eduroam in times of COVID

Klaas Wierenga,

Chief Information and Technology Officer, GÉANT

Mreža znanja 2020

25. in 26. november 2020

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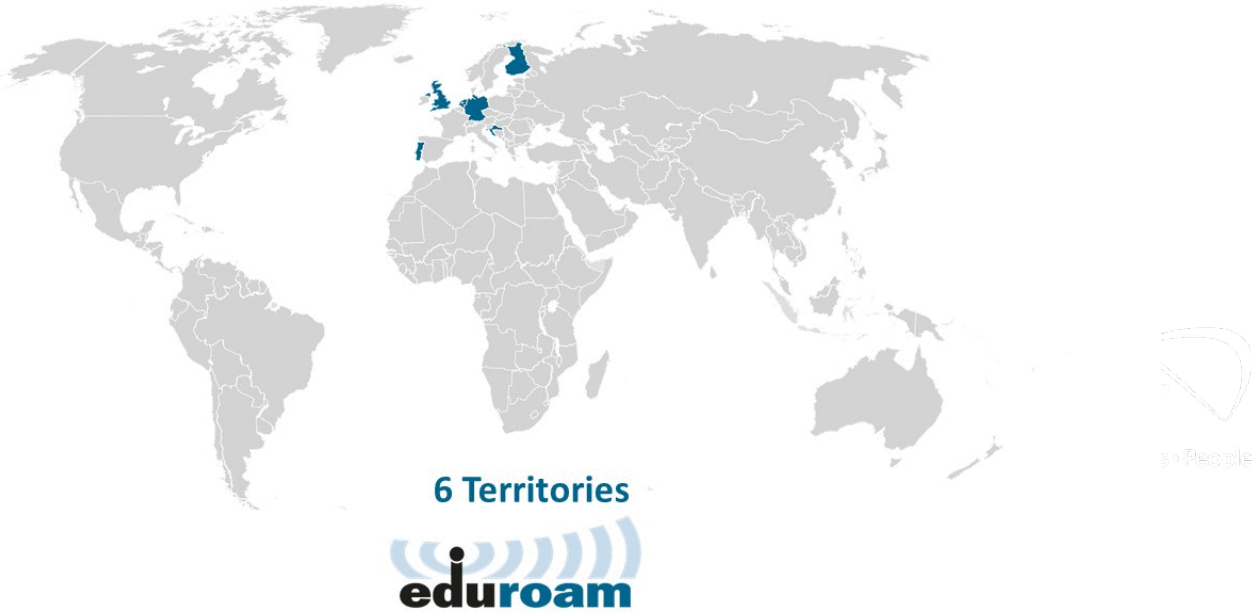
As part of the GÉANT 2020 Framework Partnership Agreement (FPA), the project receives funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 856726 (GN4-3).

Agenda

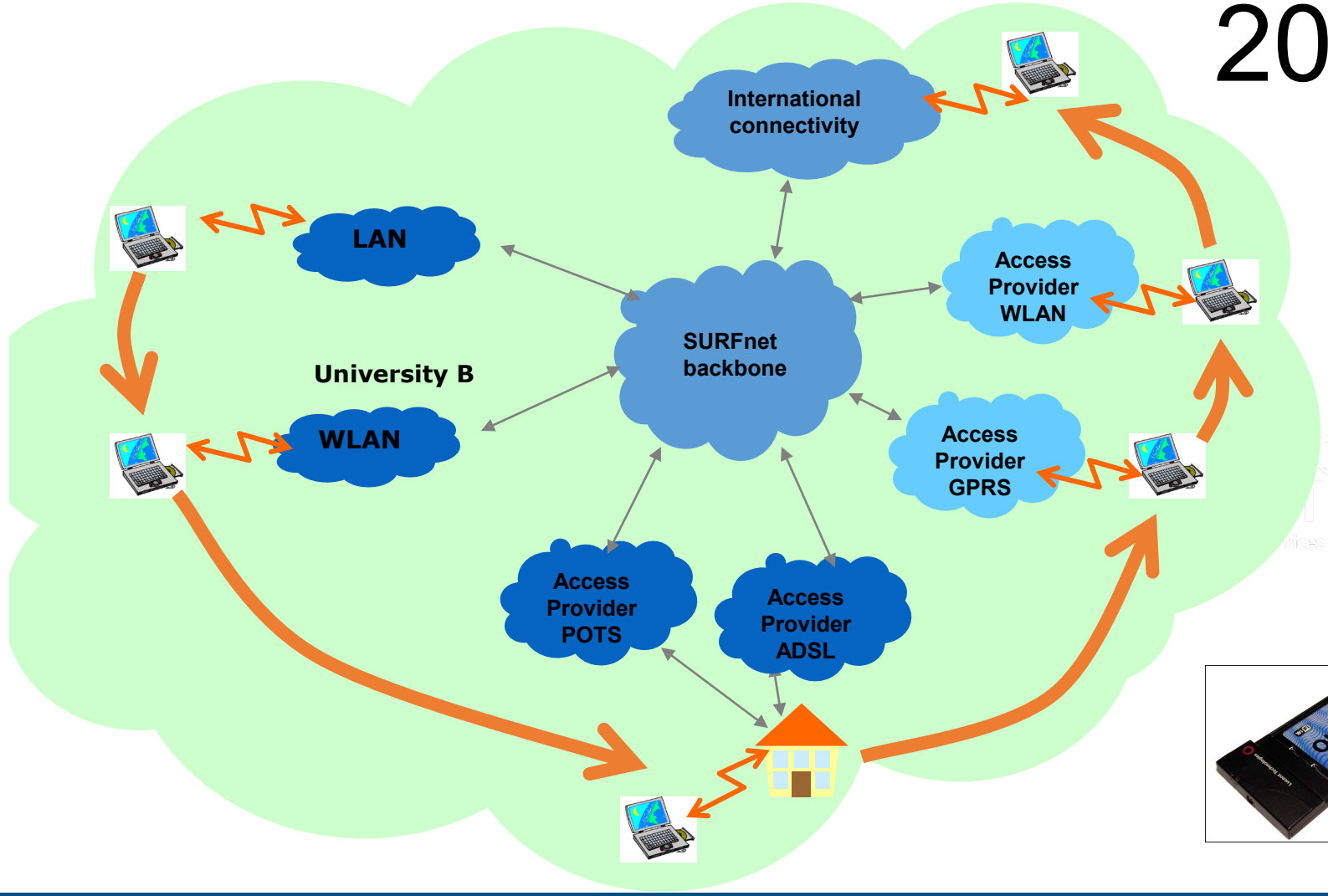
- History of eduroam
- eduroam in times of COVID
- Threats and opportunities
  - openroaming
  - geteduroam



#love2 eduroam

Motivation

2003



It all started with ...

Subject: [mobility] proposal for inter NREN roaming
From: Klaas Wierenga <Klaas.Wierenga@surfnet.nl>
Date: Thu, 30 May 2002 12:46:43 +0200
To: mobility@terena.nl

Dear all,

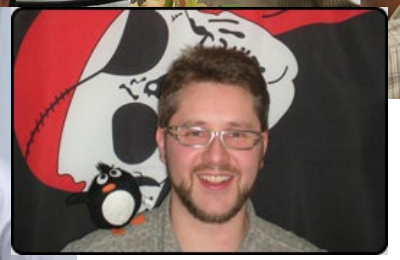
As promised at the mobility workshop a proposal for an inter-NREN wireless LAN roaming test. Based on some investigation we have done in the Netherlands we propose to experiment with the 802.1x standard as that seems the most likely candidate for inter-NREN roaming since it gets a lot of industry attention and scales relatively easy.
I'm looking forward to hear your comments or better ideas.

Cheers,

Klaas

http://www.terena.org/activities/tf-mobility/start-of-eduroam.pdf

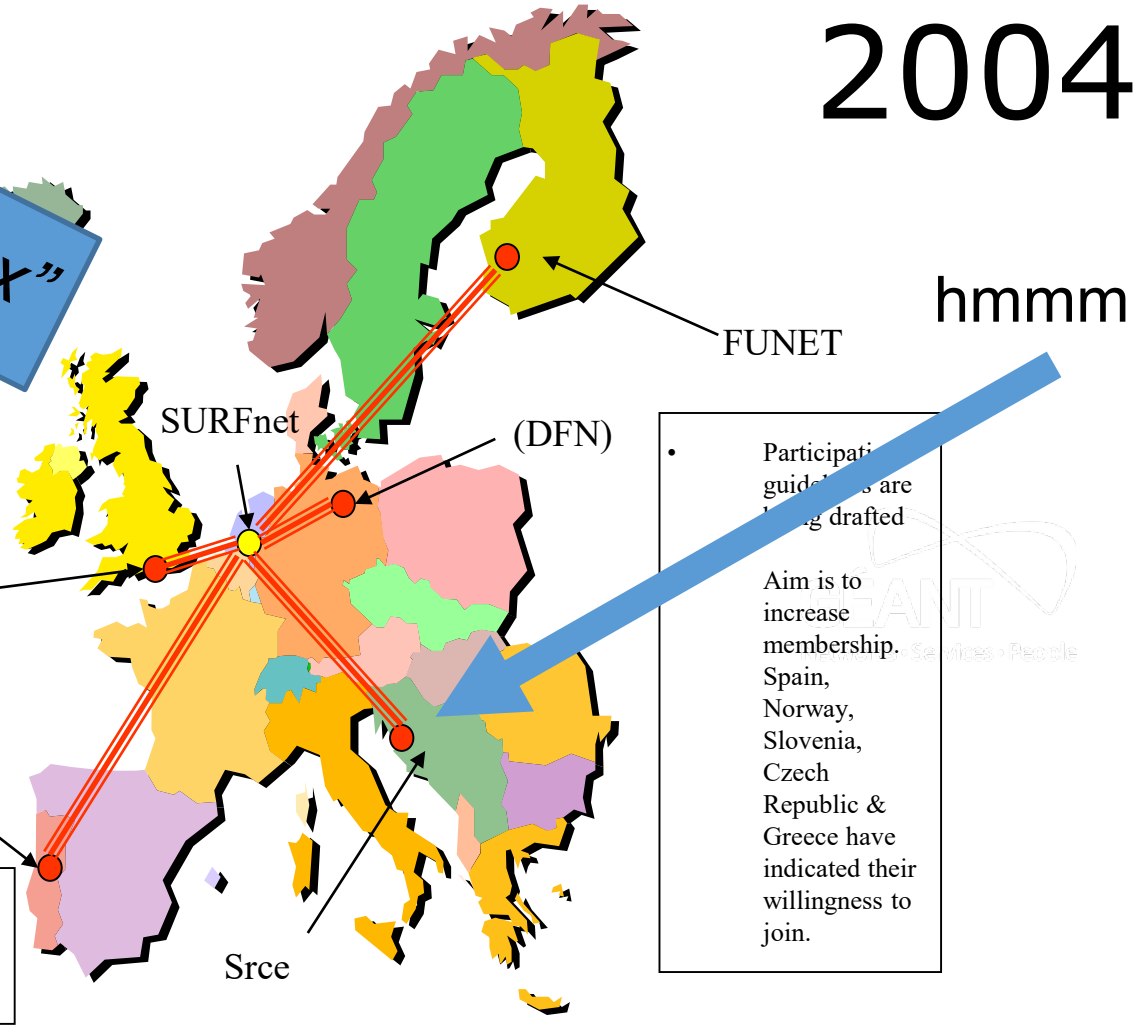
Radius proxy hierarchy



"Rok-in-a-box"

2004

hmmm



- Participati… guid… …s are …g drafted
- Aim is to increase membership. Spain, Norway, Slovenia, Czech Republic & Greece have indicated their willingness to join.

RADIUS Proxy servers connecting to a European level RADIUS proxy server

GEANT2: from a pilot to a service

- JRA5 (2004) → SA5 (2007)
- European eduroam Policy v .1.0 (January 2008)
- Supporting services
- European eduroam confederation
- Service officially started on September 1, 2008
- http://www.eduroam.org

GÉANT
Networks • Services • People

eduroam

2012

And growing….

2016

eduroam.org

Mail us : help@eduroam.org

eduroam

About eduroam FAQs News Support

Happy 1,000,000,000th!

eduroam > Happy 1,000,000,000th!

eduroam celebrates one billion roaming authentications – helping create a global village for research and education.

It's not often you celebrate a billionth "birthday" so to be able to celebrate two at the same time must be pretty rare. On 17 May 2016, eduroam clocked up two amazing milestones – registering both one billion roaming authentications (either in-country or international) since the beginning of the year and the one billionth international authentication (when users are connecting from outside their home country) since the service was launched.

eduroam – an international success story

Since its launch on 1 September 2008 as a GÉANT service, the aim of eduroam has been to help the research and education community collaborate both nationally and internationally. From its early beginnings with a handful of European universities, the service has grown to cover over 70 countries and tens of thousands of wifi hotspots on every continent around the globe. Now researchers can travel to each other's university and can instantly and securely connect to eduroam without the need for guest identities, sharing passwords or insecure webpage logins.

What is most amazing about eduroam is its seamless and virtually invisible operation – truly the mark of a successful service. Put simply, it just works!

eduroam stands as an example of the success of international collaboration. Experts from around the world have all contributed time, effort and expertise to ensure that research and education can benefit from advanced technology.

To all those people who have worked (and continue to work) on making eduroam the success it is we thank you.

Read some of the stories from the originators and developers who have made eduroam what it is.

- Stefan Winter
- Klaas Wierenga
- Miroslav Milinovic

eduroam

Linking students to the global community

Internet Hall of Fame 2019 Klaas Wierenga

CONNECT article

>1 billion international authN in 2019

106 Countries

12 new NROs

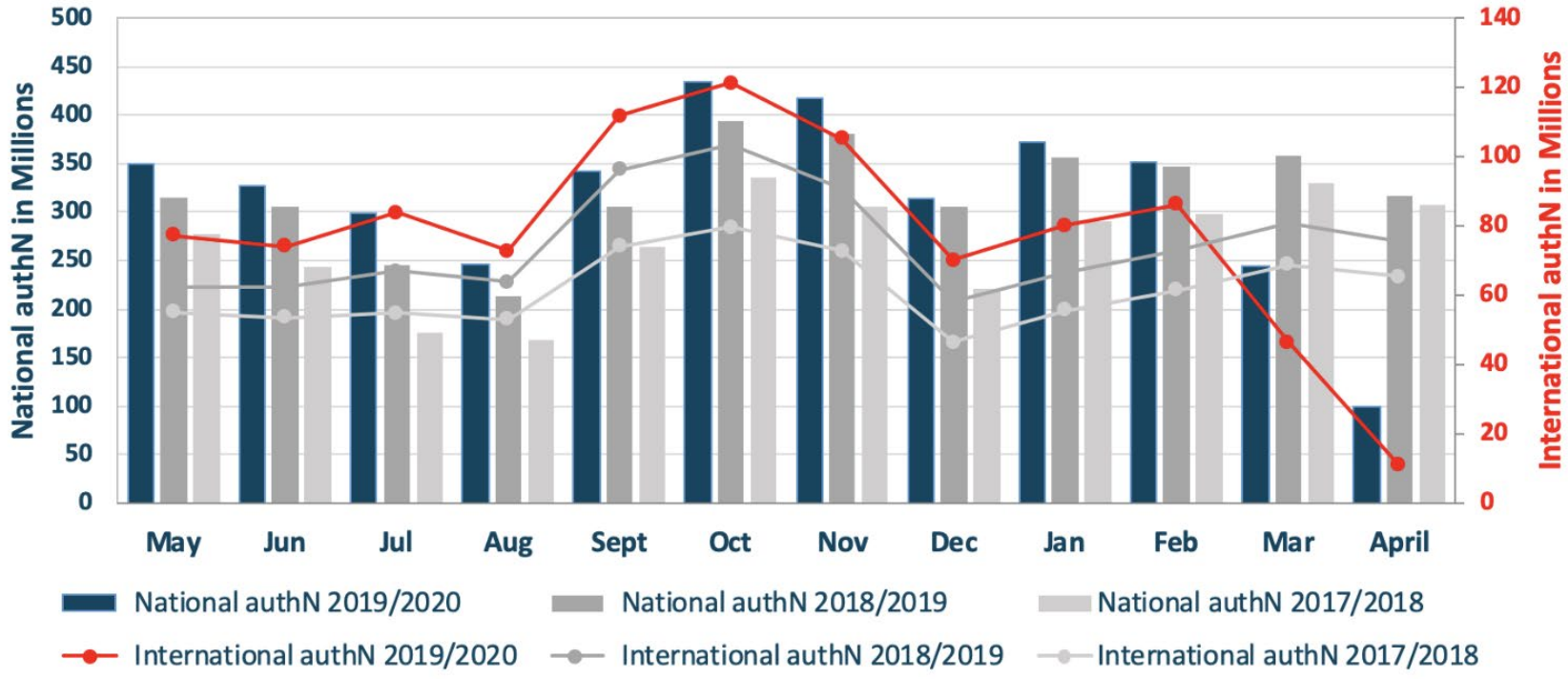
6000+ Institutions

11% growth

26,000+ Service Locations

21% growth

Service uptake – number of user authentications

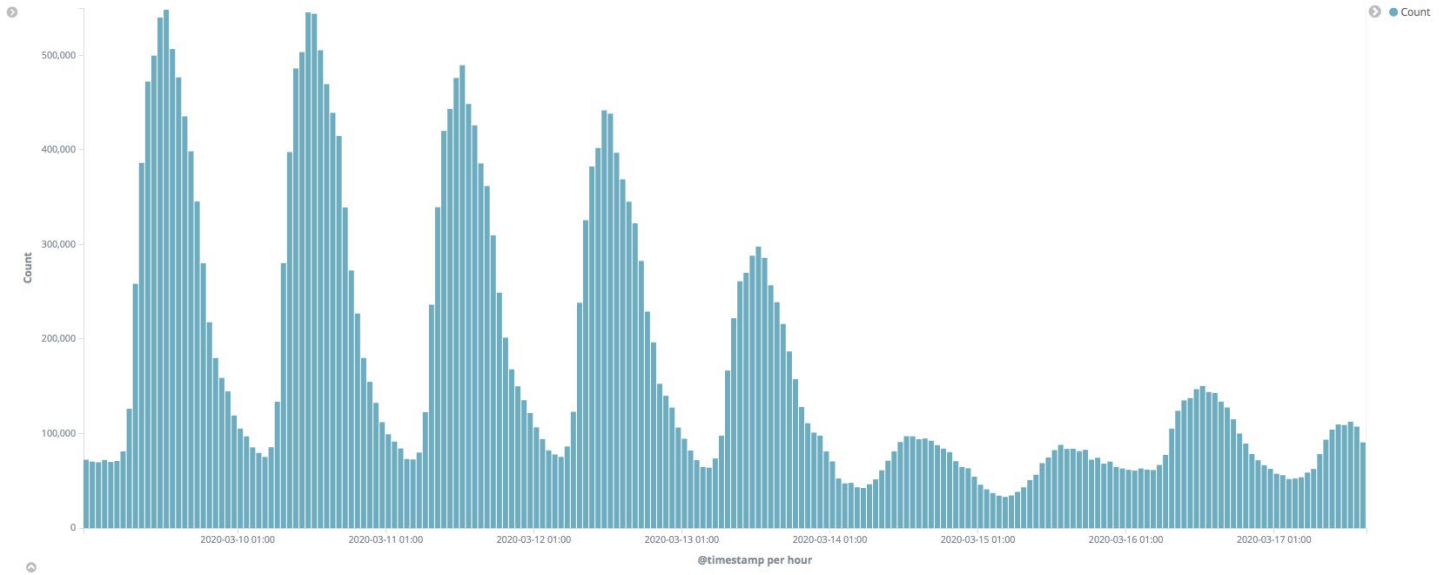


Fall in international traffic during COVID-19 lockdowns

KPI	Baseline	Target	Measured
Number of international authentications	760 million (for 2018)	10% annual increase	1,012,581,259 (for 2019)

33% Increase

eduroam down / eduGAIN up



"The usage of eduroam is actually rather low now: past two days almost looked like a weekend day."

Paul Dekkers (SURF)

"In the week between March 13 and March 20 we had over 4.100.000 successful AuthNs (compared to weekly average of over 705.000 AuthNs in 2019).
"

Miroslav Milinovic (AAI@HR)

New opportunities

14:10 Sat 21 Nov 20%

insidehighered.com

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#News #Coronavirus #Community Colleges #Technology

Reserved: Internet Parking

> Using Wi-Fi ready college parking lots is now a way of life for students with limited or no internet access.

By Colleen Flaherty
// May 8, 2020

14:14 Sat 21 Nov 19%

Not Secure — universitychron.com

SCSU News

WiFi parking lot available to students without access

May 6, 2020 Anna Panek COVID-19, internet, Miller Center, parking lot, SCSU, WiFi

Students utilize WiFi parking lot outside of the Miller Center. Photo credit: Anna Panek

With the Coronavirus (COVID-19) forcing the University to shift to an alternative method for class instruction and limiting the access to many of the buildings, some students were left without a reliable source of WiFi.

In efforts to support students, the University has created a "WiFi parking lot." Details of the access can be found on the Information Technology Services website.

"Miller Center pay lot has coverage of the following WiFi networks in select spaces:

- HuskyNet Secure (students, faculty and staff)
- SCSU Public (visitors)
- eduroam (any eduroam user)

For best connection, use spaces 261-287, the row nearest the main entrance doors and the Coffee Shop.

Parking is free while vehicles are occupied."

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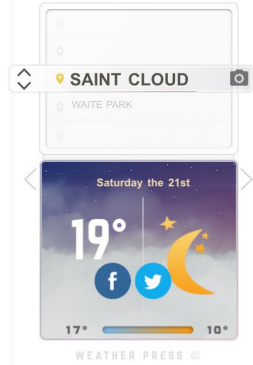
SCSU brothers break a world record



Search

OPENROAMING™
WIRELESS BROADBAND ALLIANCE

ONE GLOBAL WI-FI NETWORK

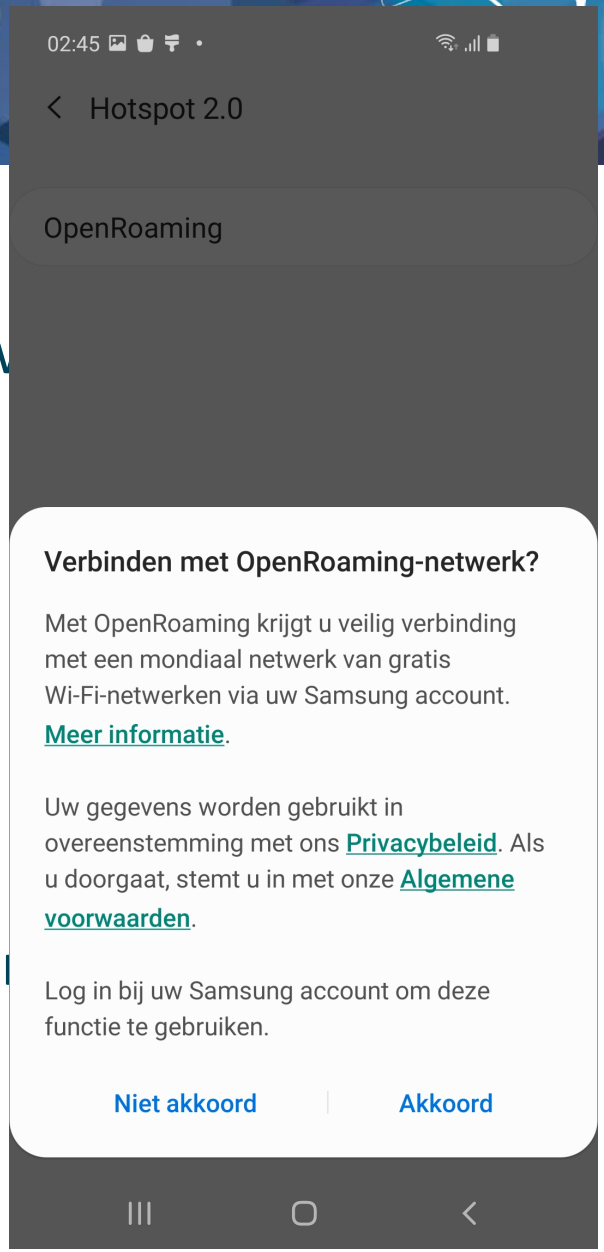
eduroam

"eduroam has been doing federated Wi-Fi roaming since over a decade with many of the building blocks that meanwhile underpin Passpoint®. Now that Passpoint® and OpenRoaming™ provide a coherent vision and technology to enable inter-federation roaming in a scalable way, it is only natural for eduroam to join forces and take this exciting next step as a first-to-market pioneer participant."

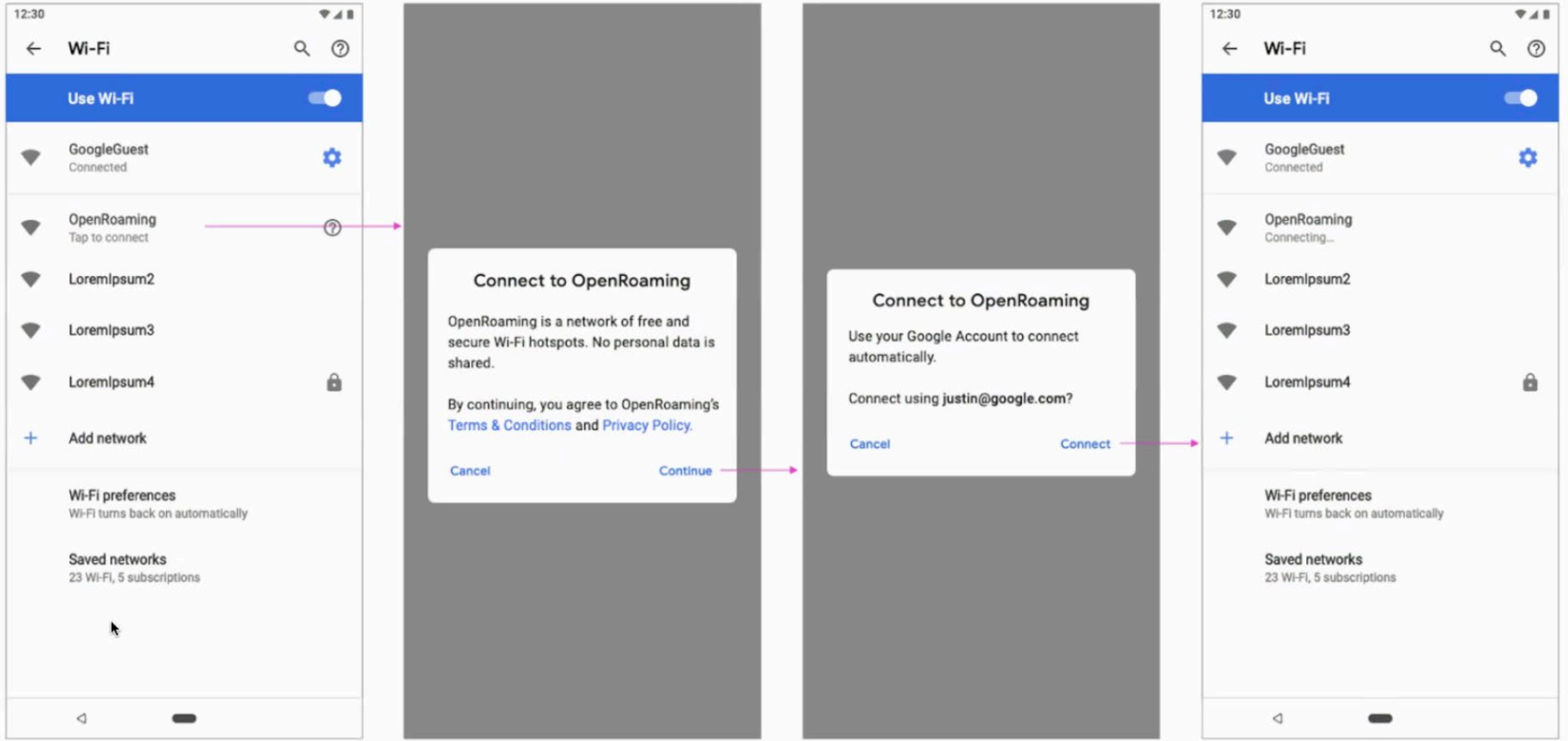
Paul Dekkers
Chair of the Global eduroam Governance Committee in GÉANT

OpenRoaming ™

- Developed by Cisco, transferred to WBA
- WBA's Wireless Roaming Intermediary eXchange (WRIX) Framew
  Interconnect, reporting/rating/data clearing, settlement
- Policies (what SPs, IdPs, privacy modes)
- Roaming based on different RCOIs
  - eduroam RCOI
  - OpenRoaming ALL (compatible T&C)
  - Settlement or settlement free
  - Privacy: true identity or anonymous, CUI
  - Type: Vendor, Service Provider, Hospitality, Enterprise, Gover
- WBAID (ours is "eduroam", some suffixed by country ID)



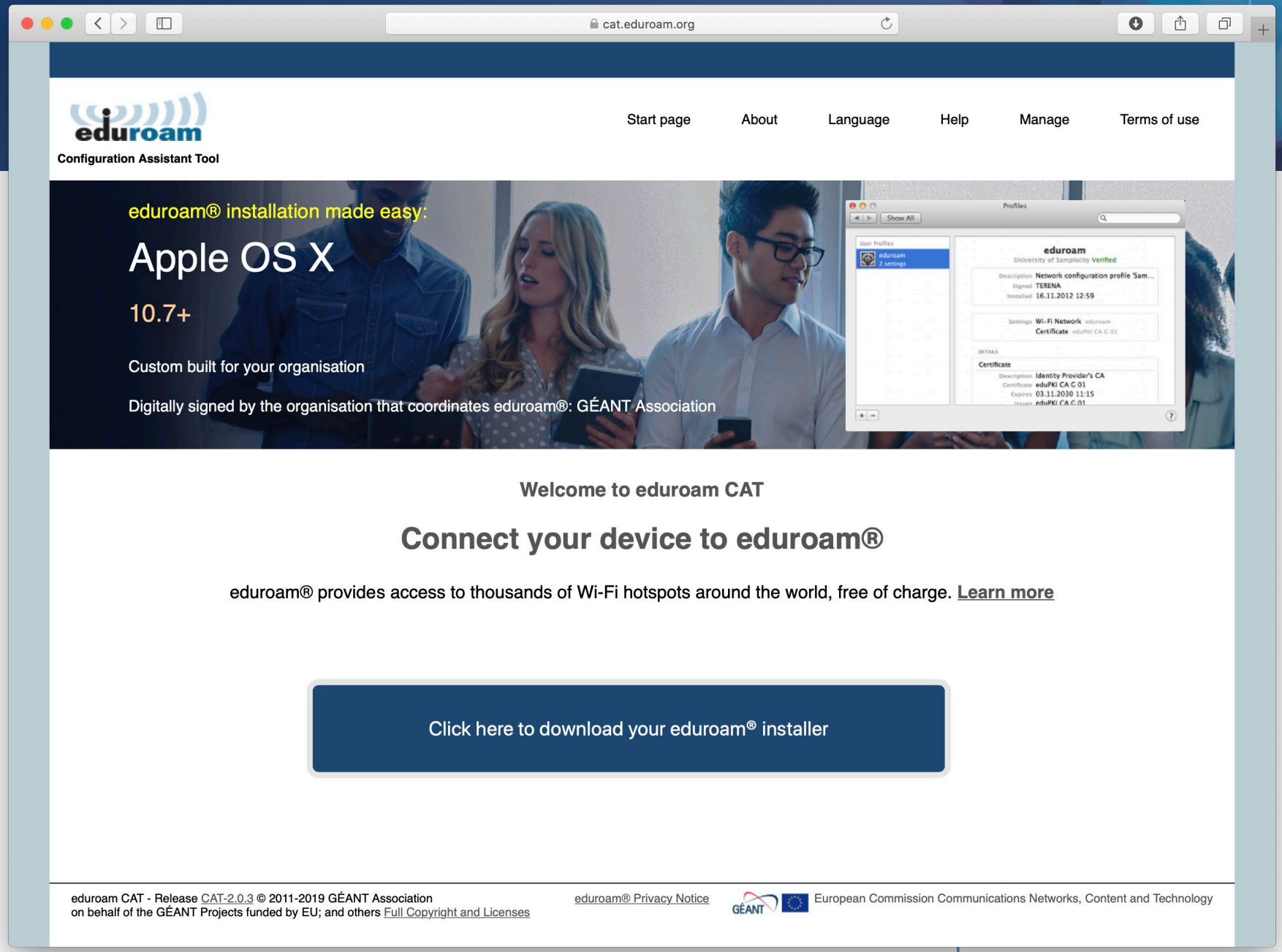
Android 11 makes OpenRoaming easy



eduroam CAT

- Single place for profiles
- All settings correctly!

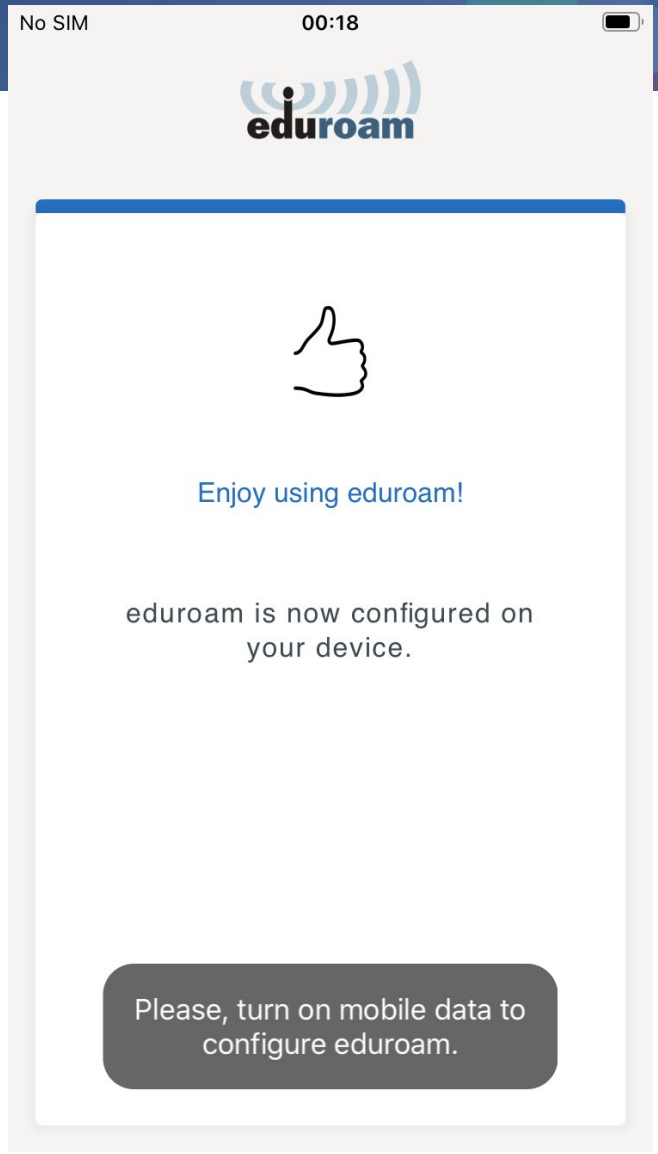
- Android app
- No built-in credentials
- Certificate provisioning for users is hard
- HS20/Pp profiles hard
- Hosted IdP is not for a big userbase



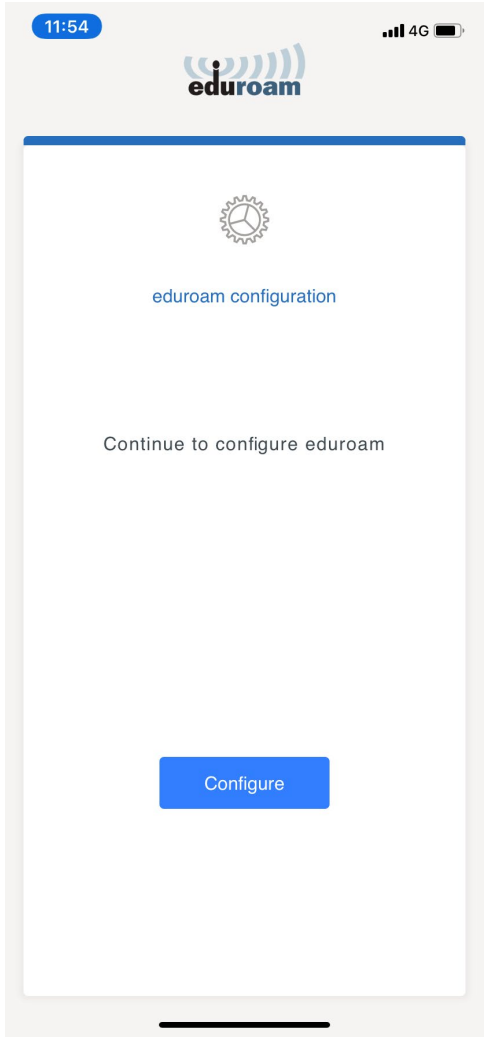
geteduroam

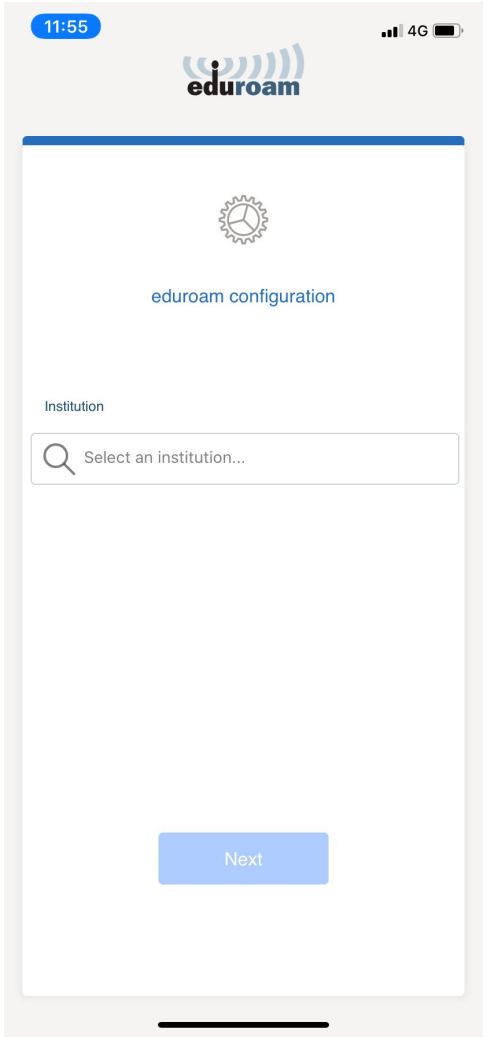
- Good client for all platforms
  - Basic iOS app
  - Basic Android app
  - Basic Windows app
- Contains CAT profiles: works for all organizations!
- Passpoint, Hotspot 2.0 settings (OpenRoaming!)
- Alternative workflow to provision credentials using federated authentication (OAUTH, SAML)
- Initiative from NORDUnet and SURF

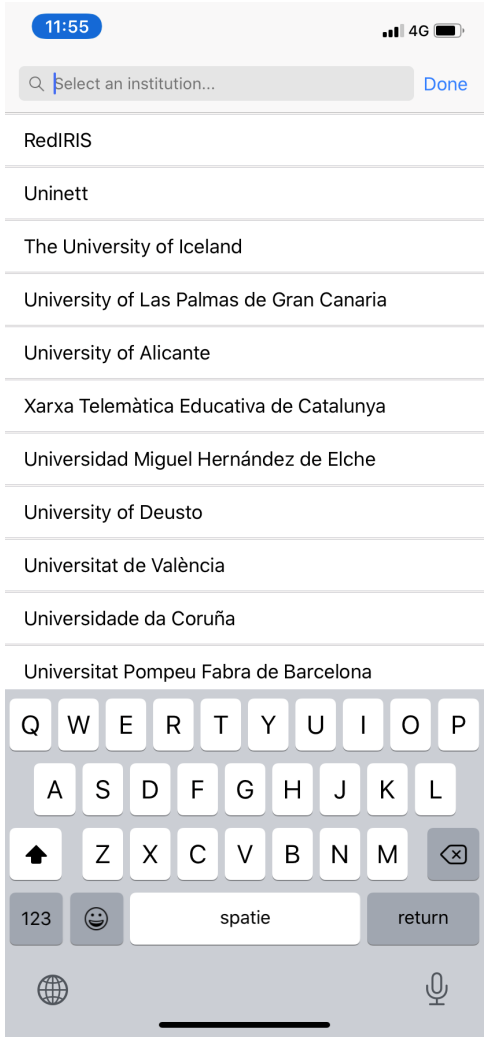
- Chicken-Egg: need connectivity for the app (unless our QR plan works out)

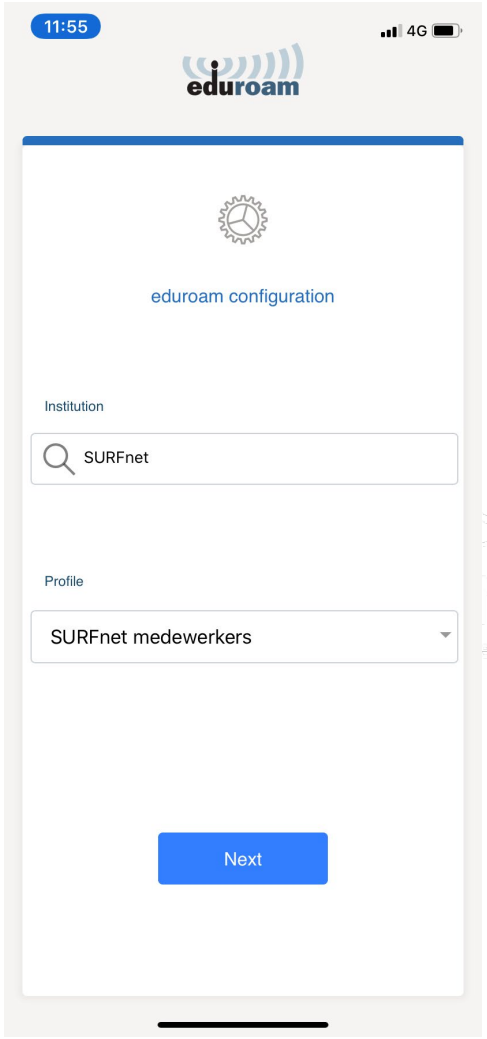


geteduroam client









Conclusion

Thank you!

Hvala!

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