



Report on TERENA Technical Advisory Council (TAC) Meeting

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Valentino Cavalli

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1. Welcome and Apologies

Christoph Graf opened the meeting and welcomed the participants; he called for a round of introductions and then continued by briefing the audience on the agenda of the meeting.

2. How to deal with content providers who are not federated

Ligia Maria Ribeiro started her talk by providing some contextual information about EUNIS, the association of European university information system managers, and its work. Currently EUNIS has around 140 members from 29 countries. Its main goal is to promote innovation in information systems in the higher education and research environment. EUNIS organises one conference per year and coordinates a number of working groups. EUNIS does not have permanent staff members and its work is completely offered by volunteers.

How to provide federated access to online journals is an issue that affects university campuses, Ligia said. In this respect, she had tried to establish links between EUNIS and TERENA in the area of campus infrastructure and middleware.

It was remarked that initiatives such as Open Access are important steps forward, but would not seem to be sufficient drivers towards federating access to e-journals. The main strategic issue is how to foster national support. Incidentally, according to a show of hands, only CARNET and RedIRIS were involved in Open Access among the TAC meeting participants.

Currently, the most widely used method of accessing e-journals is based on IP authentication. There are many issues related to this and it would be good changing to federated identity-based authentication. However, publishers often resist to changes, mostly because of lack of technical expertise, as well as the burden of dealing with frequent software upgrades. There are several inhibitors on the institutions side, too, including low availability of VPNs, lack of expertise and resources to support AAI, etc.

Ligia showed the result of a small survey, compiled with the assistance of FCCN, about the penetration of Identity Management among publishers. According to her overview, approximately 64% of the campuses were able to support some type of AAI. However, IP-based authentication was used in all case, whereas only a few ones were introducing Shibboleth.

One issue for the TAC consideration was whether EUNIS and TERENA should do something together to promote the adoption of Identity Management among campuses more widely. Another question was whether it is part of the NREN's mandate to deal with these issues or not.

Jean-Paul Le Guigner was wondering how EUNIS and TERENA collaborate and what they know about each other's work. Ligia said that collaboration so far had been limited to exchange of information and participation at respective conferences once a year. She felt there was an opportunity for increasing collaboration. One area of interest for EUNIS concerned standards for exchanging students and staff information. Some people in the NREN community, such as

Diego Lopez and Victoriano Giralt, who are active in TF-EMC2 are already involved in this area. Licia Florio confirmed that Victoriano was currently dealing with EUNIS working groups.

Brook Schofield asked whether the focus was to solve the e-journal issue or to address more general issues concerning AAI at campus level. It was felt that e-journals present a very tangible issue and probably one of the easiest to fix, provided that publishers really want this. Ligia thought NRENs may provide some incentive, even though campuses do not seem to be ready.

Josh Howlett said in the UK JISC has responsibility for liaison with service providers. However, he said most benefits are to identity providers not to service providers, so the incentives should be targeted to them.

The audience was clearly interested in fostering collaboration between EUNIS and NRENs in an effort to raise awareness of AAI among campuses. The conclusion included a few suggestions:

- being aware of how to deal with threats,
- encourage EUNIS to get in touch with the REFEDs group on a more permanent basis,
- take into account the possible limitations of some NRENs in the extent of their work with campuses, insofar as engaging with publishers is not part of their business.

At the request of Christoph 7-8 NREN representatives raised their hand to show that they felt it was part of their business.

3. The SCS model

Diego Lopez presented the SCS (Server Certificate Service) model in order to stimulate a discussion about the potential benefit of applying it in other areas.

Diego briefly summarised the content of SCS and explained that its novelty consisted of TERENA making a deal with one commercial provider, enabling NRENs to issue an unlimited number of server certificates for a limited, flat-fee price. The service started in March 2006 with eight NRENs and has led to approximately 20,000 certificates been issued by 19 NRENs. A second tender for a service extension resulted in richer service profiles offered by a different provider. The deal extends the initial offer for server certificates only and is therefore called more generally TERENA Certificate Services (TCS).

In the SCS model (and TCS) TERENA was mandated to establish a single contract with a supplier, whereas NRENs establish contracts with TERENA. This model not only showed economy of scale in an area where services were simply not affordable for most NRENs, it also created a business model which did not exist before.

The service clearly addressed a real problem space and thanks to its success providers have become very receptive to collaborating with the community. These positive results had triggered a number of questions concerning the opportunity to apply the model in other collaboration areas with the commercial sector or in the area of inter-nren service provision, community projects, etc.

Christoph confirmed that the model was successful and had created a completely new business model. He added that the community should keep being open to future opportunities as they become relevant.

Stefan Winter said a concrete opportunity for pursuing a similar arrangement would be collaborating with 3G mobile operators. The rationale is that eduroam is a successful international service but is available only at selected places and users must use different means of connectivity when off-campus. So it would be an advantage to be able to establish a deal with a large Europe-wide 3G operator to exploit the ubiquity of 3G.

Stefan said the involvement of a few more NRENS and several operators may create an opportunity to leverage this at the pan-European scale. Victor Reijs mentioned that HEANet was working with O2 and felt that wider collaboration could be stimulated. SWITCH have some collaboration in place, too, albeit non scalable ones, according to Christoph.

Michael Linden was wondering whether the SCS/TCS model was breaching the division of roles between DANTE and TERENA in the domain of service provision. Karel Vietsch clarified that in SCS and TCS TERENA does not provide certificate services to NRENS or their connected institutions. The services are actually provided by the suppliers in collaboration with NRENS, with TERENA mediating as a central contracting organisation. Diego added that in some case NRENS have already similar agreements in places at the national level and that the model builds on those pre-existing experiences by adding the principle of delegating TERENA to make an agreement with the supplier.

Hans Döbbeling and Christoph Graf remarked that NRENS could make use of these certificates in GÉANT related services.

Mauro Campanella said AAI is becoming more and more important and made a point of consolidating and enforcing AA services at common level for all NRENS.

Klaas Wierenga said one has to distinguish between services which are regulated at national level – as is the case for federations – and services which need to link to services provided in another country.

Diego clarified that TERENA's role had been crucial in supporting the SCS procurement. However, he explained, the service is nationally operated by the NRENS. Diego and Christoph argued that not all services should ultimately scale at global level. SCS, as well as identity federations, have a national scope, even though they take advantage of joint international collaboration.

There are a few examples of national collaborations between NRENS and service providers, which might have some potential for a pan-European scope. Victor Reijs mentioned a project on data hosting and talks with Google. Jan Meijer quoted a similar initiative in Norway and said it would also be interesting to look at something along the lines of collaborating with Amazon data centres.

4. GRID middleware and security, the missing bits

David Kelsey introduced the agenda item by providing an overview of organisational matters concerning Grids.

The EGEE project has reached its third phase. The project, which will end in spring 2010, has progressed towards building a collaborative environment for e-infrastructures all across the globe. EGI has been designing and planning a sustainable ongoing Grid infrastructure in Europe, federating and coordinating among NGIs. Additionally, there has been significant progress in the area of federated Identity Management in the Grid space. The coordination of a global (X.509) PKI infrastructure is managed by the IGTF with three geographical policy management authorities: EUGridPMA, TAGPMA in America and APGridPMA in the Asia-Pacific region.

David discussed three topics requiring further development, which are potentially interesting for NRENs:

- identity management,
- virtual organisations and global trust,
- Grids security operations.

A growing number of CAs are now run by NRENs. The future challenges for Grid Identity Management are mainly related to scaling and ease of use. Grid IdM has specific requirements, for instance concerning persistence and uniqueness of naming and reasonable representation of names. A few TERENA members are discussing about coordinating a new trans-national cross-federation Grid CA service (but not yet confederated). The service would use existing federation identity to authenticate to a service that issues Grid certificates. Part of the technical discussion at the moment relates to issues concerning Levels of Assurance and data privacy.

Virtual Organisations (VO) play a significant role in building trust with Grids. The Grid community has spent a lot of time with Authentication, but in the area of Authorisation things are much less mature. The VO is the Source of Authority (SOA) therefore it would be interesting to discuss the scope for standardising attributes. The SCAHC activity, which is part of the TERENA task force TF-EMC2, might be the appropriate place for such a work.

EGEE has created an operational security coordination team. There are eleven regional centres dealing with incident response, monitoring, training. Coordination with TF-CSIRT had started and discussion was going on. David reported that the next TERENA NRENs and Grids workshop would deal with network operation. The event would be jointly organised by TERENA and the EGEE SA2 and be held at the next EGEE conference in Barcelona.

Diego said one should add a fourth area on network services, especially infrastructure as a service. RedIRIS was working in that direction.

Jan Meijer commented on the business case for the inter-federation of Grid CAs service/project and the reasons for UNINETT to seek collaboration.

HEANet was seeking collaboration with Grids, especially in relation with Grid Identity Management and related work in eduGAIN.

It was felt important for NRENs to be aware of who's representing the NGI in a specific country.

Many participants said they are aware, some not. A question on the user experience of Grid AAI showed that there is room for improvement in Grid middleware.

5. NRENs interest in research on the Internet of the future

The majority of Next Generation Networking developments, which are relevant to NRENs are currently taking place in the context of the GN3 project. On the other hand, a limited number of NRENs are interested and actively participating in more fundamental research on the future of the Internet. New network components are being defined as part of EC FIRE projects and other initiatives and it was felt interesting to obtain input from TAC participants concerning developments that could provide input to TERENA activities.

Christoph introduced the subject by showing a chart, plotting lower layers work along different dimensions, in an attempt to sketch the subject areas that represent a gap in some way or another. The presentation made a number of assumptions on NRENs interest in research on the Internet of the future and tried to represent a problem space dealing with the level of attention by the community towards the Internet of the future, GÉANT, and a number of NGN workshops that had been organised by TERENA in the recent past.

Christoph highlighted two main issues:

- Is there a gap in lower layer developments among NRENs as far as operation and national/local levels are concerned?
- Is it true that more fundamental research on the Internet of the future does not attract much interest, and why?

Hans Döbbling observed that the picture was depicting the backbone network but ignored the multi-domain nature of the GN3 project. Christoph acknowledged that the picture was not an optimal representation and made the remark that GN3 is looking at the common level, whereas he felt there was a gap in the area of collaboration about the way NRENs operate their networks at the national level. Hans claimed that the SA2 of the GN3 project is actually addressing that.

There was some debate whether similar collaboration had worked in GN2 and how collaboration among network operations staff at the national level had been effective. Some participants felt this had not worked well enough.

Mauro Campanella said the picture presented by Christoph was an over simplification and he did not find appropriate to plot topology and scope.

Per Nihlén said universities in Sweden do not collaborate at the operational level as much as they should. He made the example of TTS in which only recently they have started to talk with each other. He thought there would be a great benefit in exchanging NOC related information at the European scale.

Klaas Wierenga argued that GN3 deals with inter NREN issues. Mauro agreed with him, but added that what really matters is the way the work is done: the end-to-end service is what

ultimately counts.

Jean Paul Le Guigner felt, in line with Victor Reijs and a few other participants, that GN2/3 does not provide all things that are needed. He said he's aware that the matter is a bit controversial, but agreed some parts should be filled. Stanislav Sima said there is a gap to be filled in technology transfer, which would put NRENs in a better position to cope with a changing environment.

Bram Peeters felt a need to look at technology developments outside of NERNS. To this effect Klaas invited the participants to attend a session later in the week to discuss the role of NRENs in the IETF.

6. Media Management and Distribution activities

Peter Szegedi provided an update on recent discussions and developments in the area of media management and distribution.

For several years TERENA had run task forces on voice video and collaboration, obtaining some tangible results such as the IP Telephony Cookbook. A few years back TF-Netcast had been looking at the tools to manage and deliver content and media.

A BoF at TNC 2008 had dealt with university lectures being recorded, enriched with metadata and provided to the education community. It became clear that NRENs are in a good position to providing media recording distribution to the user community. A workshop in Zürich early in 2009 had identified videoconferencing, content management systems and federating media repository as the areas where exchange of experience and collaboration, on technical and legal issues was needed.

Peter reported that discussion on a potential task force among some interested NRENs and universities was ongoing. The areas for collaboration were still being defined, but it was thought they could include the following:

- open standards to handle content
- metadata/search content
- storage, centralised or distributed approach
- federated access to metadata and to content
- workflow/architecture
- PR.

List of Participants

First Name	Last Name	Affiliation
Claudio	Allocchio	GARR
Uladzimir	Anishchanka	UIIB NASB/BASNET
Gunnar	Boe	UNINETT
Mauro	Campanella	GARR
Valentino	Cavalli	TERENA
Hans	Döbbeling	DANTE
Jón Ingi	Einarsson	RHnet
Licia	Florio	TERENA
Christoph	Graf	SWITCH and TTC
Josh	Howlett	JANET(UK)
Avgust	Jauk	ARNES
Sæpor	Jonsson	RHnet/Univ. Iceland
Baiba	Kaškina	Sigmanet
David	Kelsey	RAL and TTC
András	Kovács	NIIF/HUNGARNET
Matti	Laipio	Funet/CSC
Jean-Paul	Le Guigner	RENATER
Mikael	Linden	CSC
Diego	López	RedIRIS and TTC
Tamas	Maray	NIIF/HUNGARNET
Jan	Meijer	UNINETT
Kevin	Meynell	TERENA
Miroslav	Milinović	CARNET and TERENA TEC
János	Mohácsi	NIIF/HUNGARNET
Per	Nihlén	NORDUNet/SUNET
Christian	Panigl	ACONET
Bram	Peeters	SURFnet
Jorgen	Quist	NORDUNet
Victor	Reijs	HEANet
Ligia Maria	Ribeiro	EUNIS/Univ. Porto and TTC
Brook	Schofield	TERENA
Damien	Shaw	JANET(UK)
Stanislav	Šima	CESNET
Milan	Sova	CESNET
Helmut	Sverenyák	CESNET
Péter	Szegedi	TERENA
Karel	Vietsch	TERENA
Klaas	Wierenga	Cisco Systems
Stefan	Winter	RESTENA

