AIM: THE VPN STANDARD FOR NREN COMMUNITY

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Secure Browsing
Business case

Assumptions to make business case
• Every institute maintains currently its own VPN service
• Traditional VPN: Costs involved for VPN licenses, VPN concentrators
• Traditional VPN doesn’t integrate with IdP/federation
• Traditional VPN service desk calls about apps not working

Business case
• On GEANT level -> governance of eduVPN concept
• On GEANT level -> manage eduVPN apps & eduVPN server software
• GEANT, NREN or collaboration of institutes can ‘run’ their own eduVPN service based on the open-source eduVPN software
Starting points

- Secure by default
- Privacy by design
- Plug and play & zero maintenance
Institute Access

<table>
<thead>
<tr>
<th>EduVPN Enterprise</th>
<th>Datum: 31-03-2015</th>
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</thead>
<tbody>
<tr>
<td>Design</td>
<td>V 0.2</td>
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Supported Devices:
- Windows
- Apple

Diagram:
- Internet
- Institute
- IT services
- Virtual presence
- EduVPN Enterprise server
- Enrollment
- VPN
- Certificate per client device
App impression

Choose your profile
Select the profile type you want to use below. You will be redirected to the browser for your credentials.

Connect to the internet securely, for example when using public WiFi.
Access your institute's network from outside the institution.
Add other address

Select your Country
Select your institution's country here. You can select VPN endpoints in other countries after signing in with your institution credentials.

Argentina
Netherlands
Norway
Spain

Select your Institution

Hogeschool van Amsterdam
Universiteit Twente
Netherlands eScienceCenter
Radboud Universiteit

Connect

Secure Internet
Netherlands
Groningen
Utrecht

Institute Access

Toegang medewerkers
UnivDienst Route
Network Operations
Hogeschool van Amsterdam
Wetenschappelijke publicaties
Netherlands eScienceCenter

VPN connection

Status
Provider
Profile SURFnet kantoor

Notification
This is the eduVPN development server, we might break things on a regular basis. If you have any feedback, please contact us at eduvpn@surfnet.nl.

Connection info
Duration: 23:45:12
Bytes in: 405.04 MB
Bytes out: 11.78 MB
IPV4: 195.168.120.132

Disconnect
Federated eduVPN (Secure Internet)

- Login at your familiar IdP
- Choose eduVPN server in another country
- How does it work? There is trust in between eduVPN servers (pub-key)

Why federated VPN?

- For researchers, research the effects of geo location, for example how (web) personalization changes depending of the geo location;
- Use an endpoint in another jurisdiction because specific countries have privacy friendly legislation;
- Optimize performance, e.g. when traveling to a country on the other side of the planet, connect to the "local" NREN provided VPN server instead of your own NREN's server;
- High availability: with many available endpoints in many countries, there is a bigger chance of getting a connection to the VPN;
- All ‘competitors’ have this functionality, users expect it
eduVPN Features

• Current features
  • IPv6 support
  • **Federation integrated (SAML)**
  • UDP & TCP support (fallback)
  • Route either all traffic or some traffic
  • Logging of connections
  • Easy user portal
  • Easy admin portal
  • Documentation for all devices
  • Integration with institute network (lightpath)
  • Built-in CA for managing client certificates
  • Out-of-band access
  • **Two-factor authentication (TOTP, yubikey) support on VPN**
  • Client-to-client traffic
  • **Group support with custom routes (via IdP, LDAP or eduteams)**
  • Federated eduVPN support
  • **Full eduVPN apps for Android, Windows, MacOS, Linux**
  • A half eduVPN app for IOS -> working on full app (GPL license issue with appstore)
eduVPN

More info:

https://github.com/eduvpn
https://www.eduVPN.org

eduVPN video:
https://www.youtube.com/watch?v=TRAtqJ5Ke00

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