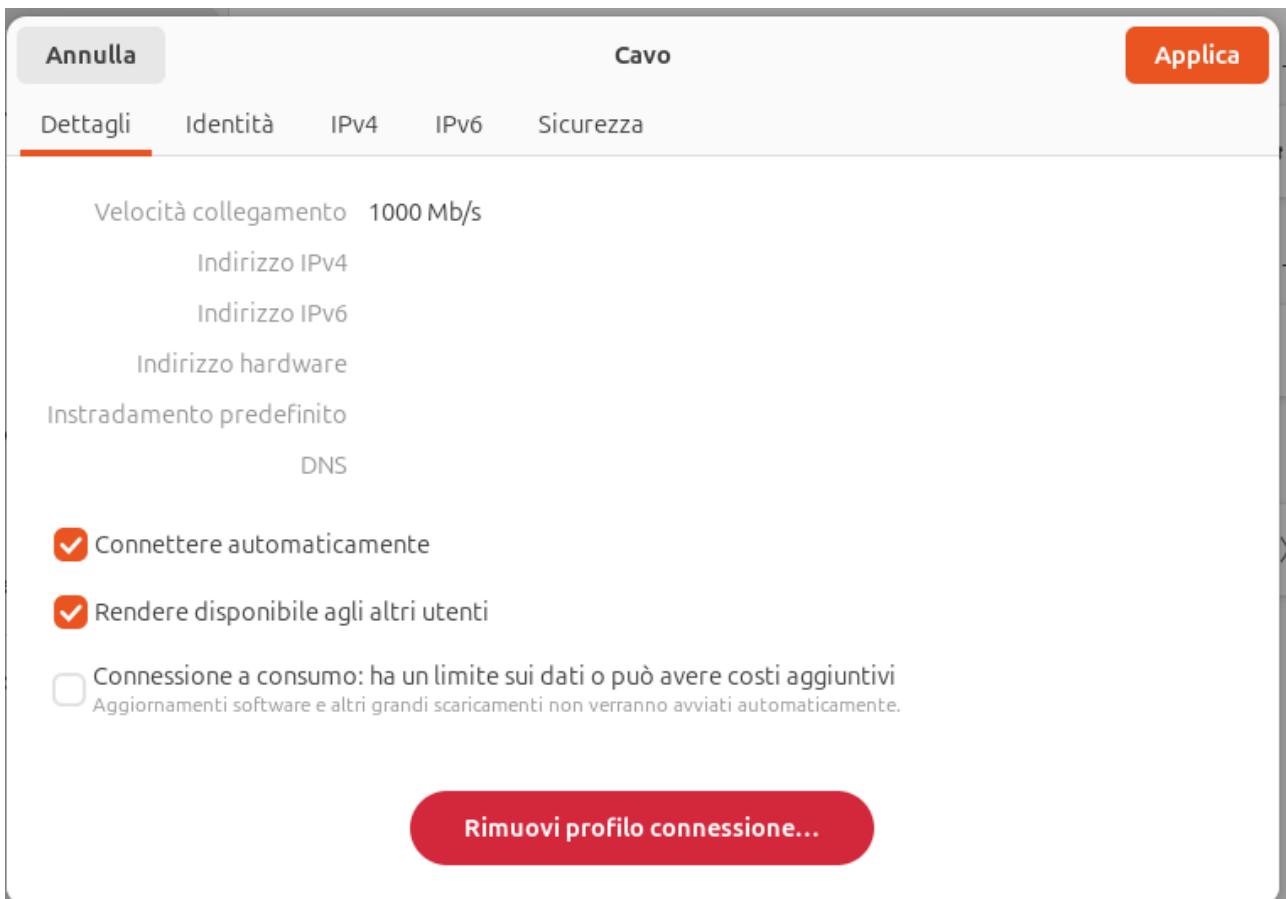
Nome utente

Mostra la password

Annulla
Scelta certificato CA

Home
etc
ssl
**certs**

Nome	Dimensione	Tipo	Data di modifica
HARICA_TLS_ECC_Root_CA_2021.pem	867 byte	Text	4 feb 2024
HARICA_TLS_RSA_Root_CA_2021.pem	2,0 kB	Text	4 feb 2024
Hellenic_Academic_and_Research_Institutio	1,0 kB	Text	4 feb 2024
Hellenic_Academic_and_Research_Institutio	2,2 kB	Text	4 feb 2024
HiPKI_Root_CA_-G1.pem	1,9 kB	Text	4 feb 2024
Hongkong_Post_Root_CA_3.pem	2,1 kB	Text	4 feb 2024



## Connection Verification

- Check the connection status in the network notification area.
- Open a terminal and verify connectivity with:

```
nmcli connection show --active
```

## Debugging and Troubleshooting

- If the connection does not work:
  - Ensure the credentials are correct.
  - Check the Network Manager logs:

```
journalctl -u NetworkManager --no-pager | tail -50
```

- Reconfigure the settings, making sure to select the correct parameters.

## Conclusion

By following these steps, you should be able to successfully configure a wired 802.1X connection on Ubuntu using the graphical interface. If you encounter any issues, contact IT services by opening a support issue on Portale Supporto at <https://myunivr.univr.it/> /MYDESK using the category “Fault and Anomalies - Other”.