

Consigna¹: federated filesharing

federation as an afterthought

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¹Consigna is Spanish for left luggage

Outline

1 Motivation

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- 1 Motivation
- 2 Development

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- 3 Demo

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- 4 Implementation

Why a file sharing application?

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- It should be useable by members and non members
- It should not be a “*black hole*”
- It should be easy and unobstrusive
- The browser is *THE* interface

The way to a federated application

from local users to federation

We have evolved the application through several access control methods

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- **User/password**

AuthN/AuthR at the application level

- Heavy administration
- Impedes usage by non members
- + May be used from any location

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- User/password
- **IP based**

Location based AuthR

It has the concepts of

- *Inside* (organization's IP space)
may upload **and** download
- *Outside* (rest of the Internet)
may upload **or** download

Files are password protected

DAD

The way to a federated application

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Location based AuthR

- + Low administrative burden
- + Easy for non members
- Unusable for roaming members

The way to a federated application

from local users to federation

We have evolved the application through several access control methods

- User/password
- IP based
- **WebSSO**

Centralized AuthN/AuthR

- + Maybe added to IP based control
- + roaming members location become *inside*

The way to a federated application

from local users to federation

We have evolved the application through several access control methods

- User/password
- IP based
- WebSSO
- **Federated**

Shibboleth based AuthN/AuthR

- + Lazy sessions allow old behaviour
- + Collaborating members from other institutions can be treated like local members.
- + Abuse can be traced
- + Richer AuthR possibilities

Best seen than told

or one image is worth a thousand words

Let's see it working

The gory details

adding code to connect to the federation

We have based our development on QuiXplorer
altering several parts, though not many:



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- IP control added by the University of Basque Country
- Interface hints: the green and red dots
- Login links
- Session info for authenticated access

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Apache configuration

We have used Shibboleth lazy sessions
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```
<Location /consigna>  
  AuthType shibboleth  
  ShibRequireSession Off  
  require shibboleth  
</Location>
```


The gory details

Attribute release

We require minimal identity information

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- Whatever is in REMOTE_USER, as user ID

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Attribute release

We require minimal identity information

- Whatever is in REMOTE_USER, as user ID
- If common name is available, we show it

The gory details

Code changes and additions

We have modified several files

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index.php

- Inclusion of our function definitions
- Call of our access control funcion
- New action definitions for launching login

The gory details

Code changes and additions

We have modified several files

`.include/init.php`

- Added code for session initialization
- Added code for loading session data into global array

The gory details

Code changes and additions

We have modified several files

`.include/header.php`

- Added code for checking credentials
- Added code for showing user information
- Added code for displaying login links

The gory details

Code changes and additions

We have modified several files

`.include/fun_*.php`

- Cosmetic changes
- Added code for checking credential
- Added code for checking AuthR
- Added code for saving credentials in the database

The gory details

Code changes and additions

and we have added one file for all our functions

`.include/luis.php`

- IP address checking
- Download authorization
- Checking authentication
- Displaying AuthR privileges
- Logout (testing)



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- Normal location related control preserved
- Identity is optional \Rightarrow public service
- Shibboleth session \Rightarrow additional privileges

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Relating to the integration work

- Access to the code is definitely a plus
- Lazy sessions have been great
- The task has been both easy and fun
- Help accepted at <https://forja.rediris.es/projects/tfconsigna>