

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? 🤔

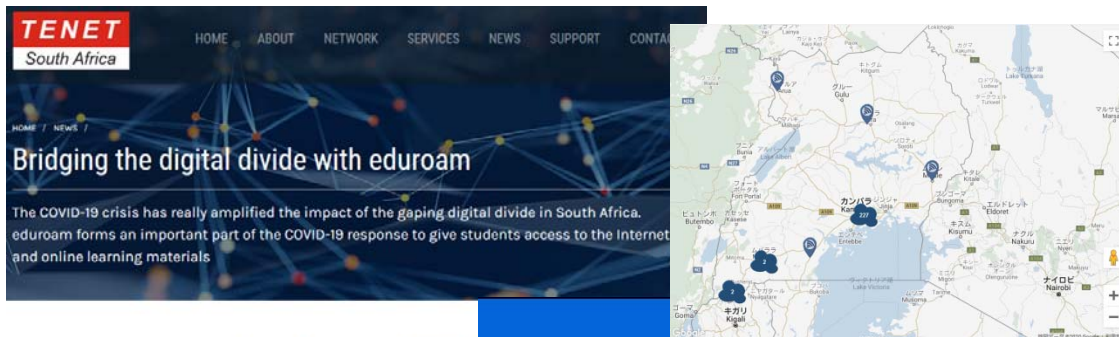
(Media has been removed.)

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)



Today a University of Cape Town student living in Khayelitsha can access eduroam, the high-speed Internet offered by nearly all South African universities and an additional 105 countries around the world, at their local library. A University of Witwatersrand (Wits) student living in Sebokeng needs only to travel 30 minutes to North-West University's Vaal Triangle Campus to download their course content and videos quickly and for free on the eduroam network, while a University of South Africa (UNISA) student anywhere can check the [eduroam interactive map](#) to see where their closest internet access point is.

A blue promotional graphic for eduroam. At the top left is the eduroam logo. The main text asks 'Are you a Student, Researcher or University Staff?' and states 'Covid-19 has pushed us off campus, and reliable off-campus connectivity is a problem. eduroam has now gone beyond your campus borders.' It encourages users to look for the eduroam Wi-Fi network in their neighborhood and offers a 'Free, simple, seamless connection at your convenience.' At the bottom, it includes social media icons, the website 'www.renu.ac.ug', the phrase 'SECURE & TRUSTED', and the RENU logo.

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

A screenshot of a news article from University Times Ireland. The article title is 'Government to Extend WiFi Initiative for Students to 90 New Locations'. The sub-headline reads: 'Difficulty accessing the internet in rural communities has become a major talking point in higher education circles since the outbreak of the pandemic.' The author is Cormac Watson, Editor. The article text states: 'The government will extend internet access for students to go new locations across the country in order to create "extended virtual campuses", Higher Education Minister Simon Harris announced today. HEAnet will lead the initiative, rolling out **eduroam** – a WiFi connection that students can automatically connect to – to locations accessible to students, such as libraries, museums, public offices, coffee shops and shopping centres. **Eduroam** is already available to students in a number of locations, including libraries in Longford and Galway, the Convention Centre and Custom House Quay in Dublin.' To the right of the text is a photo of Simon Harris, the Higher Education Minister, speaking at a podium.

“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/connect...
#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!

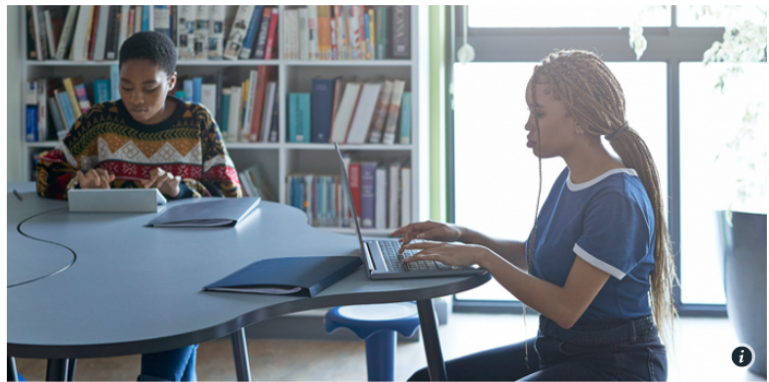
Jisc News > Call for local authorities to support students with free wifi in public ...

News

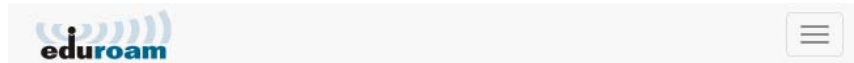
Call for local authorities to support students with free wifi in public spaces

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.

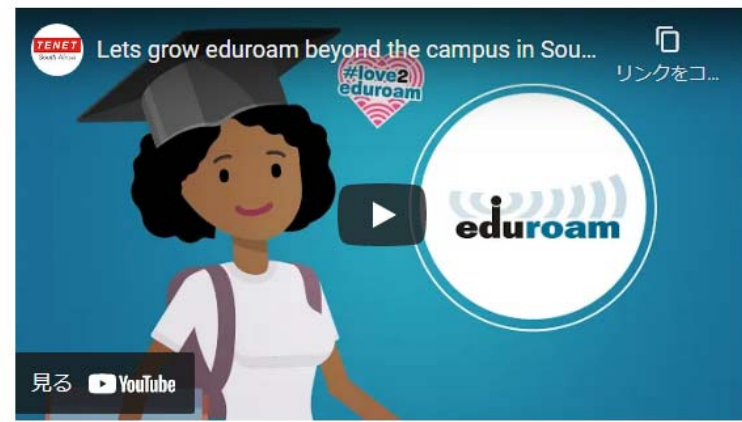


Jisc, UK (May, 2021)



eduroam 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**)

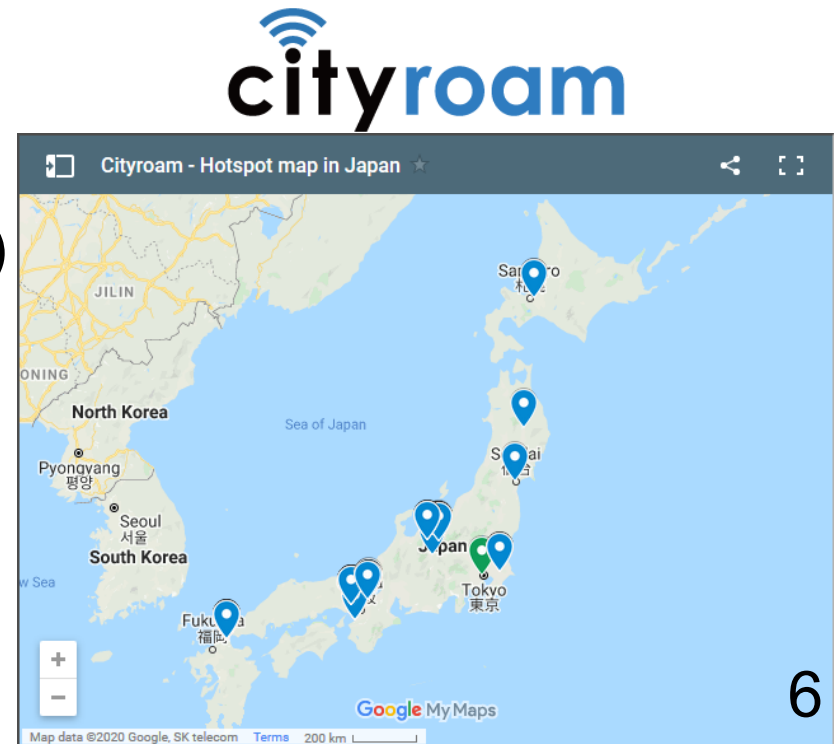
- Our strategies:

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)



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)

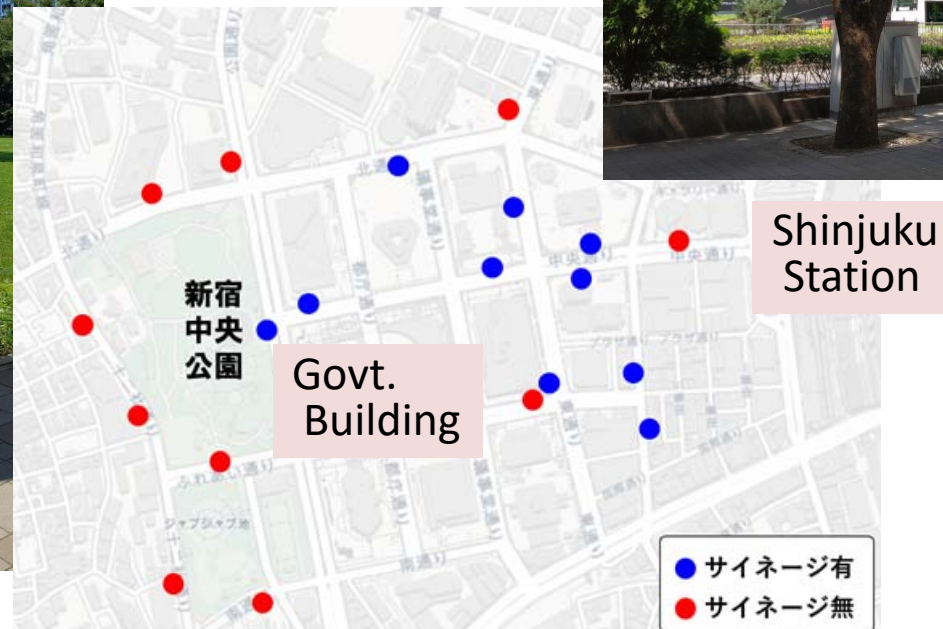


Hot Spring facility in Nagano
(May 2021)

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



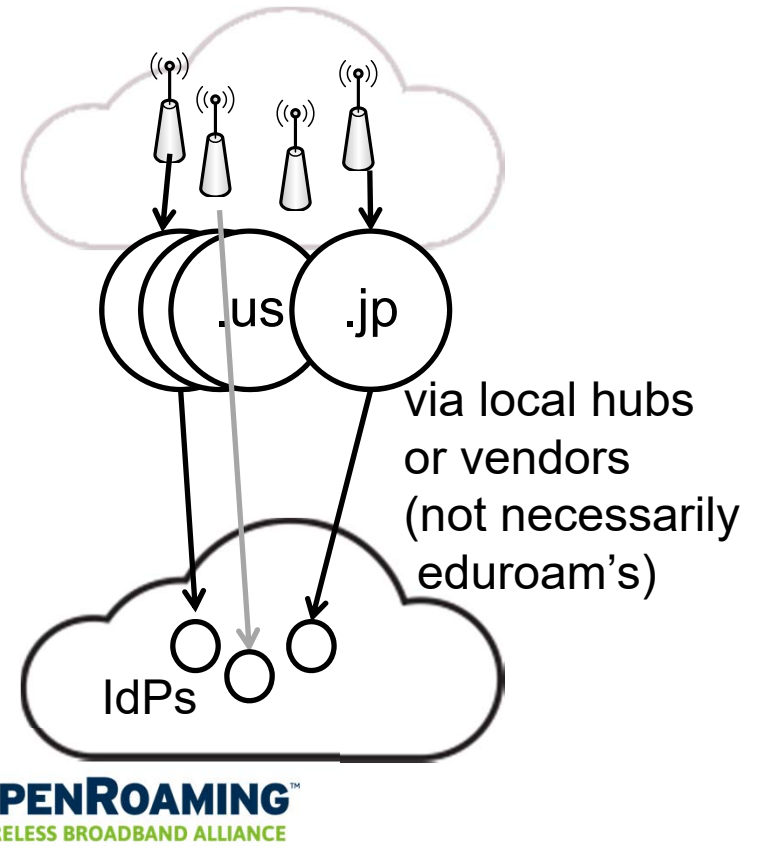
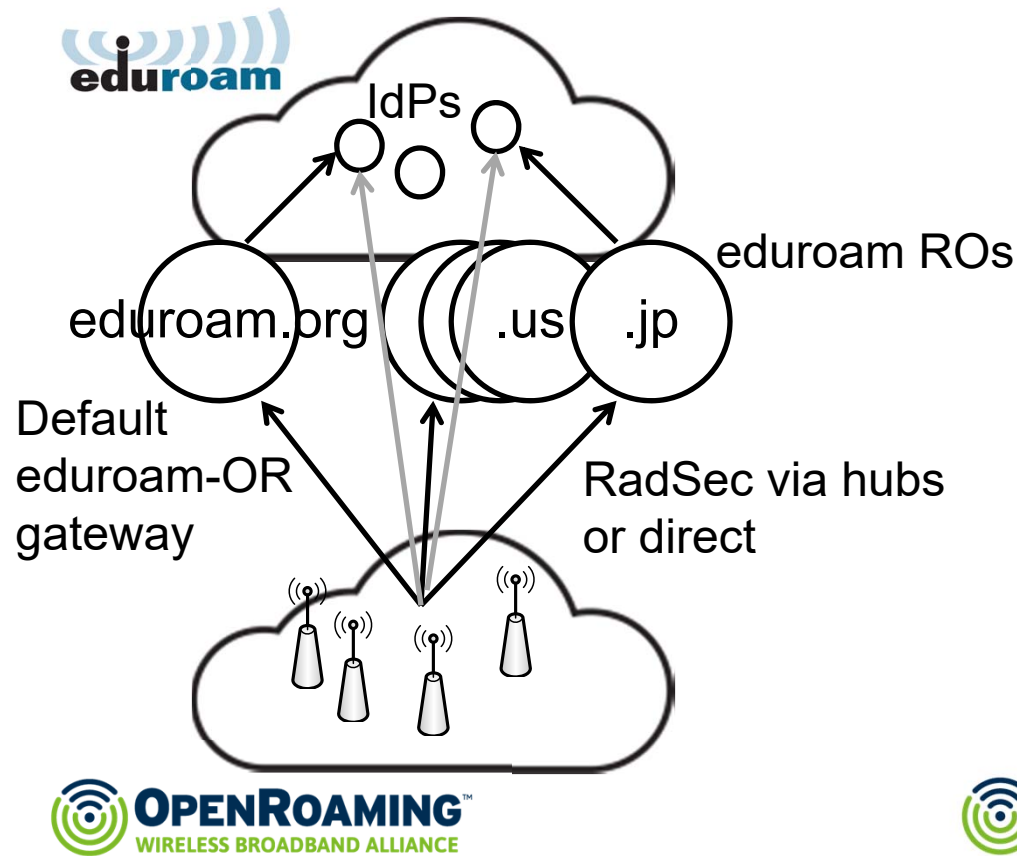
- Inter-connect telcos, ISPs, City Wi-Fi, etc.
- Based on the Passpoint and the Wireless Roaming Intermediary eXchange (WRIX) framework.
- PKI and RadSec + Dynamic Peer Discovery
 - Similar to eduroam, but in larger scale.
- Two policies using different RCOIs
 - Settled: Accounting and intermediary are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

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

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.

Tokyo 2021 OpenRoaming / Passpoint Trial

15th Jul 2021

July - 15 Sept., 2021



Cityroam invites some **telecom operators** and **ISPs** in the world to provide **secure Wi-Fi roaming** temporarily for their users this summer. While we cannot expect so many travelers this year due to COVID-19, we've already seen a number of visitors using foreign SIM cards. We hope tourists as well as interested people enjoy secure Wi-Fi roaming.

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/>