AAA Study Home Page

Study on AAA Platforms For Scientific Resources in Europe

In December 2011, a consortium of four partners and a number of external experts was awarded a contract by the European Commission to carry out a study into AAA (authentication, authorisation and accounting) platforms and services for scientific resources. The study, led by TERENA, was concluded in September 2012.

The **AAA Study Final Report** is now available as pdf.

Consortium	Experts
Licia Florio (TERENA) Susan Reilly (LIBER) Yuri Demchenko (UvA) Marta Virágos, Tamas Verga and Gabriela Harangi (DEENK)	Nicole Harris (JISC Advance) Diego Lopez (Telefonica I+D) Klaas Wierenga (Cisco Systems) Andrew Cormack (Janet) David Groep (Nikhef) Torbjörn Wiberg (Umeå University) Mikael Linden (CSC)

Aim of the AAA Study

The **goal of the study** was to evaluate the feasibility of delivering an integrated Authentication and Authorisation (and possibly accounting) Infrastructure (AAI) to help the emergence of a robust platform (Scientific Data Infrastructure(SDI)) for access to and preservation of scientific information.

The targeted actors in the study were the research and education communities, information service providers (data centres, libraries) and e-Infrastructure providers.

The study was organised in two parts (see picture on the righhand side):

1. **Collection use-cases** to derive the AAI requirements;
2. **Evaluation of existing AAI** as well as their gap analisys to identify their strengths and their challenges. The legal aspects of the different AAIs was also assessed.

The output of the study consists of a set of recommendations for the delivery of an integrated AAI to be used for SDI.

The recommendations highlight the following priorities:
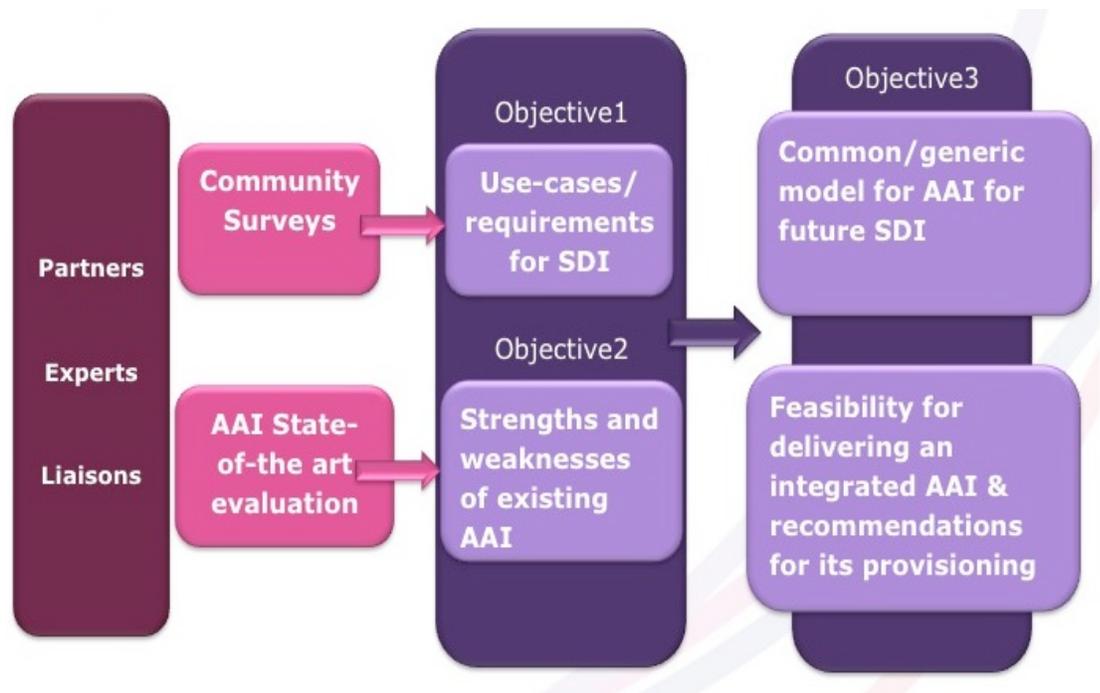
- The general assumption confirmed by this study is that an AAI for SDI should be built on standard technologies, using mechanisms to translate between various authentication and authorisation technologies, and that federated access plays an important role;
- To fully benefit from federated access, more funding is needed to improve the reach of national identity federations in research an education;
- Further research is needed to enhance authorisation and accounting mechanisms;
- A common policy and trust framework for identity management is needed, as well as clarity on data protection laws – these should be coordinated at European level;
- Relevant organisations such as eIRG, REFEDS (Research and Education Federations), IGTF, the EC and consortia of libraries and data centres should all work towards these goals.

Results of the Study

The tables below summarises the list of high-priority recommendations as identified by the team.

Technical Recommendations	Action Required	Main Stakeholder(s)
Rely on standards for federated technologies for network, service and application access across Europe .	Specific support should be given to inter-federation to meet cross-disciplinary and cross-boundary requirements and to create a common access infrastructure.	Developers, eduGAIN, EUDAT, EGI, REFEDS
Enhance existing AAIs to address the demands of research communities for accessing different types of services in a manageable and secure way.	AAA support for mobile access; Support for non-Web browser applications; Develop security token translation services to enable inter-operability of different AAIs; Provide guest identity providers (IdPs) for users that cannot rely on an institutional IdP; Allow for effective resource usage accounting for distributed and heterogeneous environments; Enable the usage of persistent identifiers within AAIs; Support social network identities in combination with institutional identities to address specific use - cases for the SDI.	National identity federations, eduGAIN, research collaborations (i.e. big scientific projects)
Enhance authorisation in inter-federations scenarios by providing support for distributed attribute management.	Provide security mechanisms and tools to enable identity federations to consume attributes managed by collaboration projects.	National identity federations, collaboration projects (e-Research)
Phase-out IP-based authentication.	Provide support for those institutions relying on IP-based authentication to migrate to federated access technologies.	National identity federations, service providers, national funding bodies

Policy Recommenda...
Facilitate the deve... of a common polic... trust framework fo... management that... identity federation... Researchers com... libraries and data...
The operators of ... federations to exp... coverage of their ... federations.
Implement scalab... negotiation mech...
Identity federation... harmonise their p...
Lower the adoptio... level of existing infrastructures for... users and provide... support communit... benefit from existi...

Legal Recommendations	Action Required	Main Stakeholders
Provide clarity about consent and legitimate interest. Art 7 of European Directive (95/46/EC) states that personal data can be processed if "*processing is necessary for the purposes of legitimate interests pursued by the controller or by the third party or parties to whom the data are disclosed, except where such interests are overridden by the interests for fundamental rights and freedoms of the data subject*"	Provide clear and simple documentations and raise awareness on when consent can or cannot be used.	EC, Member States, eduGAIN/national identity federations
Organise training for the Member States representatives to avoid cultural interpretations of the Directive and to prepare for a smooth transition from the Directive to the Regulation.	Raising awareness.	EC, Member States

Funding Recommendati...
Secure funding to v towards inter-opera e-Infrastructures ar enhance the corresponding AAIs
Secure sustainable structural funding to support various e-Infrastructures.
Invest in 'train-the-trainers' initiatives.

The recommendations target different stakeholders:

- The EC for the definition of a possible directive;
- Developers to encourage them to use standard technologies to achieve interoperability;
- Member States for creating the conditions for such an infrastructure at a national level;
- Policy makers, particularly those involved in the Data Protection Directive, to create awareness of the impact of legislation on cross-boundary access management.

The involved stakeholders should act timely to address these points.

Milestones and Meetings

The study will be done in the period from January 2012 till August 2012 with the following deliverables and timetable.

Name	Deadline	Description
Draft Final Study Report	June 2012	Draft AAA-Study-Report - **To provide the draft final report of the study for comments.** This version of the report was circulated before the final workshop (see below). Partners' liaisons (i.e. REFEDS, TF-EMC2 and other relevant groups) were also consulted. Beside the report, the consortium has made available an additional document '**FIM and Law**'. This document covers legal issues in federated access management.
Final Workshop	July 2012	To present the preliminary results to the study and receive feedback during the workshop. The workshop was organised at the Commission's premises in Brussels.
Final Study Report	Sep 2012	To include the feedback received during the final workshop.

| Technical Report | Aug 2012 | To report on the use of resources in the performance of the contract. |

Contacts

If you have any question please do not hesitate to contact the study coordinator Licia Florio (florio@terena.org) or TERENA (secretariat@terena.org).