

February 2009

Relevance

CLARIN community

for all communities

# Trust Domain

## What is it?

CLARIN wants to establish a domain of trust where every researcher can act in the whole language resource and technology domain based on a single identity that is granted by his home organization. This allows us to implement a single-sign-on principle which is important when working for example with virtual collections. In such a domain service providers such as from CLARIN and identity providers such as universities make an agreement about the quality of user management, the user information to be exchanged and the terms of usage. When such agreements are signed the individual researcher is relieved from a lot of overhead and can access all resources in the domain in a much more simple way.

## What is it for?

Users increasingly often want to

- build virtual collections by combining data resources from various projects and various repositories to carry out some research (see special short guide)
- build “virtual” workflows by combining services from various service providers to new types of cyberinfrastructure applications (see special short guide)
- carry out queries on large virtual aggregations of resources selected by metadata
- carry out automatic semantic linking on large aggregations of related resources

Whenever researchers want to carry out such operations they want to use one single sign-on with one authentication step where the authentication in general should be done by their home institution based on proper agreements. Therefore we can state that creating the indicated domain of trust bringing together the service provider organization on the one hand and the national identity federations on the other hand covering ideally all European researchers is a prerequisite for any cyberinfrastructure scenario.

## Who can use it?

- The domain of trust is created for all researchers covered by the emerging national identity federations that participate in making agreements with service provider organizations such as CLARIN, thus the solution is not limited to CLARIN members or researchers from the linguistic domain.
- In many areas such trust domains are currently being established. National identity federations and organizations for example make federation agreements with big publishers and even software providers to simplify access by a personalization of the authentication process. This CLARIN activity is embedded in worldwide activities of the grid and federation communities.

## When can it be used?

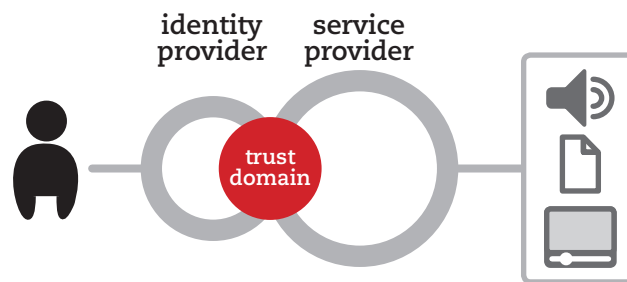
CLARIN is currently investigating all aspects to come to a first network of centres that can link up with the already existing European identity federations.



At the end of 2009 this first service provider federation should be running and offer distributed authentication mechanisms to a wide range of researchers. In 2010 further centres should be included and applications making use of the new possibilities should become available. Intensive interactions with TERENA and EduGain have been started to understand the European harmonization efforts, i.e. the progress at the side of the identity federations.

## How does it work?

The following diagram shows how the federation scenario is working. A user wants to access one or several resources from one or several service providers. The resource administration will indicate that authentication is required. Via some technical means it will be found out what the home institute of the researcher is. There the researcher will authenticate himself according to the rules of the agreement of trust between the service provider organization and the identity provider organization. When the authentication has been carried out successfully, some user attributes also compliant with the agreements will be exchanged between identity and service provider(s). The resource administration can now check whether the specified user or user group is allowed to access the resource(s).



For getting this system working a number of components are required:

- middleware components on both sides need to interact between the two sides
- all interaction must be carried out by using SAML 2.0 (a standard for secure information exchange which is obligatory within CLARIN)
- some middleware components will be required when credentials have to be passed through to a number of service providers or when web services are requesting access on behalf of a user.

With respect to the standard case two middleware components are currently offered: (1) Shibboleth being maintained by Internet2 and (2) Simple SAML PHP being maintained by FEIDE (the Norwegian identity federation). Both will be supported in CLARIN. With respect to the exchange of user credentials attributes and their values have been defined for example by Eduperson. However, it turned out that different countries and organizations need different properties. This led to some interoperability problems which initiatives such as TERENA and EduGain try to overcome. CLARIN has established formal links to these initiatives to take profit from their work and to push forward its own requirements.

## Who is responsible?

Work package 2 is leading the work within CLARIN. With respect to the national activities we recommend to soon get into contact with the grid/federation (AAI) experts who are responsible of setting up the distributed authentication infrastructure.

## Whom to contact?

For CLARIN we refer to the web site for further information: <http://www.clarin.eu/specification-documents>

For all service related questions the following address is relevant:

Dieter van Uytvanck (MPI): [dieter.vanuuytvanck@mpi.nl](mailto:dieter.vanuuytvanck@mpi.nl)

## Where to find more information?

Due to its enormous importance there is quite some activity from various initiatives. Here we just refer to the most important ones:

CLARIN: <http://www.clarin.eu/specification-documents>

TERENA: <http://www.terena.org>

EduGain: <http://www.edugain.org>

Shibboleth: <http://shibboleth.internet2.edu>

SimpleSAML PHP:

<http://rmd.feide.no/simplesamlphp>

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