



21st TF-Mobility and Network Middleware Meeting - Thursday, 18 February 2010

Vienna, Austria. The meeting was hosted by AConet.

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1. Welcome and Apologies

Klaas Wierenga welcomed everyone to the meeting. Apologies were recorded on the event registration page: http://www.terena.org/events/details.php?event_id=1550

2. Minutes of Last Meeting and Update of Action List

The minutes of the last meeting held on the 20th October 2009 were approved without corrections and are available at <http://www.terena.org/activities/tf-mobility/meetings/20/minutes.pdf>

Reference	Who	Action	Status
02122008-03	Milan Dick Visser	Circulate information on the procedures needed to DNSSEC sign eduroam.org	<i>Created as an internal helpdesk item within TERENAs ITS.</i>
20090507-01	Diego	Ask Glen Wearren to report on Irish 3G deal and identity management issues.	<i>Glen is not in attendance and this action will be carried over to the next meeting.</i>
20090507-03	Kurt	Identify sensor and mesh networking activities, and find out what their technical requirements are.	<i>Kurt to present at todays meeting.</i>
20090507-07	Klaas	Setup conference call on 802.11u.	<i>Carried over to the next meeting</i>
20091020-01	Brook	Brook to establish an archive of the GWG mailing list if it doesn't exist already.	<i>Completed archive available at http://www.terena.org/mail-archives/eduroam-gwg/</i>
20091020-02	Klaas	follow up on action items prior to the next TF-Mobility meeting.	<i>Informational. Completed.</i>
20091020-03	Brook	Discuss eduroam.org website updated with Daniel/Marcus from Australia regarding their "User Centric Website".	<i>Have received feedback. They have yet to publish their work and are</i>
20091020-04	Brook	Discuss the "interface" to create mapping data and see about integrating this with the SURFnet solution discussed in line with website changes at GN3 Symposium.	<i>Further work on website will be discussed later in the meeting. SURFnet own all the IPR relating to their eduroam website and are able to contribute the work if the community supports this.</i>
20091020-05	All	Produce good use-cases for DNSSEC implementations. To discuss later today and circulate on the BoF-DNSSEC@terena.org mailing list.	<i>Done.</i>
20091020-06	Brook	Put this Metering and Monitoring effort on the radar of the Dutch (Michael Rave), Canadian and Australian efforts to do the same. Report back at next meeting.	<i>All three groups are aware of the existence of each other.</i>
20091020-07	Hideaki Goto, Brook	Minimum requirements for generating SP configurations in an eduroam federation.	<i>Ongoing.</i>
20091020-08	Brook	At the suggestion of Diego the eduroam.org website should have a portion devoted to projects that are doing work relating to eduroam (such as this).	<i>Included in the proposal.</i>

3. Summary of Beyond WebSSO

Klaas Wierenga gave a brief summary of the previous afternoons joint TF-EMC2/TF-Mobility and Network Middleware session on Beyond Web Single Sign-On where Josh Howlett and himself presented their proposals.

4. National Updates

Netherlands

- Paul Dekkers presented a summary of the work by Michael Rave (the monitoring device).

Miro called for the service to be more general purpose for more people. Wenche identified a company that has a sophisticated WLAN monitoring tool. The company is called 7signals and the product is called Sapphire. Paul stated that a future option could be a looking glass service to debug problems because looking through log files isn't pleasant. Klaas asked whether this is likely to gain interest in institutions.

- SURFnet eduroam service with centralised controllers and light weight access points were deployed in institutions. This is successful and the pilot will continue with two suppliers.

Wenche has tried implementing this similar service and an issue with allowing access points to connect from outside the network.

Paul stated that the various commercial suppliers were identical that offer solutions in this space. The only difference in comparison was how well they supported IPv6. The original plan was to offer an Open Source solution on top of OpenWrt but the manageability of this solution was limited.

Finland

Wenche Backman presented updates from Finland. The slides are available at:

<http://www.terena.org/activities/tf-mobility/meetings/21/National-update-Finland-2010-02-18.pptx> A report on Campus Best Practices is available at <http://www.terena.org/mail-archives/mobility/pdfxrhELoYXtV.pdf>

On the topic of problems raised, Mark suggested surveying the end users rather than IT support staff as they would have a very different view. He mentioned a reputation tool from a UK university that collects information from social networking sites and ranks posts as positive or negative. It would be useful to pump "eduroam" through this service.

Klaas mentioned a blog post that talked about "this eduroam network being so slow". Paul has identified some "incorrect" twitter posts referencing eduroam and posted updates/clarifications.

Japan

Hideaki GOTO from Tohoku University presented the situation in Japan. The slides are available at: <http://www.terena.org/activities/tf-mobility/meetings/21/TF-Mobility-21st-HGoto.pdf>

The core work centres on integration of their Shibboleth and eduroam AAI infrastructure to lower the barrier for adoption. Initial details of a city wide wifi collaboration with a commercial provider was also presented.

United States of America

Ken Klingenstein spoke of the work of eduroam in the US - and its increasing importance to InCommon members and a need for support. US institutions generally only offer ports 80 + 443. There will be 3 sessions at the Spring Internet2 Member Meeting surrounding eduroam. The issue of confederation was raised. It was recommended that this is deferred until the local federation was off the ground - and an additional layer of complexity will add little value in Internet2s eyes. The NSF is wanting to be an eduroam Service Provider. If eduroam membership is equivalent to InCommon membership then there will be a lot of synergy for expanding both communities.

United Kingdom

Mark O'Leary spoke about the investigation of a JANET branded 3G dongles and impact of this service. Consumers already have these services and there is dissatisfaction by customers because the "high speed" portion of 3G broadband. A JANET service wouldn't be useful to the community. Although the services are branded as 7Mb/s if the service provides 100kb/s then a fault won't be investigated. There is work looking at mobile wireless providers for public transport (bus and trains).

Lancaster University built access point (Linux) that has 2 x wifi cards, 3G, wimax and zigbee interfaces that can organize into a mesh and can be deployed to provide a day geology field trip or an archeological dig site or any other temporary or sensor network site.

eduroam visualisation (will be presented later) and a RadSec testbed is being deployed and statistic information will be published via IFmap, first to a local service which can get aggregated up to the national level. The non-trivial problem of publishing/subscribing to the data in a federated sense will need to be solved to make this cross domain data sharing possible.

InfoBlox have a wireless and DHCP but the service has an inactive RADIUS server on board - that would be useful in creating an eduroam-in-a-box hardware device. Discussions with their European operations were fruitful. Project suspended by US parent as no market perceived.

Australia

Email report from Glen Turner of AARNet related to the joint eduroam operators meeting on February 9th, a list of realms handled at various levels.

Problems identified:

- Both top levels claim: .ca .nz .ph
- APAN-au is missing: .ad .cat .cy eduroam-test.org .ensam.eu .fr .grangenet.net .hu .il .it-sudparis.eu .ja.net .kr .mk .nordu.net .ro .rs .tr .upc.net
- Europe is missing: .mo

Work is proceeding to clarify these problems.

5. Progress on Work Items

5.1 Standardisation process

No work on this item was presented.

5.2 Support for the development of the next generation eduroam

Stefan Winter talked about the TLS vulnerability and how it impacts authentication within eduroam. EAP-TLS it is only the handshake that is problematic. The other EAP methods are not impacted because injection of other data will cease the connection.

TLS renegotiation RFC has been published. There are implementations of this (for some time) there are still arguments.

RadSec/Radius over TLS is not part of the GN3 project because the IPR issues have yet to be resolved. Stefan will thenceforth be participating as an individual. Diameter working group participant/chair has been elected to the IAB.

EMU stands for "EAP method update", and deals with new authentication methods

[**ACTION**] **Stefan** to provide references of mailing lists for community interest (to the mobility mailing list).

5.3 Location awareness & Visualizing eduroam

Mark O'Leary presented on the history behind the creation of a visualization tool for eduroam use. The slides are available at: <http://www.terena.org/activities/tf-mobility/meetings/21/tf-mobility-vienna10-ml.pptx>

Mark also detailed the need to have opaque versions of the data and how to make diagnostic information available while protecting the privacy of users.

Miro stated that the eduroam database could include the necessary information. Stefan stated that additional information could be available as additional RADIUS attributes.

Mark made a call for any interested NREN to make contact if they would like to trial this tool. An expanded presentation will be at TNC2010.

[**ACTION**] **Mark** to keep community abreast of visualization tool licensing.

5.4 DNSSEC

Roland van Rijswijk presented on DNSSEC and the troubles with validation. The slides are available at: <http://www.surfnetters.nl/rijswijk/presentations/pres-tf-mob-20100218.pdf>

You can check your DNS size reply issues using the instructions at <http://labs.ripe.net/content/preparing-k-root-signed-root-zone> Many useful resources were presented. A BoF at TNC2010 will go ahead.

[**ACTION**] **Brook** to locate a time at TNC for a DNSSEC meeting/workshop.

Ken stated that the DNSSEC work needs come out from the shadow of Mobility. Klaas stated that the taskforce was Mobility and Network Middleware. Ken mentioned the Internet2 SIG on DNSSEC <https://spaces.internet2.edu/display/DNSSEC> and that it was unaware of this work item.

Should eduroam.org be signed? What is the business case what is the purpose. eduroam.org could become the root of a hierarchy for dynamic discovery. There is interesting work going on and Roland can't do this alone and called for community participation.

[ACTION] Track the location of REFEDs Q3/Q4 meeting (Fall isn't hemispherically correct) to determine whether a half-day DNSSEC meeting could be held.

5.5 Integration with other operators

Stefan Winter discussed the need for combining the agreements that individual country NRENs have mobile operators for 3G that there should be a list of national flat rate data.

Josh would like to also compile any failed negotiations so that people could work out which operators to not burn time on.

The current list is:

T-Mobile	DFN (Stefan mentioned this, source: DFN-Mitteilungen 77, page 9-10 http://www.dfn.de/fileadmin/5Presse/DFNMitteilungen/heft77.pdf), but there is no web page for the service. Institutions can get into the deal by mentioning a special keyword "DFN-Rahmenvertrag" in contract negotiations. The text says that a flat fee of 19,95 EUR covers unlimited 3G access and access at 20.000 T-Mobile Wifi hotspots Germany-wide; and also states that DFN will subsequently try to negotiate international flat roaming deals. Some clarifications/details on their deal would be helpful
Telefonica/O2	HEANet - http://heanet.ie/services/software_contract_management/existing_agreements/mobile_broadband/press_release and http://www.heanet.ie/conferences/2008/presentations/eoinkenny.pdf
Vodafone	<ul style="list-style-type: none"> • SURFnet - https://directsales.vodafone.nl/surfspot • CARNet/Srce

5.6 Metering and monitoring

Miroslav Milinović, Srce presented the [results of eduroam supplicant survey](#) and other work on Metering and Monitoring,

- http://monitor.eduroam.org/eduroam_map.php?kml=europe_capital
- University of Bristol <http://www.wireless.bris.ac.uk/maps/xmap.html>

Miro presented that there were over 15,000 eduroam people roaming days in December 2009. This is a 3 fold increase since December 2008. There is also a "radsec" country because the logging within Radiator doesn't expose sufficient information to map country information.

From the eduroam supplicant survey that was run in 2009 <http://www.terena.org/mail-archives/mobility/pdfCog1yI7EKw.pdf> there doesn't seem to be an impact with the use of SecureW2.

Paul Dekkers mentioned that the community edition is no longer available to download. José-Manual said that a group of institutions are looking at pooling together to purchase either Cisco, Juniper or SecureW2 supplicants.

Some people are still happy with the earlier SecureW2 v1.x and it uses the Windows framework that it why it continues to work on Windows 7.

Miro discussed PEAP-GTC: PEAP+MSCHAP are out of scope because their NRO and AAI require strong cryptography. You can modify your FreeRADIUS configuration with around 3 lines of changes which has been posted to the mailing list <http://www.terena.org/mail-archives/mobility/pdfscuyjHPkID.pdf> - the downside to this solution is that you must type in your password each time you connect on a Nokia mobile phone. There may be potential work arounds.

5.7 Sensor and mesh networking

Kurt Bauman presented a feasibility study on "Wireless Mesh-Networks for Interconnection of Remote Sites to Fixed Broadband Networks" the full presentation is available http://www.terena.org/activities/tf-mobility/meetings/21/FeasibilityStudy_SWITCH_100217.pdf

The project investigated the feasibility of multi-hop wireless mesh networks for connecting sensor networks or other devices deployed in remote areas over multiple 10km hops with the goal of evaluating bandwidth, delay, and robustness of the solution.

5.8 Liaison with GN2/GN3

No work on this item was presented.

5.9 Cooperation with other initiatives

Klaas Wierenga mentioned the work of the eduroam Global Working Group. Updates will be made available on the relevant lists.

5.10 New mobile technologies

No work on this item was presented. An existing action item remaining for this work.

6. Mobility Activities

6.1 RadSec and DAME

Sascha Neinert presented some history on previous DAME projects and the work underway in DAME-2. The slides are available at: http://www.terena.org/activities/tf-mobility/meetings/21/dame_at_tf-mobility_vienna_2010-02-18.ppt

There will be some future tests in the testbed that will look at the performance of dynamic radsec via DNS or MDS. GN3's interest in this is the performance improvements between DNS + MDS. Are there GN3 use cases for DAME? Answer currently "no".

More information is available at <http://dame.inf.um.es/>

6.2 VoIP Experiments

Gabriel López presented VoIP experiments over DAME/eduroam. The slides are available at: <http://www.terena.org/activities/tf-mobility/meetings/21/VoIP-DAMe.ppt>

The scenario presented has a firewall between the remote and home institution requiring registration with the remote institution (visited site) first to be able to make calls. There is interest in developing this solution if there is wider interest from the community. There was work in Croatia to develop a better SIP client that allows experimentation and extensions of more complex authentication methods that would align with these experiments.

Discussions on further development, man-power and financial resourcing will be taken to JRA3 for discussion.

6.3 EAP-FAST testing

Paul Dekkers presented on the EAP-FAST testing that he and Tomasz Wolniewicz have been conducting. The slides are available at: <http://www.surfnetters.nl/paul/eap-fast-02.ppt>

The ordering of EAP types is important and if it is configurable will save you a round trip per EAP type that you have listed if your preferred method is the first listed. The use of Diffie Helman keyfile is required of EAP-FAST and improves performance for other TLS types - but the reasons for this and why it is better hasn't been determined beyond the fact that it is recommended by the software.

The testing showed that PEAP takes the longest time and is the most inefficient. PEAP is now becoming more popular because of the SecureW2 licensing issue. The talk concluded that EAP-FAST is useful and there is a need for increased free clients and that RadSec with dynamic discovery improves the latency by being able to bypass 8 servers in a connection between The Netherlands and Poland.

6.4 FreeRADIUS, EAP-FAST and EAP Fragmentation

Maja Wolniewicz presented on the configuration requirements for supporting EAP-FAST within FreeRADIUS v1.1.4. This described the compilation and configuration between library dependencies as non-trivial. The presentation slides are available at:

<http://www.terena.org/activities/tf-mobility/meetings/21/eapfastfreeradius.pdf>

6.5 eduroam.org Website

Brook presents his ideas on the eduroam.org website. He has mockups for the site, based on a model that goes down from "area" to "country" to "institution". He suggests also including institutions that don't yet support eduroam and having something like a "petition" button on there. The goal is also to evangelise eduroam.

Klaas says that the current site is mostly a European site whereas it should be an international site. Insufficient time was available to discuss the proposal or determine the stakeholders/steering group for eduroam.org changes and improvements.

[ACTION] Brook to determine (independent of funding) the authority to make wholesale changes to the eduroam website for future discussion.

7. Date of Future Meetings

During the week of September 20th, 2010 in Copenhagen was agreed as an acceptable time to those present.

[**ACTION**] Brook to liaise with Jacob-Steen @ WAYF regarding the logistics of the event.

8. Any Other Business and Close

The meeting closed at 17:45. (Minutes published 11th March 2010)

Summary of Actions

Reference	Who	Action	Status
20100218-01	Stefan	Provide references of mailing lists for community interest (to the mobility mailing list).	
20100218-02	Mark	Keep community abreast of visualization tool licensing.	
20100218-03	Brook	Locate a time at TNC for a DNSSEC meeting.	
20100218-04	Brook	Track the location of REFEDs Q3/Q4 meeting to determine whether a half-day DNSSEC meeting could be held.	
20100218-05	Brook	Determine the authority to make wholesale changes to the eduroam website for future discussion.	
20100218-05	Brook Jacob	Liaise with WAYF regarding the logistics of the next event.	

Document History

Date	Comment	Status
18 Feb 2010	Initial text collaboratively written in Google Wave.	Internal
11 Mar 2010	Initial version published for comment.	Published