



European Union's FP7 Programme

DG Connect

Directorate C: Excellence in Science

Unit C1: e-Infrastructure



Deliverable D5.2

Service Model Definition for a Community Service Framework between Latin-America and Europe



A project of the Seventh Framework Programme (FP7)



This project is funded by the European Commission



A project implemented by RedCLARA

Periodical Progress Report

ELCIRA Deliverable: ELCIRA D5.2 – Service Model Definition for a Community Service Framework between Latin-America and Europe

Document Full Name	ELCIRA D5.2 Service Model Definition for a Community Service Framework between Latin-America and Europe
Date	2012-09-25
Activity	5. Extending and Strengthening the Collaboration Platform (RedCLARA)
Lead Partner	RedCLARA
Document status	Final
Classification Attribute	Public
Document link	

Abstract: This document describes the scope agreed for a community services framework between Latin-America and Europe. This analysis aims to define what would be done, and how will the services platform system work that would help to promote the integration between Latin-American and European communities.



A project of the Seventh Framework Programme (FP7)



This project is funded by the European Commission



A project implemented by RedCLARA

COPYRIGHT NOTICE

Copyright © Members of the ELCIRA Project, October 2012.

ELCIRA (Europe Latin America Collaborative e-Infrastructure for Research Activities – Call (part) identifier: FP7-INFRASTRUCTURES-2012-1 – Project number: 313180) is a project co-funded by the European Commission within the Seventh Framework Programme (FP7), Infrastructures (DG Connect, Directorate C: Excellence in Science, Unit C1: e-Infrastructure). ELCIRA began on 1st June 2012 and will run for 24 months.

For more information on ELCIRA, its partners and contributors please see <http://elcira.redclara.net> (this website will be available in October 1st 2012).

You are permitted to copy and distribute, for non-profit purposes, verbatim copies of this document containing this copyright notice. This includes the right to copy this document in whole or in part, but without modification, into other documents if you attach the following reference to the copied elements: “Copyright © Members of the ELCIRA Project, 2012”.

Using this document in a way and/or for purposes not foreseen in the paragraph above, requires the prior written permission of the copyright holders.

The information contained in this document represents the views of the copyright holders as of the date such views were published.

THE INFORMATION CONTAINED IN THIS DOCUMENT IS PROVIDED BY THE COPYRIGHT HOLDERS “AS IT IS” AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE MEMBERS OF THE ELCIRA COLLABORATION, INCLUDING THE COPYRIGHT HOLDERS, OR THE EUROPEAN COMMISSION BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THE INFORMATION CONTAINED IN THIS DOCUMENT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.



A project of the Seventh Framework
Programme (FP7)



This project is funded by the European
Commission



A project implemented by RedCLARA

DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Gustavo Garcia	RedCLARA	2012-9-6	
From	Carlos Gonzalez	RedCLARA	2012-9-6	
Revised by	Brook Schofield	TERENA	2012-9-27	
Revised by	Mario Reale	GARR	2012-9-27	
Revised by	Tom Fryer	DANTE	2012-9-27	
Revised by	Gustavo Garcia	RedCLARA	2012-11-7	
Revised by	Carlos Gonzalez	RedCLARA	2012-11-7	
Revised by	Brook Schofield	TERENA	2012-11-7	
Revised by	Mario Reale	GARR	2012-11-7	
Revised by	Tom Fryer	DANTE	2012-11-7	



A project of the Seventh Framework Programme (FP7)



This project is funded by the European Commission



A project implemented by RedCLARA

TABLE OF CONTENTS

COPYRIGHT NOTICE	2
DELIVERABLE ROUTE	3
1.- INTRODUCTION	5
2.- EXECUTIVE SUMMARY	5
3 OVERALL SERVICE DESCRIPTION AND GOALS	6
4 COLLABORATION SERVICES GLOBAL INNIItIAtIVES	6
5 SELECTED PORTAL SERVICES.....	8
6 END USER USE CASE DEFINITION	9
7 NRENs' TECHNICAL USERS' USE CASE DEFINITION.....	10
8 HOW TO GET THE SERVICE	11
9 FEDERATED AUTHENTICATION.....	13
10 SERVICE SUPPORT	14
11 REFERENCES	14



A project of the Seventh Framework
Programme (FP7)



This project is funded by the European
Commission



A project implemented by RedCLARA

1.- INTRODUCTION

ELCIRA is a collaborative project between Latin America (LA) and Europe (EU) with the goal to establish Identity Federations in LA and the adoption of advanced services based on their usage. Above all, the EduROAM and EduGAIN inter-federation based services to allow roaming of wireless networks and web-based applications users within a global inter-federation of trust. A third goal of ELCIRA is the definition and promotion of a collaborative cloud platform with services for end user that enable interoperability for both EU and LA. These services shall promote e-Science collaborations between EU and LA.

This document describes the initial set of services which have been identified by the ELCIRA collaboration as a starting core set of platform services to be enabled through Identity Federations, whose adoption by both European and American users will be promoted, and for which a global provisioning model will be defined and described.

2.- EXECUTIVE SUMMARY

Chapters two and three are an introductory section to the scope and goals for this document and the executive summary.

Chapter three provides an overall description of the selected platform services with respect to the project goals and mission.

Chapter four describes the global collaboration services initiatives in other academic networks

Chapter five introduces the starting core of services building up the collaborative EU-LA cloud platform.

Chapter six describes the underlying Use Cases implemented to be supported by the platform services and their end users;

Chapter seven describes the Use Case supported for Technical Staff belonging to the NRENs community rather than end users, for the provisioning and maintenance of the Cloud platform.

Chapter eight describes the whole service provisioning model from the user perspective: how to get the required platform service;

Chapter nine describes how the service will be based on academic identity federations.

Finally, chapter nine describes the model which has been designed to provide support for the identified set of services.



A project of the Seventh Framework
Programme (FP7)



This project is funded by the European
Commission



A project implemented by RedCLARA

3 OVERALL SERVICE DESCRIPTION AND GOALS

The ELCIRA WP5 aims to achieve the deployment of a community' services platform for academic users and institutions. The goal is to provide a service platform instead of delivering services directly to the end-user. The above means that the NRENs would use this platform to select services to implement in their own portal. The NRENs will act as service providers for their own users, and the ELCIRA will be the infrastructure provider for it.

The service goals of the platform between Latin-America and Europe are:

- a) Providing the NRENs with a set of services they can easily implement in their own portal. In this model the ELCIRA system will act as an infrastructure provider, and the service provider will be directly the NREN.
- b) Design a platform where administrator can select the services they are going to use, see how to implement them in their portal, and access statistics about the use.
- c) Build a strong collaboration platform where end-users from different NRENs can register through their institution or the RedCLARA's portal.

Services shall be integrated with the academic authentication federations, including EduGAIN and Café.

4 COLLABORATION SERVICES AND SSO GLOBAL INITIATIVES

Similar to the RedCLARA's collaboration platform, other academic networks and organizations are working in developing tools to support collaboration. Many ongoing initiatives are based on collaboration portal and tools, integrated with federation-based Authentication and Authorization Infrastructures. Relevant initiatives in the domain of collaboration platforms are, for example, carried out by trans-national organizations like TERENA, currently working on a Cloud Storage prototype, or individual NRENs. The main projects checked by the WP5 team, more closely related to the original mission and objectives of ELCIRA's WP5, were OpenConext developed by Surfnet, OpenSocial, LifeRay and and SSO technologies like OpenAM or SCIM.



A project of the Seventh Framework
Programme (FP7)



This project is funded by the European
Commission



A project implemented by RedCLARA

OpenSocial is a set of common application programming interfaces (APIs) that allow building social platforms with sharing of core functions and information at multiple social networks. One of the main features of OpenSocial is that the set of APIs is common to every site using OpenSocial; the developers must learn once the API and then, are they are able to use it on every OpenSocial-enabled site.

OpenConext was created by SURFnet to create new opportunities for online collaboration. OpenConext is built on four components:

- Federated Identity Management through SAML2,
- A set of self-defining people groups with capabilities to work on different applications called SURFTeams,
- OpenSocial,
- Collaboration tools provided to third parties and connected through the Identity Management.

Nowadays, SURFnet is running SURFConext, an instance of OpenConext for research and education in The Netherlands.

Liferay is an open source content management framework. The software components are built to be displayed on web portals. LifeRay allows Content Management, Web edition, shared web spaces, enterprise collaboration, social networks, Identity management, and OpenSocial. Liferay is being used by projects as Chain and Gisela and it has successfully integrated to Shibboleth-based authentication.

Even if OpenSocial seem to be a common method of integration, it still appears to have been object of major developments during the last year. The ELCIRA team will evaluate the convenience of working in compliance with it. On the other hand, Liferay may be considered as a web application Framework. Nevertheless, the current RedCLARA's framework (Joomla) and others should be evaluated in order to pick the best option to fit requirements. The above will become part of the architectural design of the solution.



A project of the Seventh Framework
Programme (FP7)



This project is funded by the European
Commission



A project implemented by RedCLARA

SCIM: The System for Cross-domain Identity Management (SCIM) specification is an open initiative under development through the Internet Engineering Task Forum (IETF). The specification aims to set a common method to work with identities using existing technologies and standards. For instance, user definitions can be shared using XML and JavaScript JSON objects. Some of the advantages of SCIM include that it integrates with SAMLv2 used in academic federations, and the use of web services that facilitate the development. There are similar technologies to SCIM. For instance, the Service Provisioning Markup (SPML) language is the open standard for the integration and interoperation of service provisioning requests. The OpenAM provides open source Authentication, Authorization, Entitlement and Federation software. The ELCIRA team shall evaluate these technologies taking into account the flexibility, the potential and the level of adoption across academic environments.

5 SELECTED PORTAL SERVICES

The ELCIRA work team have selected a set of four services to work in the project. The selected services for the ELCIRA collaboration cloud platform between Latin-America and Europe are:

a) *Communities portal, based on Joom-social*

The communities' portal is a service where users can create groups or communities to interact with. The service has well known features like wall publishing, private messages, add contacts and other to manage and handle a community in an academic or scientific area.

b) *Wiki service*

The Wiki service allows collaborated document creation through a simple web page. The Wiki created documents are instantly published to the web, and can be edited at any time with the users using only their browser. History records of any change are stored.

c) *Web-conference service based on MCONF*

The Webconference system will be based on the MCONF platform developed by the Brazilian NREN RNP. The Webconference service will allow handling multi-video meetings with co-workers. The main advantage is that the system does not need installing any software of element in clients' computer.



A project of the Seventh Framework Programme (FP7)



This project is funded by the European Commission



A project implemented by RedCLARA

d) *Large File transfer service*

With the Large File Transfer service, the researchers could share a file with their colleagues using cloud storage. If the end-user wants to send a 2 Gbytes file overseas, systems like email can't do the work. With this service, the user will only have to upload the document and sent the link, and will be set.

6 END USER USE CASE DEFINITION

The ELCIRA system deployed under this work package will be directed to academic researchers of institutions connected to the NRENs in Europe and Latin-America. Due to the nature of the services, the end user should belong to a community or have collaboration with it.

Communities' portal

By means of this portal, the user will be able to create a community and share information with their members. The end user will have the options to send them messages, and post information to a wall of their community. In the communities' portal, the user could do the following:

- Create a community and invite people to join it
- Search, select and join to a community
- Have easily access to the amount of communities by region and other statistical information

Web-conference

The users can use the Web-conference system to carry out meeting with their colleagues, perform presentations or virtual courses. In general terms, the Web-conference will facilitate the real time interaction of a closed group of users. In the Web-conference, the users will do the following tasks:

- Book a conference
- Get a link to enter directly in a web-conference service. This link could be shared



A project of the Seventh Framework
Programme (FP7)



This project is funded by the European
Commission



A project implemented by RedCLARA

with other users willing to join the conference.

Wiki

The main goal of a wiki system is allowing a collaborating content creation. With the wiki service, the users of the portal could create a web page that can be edited by the users of his community. In the wiki system, the users will be able to:

- Create a wiki, and define the kind of access to it. The wiki can be of two types:
 - a) Public: Information can read by anyone
 - b) Community: Information can only be read by users in the community.
- Update his community's wiki and read information from it.
- See whether the wiki is public or private. If the wiki is public, he shall see a link to share it to others.

FileSender

Content creation is an important task across academic communities. The above can produce high amounts of data in the form of files. Sometimes traditional systems like email are not enough, and the academic users have some worries about privacy when using public service like Dropbox. The file transfer service will allow the ELCIRA users to share a file with others using academic infrastructure.

7 NRENS' TECHNICAL USERS' USE CASE DEFINITION

EL CIRA system administrative options

- Administrators shall be able to login a web system that allows them to select the services they want to use.
- Administrators shall have access to a statistics system where they can see the accesses to their services. Hits, unique visits, downloaded files and other useful metrics shall be provided.



A project of the Seventh Framework
Programme (FP7)



This project is funded by the European
Commission



A project implemented by RedCLARA

- Administrators shall be able to delegate administration to other users.
- The ELCIRA portal will have a technical description of how to integrate the selected services in his NRENs portal.

Service customization options

A very important feature for service acceptance is the content regionalization and adaptation to the local (NREN) needs. This is a complex challenge in terms of defining the limit between customization, reliability, and uniformity. The ELCIRA system shall provide the NREN the options say what communities they want to see first in the list, or in what order communities shall appear when searching is done. Some example of administrative options that could be implemented for this are: a) Show first the local NREN communities, b) Order communities by science area and relation to the NREN, c) Show random communities each time user logs in.

Adaptations in look and feel would be done through modularity (style files) and the proper guidelines for system integration.

8 HOW TO GET THE SERVICE

The services that ELCIRA intends to offer to the EU-LA user community are essentially represented by three different categories of services; the first two are directly available for end-users, while the third one is meant to be offered to users through the intervention of technical staff belonging to NRENs:

- Services currently provided by the RedCLARA portal accessed through username and password (currently) or Identity Federations (IdPs) and Shibboleth, once the RedCLARA portal will have been fully made shibboleth compliant (e.g.: become a Resource Provider within a Federation or an inter-federation)
- Services implemented directly within the portal of individual NRENs, after their integration into a Federated model for AAI: ELCIRA will play the role of ensuring Federation based AAI is used while making use of services already implemented by NRENs.



A project of the Seventh Framework
Programme (FP7)



This project is funded by the European
Commission



A project implemented by RedCLARA

- Services available through the ELCIRA platform, possibly integrated into the portals of NRENs; a relevant difference with the previous category is that these services will be directly provided by ELCIRA and that Technical Staff from the NREN will have means of integrating them into the national NRENs' portals. The core ELCIRA services provided by the ELCIRA cloud platform (ref. chapter 5) fall in this category.

The user shall have therefore three ways to access the provided services:

- a) Latin-American end users could log onto the RedCLARA portal and subscribe to them
- b) Europe and Latin-American NRENs technical representatives could log onto the ELCIRA system. In this case, the technical user will enter in an administrative interface that provides the options to select services and integrate them to their NREN portal.
- c) End-user in Europe and Latin-America will be able to use the service implemented in its NREN portal. Users will use his institution username and password. The above will be carried out using federations as explained in the following paragraph.



A project of the Seventh Framework
Programme (FP7)



This project is funded by the European
Commission



A project implemented by RedCLARA

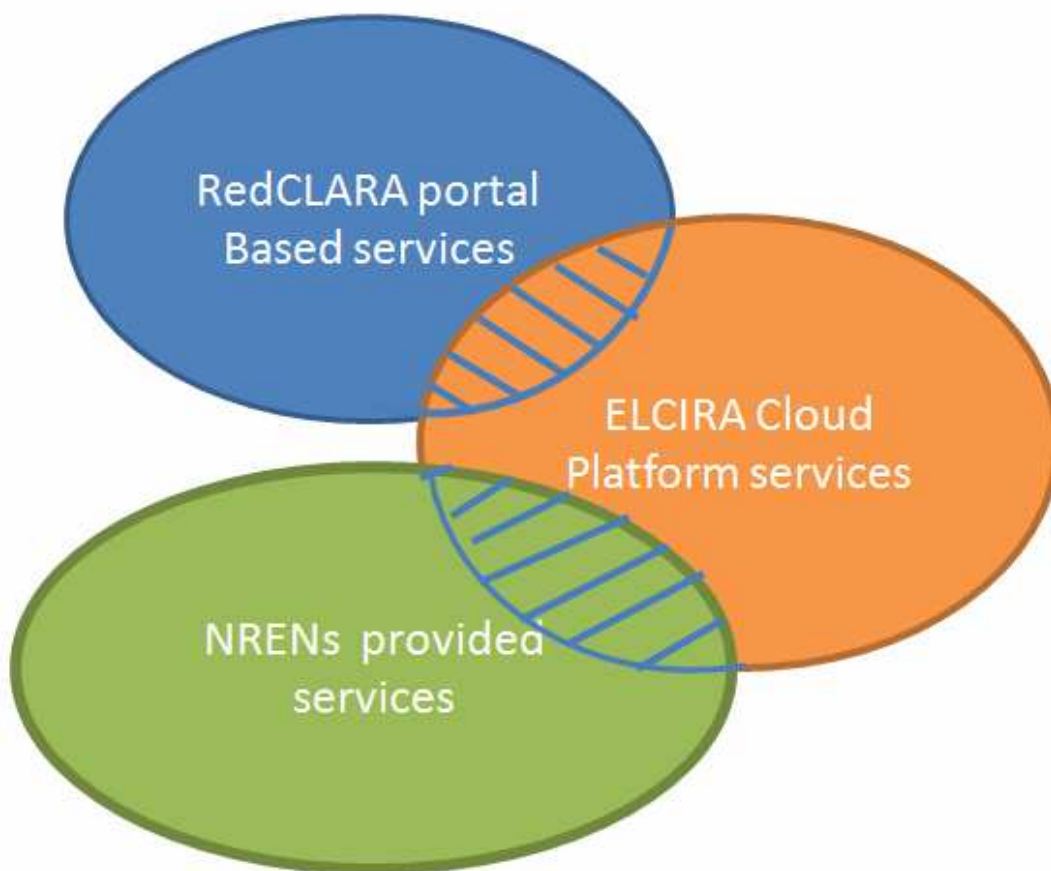


Figure 1: ELCIRA and RedCLARA services

9 FEDERATED AUTHENTICATION

One of the main characteristics of the offered services will be the integration to the academic service federations. The main goal is that services can be accessed by end-user using the credentials (user and password) from their own institution. Now days, the European (EduGAIN), the Brazilian (Café) and Chilean federations will be the integration target. Services will work as in the federation concept where a user will be redirected to an identity provider, and it will check credentials with the user institutions' identity provider. There are two leading technologies in order to implement federated services OpenID, and SAML2.0. The path for the research and academic environments is SAML2.0 due to its acceptance across the NRENs.



A project of the Seventh Framework Programme (FP7)



This project is funded by the European Commission



A project implemented by RedCLARA

In the Federated Authentication model that will be adopted, the RedCLARA portal will be configured to be Service Provider for the above mentioned federations, so that users authenticated through IdPs belonging to them will be allowed to access the portal and its provided services. A starting point will be, along with what just mentioned, the set-up of a RedCLARA project IdP where current users will be inserted, acting as a stand-alone IdP to support the utilization of the portal through SAML2 based authentication. At a later stage, once a relevant part of the users will be included in IdPs belonging to LA Federations, and after the RedCLARA portal will be included among their Resource Providers, the stand-alone IdP will possibly act as a catch-all IdP for residual homeless users.

10 SERVICE SUPPORT

The support model which we envisage is based on a 2 level global support where NRENs are directly responsible to provide support to their users for the services they provide through the ELCIRA platform, whereas ELCIRA partner's will act as second level support, when required by issues which need escalation.

For the services directly provided by ELCIRA, ELCIRA will provide both the first and second level of support.

Various technical tools are available to implement support systems, and the project will chose the optimal one according to

- Ease of usage
- Capability to be integrated into a federated web portal
- Available Customization options
- Openness
- Supported standards for AAI

11 REFERENCES

[1] The ELCIRA project – <http://elcira.redclara.net>

[2] SurfConext - <http://www.surfnet.nl/en/Thema/coin/Pages/default.aspx>



A project of the Seventh Framework Programme (FP7)



This project is funded by the European Commission



A project implemented by RedCLARA

OpenConext Wiki pages - <https://wiki.surfnetlabs.nl/display/OpenConext/Home>

[3] Open Social - <http://www.opensocial.org/>

[4] LifeRay - <http://www.liferay.com/documentation/liferay-portal/6.1/user-guide/-/ai/lp-6-1-ugen01-what-is-liferay-ndash-0>

[5] CHAIN project : <http://www.chain-project.eu>

[6] GISELA project : <http://www.gisela-grid.eu>

[7] JOOMLA : <http://www.joomla.org>

[8] Shibboleth <http://shibboleth.net/>

[9] SAML2 <http://saml.xml.org/saml-specifications>

[10] FileSender https://www.assembla.com/spaces/file_sender/wiki

[11] TWiki <http://twiki.org/>

[12] JomSocial <http://www.jomsocial.com/>

[13] MCONF <http://mconf.org/m/>



A project of the Seventh Framework
Programme (FP7)



This project is funded by the European
Commission



A project implemented by RedCLARA