

02.1X Wired Configuration on Ubuntu (Graphical Interface)

Introduction

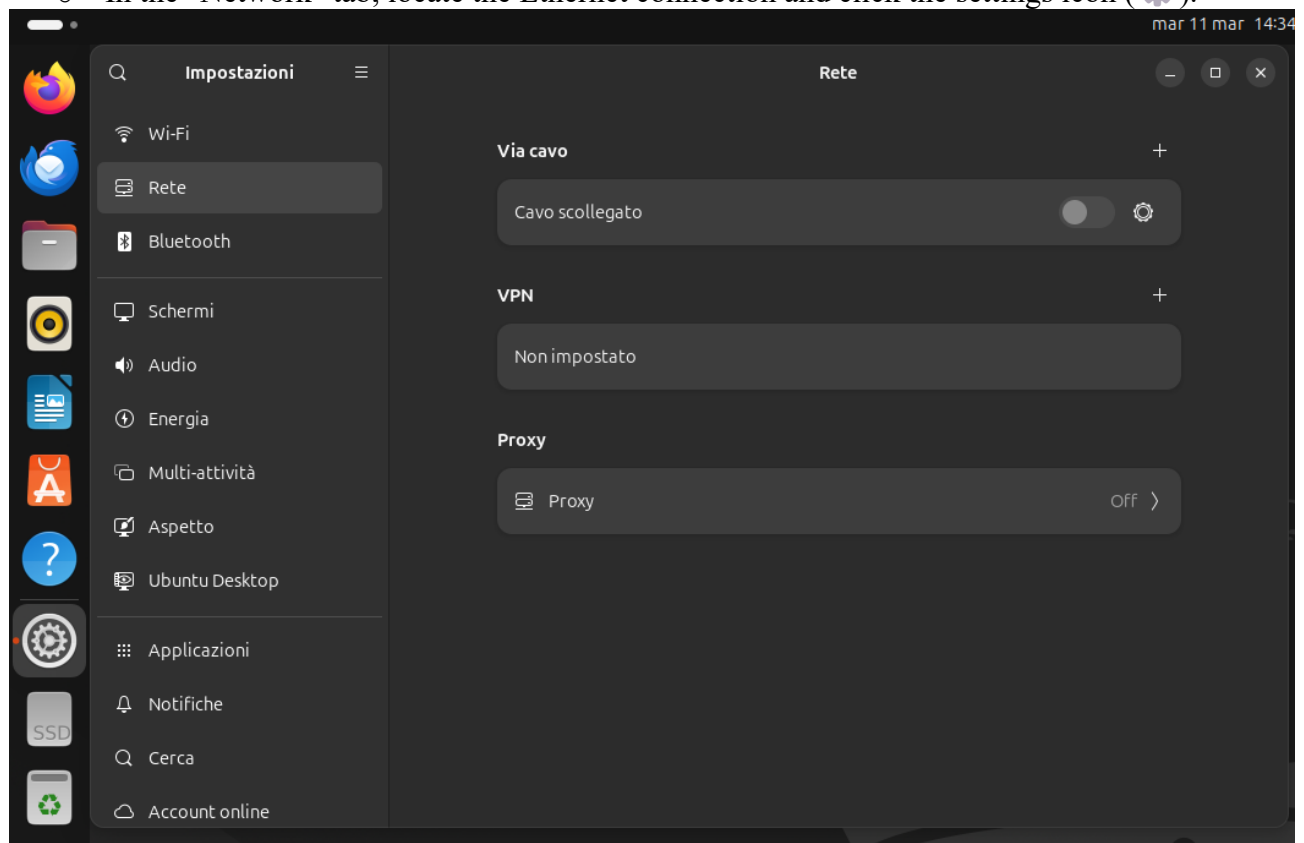
802.1X is a network authentication protocol that controls access to the network using EAP (Extensible Authentication Protocol)-based authentication. This tutorial explains how to configure a wired 802.1X connection on Ubuntu using the graphical interface.

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.

The screenshot shows a network configuration window titled "Cavo". At the top, there are buttons for "Annulla" (Cancel) and "Applica" (Apply). Below the title bar, there are tabs for "Dettagli", "Identità", "IPv4", "IPv6", and "Sicurezza". The "Identità" tab is currently selected. The main area contains the following fields:

- Nome:** A text field containing "Connessione via cavo 1".
- Indirizzo MAC:** A text field with a dropdown arrow on the right.
- Indirizzo clonato:** A text field with a dropdown arrow on the right.
- MTU:** A text field containing "automatica" with minus and plus buttons on the right.

At the bottom left, the word "online" is partially visible.

Annulla

Cavo

Applica

Dettagli

Identità

IPv4

IPv6

Sicurezza

Metodo IPv4

☒ Automatico (DHCP)

☐ Solo link-local

☐ Manuale

☐ Disabilita

☐ Condivisa con altri computer

DNS

Automatico

Separare gli indirizzi IP con virgole

Instradamenti

Automatico

Indirizzo

Netmask

Gateway

Metrica

☐ Usare questa connessione solo per risorse nella sua rete

online

Annulla

Cavo

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

Password

☐

Mostra la password

Annulla

Sceita certificato CA

Seleziona

Home

Documenti

Immagini

Musica

Scaricati

Video

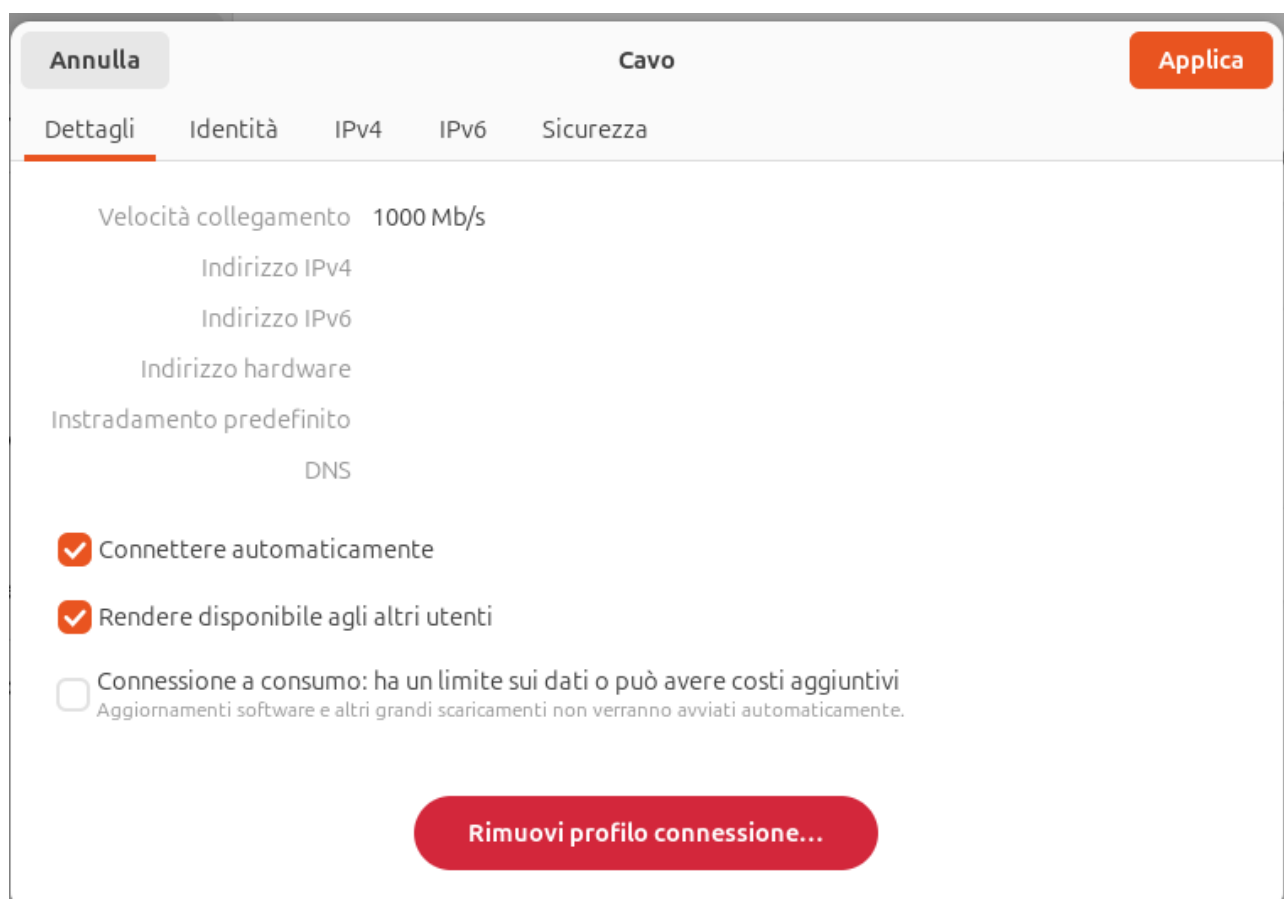
+ Altre po...

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”.