EDUROAM BEYOND THE CAMPUS

WHAT IS EDUROAM?

eduroam (education roaming) is the secure, worldwide roaming access service developed for the international research and education community. Since its launch in Europe in 2003, eduroam has gained popularity throughout the research and education community and is now available in 74 territories worldwide. eduroam allows students, researchers and staff from participating institutions to obtain internet connectivity across campus and when visiting other participating institutions quickly and easily without the need to find local login details. The next step for eduroam is to further expand into public places, to provide an ever-increasing mobile platform for its users.

EUROPE LEADING THE WAY IN EDUROAM ACCESS

eduroam has grown substantially over more than a decade and now GÉANT wants to push the boundaries further by inviting public, commercial and city Wi-Fi initiatives to offer the service. Already eduroam can be found in airports, city centres and other public spaces throughout Europe. Some forerunners can be found in Switzerland, Norway, Luxembourg, The Netherlands, and in Sweden.

SWITZERLAND

SWITCH, the Swiss National Research and Education Network (NREN) has pushed the eduroam service beyond universities, schools and research labs. In Switzerland, you can also use eduroam in the university hospital of Bern, in libraries (Zentralbibliothek, Zürich; Pädagogisches Zentrum, Basel-Stadt / Bibliothek) and last but not least at Geneva Airport.

David Foster, Deputy head of the IT department at CERN, underlines the importance of eduroam: "Collaboration is fundamental to global research and CERN is a first class example of global science collaboration. It is important then that the tools and infrastructure that facilitate global collaboration are developed and deployed. This is why CERN supports the ability for researchers to be connected wherever they are, and eduroam is key to getting connectivity, anywhere, anytime, in a trusted and easy manner. The installation of eduroam at Geneva airport is a great service for the many researchers and students that travel to and from CERN and extends the reach of eduroam in Switzerland."

NORWAY

In Norway, the use of eduroam is even more widespread: the nineteen biggest airports in the country all offer the service. Additionally, in several towns there's eduroam coverage in public spaces, offered by the local university. "Trådløse Trondheim" (Wireless Trondheim) provides coverage at a number of addresses throughout the city and a similar solution is provided in Kristiansand. Similarly, eduroam is provided in a number of hospitals throughout the country. In the future, UNINETT hopes to expand the service to secondary schools as well.

LUXEMBOURG

The ability to expand eduroam beyond the education community is successfully demonstrated in Luxembourg, where a partnership exists between RESTENA (the Luxembourg NREN) and hotcity S.A. which owns a Wi-Fi infrastructure in many places, including the downtown areas of the major cities. This partnership delivers eduroam to a big percentage of the Luxembourg populace in densely populated areas. eduroam usage data (March-July 2014) shows that on average more than 10,000 distinct devices are connected in any given month, most of which belong to students of the University of Luxembourg. Outside of the capital,

both the country's second-largest town Esch-sur-Alzette and Luxembourg International Airport offer eduroam.

THE NETHERLANDS

SURFnet, the Dutch NREN and inventor of eduroam, has of course adopted it right from the start. Throughout the country, eduroam is heavily used in education and research institutions. A good example is the ROC Midden-Nederland school. They are one of the biggest educational organisations in the Netherlands, catering to over 28,000 students, and they've been using eduroam for over ten years.

Frank Pinxt, ICT Manager at ROC Midden-Nederland says, "We're very happy with eduroam, especially since our organisation doesn't need to configure and maintain it. On top of that, outages are almost non-existent. Another benefit is that we can use eduroam outside of the school premises as well. Recently, I experienced this myself, when I had to visit a hospital in Aarhus (Denmark). When I was waiting in the hallway, all of a sudden I saw email messages coming in, and I discovered I was automatically connected to eduroam."

EDUROAM VISITOR ACCESS (EVA)

Institutions in the Netherlands can now offer eduroam to visitors too, by using the eduroam Visitor Access service. Since February 2015 the ROC MN school is offering eVA through reception desks in all school buildings, which are spread over six towns throughout the country. Temporary personal visitor accounts are given to individuals. It is also possible to provide secure eduroam access to large groups of visitors during events and seminars. Frank Pinxt, ICT Manager at ROC MN: "Visitors are very happy with this service, and it works great!"

Words
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EDUROAM CONQUERS SWEDEN

Sweden is a worldwide leader when it comes to public ICT infrastructure, and so it's easy to understand why it's one of the leading countries in offering eduroam in public spaces.

eduroam was initially offered to Swedish universities and colleges, and almost all of them run eduroam today. More than 100,000 unique devices are authenticated per month, roughly 500,000 individuals are active within higher education in Sweden. The implementation and usage of eduroam in Sweden has indeed been a great success, but Sweden is aiming even higher.

The Swedish National Research and Education Network SUNET sought a partner to provide eduroam in places where students hang out outside normal campus areas. The solution that was chosen is to offer eduroam via SUNET's provider The Cloud through their existing access points, says Valter Nordh who is in charge of eduroam at SUNET, Sweden.
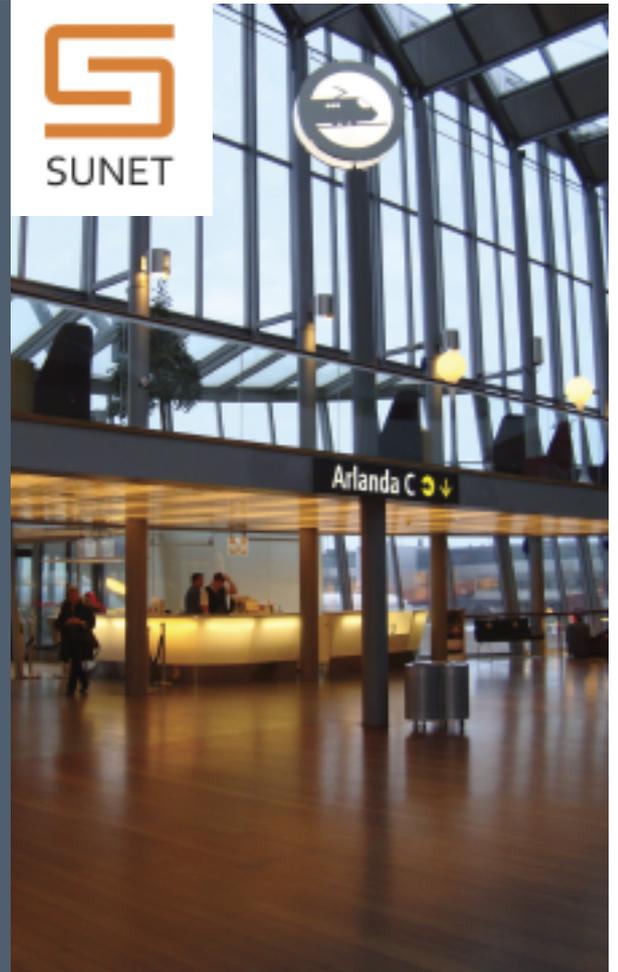
The first places targeted were travel hubs, such as airports and railway stations. Today, SUNET can provide eduroam in 934 locations through 16,146 access points all over Sweden. The locations are universities and colleges, municipalities as well as commercial venues. City centers, railway stations, ten of Sweden's airports, ferry terminals, municipal buses and libraries. Hotels, fast food restaurants, cafés, gas stations and malls also offer connection through eduroam.

Stockholm Arlanda Airport is the biggest airport in Sweden with more than 22 million passengers on a yearly (2014) basis. Stockholm Arlanda Airport is operated by Swedavia AB, a Swedish nationally owned company that owns and runs ten major airports. In total more than 35 million passengers are travelling from Swedavias ten airports (2014).

Pär Weilow is the Product Owner in charge of mobile solutions at Swedavia Airport Telecom AB. He notices a keen demand for the service. "In May 2012 we started offering free Wi-Fi connections to all visitors throughout all Swedavia airports. At that point, we had to restrict the usage, but that was not a popular move. Despite quite generous amounts of data we soon got feedback from many customers about the data limitations. But, when we launched eduroam the complaints almost disappeared. It turns out it was mostly students complaining about restricted usage of Wi-Fi. Overall, airport visitors are a crowd that expect excellence, and Wi-Fi is an extremely important part of the experience. So, today we are very happy to be able to offer eduroam together with SUNET and The Cloud."

Roald Sandén, General Manager of The Cloud Nordics adds: "The benefit from the eduroam service is apparent not only for the users, but also for our venue partners in all segments." He continues: "The transport segment where we cover the airports in cooperation with Airport Telecom, and the railway stations in cooperation with Jernhusen was the initial focus, but the benefit of offering services in the public, hospitality, and retail/fast food sectors is also obvious for our partners in those segments."

What is in the pipeline when it comes to eduroam? The target is threefold: Increasing awareness about eduroam amongst students, looking into monitoring of the service and setting up automatic testing. "Two very exiting things ahead are firstly, an agreement with the Swedish school federation in order to provide eduroam in all elementary schools, says Maria Häll, in charge of SUNET. "And secondly, we need to make a new eduroam procurement, within a couple of years from now."

Some of the commercial venues providing eduroam in Sweden:

Hotels:

Best Western	Park Inn
Clarion	Radisson
First Hotel	Quality Hotel

Restaurants, cafés & bars:

Burger King	O'Learys
Starbucks	Stars and Stripes
Barista	

Swedavia AB is a Swedish nationally owned company, which owns and operates the ten major airports of Sweden:

Åre Östersund Airport
Gothenburg-Landvetter Airport
Kiruna Airport
Luleå Airport
Malmö Airport
Ronneby Airport
Stockholm-Arlanda Airport
Stockholm-Bromma Airport
Umeå Airport
Visby Airport

Links:
https://meta.eduroam.se/
http://www.thecloud.net/
https://en.wikipedia.org/wiki/Swedavia