

EDUVPN – SECURING YOUR PRIVACY WHEN YOU ARE OUT AND ABOUT

Many of us enjoy taking our smartphone or laptop down to our local café, grabbing a cup of our favourite hot beverage and sitting down to surf the web. Free Wi-Fi is no longer a luxury but an essential commodity when on the move. But are you actually aware of how vulnerable you are when you are using a public Wi-Fi hotspot?

Wi-Fi convenience vs security

Most Wi-Fi networks that are created for home and business use are password-protected and encrypted. However, most public Wi-Fi hotspots are set up strictly for convenience, not security! When you are using an unprotected public hotspot, whatever you do online is potentially open to the eyes of prying hackers. If you allow file-sharing across such a network, hackers can easily plant infected software on your computer.

eduVPN – a shield to protect your privacy

As public Wi-Fi becomes increasingly common, you can expect risks to grow over time. But this doesn't mean you have to stay away from free Wi-Fi and tether yourself to a desk again.

A group of developers from across research and education have joined forces to develop eduVPN, a technology for ultra-secure access, designed for the research and education community. VPN stands for Virtual Private Network, and by using eduVPN a tunnel is created that shields your data traffic from prying eyes, even when you are in your favourite café or riding the train.

"Through the eduVPN app, students and researchers can access their applications and resources from anywhere, without having to worry about security," explains Tangui Coulouarn, chair of the eduVPN board and project manager at the Danish e-infrastructure Cooperation (DeiC).

He is developing eduVPN jointly with colleagues from Australia (AARNet), The Netherlands (SURFnet), as well as the Nordics (NORDUnet), and GÉANT. He hopes the novel privacy technology will spread as widely as eduoam, the secure, worldwide roaming access for research and education.



"We want to make VPN technology easily available by building better and more user-friendly tools", adds Tangui. "There are other VPN solutions out there. But they are either very expensive or you can have them for free, but then you have to be exposed to advertising. Also, many of them have quality and pricing issues."

A variety of uses for eduVPN are being considered at the moment: safe web browsing; access to campus resources from outside a campus; and establishing secure campus-to-campus connections. For example GÉANT itself is looking into eduVPN to connect staff to its offices in Cambridge and Amsterdam.

The next steps - federated VPN usage

But that's not all. The eduVPN development team has another ambitious goal in mind – a federated VPN model.

Just like eduoam provides federated trust between users from other institutions then eduVPN can leverage this same level of trust to offer a distributed VPN service.

This would provide secure eduVPN gateways that end-users can access when using unsecured networks. By separating the ownership and operation of the gateways from the operation of user identity components (using

eduGAIN federated identity), eduVPN offers privacy-by-design in a way that is not attainable by other commercial VPN operators. Users can then select which eduVPN gateway to use to best suit their requirements and location.

Success depends on universities

Ultimately, the success of eduVPN will depend on securing a critical mass of R&E networks that incorporate the technology in their service offering, and on universities using it to connect students and staff to campus resources.

SURFnet is the first NREN to deploy eduVPN, starting 1 January 2018. NORDUnet is running a test

application, and the other eduVPN partners are preparing deployments in the near future.

eduVPN has recently become an official part of the GÉANT (GN4-2) Project, and has received financial support from the Vietsch Foundation, the SIDN Fund, RIPE, NORDUnet and SURFnet. Also, eduVPN recently won the Internet Society of the Netherlands' "Innovation Award 2018".

To find out more and to take part visit the eduVPN website at www.eduvpn.org