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eduRoam implementation: benefits and obstacles



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WHAT IS eduroam?

eduroam:

- Stands for EDUcation ROAMing.
- Provides secure internet access for academic roamers.
- User experience - “Open your laptop and be online.”

WHAT IS eduRoam (2)

eduroam (education roaming) is the secure, world-wide roaming access service developed for the international research and education community.

eduroam allows students, researchers and staff from participating institutions to obtain Internet connectivity across campus and when visiting other participating institutions by simply opening their laptop.

WHY eduroam?

Researchers:

- Travel with WLAN-enabled notebooks.
- Want transparent, secure network access.
- Want similar experience at visited institution as home.

Experience facilitated by seamless sharing of network resources.

Better for roamers, easier for administrators.

A BRIEF HISTORY OF eduroam

Service developed/deployed by GÉANT2 (JRA5/SA5) based on the results of TERENA TF-Mobility.

Now part of the GÉANT3 project:

- Service Activity 3 (SA3).

Joint Research Activity 3 (JRA3)

- “Open Your laptop and be online”.

CURRENT eduroam STATUS

37 countries (NROs/NRENs)
connected to the two
European Top Level Radius
Servers (ETLRs)

International/intercontinental
peering (.au, .ca, .jp, USA, ...)

Policy:

- signed by 37 countries
- in addition JSCC
(Russia) signed but not
connected, yet



THE EUROPEAN eduroam CONFEDERATION

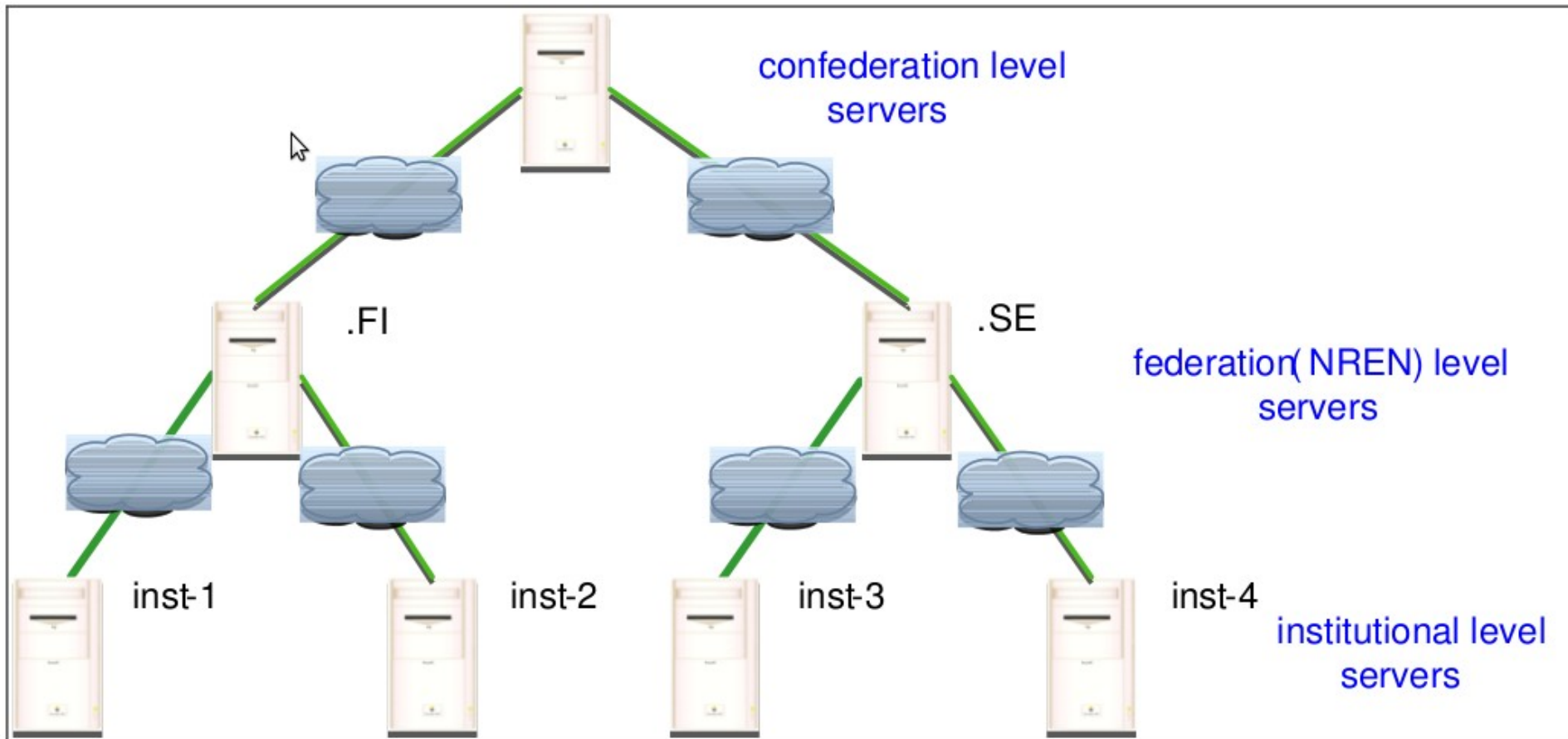
Hierarchical structure:

- Institutions with eduroam service points
 - Belong to
- Federations – one for each country / NREN,
 - Which belong to
- The European eduroam confederation,
 - Which covers the whole of Europe.

Provides the experience: “Open your laptop and be online”.

- Users given secure network access within the confederation.

Servers hierarchy within the eduroam network



PRINCIPLES OF THE EUROPEAN eduroam CONFEDERATION

Mutual network access without fees.

- Authentication at home; authorisation at Service Provider.
- Identity Providers remain responsible for roamers.
- Member NRENs / NROs promote eduroam in their countries.

MAIN COMPONENTS OF eduroam

Network Access Server (NAS):

- Wireless Access Point or
- 802.1X compatible wired switch.

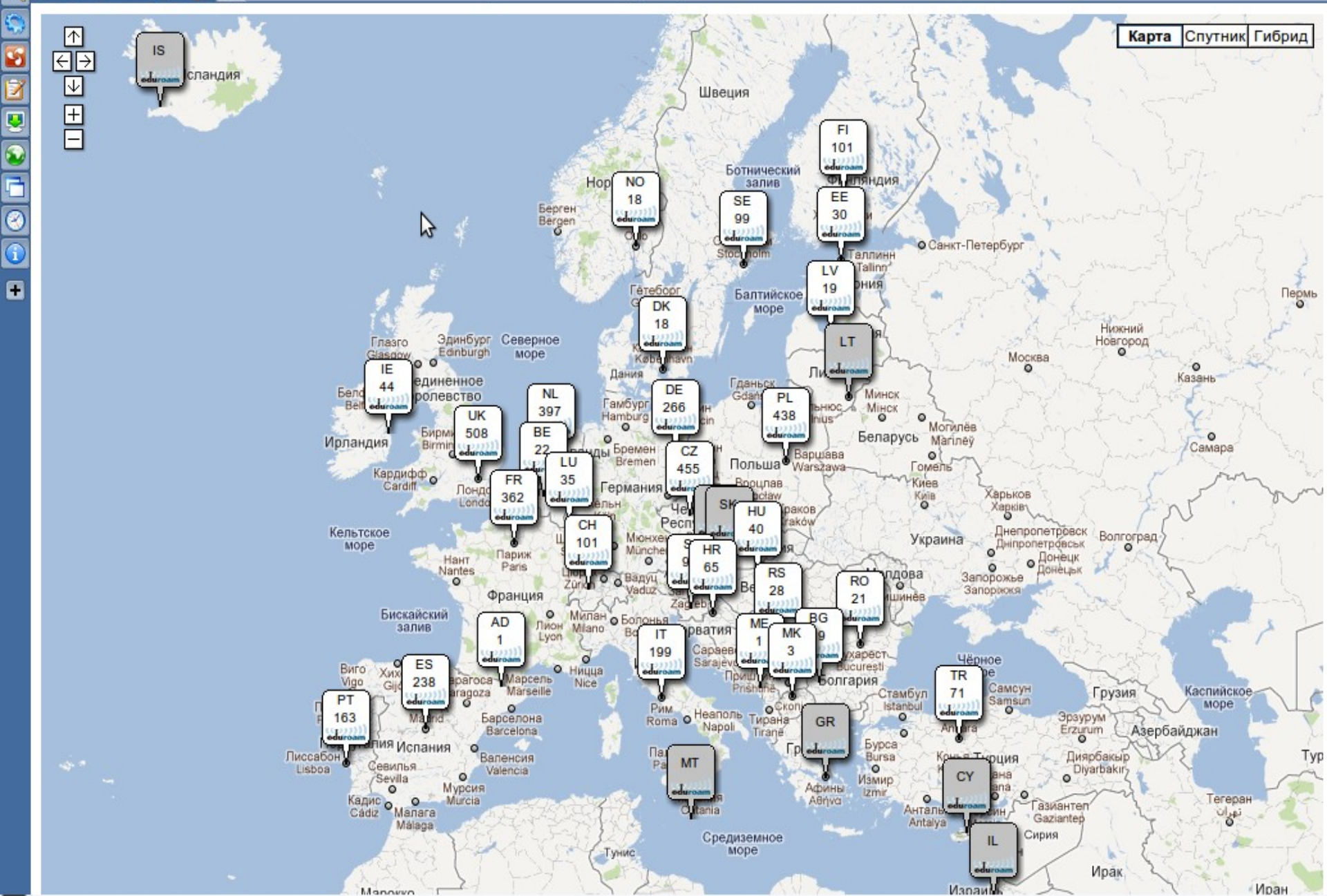
Client with configured software module.

Hierarchy of **RADIUS Authentication Servers (AS)**.

IEEE 802.1X.

IEEE 802.1q.

- Standard for VLAN assignment.



Benefits

- Simple easy access to wireless networks for traveling clients.
- Allows visitors of your institutions to participate in eduroam access.
- Availability at a growing number of institutions worldwide.
- Reduces the complexity for users when accessing the internet at visiting eduroam institutions

Benefits (2)

- Provides security with authenticated access.
- Not necessary for the visited university to grant access specifically
- YOUR institution REPUTATION
- Minimal financial investment

Problems and decisions for MD

Lack of hardware/human resources

- Access Points, switches capable of IEEE 802.1x
- Authentication
 - RENAM members – on RENAM server;
 - ASM Institutions – on ASM server
- May be deployed only in selected areas, conference rooms
- Your users can be added to the central IdP DB

Promoting the eduRoam

Promotion of eduroam (Partner Services Promotion by TERENA)

- eduroam is only a success if people use it
- People will only start using the service if:
 - they know they can / should have it
 - they know how it benefits them
 - they know how / where to get it and use it
- ...so promoting your eduroam service is important!
 - PSP is here to help

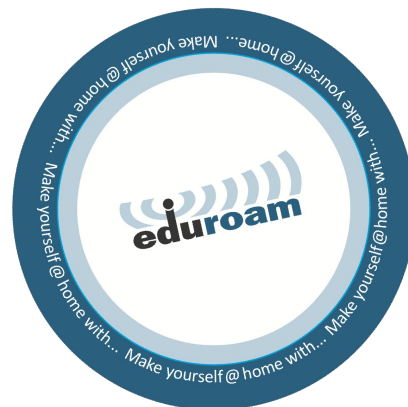
For eduroam promotion, there are... (1)

...published updated technical information online (wiki pages)
www.eduroam.org/index.php?p=europe&s=docs

- For use at national level:
 - **How to deploy eduroam at national level**
 - **How to offer eduroam support to customer institutions**
 - **How to deploy and promote eduroam for events**
- For use at institution / campus level:
 - **How to deploy eduroam on-site or on campus**
 - **How to offer helpdesk support to end users**
 - **How to deploy and promote eduroam for events**
- You can read, export to print and add comments

For eduroam promotion, there are... (2)

- Produced a set of sample materials
 - For end users
 - poster
 - 2-sided leaflet
 - sticker
 - beer-mat
 - information 'credit card' (2 sided)
 - web banner



- Configure eduroam via [\[url institution\]](#)
- Connect to the 'eduroam' SSID wireless network
- If asked, logon using your username and password from [\[name of institution\]](#)
- For help call IT support: [\[telephone number\]](#)
- Visit [\[url NRO\]](#) to see where you can connect to eduroam in [\[COUNTRY\]](#)
- Before travelling, check the international eduroam website www.eduroam.org

eduroam OVERVIEW: RECAP

Secure, robust, stable service.

Easy to set up and install.

Allows European scientific community to roam.

- ‘Open your laptop and be online’.

Authentication at home, authorisation at Service Provider.

FOR MORE INFORMATION

- www.eduroam.org
- www.geant.net
- www.dante.net
- For GN3 e-learning: <http://cbit.geant.net/>

Thank you!

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