



## Report on TERENA Technical Advisory Council (TAC) Meeting 16 May 2011

Prague, Czech Republic

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The Technical Advisory Council consists of senior technical managers of the TERENA member organisations. It has as its tasks to review the progress of the TERENA Technical Programme, advise on its future direction and propose new initiatives. Every two years the TAC also makes recommendations to the TERENA Executive Committee on the creation of Special Interest Areas.

Christoph Graf welcomed the participants and introduced the agenda of the meeting:

1. Cloud Services - Jan Meijer, UNINETT
2. Synergy between social networking and identity federations - Niels van Dijk, SURFnet
3. World IPv6 Day Advert: How can NRENs help worldwide efforts to take up IPv6 - Robert Kisteleki ,RIPE NCC
4. Interacting with network researchers - Esther Robles, RedIRIS
5. NREN Network Service Innovation - Christoph Graf, SWITCH
6. JANET(UK) Mobile Services - Mark O'Leary, JANET(UK)

Presentations were given as introduction to each agenda item. They are available at:

<http://www.terena.org/about/tac/20110516-presentations.html>

### 1. Cloud Services

To set the scene and stimulate discussion Jan Meijer presented his views on how the European research and education community could address Cloud services in a coordinated fashion.

In several countries cloud activities started at NREN level, for instance in Greece, Poland, the UK, Norway, etc. but there appears to be very little European coordination. Jan argued that it makes lot of sense to work on clouds at the European level. Particularly, he stressed that if NRENs want to enter in the cloud business it would be best to start at large, pan-European, scale from the very beginning. This would be the most appropriate approach to address the key elements of cloud services: consolidation at massive scale, elasticity (easy scaling up and down) cost associativity and flexibility. However, NRENs are starting now to work in setting up such services, whilst large commodity Cloud service suppliers are five years ahead and it does not make sense to compete with them.

A few key questions on this (among other) agenda item had been sent to the audience in advance of the meeting. Some questions were asked during the meeting:

- Are you as NREN considering entering the Cloud service business? There was a show of

hands. Approximately a dozen participants responded positively.

- Are universities prepared to buy services from commodity Cloud suppliers? This question was more difficult for NRENs to answer on the spot. However it was remarked that NRENs who don't think they should enter the cloud business should consider this and figure out whether they would "lose customer institutions" due to this.

An argument in favour of collective effort was that developing Cloud services at the national level would be too expensive. Christian Panigl remarked that Cloud services really make sense at the European scale, but he felt it would be very difficult for national decision makers to invest money in a European project without knowing what their return would be and what would ultimately be the benefit for their own country. Most of the follow up talks were related to the business case for a large scale Cloud service.

Olav Kvittem suggested that NRENs could work together on defining open technical specifications rather than discuss the business case. John Dyer remarked that TF-MSP had been looking at the non-technical side of the Cloud business. In the context of TF-MSP some documents had been collected, also including open standards, and made available on the task force wiki.

Triggered by a comment from CESNET, some participants argued that the "the bigger the better" claim was not necessarily true. It was remarked that the biggest strength of NRENs, compared to commodity Cloud providers, is being close to their users, and that they should capitalise on such things as infrastructure, middleware and trust, that are missing in the commercial Cloud offering.

David Foster questioned about the underlying demand for a European Cloud services. He felt there was a similarity with Grids, which, he claimed, developed the way they did because there was not enough central money for the large scale processing needs of scientific communities.

Christoph Graf summed the discussion up by remarking that although he felt that bigger is better in economic terms, it looks unlikely that NRENs move in that direction due to concerns in doing things centrally. The most reasonable conclusion from the discussion would be to start small and national (as is happening already) and then federate those initiatives at the international level.

## **2. Synergy between social networking and identity federations**

One of the key messages of Niels van Dijk's presentation was to consider how NRENs can leverage social networking technology with federations.

Social Networks have a number of very interesting collaboration features, as well as a number of drawbacks. On the collaboration side, social networking platforms are normally quite simple, as they support only one group (friends), whilst NRENs have federations, more formal groups, and ways of bundling content and services together.

OpenSocial, providing APIs to support various social networking components, was presented in some detail. OpenSocial is taking up at various levels among institutions and the academic community.

Social networks and research and education federations have a lot of common requirements/features: authentication, people profiles/attributes, group management, privacy. However, the trust fabric is missing in social networking. Niels argued that the research and education community can strongly contribute to social networking developments by using its trust. The SURFconext platform is an example of work exploiting the features of federated (SAML2) IdM, group management, OpenSocial and collaboration tools.

The first question from the audience was about the role of NRENs in supporting collaboration and provisioning collaboration services. Likely these would cross various domains and countries and people were wondering how that impacts on institutions. Work was going on in Spain in integrating social networking components in service offerings. Similar experiences were taking place in Norway.

John Dyer said there had been a lot of talk among TF-CPR participants on social networking. He also addressed a communication issue between technical and non-technical task forces.

Christoph Graf asked the participants whether their organisations were looking into collaboration platforms. Norway and Hungary responded positively, whilst many participants looked undecided. This led to no specific outcome, but it was concluded that there was some room to work on this in the future.

### **3. World IPv6 Day Advert: How can NRENs help worldwide efforts to take up IPv6**

Robert Kisteleki, RIPE NCC, had been invited to speak at the TAC meeting to "promote" the IPv6 Day on 8 June 2011. It was felt that such a talk would help raising awareness among NRENs and their connected institutions.

The main message that Robert passed to the participants was that besides turning on IPv6 on 8 June, NRENs should try to convince customers that this is the right thing to do. In the RIPE region IPv4 space is expected to run out in approximately 6 months, admittedly it is hard to be precise with this type of estimate, but it really is time to start turning IPv6 on.

### **4. Interacting with network researchers**

Esther Robles presented briefly on the issue of interacting/supporting network researchers.

Spain care about these researchers and RedIRIS has an interest in the possible practical exploitation of their research. RedIRIS feel that somehow their output is relevant to them.

Simon Leinen said SWITCH have contact with researchers from earlier long-standing collaborations, partly also because of FEDERICA participation. SWITCH had been talking with universities, too. Almost all of them have PlanetLab installations.

Jari Miettinen, said CSC are involved in a joint industry/research programme (<http://www.futureinternet.fi/>). CSC has been working with three research partners, connected them to their backbone and built testbeds to support research collaboration. Juha Oinonen and Pekka Savola (CSC/Funet) are the contact persons for this project that runs until 2013.

UNINETT are providing infrastructure for researchers as well as monitoring service and want to continue doing it.

Stanislav Sima, expressed interested in Future Internet research. He added that CESNET have funding for large-scale infrastructure and are now in a good position to get more involved, not only in providing the infrastructure but also in contributing to the research itself. Stanislav said they would like to work on layer1 research.

FCCN was also a partner in FEDERICA and were planning to support the project follow up. In Portugal there are some research projects that can use the infrastructure.

The position of NIIF was that everybody who's improving their network should engage with their researchers. In Hungary, said Tamas Maray, they had started a survey to track what researchers are doing and he claimed that it is the job of NRENS to engage with them. However, there may be issues in exploiting the results of the research, which usually are distant from the practical needs of NRENS.

Esther said one benefit of Pasito (<http://www.rediris.es/proyectos/pasito/>) is that thanks to the infrastructure it provides RedIRIS have also a mechanism to know what the researchers are working on and for ensuring follow up.

There was some follow up discussion on whether NRENS should be in charge of the relation with Internet researchers or not. Simon Leinen, warned that NRENS should not think they are in charge. A symptom of that was that the Future Internet Assembly was taken place precisely in the same week as TNC, showing the Internet research community's lack of attention for NRENS.

Valentino mention that PSNC would organise the next Future Internet Assembly meeting in October in Poznan and suggested that PSNC may be able to facilitate NRENS in playing a more active role. Stanislav Sima said that NRENS have a stake in Internet Research.

## **5. NREN Network Service Innovation**

Christoph Graf addressed the need for a platform for network architects to share ideas and discuss technical matters. He started by looking back at the talk he gave at the TAC meeting in Malaga in 2009. At that time a gap was identified in networking NREN operational people and further discussion led to the establishment of TF-NOC. Christoph argued that it would be interesting to address a similar gap among NRENS in the phase of designing/piloting new network architectures. That would also depend on which part of the lifecycle does the network finds itself in.

Christoph asked the participants what their current position in the lifecycle was. Two NRENS said their network was brand new, six-seven said their network goes through continuous upgrade phases, four were reaching end of life, none was awaiting replacement. Christoph felt there was a reasonable spread.

The next question was: which term best describes for your next generation NREN network the position in the life cycle? The answers were:

- Not an issue: 6 (reasons given: business/technology as usual; network very new and

capable to match demand for the foreseeable future; adequate in the current time frame)

- Planned: 2
- Design prototype: 3
- In procurement: 2
- Release imminent: 3

Finally, Christoph asked the participants if they felt network architects in their organisations were interested in working together when planning network upgrades.

Peter Kaufmann objected on the questions themselves as the NRENs practice consists of making specifications for tender, define platform, requirements, etc. and then go out for a commercial Call for Tender. It was remarked that discussion of requirements and specification parameters takes place regularly as part of that process.

In Denmark they have made good use of information exchange with other NRENs in preparing their own Call for Tender, but it was pointed out that joining a TERENA activity while being busy in the preparation of a CfT is very difficult. Tamas Maray said the same would hold for NIIF. It was mentioned that there is already good collaboration among NRENs on some of these topics, for instance concerning optical parameter via the CEF conferences. That was felt as a good model. Most of the participants seemed to believe that they can easily find colleagues when needed through existing channels.

Esther commented that in Spain, having just finished the procurement, RedIRIS found it very useful to discuss with other NRENs to share expertise; this put them in a much better position in negotiating with suppliers.

Christoph felt this to be an interesting topic, addressing a real need to know what other NRENs are doing. He concluded that NRENs are in a good position to share information as they need it.

Olav Kvittem argued that there is more at stake than writing procurement specs. He claimed that people need to talk frequently and more regularly with other people and said that a workshop-style gathering once a year would be relevant. He expressed a need an arena to discuss network technologies. Martin Bech, added that he found NGN workshops a good initiative and said he was in favour of TERENA organising workshops.

## **6. JANET(UK) Mobile Services**

Mark O'Leary had been invited to present the JANET(UK) 3G service, due to be launched this summer.

Martin Bech asked about billing. Mark explained there is a payment engine. JANET has had a role in establishing a framework agreement, then it was passed on to organizations/universities that retain responsibility for the payments. This was felt as a "compromise" that made everybody happy. Some other questions related to how users are identified. This is done both via the SIM card and the user ID.

In Norway they also procured this type of services, but it was observed JANET(UK) went much further. It was suggested that more NRENS might be interested in discussing technical issues in more detail.

Klaas Wierenga remarked that the way JANET has set up the link with eduroam is not the way he, as one of the initial designer of eduroam, would have liked to see it. He said the fact that user credentials are also known to the operator goes against the eduroam security principle. Mark said JANET is aware that this changes the model. He agreed it is an issue although he felt that wireless eduroam was not the ultimate way of doing things.

## **List of Participants**

<b>First Name</b>	<b>Last Name</b>	<b>Affiliation</b>
Claudio	Allocchio	GARR
Kurt	Bauer	ACOnet
Martin	Bech	UNI-C
Gunnar	Boe	UNINETT
Marko	Bonac	ARNES
Maciej	Brzezniak	PSNC
Valentino	Cavalli	TERENA
Tomas	De Miguel	RedIRIS/Red.es
John	Dyer	TERENA
Gareth	Eason	HEANet
Joao Nuno	Ferreira	FCCN
Jón Ingi	Einarsson	RHnet
Jan	Ferre	Forskningsnett
Licia	Florio	TERENA
David	Foster	CERN
Christoph	Graf	SWITCH and TTC
Laurent	Gidé	RENATER
Avgust	Jauk	ARNES
Sæpor	Jonsson	RHnet/Univ. Iceland
Baiba	Kaskina	SigmaNet
Peter	Kaufmann	DFN
David	Kelsey	STFC/RAL and TTC
Robert	Kisteleki	RIPE NCC
Olav	Kvittem	UNINETT
Janne	Lauros	CSC
Jean-Paul	Le Guigner	RENATER
Simon	Leinen	SWITCH
Diego	Lopez	RedIRIS
Jan	Meijer	UNINETT
Jari	Miettinen	Funet/CSC
Miroslav	Milinović	SRCE Univ. Zagreb and TERENA TEC
János	Mohácsi	NIIF/HUNGARNET
Fabio	Okomurk	RNP
Mark	O'leary	JANET(UK)
Christian	Panigl	ACOnet
Bram	Peeters	SURFnet
Eli	Peleg	IUCC
Esther	Robles	RedIRIS and TTC
Miroslav	Ruda	CESNET
Brook	Schofield	TERENA
Stanislav	Šíma	CESNET

Helmut	Sverenyàk	CESNET
Péter	Szegedi	TERENA
Varis	Teivans	SigmaNet
Niels	Van Dijk	SURFnet
Walter	Van Dijk	SURFnet
Karel	Vietsch	TERENA
Klaas	Wierenga	Cisco Systems
Stefan	Winter	RESTENA