eduroam Webinar

Theme: Why eduroam?

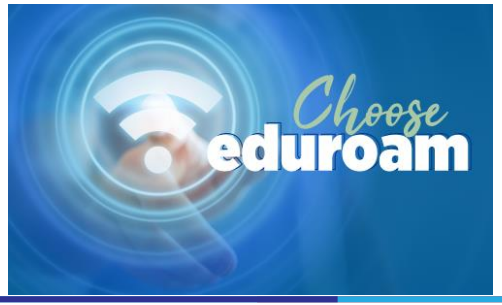
Outline

- What is eduroam?
- Why eduroam?
- Our Journey
- eduroam Deployments
- On Campus eduroam
- Managed IdP
- Metro and Homelinks eduroam
- eduroam OTG
- Connecting to eduroam

What is eduroam?

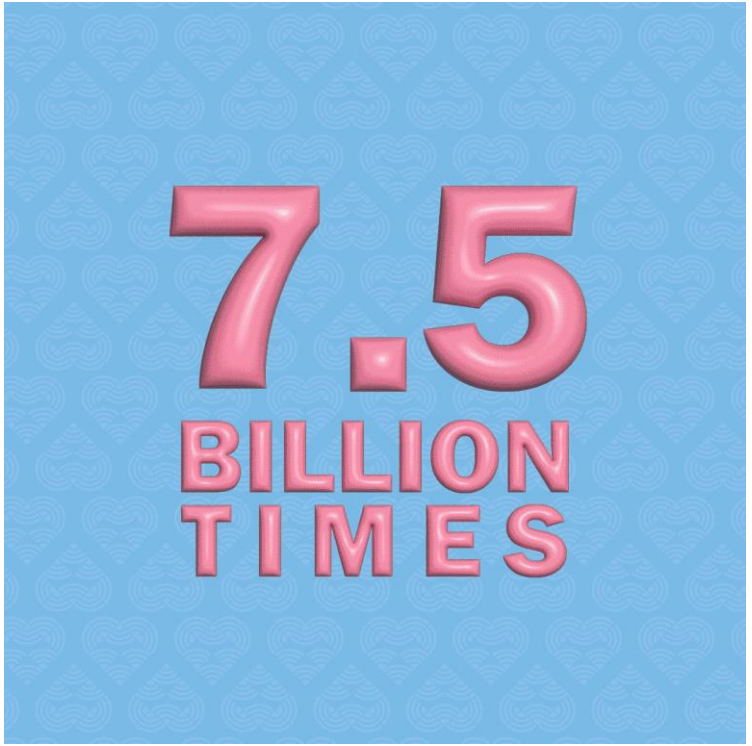
eduroam(education roaming)

Is a secure, worldwide roaming Wi-Fi internet access service developed for the research and education community.



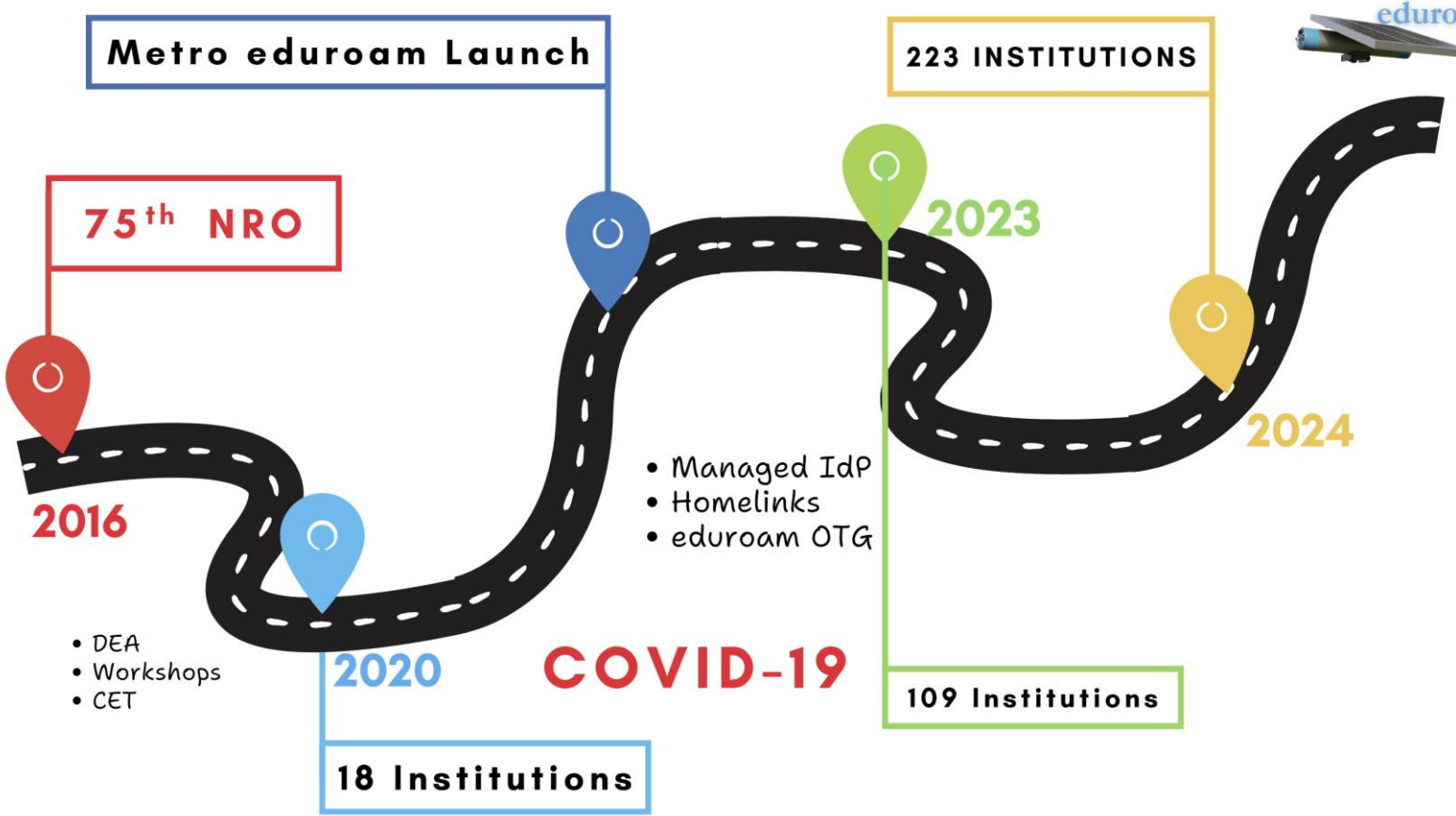
Why eduroam?

- Global access to the Internet
- Free!
- Ease of Use
- Secure Encrypted Connection



7.5 Bn Successful User Logins Recorded In 2023!
RENU – 17,549,184

Our Journey


Metro eduroam Launch
75th NRO
2016
• DEA
• Workshops
• CET
2020
18 Institutions
COVID-19
• Managed IdP
• Homelinks
• eduroam OTG
2023
223 INSTITUTIONS
109 Institutions
2024

eduroam Deployments

eduroam OTG

Metro eduroam

On Campus

Homelinks

On Campus eduroam

- Need for technical capacity with Linux knowledge
- RADIUS Server Capacity/Setup
- Existing/Setup new User Database
- Public IP Addressing
- Open ports: 1812 & 1813 (196.43.185.12)
- Technical Know how of the Institution's network
- Access Points (WPA Enterprise) (preferably with a controller in place)

On Campus eduroam Requirements

You need a source of identity

- ActiveDirectory
- eDirectory
- OpenLDAP

You need a RADIUS server

- Windows Network Policy Server (NPS)
- FreeRADIUS
- Clearpass

You need your NRO to route your realm

On Campus eduroam Management

FreeRADIUS Management

- Adding new clients / Access Points (Use the clients.conf file
- Adding sub domains
- RADIUS Debug Mode.

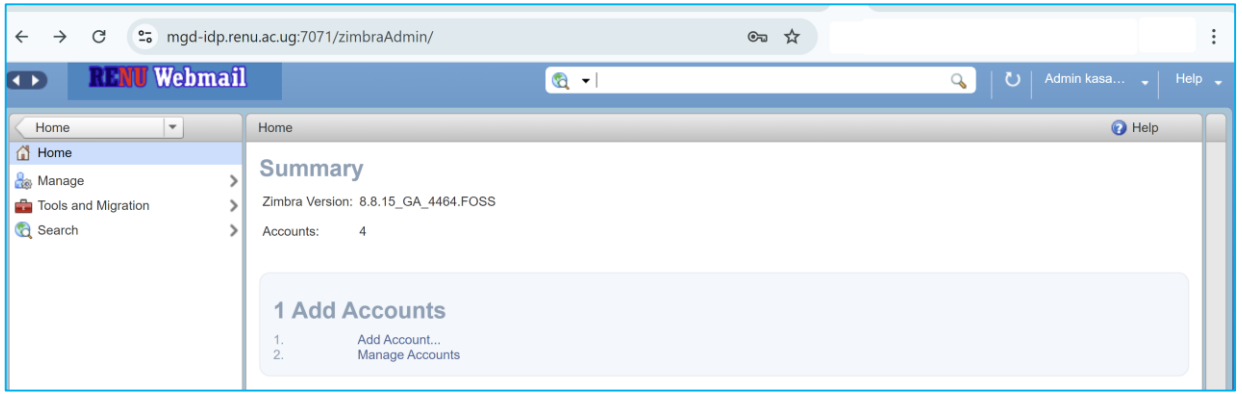
On Campus eduroam - Demo

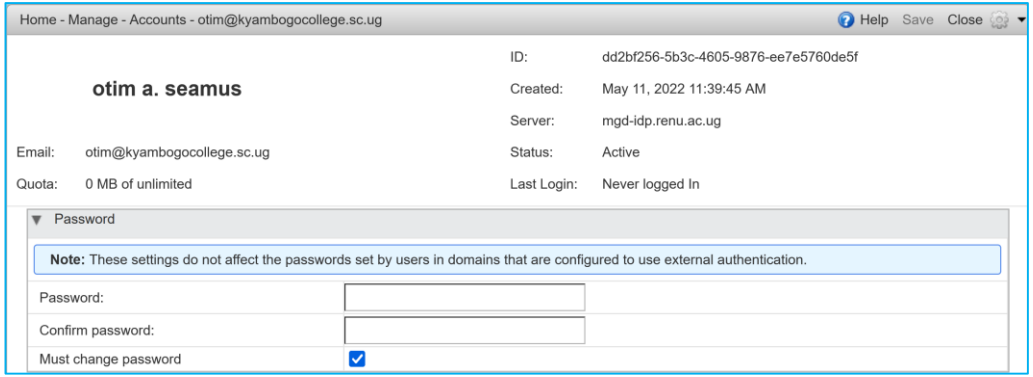
Managed Identity Provider (IdP)

- Outsourcing technical capacity
- No need to hire a technical resource
- Only focus on your users
- Short setup duration
- Web-based Interface
- Designed for RENU member institutions

Managed IdP - Administration

- Creating user accounts
- Resetting user passwords
- Deleting users
- geteduroam (Managed IdP-1 & Managed IdP-2)
- Change of Administrators (Resetting accounts)

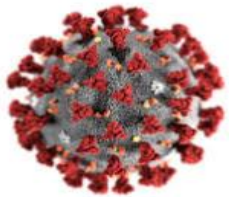




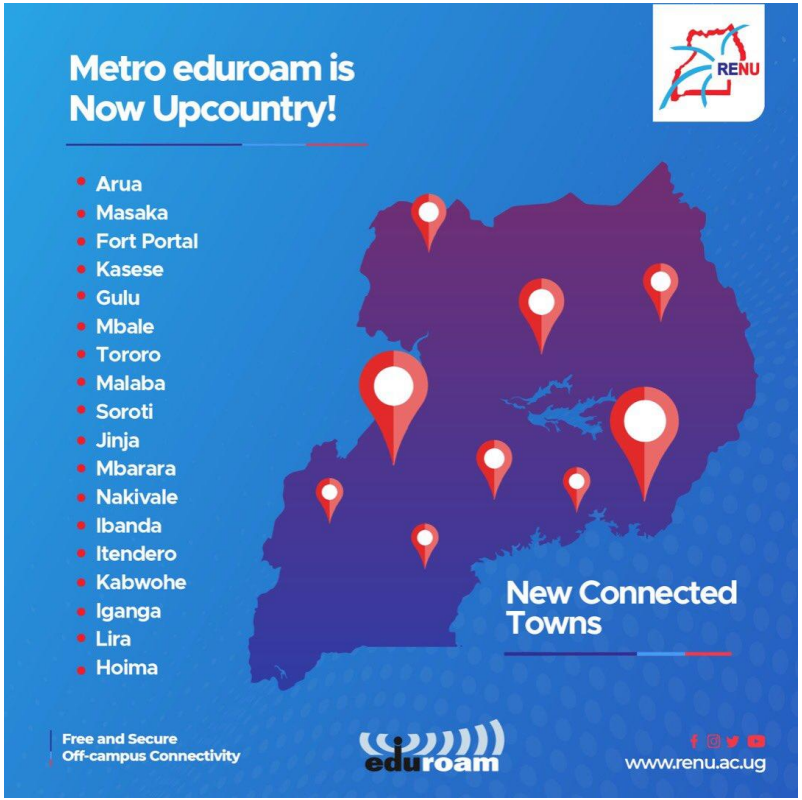
Managed IdP - Demo

Metro & Home eduroam

- eduroam locked inside Campus Network.
- In-country lock-down boosted Metro eduroam need.
- Deployment Strategies:-
  - Leverage existing metro wireless deployments.
  - Awareness Campaigns.
  - Institutional staff residences.
  - Managed IdP service
  - On The Go



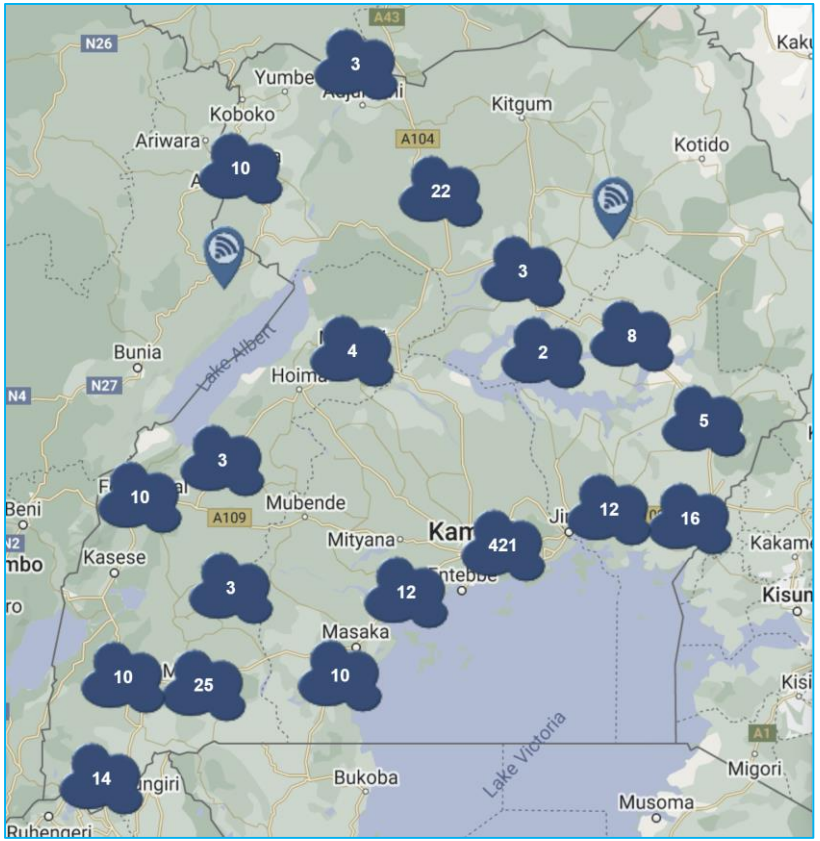
Metro & Home eduroam



Metro eduroam hotspots

eduroam Map

https://eduroam.renu.ac.ug



The Future – Metro eduroam

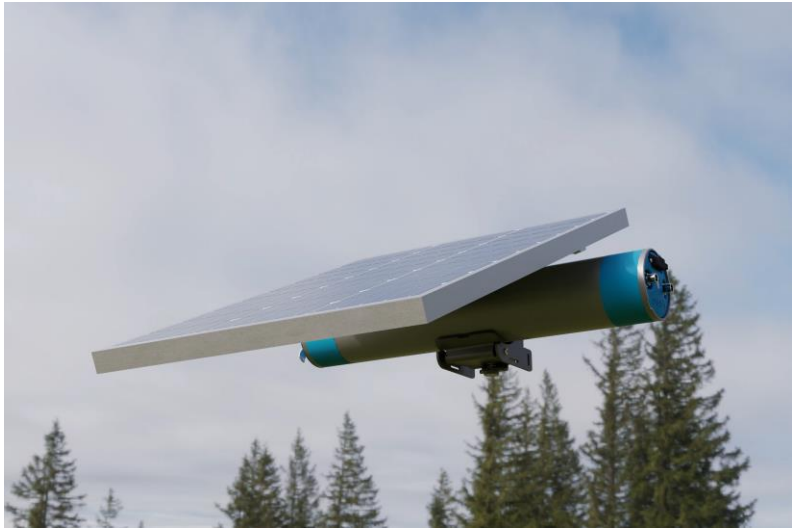
- eduroam hotspots at University Hostels
- eduroam Upcountry
- Better User experience
- Solar powered routers

500+ Access Locations

Why choose our routers?

Our solar-powered routers are perfect for off-grid locations, ensuring that even the most remote areas have access to the Internet, education, and communication.

- ❑ Sustainablility
- ❑ Network Performance
- ❑ Modern Technology
- ❑ Disaster Relief



RENU
eduroam
eduroam on the Go!
Anytime | Anywhere

RENU

What is eduroam on the Go?

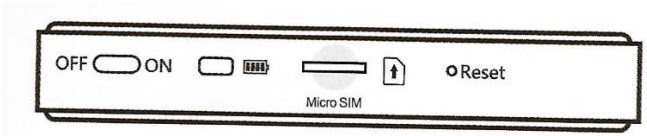
- Pocket size routing device.
- Broadcasting “eduroam” SSID.
- Capable of WPA2 enterprise authentication.
- Implemented on cellular provider network.
- Access to internet Anytime, Anywhere.

Why eduroam on the Go?

- Metro eduroam at fixed hotspots outside boundaries.
- Home eduroam - an extension of eduroam **but still fixed at staff residences**
- Covers the connectivity gaps and offers flexibility.
- Maximum number of connected devices – **16**

eduroam on the Go - Best Practices

- **Device Charging**
  - Charging power ranges (Not higher than 12V)
  - Charge device overnight.
  - Avoid depleting the device battery
  - Turn off the device to charge
  - Avoid using device while in power (to prevent issues like bloating)



- **Avoid resetting the device**
- **Do not remove the sim card.**

eduroam on the Go Device Replacement Procedure

Policy on device replacement (Stolen)

- Ensure to report to Police when the device is stolen to obtain a police letter.
- Contact RENU through our NOC (noc@renu.ac.ug) about the incident.
- When communicating to NOC ensure to attach the police letter.
- A small substantial fee will be attached to device replacement.

Policy on device replacement (Damage)

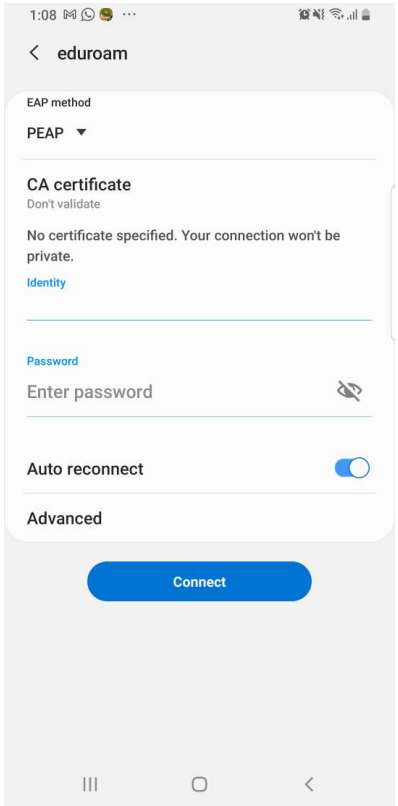
- Incase of device damage, contact the NOC team about this.
- Our networks team will check and evaluate the device to find out the cause of this damage.
- Incase of user negligence, the responsible institution will pay for the device replacement.
- Incase it's a fault in the device, RENU will replace the device at no cost.

eduroam on the Go Device Replacement Procedure

- **Policy on device replacement regarding promotional devices.**
  - Incase of device damage, contact the NOC team about this.
  - Our networks team will check and evaluate the device to find out the cause of this damage.
  - Incase the device was offered to the institution on promotional terms and it incurs any damage the institution is liable to pay for the damage.

How to connect to eduroam

1



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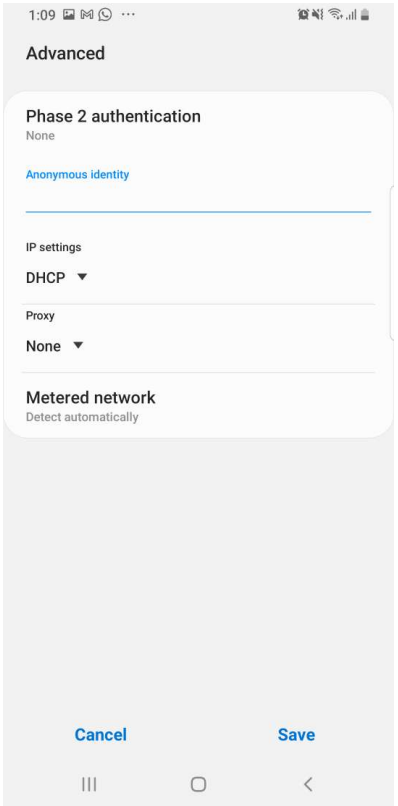

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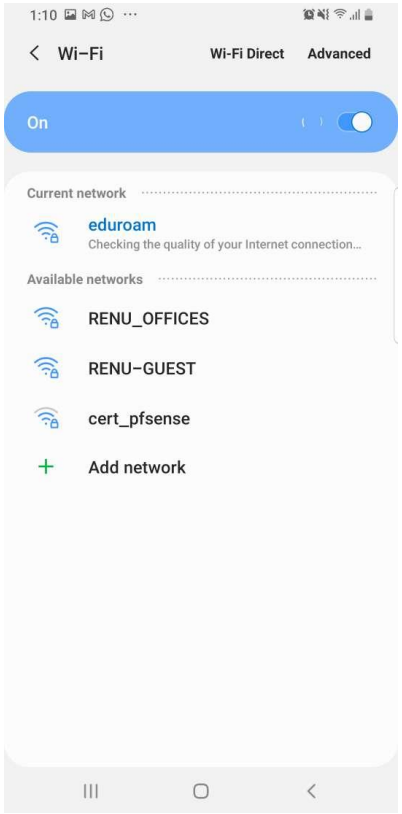

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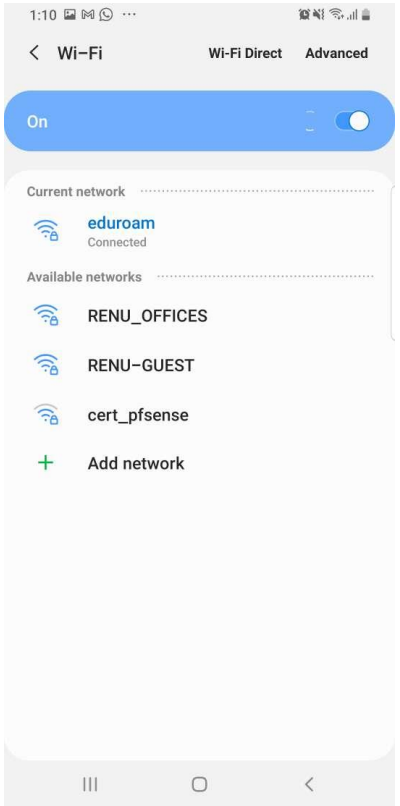
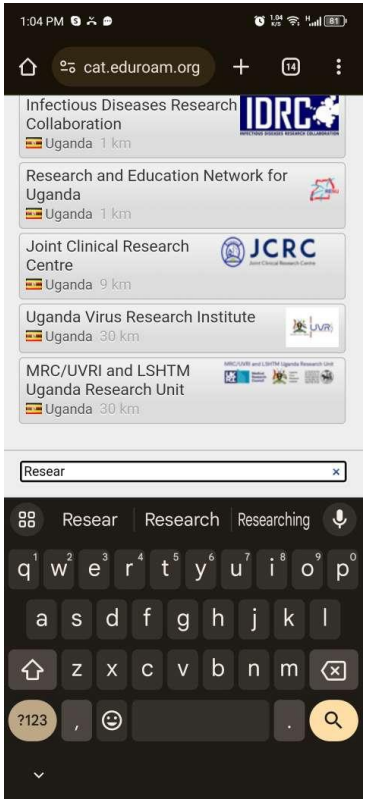


eduroam CAT

1

2



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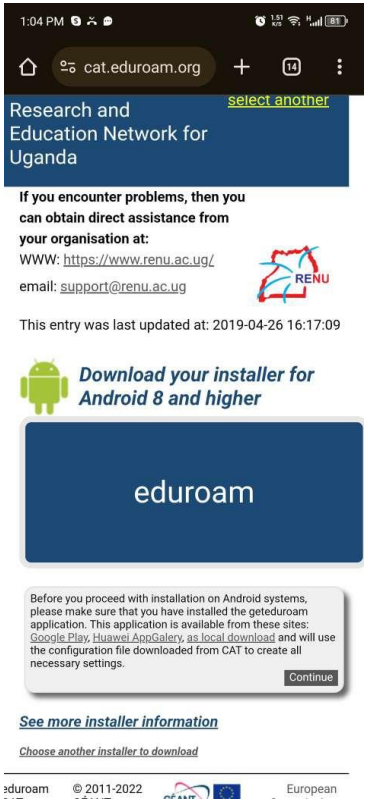

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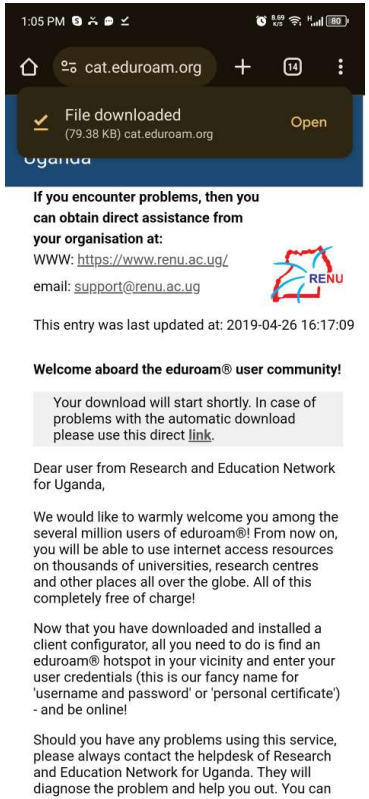

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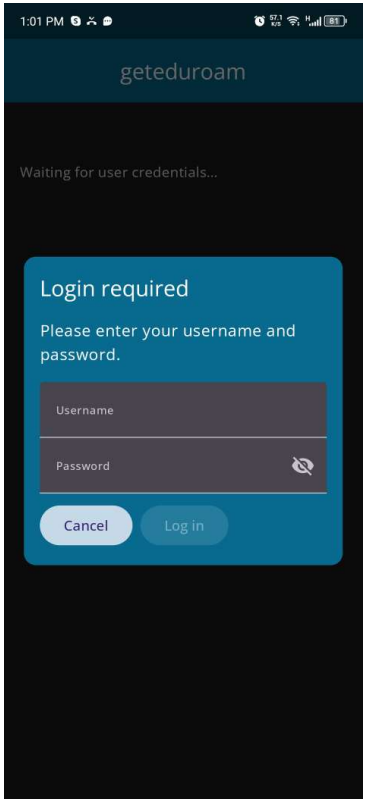

geteduroam

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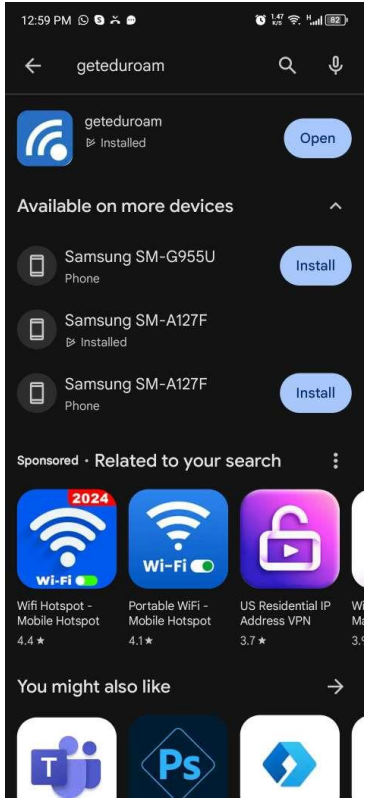

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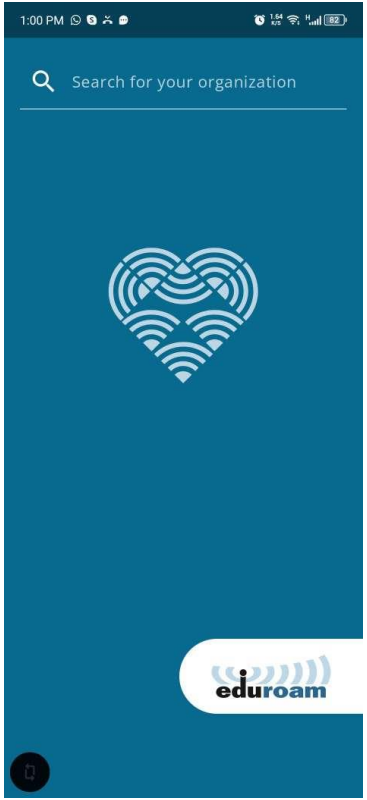

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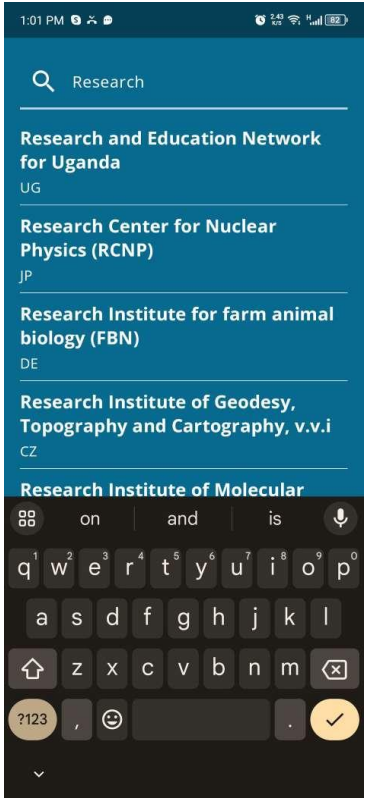

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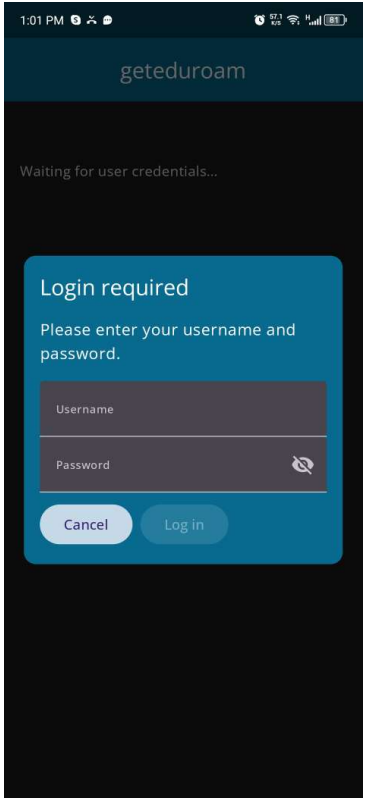

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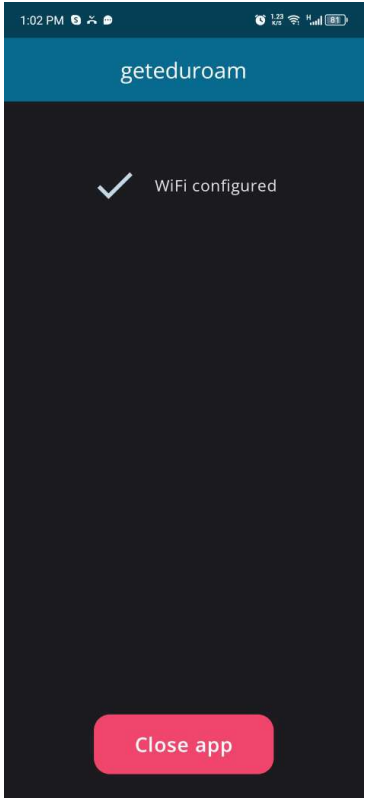

Troubleshooting eduroam

Problems connecting to WiFi – Is eduroam listed as an SSID?

- Check that WiFi is enabled
- Try switching flight mode on and then off.
- Restart your device.

Problems connecting to eduroam

- Android users – recommended to use geteduroam
- Check username format – user@institution.ac.ug
- If you have trued connecting before, forget the eduroam network.
- Connected but no internet (security checks, AP is far, weak signal)

eduroam on the Go Testimonial

Thank You!

https://renu.ac.ug