

# LITNET way to eduGAIN

WACREN - CEOs Academy

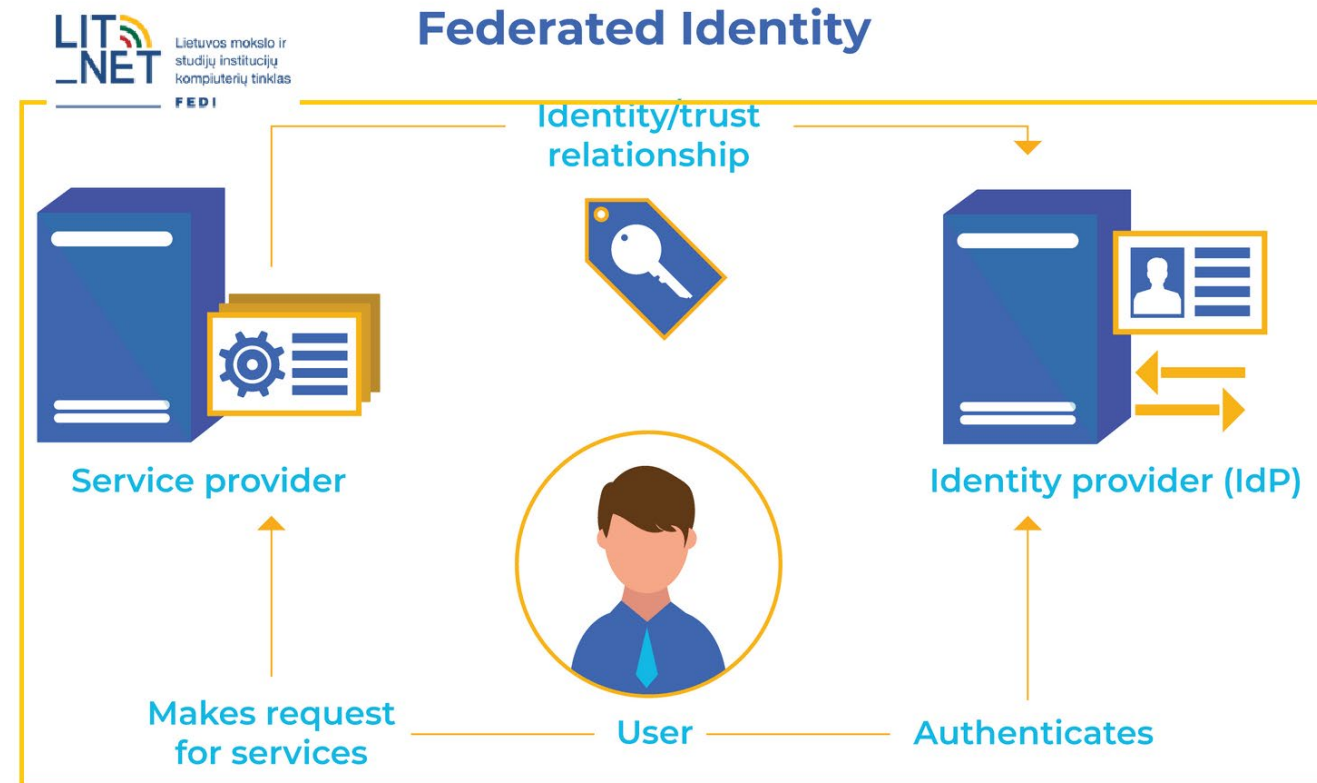
eduGAIN in Practice

8 December 2021

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*IT project manager*  
*LITNET VDU TC*



# Brief history to LITNET FEDI



# 2011 – Terena EuroCAMP



## EuroCAMP Istanbul



- › Building Federated Identity Infrastructure 3-Day Event
  - › simpleSAMLphp IdP
  - › Shibboleth SP
  - › JANUS for Metadata Management
- › 19 Participants / 9 countries
  - › Armenia
  - › Azerbaijan
  - › Belarus
  - › Estonia
  - › Lithuania
  - › Moldova
  - › FYR Macedonia
  - › Serbia
  - › Turkey

2011 – 2012  
LITNET builds  
test federation



- Identity provider (LDAP)

- Discovery service

- Single Sign On

- Service provider

# LITNET FEDI member of eduGAIN since 2014



[Home](#) [Members](#) [Joining](#) [Tools](#) [Policy framework](#) [Operations](#) [Support](#) [Wiki](#) [Main webpage](#)

Members > Membership and status

Quick filter

☒ Participants (73) ☒ Voting-only members (1) ☒ Candidates (7)

Participants

- AAF(Australia)
- AAI@EduHr(Croatia)
- AAIEduMk(North Macedonia)
- ACOnet Identity Federation(Austria)
- AFIRE(Armenia)
- ARNaai(Algeria)
- ArnesAAI Slovenska izobraževalno raziskovalna federacija(Slovenia)
- Belnet Federation(Belgium)
- BIF(Bulgaria)
- Canadian Access Federation(Canada)
- CAFe(Brazil)
- CAFMoz(Mozambique) ⚠
- CARSI(China)
- COFRe(Chile)
- COLFIRE(Colombia)
- CSTCloudFederation(China)
- CyNet Identity Federation(Cyprus)
- DFN-AAI(Germany)
- Edugate(Ireland)
- edulD.cz(Czech Republic)
- edulD.hu(Hungary)

Europe



■ Participants ■ Voting-only ■ Candidate

## LITNET FEDI

### Area served

Lithuania

### General

#### eduGAIN declaration

version2 signed on :2014-08-27

[see the scan](#)

#### eduGAIN declaration hardcopy received version

2

#### Federation page

<http://fedi.litnet.lt/>

#### Contact email

[fedi@litnet.lt](mailto:fedi@litnet.lt)

#### Security contact

mail: [cert@litnet.lt](mailto:cert@litnet.lt) (preferred)

phone: +37037300645

url: <https://cert.litnet.lt>

#### SG delegate

Aurelija Gefenienė

#### SG deputy

Kęstutis Paulikas

#### Policy

[http://fedi.litnet.lt/doc/LITNET\\_FEDI\\_policy\\_EN.pdf](http://fedi.litnet.lt/doc/LITNET_FEDI_policy_EN.pdf)

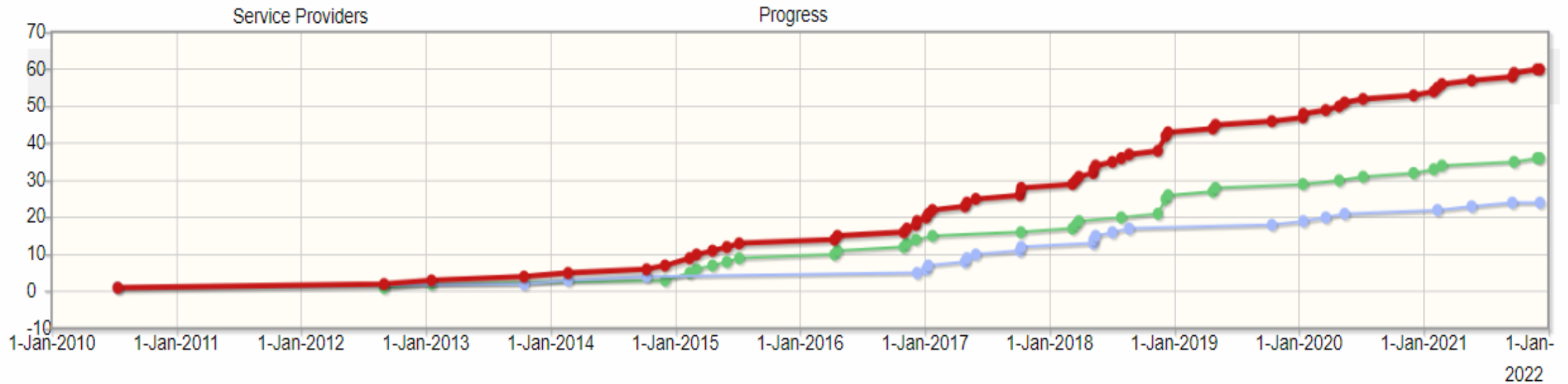
#### Supplied English version of the Policy

yes

## 2017 – LITNET FEDI Identity federation expands

- 2 Single Sign-On hosts
- Institutional IDPs
- Discovery service
- Federation as a Service (GÉANT)
- Metadata registry for IDM/SSO as a Service
- Cron for metadata refresh
- Multiple SPs

# LITNET FEDI growth



# eduGAIN and national federation entities

- eduGAIN



22 Identity Providers  
5 Service Providers  
0 Identity/Service Providers

- LITNET FEDI



24 Identity Providers  
37 Service Providers  
0 Identity/Service Providers



# Key factors to LITNET FEDI success



Staff with  
relevant skill set  
and NREN own  
infrastructure



SAML 2.0 protocol

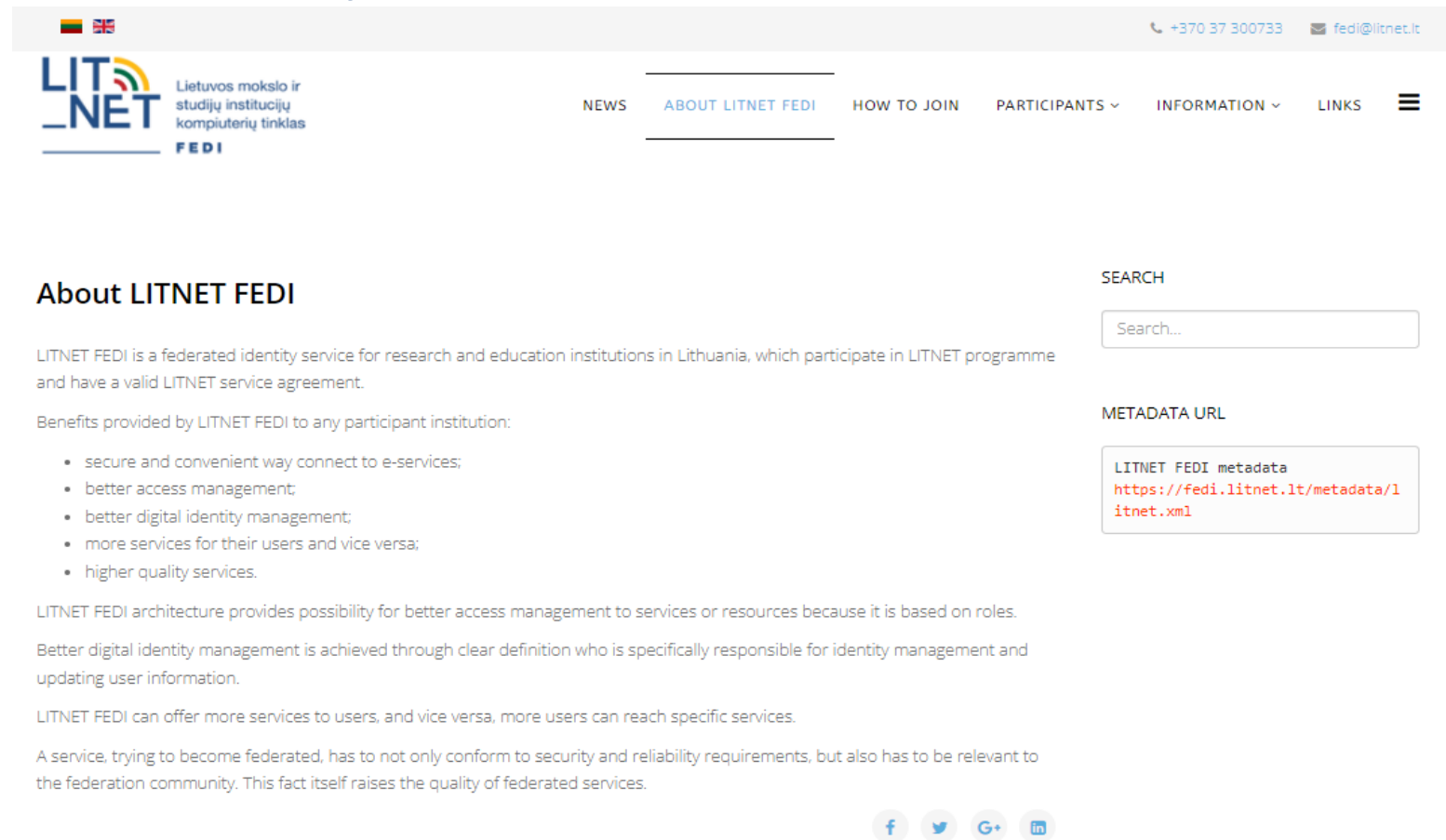
# Read and Learn

## Useful links:

- <https://wiki.geant.org/display/eduGAIN>
- <https://wiki.geant.org/display/eduGAIN/Tools+and+Services>
- <https://technical.edugain.org/>
- <https://wiki.geant.org/display/eduGAIN/IDP+Attribute+Profile+and+Recommended+Attributes>
- <https://wiki.refeds.org/>
- <https://discovery.refeds.org/guide/>
- <https://attribute-viewer.aai.switch.ch>
- <https://attribute-viewer.aai.switch.ch/interfederation-test/>

# Sharing information

## • Identity federation website



The screenshot shows the LITNET FEDI website. At the top, there is a header with the LITNET logo and text 'Lietuvos mokslo ir studijų institucijų kompiuterių tinklas' on the left, and contact information '+370 37 300733' and 'fedi@litnet.lt' on the right. Below the header is a navigation menu with links: NEWS, ABOUT LITNET FEDI, HOW TO JOIN, PARTICIPANTS, INFORMATION, and LINKS. The main content area is titled 'About LITNET FEDI' and contains the following text: 'LITNET FEDI is a federated identity service for research and education institutions in Lithuania, which participate in LITNET programme and have a valid LITNET service agreement.' It then lists 'Benefits provided by LITNET FEDI to any participant institution:' followed by a bulleted list: 'secure and convenient way connect to e-services;', 'better access management;', 'better digital identity management;', 'more services for their users and vice versa;', and 'higher quality services.' Below this, it states 'LITNET FEDI architecture provides possibility for better access management to services or resources because it is based on roles.' and 'Better digital identity management is achieved through clear definition who is specifically responsible for identity management and updating user information.' It also mentions 'LITNET FEDI can offer more services to users, and vice versa, more users can reach specific services.' and 'A service, trying to become federated, has to not only conform to security and reliability requirements, but also has to be relevant to the federation community. This fact itself raises the quality of federated services.' On the right side of the page, there is a 'SEARCH' section with a search bar and a 'METADATA URL' section displaying the URL 'https://fedi.litnet.lt/metadata/litnet.xml'.

LITNET FEDI

LITNET FEDI is a federated identity service for research and education institutions in Lithuania, which participate in LITNET programme and have a valid LITNET service agreement.

Benefits provided by LITNET FEDI to any participant institution:

- secure and convenient way connect to e-services;
- better access management;
- better digital identity management;
- more services for their users and vice versa;
- higher quality services.

LITNET FEDI architecture provides possibility for better access management to services or resources because it is based on roles.

Better digital identity management is achieved through clear definition who is specifically responsible for identity management and updating user information.

LITNET FEDI can offer more services to users, and vice versa, more users can reach specific services.

A service, trying to become federated, has to not only conform to security and reliability requirements, but also has to be relevant to the federation community. This fact itself raises the quality of federated services.

SEARCH

Search...

METADATA URL

LITNET FEDI metadata  
<https://fedi.litnet.lt/metadata/litnet.xml>

# Technical instructions

- WIKI page with technical configuration and tips for IT admins



Pagrindinis puslapis  
Naujausi keitimai  
Atsitiktinis puslapis  
Smėlio dėžė  
Pagalba

Rankiai

- Susiję puslapiai
- Susiję keitimai
- Specialieji puslapiai
- Versija spausdinimui
- Nuolatinė nuoroda
- Puslapio informacija

Kategorija **Aptarimas** Skaityti Žiūrėti kodą Istorija

**Kategorija:SSO** [Pagalba](#)

**Puslapiai kategorijoje „SSO“**

Rodoma 11 šios kategorijos puslapių (iš viso kategorijoje yra 11 puslapių).

**A**

- Auth MemCookie SP įdiegimas

**M**

- Mod auth mellon diegimas ir konfigūravimas

**S**

- Shibboleth automatinis metaduomenų atnaujinimas (SP)

- Shibboleth paslaugos (SP) diegimas ir konfigūravimas
- SimpleSAMLphp automatinis metaduomenų atnaujinimas (IdP + SP)
- SimpleSAMLphp Discovery serviso konfigūravimas
- SimpleSAMLphp paketo diegimas
- SimpleSAMLphp paketo versijos atnaujinimas
- SimpleSAMLphp paslaugos (SP) konfigūravimas
- SimpleSAMLphp tapatybės tiekėjo (IdP) konfigūravimas
- SSO

# Providing user support system for Q&A

- Email request tracker system for providing user support

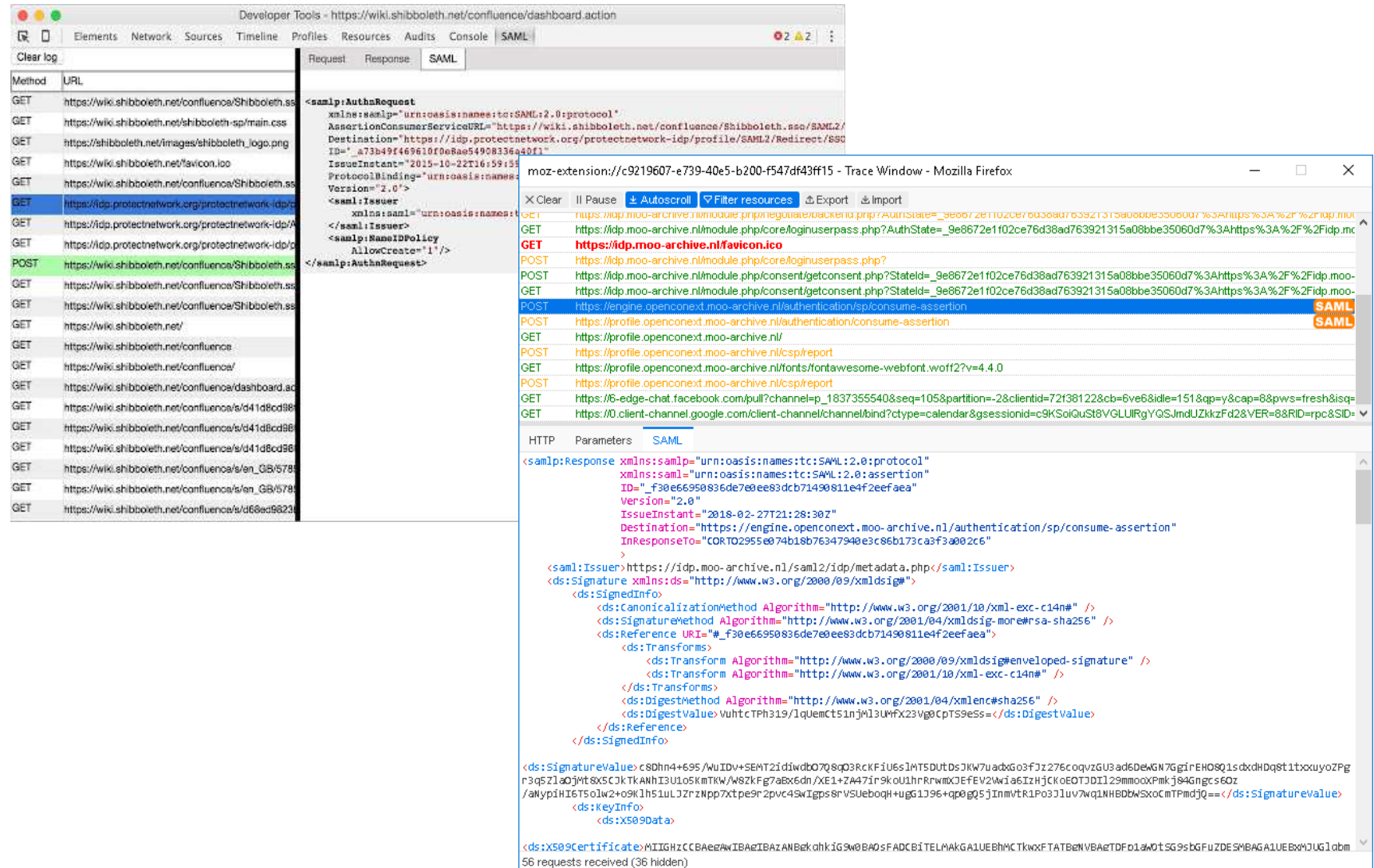
<b>310879 Federation member has been modified</b> <noreply@litnet.faaas.geant.org>	<b>new</b> 6 days ago	LITNET federacija	Nobody 23 hours ago	<b>High</b>
<b>310882 Provider has been modified</b> <noreply@litnet.faaas.geant.org>	<b>new</b> 6 days ago	LITNET federacija	Nobody 23 hours ago	<b>High</b>
<b>311329 Provider has been modified</b> <noreply@litnet.faaas.geant.org>	<b>new</b> 5 days ago	LITNET federacija	Nobody 3 hours ago	<b>High</b>
<b>311332 Federation member has been modified</b> <noreply@litnet.faaas.geant.org>	<b>new</b> 5 days ago	LITNET federacija	Nobody 3 hours ago	<b>High</b>
<b>312349 User registration request</b> <noreply@litnet.faaas.geant.org>	<b>new</b> 3 days ago	LITNET federacija	Nobody 5 hours ago	<b>Low</b>
<b>312460 User Registration</b> <noreply@litnet.faaas.geant.org>	<b>new</b> 3 days ago	LITNET federacija	Nobody 3 hours ago	<b>Low</b>

# Communication between IdP admins

- Various communication tools for group messages for IT admins for quick questions



# Trainings for IT admins



The screenshot displays a web browser window with the 'Developer Tools' console open. The left pane shows a list of requests and responses, with the 'SAML' tab selected. The right pane shows the XML content of the selected request and response.

**Request:**

```
<samlp:AuthnRequest xmlns:samlp="urn:oasis:names:tc:SAML:2.0:protocol" AssertionConsumerServiceURL="https://wiki.shibboleth.net/confluence/Shibboleth.sso/SAML2/destination" ID="a73b49f469610f0e8ae54908336a40f1" IssueInstant="2015-10-22T16:59:55" ProtocolBinding="urn:oasis:names:tc:SAML:2.0:bindings:HTTP-POST" Version="2.0">
  <saml:Issuer xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion" ID="https://wiki.shibboleth.net/confluence/Shibboleth.sso/SAML2/destination" />
  <samlp:NameIDPolicy AllowCreate="1"/>
</samlp:AuthnRequest>
```

**Response:**

```
<samlp:Response xmlns:samlp="urn:oasis:names:tc:SAML:2.0:protocol" xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion" ID="f30e66950836de7e0ee83dc71490811e4f2eefaea" Version="2.0" IssueInstant="2015-02-27T21:28:30Z" Destination="https://engine.openconnect.moo-archive.nl/authentication/sp/consume-assertion" InResponseTo="COR102955e074b18b76347940e3c86b173ca3f3a082c6">
  <saml:Issuer xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion" ID="https://engine.openconnect.moo-archive.nl/authentication/sp/consume-assertion" />
  <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
    <ds:SignedInfo>
      <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
      <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256" />
      <ds:Reference URI="#f30e66950836de7e0ee83dc71490811e4f2eefaea">
        <ds:Transforms>
          <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature" />
          <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
        </ds:Transforms>
        <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#sha256" />
        <ds:DigestValue VuhTcTPH319/1queMct5InjW13UWfX23Vg8CpTS9ess=</ds:DigestValue>
      </ds:Reference>
    </ds:SignedInfo>
    <ds:SignatureValue> c8Dhn4+695/WuIDv+SEMT2idjwB070q3RcKfIu6s1MT5DutDsJKW7uad6G03fJ276coqVzG3ad6DeAGN7GgIrEH08Q1sdcxHDq8t1txxyoZPgR3q5Z1a0jMt8X5CkTKANhI3Ulo5KMTKw/W8ZfG7aBx6dn/XE1+ZA47ir9kUuJhRrwmXCEFEV2Wki96IZHjCk0EOTD1L29mnooXPMkj94Gngcs60Z/aiNypIH1650lw2+o9K1h51UL37rzNpp7xtp9r2pvc4SwIqps8rVSUebogH+uG51J96+qp0g5jInmVtr1P03J1uv7wq1NH8DBWxSoCMTpmdjq==</ds:SignatureValue>
    <ds:KeyInfo>
      <ds:X509Data>
        <ds:X509Certificate> MIIGHIICCBAeewIBAAIBAZANBekahkIG9w0BA0SfADCBI TELMAKGA1UEBHMk TkxwFATBENVBABTDFDf1dW0tSG9sbgFuZDE SMBA GA1UEBHMkUG1obm56 requests received (36 hidden)
```



# Keeping your federation healthy and stable

- <https://technical.edugain.org/monitoring>
- Zabbix for monitoring
- Warn your user institutions



# Offer attractive services to users

- Filesender - for large files transfer
- Nextcloud/Owncloud - for storage, sync and share
- Moodle - virtual learning environment
- Library resources
- Personal certificates
- SSOaaS
- IDaaS
- IaaS on Openstack
- CaaS on Kubernetes
- CERT services
- Other ideas welcome!

Be part of T&I  
community



GÉANT TF and SIG mailing lists  
<https://lists.geant.org/sympa/lists>

# Thank you!

## Any questions?

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