Aug. 4, 2021
IAM WG Meeting @ APAN52, Virtual / Indonesia

Off-campus eduroam deployment and WBA OpenRoaming Update 2021

Hideaki Goto　Tohoku University / NII, Japan

Secure Wi-Fi? 🤔

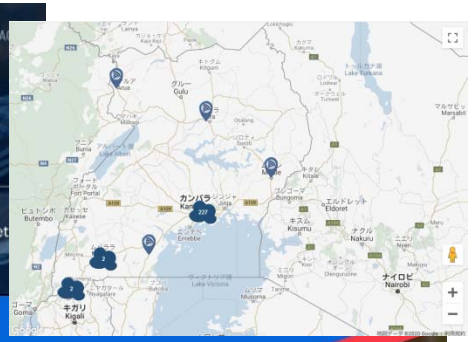
(Media has been removed.)

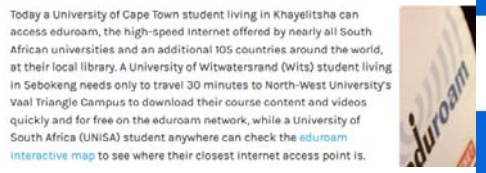
https://twitter.com/Devin_Heroux/status/1419092561570893825

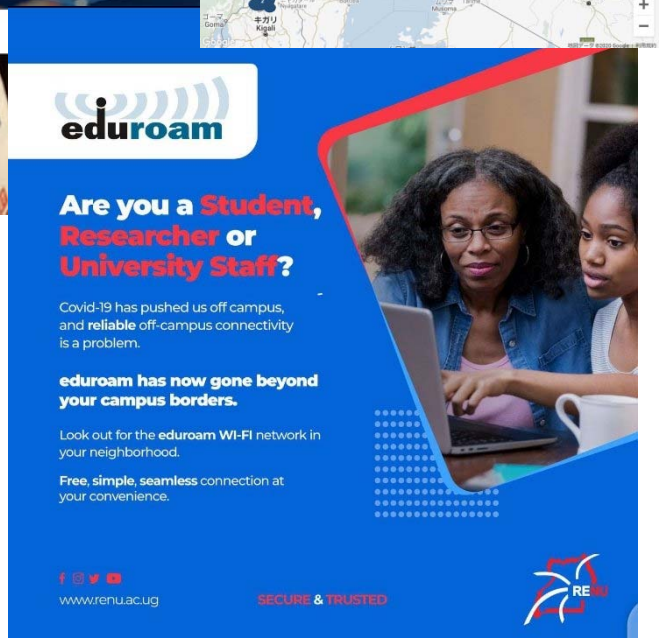
https://twitter.com/PabloRochat/status/1400475642211180547

Off-campus eduroam as digital infrastructure

South Africa:
eduroam at most universities, addressing digital divides and COVID-19 (July, 2020)







RENU in Uganda:
Town-wide eduroam to help students learning under COVID-19 (Oct. 2020)

"Extended virtual campuses" in Ireland (Jan. 2021)
http://www.universitytimes.ie/2021/01/heanet-to-extend-wifi-initiative-for-students-to-90-new-locations/

Off-campus eduroam as digital infrastructure

Newer!

HEAnet
@HEAnet

Did you know that there are more than 160 eduroam Wi-Fi hotspots across Ireland? Click here to view a map of all live eduroam locations: heanet.ie/services/conne... #eduroam #eduroameverywhere

ツイートを翻訳

LIR HEAnet
@LIRHEAnet

"On the buses" from today a very visual message about @eduroam on Dublin Bus. Looks great! @HEAnet

ツイートを翻訳

HEAnet, Ireland: 160 locations + “eduroam on Dublin Buses” (Mar. 2021)

Off-campus eduroam as digital infrastructure

Newer!

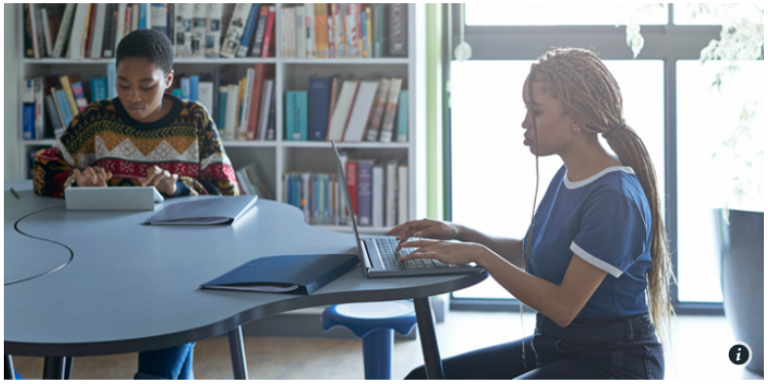
Jisc News > Call for local authorities to support students with free wifi in public ...

News

Call for local authorities to support students with free wifi in public spaces

19 May 2021

Building on efforts to tackle digital poverty, Jisc has written to the Local Government Association, urging authorities to provide free internet access to students in public spaces via our eduroam connectivity service.



Jisc, UK (May, 2021)

eduroam

eduroam in Libraries, transport hubs, hospitals, and beyond.

The original eduroam use case was for a researcher at one institution to easily be able to collaborate with researchers at another institution without having to jump through bureaucratic hoops to get Internet access. This is relevant in South Africa too, because we have a great deal of inter-institution collaboration, but a more important use-case, when you bring eduroam to Africa, is the potential it has to play in bridging the digital divide.

TENET, South Africa (July, 2021)

Cityroam, the secure roaming system for Public Wi-Fi

- Affordable roaming platform for various Roaming Consortia and operators (SMB, cities, etc.)
  - IdP: eduroam, ANYROAM, Cityroam Cloud IdP, etc.
    (planned: telcos/ISPs and cities via OpenRoaming)
- Our strategies:

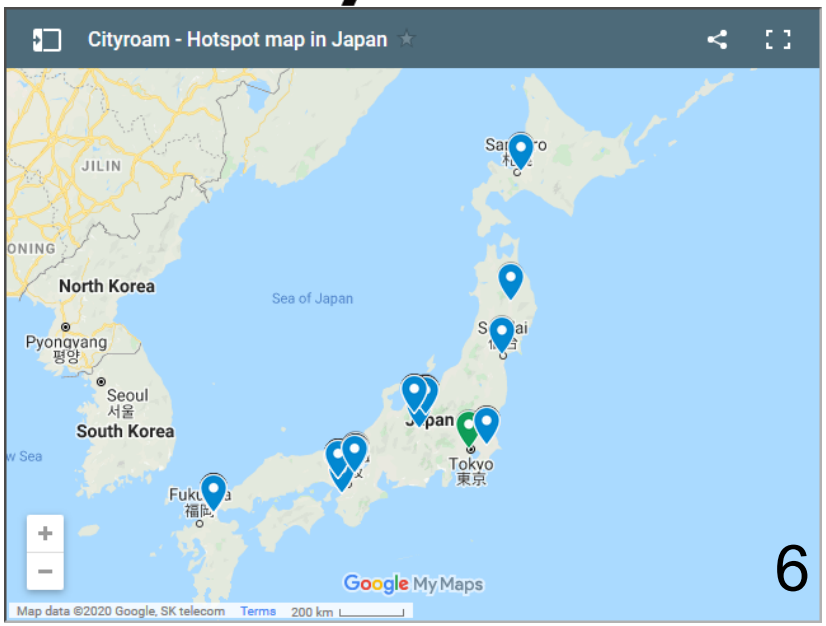
  No roaming fee.

  (We make the most of the local ecosystem each Free Wi-Fi has.)

  Utilize existing accounts as much as possible.

  (roaming with telcos/ISPs)

cityroam

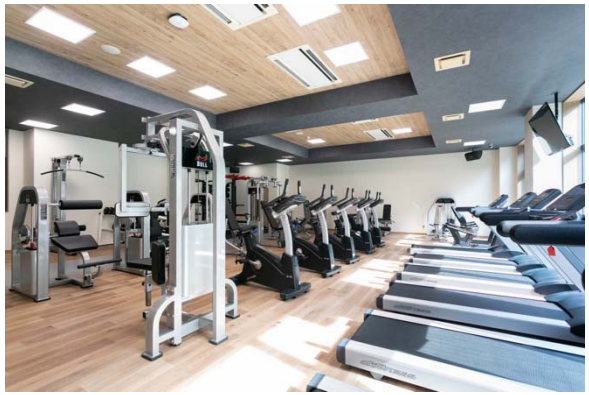


New sites of Cityroam

- eduroam/Cityroam/OpenRoaming service at a wide variety of venues.

Co-working space in Morioka
(OpenRoaming was added
in 2020)

Conference Center in Nagano
(May 2021)

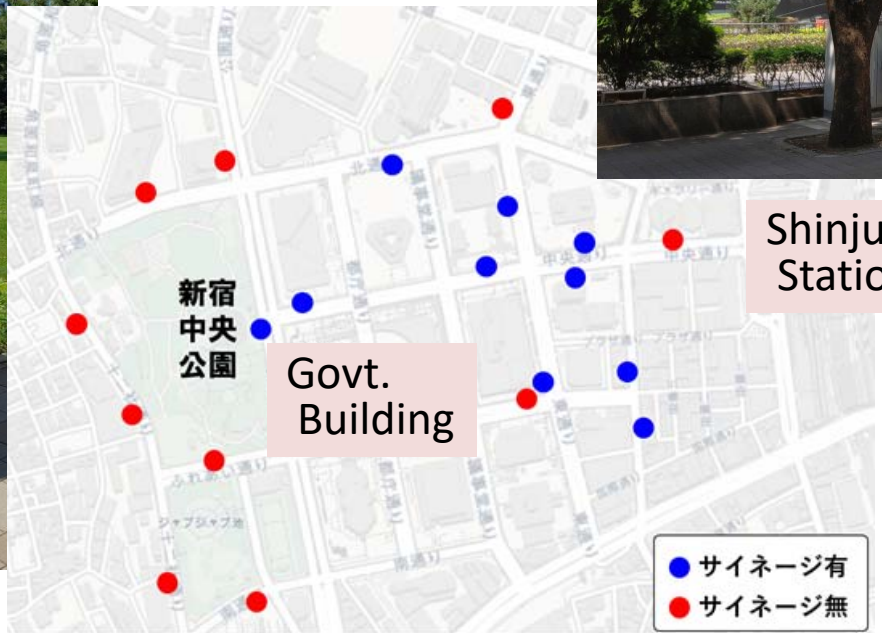


Hot Spring facility in Nagano
(May 2021)

More hotels, co-working spaces, conference sites, and others will come.

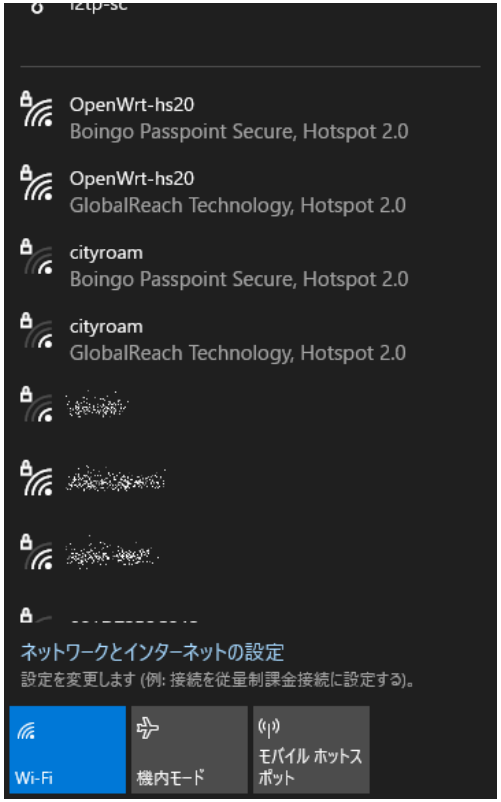
New sites of Cityroam

- Nishi-Shinjuku Smart Pole project by Tokyo Met. Govt.
  - PoC and pilot service in a Smart City project.
  - eduroam, Cityroam, and OpenRoaming will be available. (already in-service on two poles)



New sites (?) of Cityroam

- Mobile eduroam/Cityroam/OpenRoaming Routers
  - Temporary services anywhere. ☺
  - Fully-managed, easy operation.
  - Fast VPN (WireGuard) to protect user/RADIUS traffic.



https://hgot07.hatenablog.com/entry/2021/07/31/232441

WBA OpenRoaming

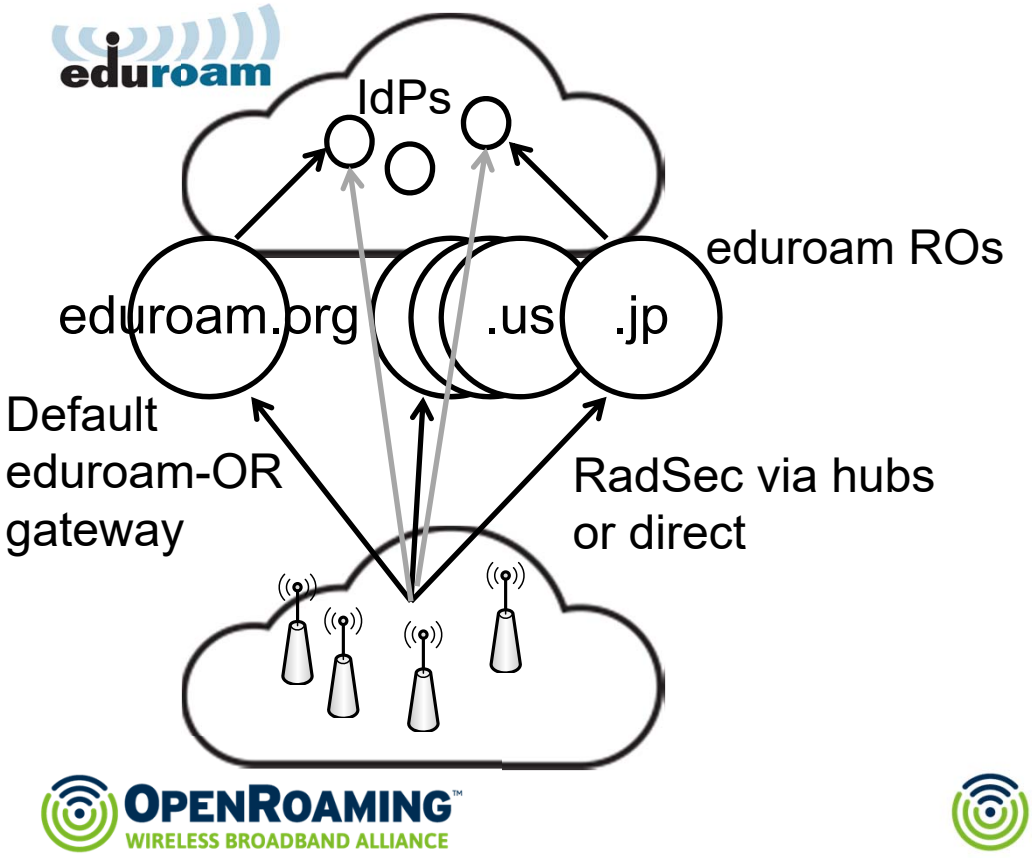
- Inter-connect telcos, ISPs, City Wi-Fi, etc.
- Based on the Passpoint and the Wireless Roaming Intermediary eXchange (WRIX) framework.
- PKI and RadSec + Dynamic Peer Discovery
  - Similar to eduroam, but in larger scale.
- Two policies using different RCOIs
  - Settled: Accounting and intermediary are required.
  - Settlement-free: No roaming fee. Easier onboarding.

eduroam is a Contribution Member of WBA ☺ and also an OpenRoaming member.

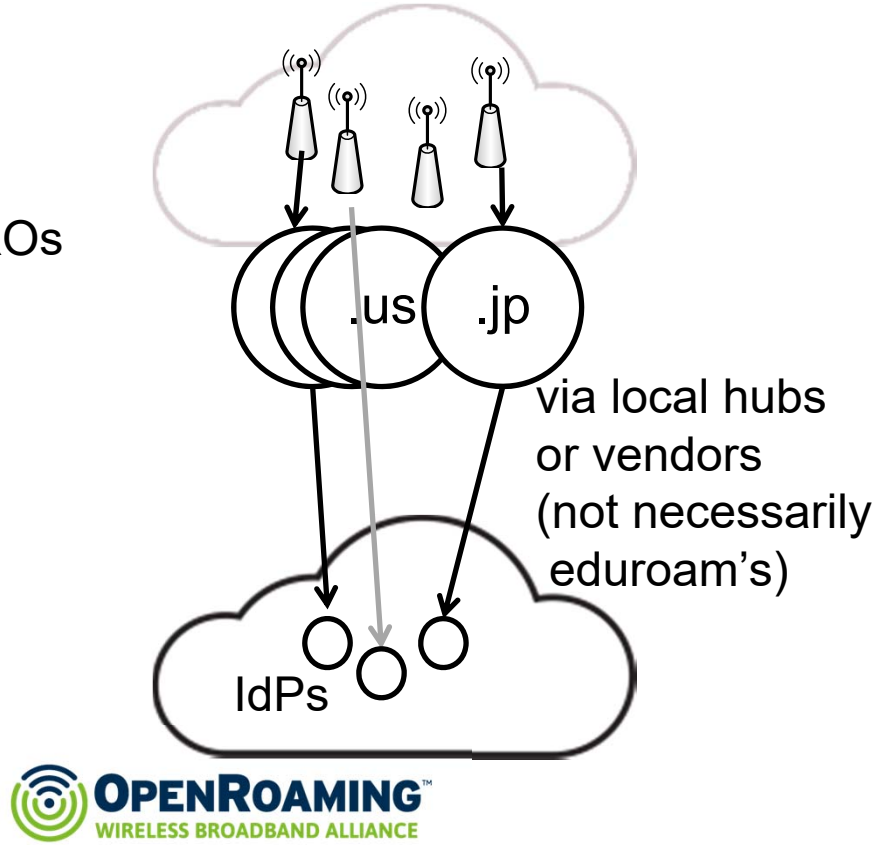
RCOI: Roaming Consortium Organization Identifier

eduroam–OpenRoaming interconnection

eduroam via OpenRoaming ANPs



Universities providing OpenRoaming service for visitors and residents.)



ANP: Access Network Provider

How to get on OpenRoaming?

eduroam members (ROs, universities, etc.)

- By simply adding DNS NAPTR records, institutions will be able to accept AuthN requests from OpenRoaming.
- Connection via your national RO, or AP vendor's solution.

Non-eduroam operators

- Become a WBA member to get the digital certificates for onboarding.
  - Membership fee applies. WBAID is assigned.
  - *Implementer Member* is a new and affordable category.
- Get the digital certificates from a WBA agent.
  - WBAID with SubID is assigned.
  - Subscription fee applies.

Tokyo 2021 OpenRoaming/Passpoint trial

- OpenRoaming service incubation and deployment acceleration.
  - Some telcos/ISPs are providing a trial service.
  - Not only in Tokyo but also across Japan.

Please call us if you want to develop a **federation** like Cityroam in your region.

https://cityroam.jp/en/

If you are interested in trying OpenRoaming, please ask
Hideaki (me) or Paul@SURFnet

Join https://eduroam.slack.com/