



NOC Tool Workshop & 4th TF-NOC meeting

11-12 October 2011

Brussels, Belgium

Table of contents

Table of contents	1
Minutes	1
1. Introduction, roll call, minutes, and actions.....	1
2. NOC Tool Workshop	1
3. Community and Work Items' update.....	3
4. Discussions and Actions on various topics	3
5. Next steps, AOB, and close	4
List of actions	5
List of participants.....	5

Minutes

1. Introduction, roll call, minutes, and actions

The 4th Network Operation Centre Task Force (TF-NOC) meeting in conjunction with the open source *NOC Tool Workshop* was held on 11-12 October, 2011, hosted by Belnet, the Belgian research and education network in Brussels, Belgium. This was the first time when TF-NOC organised a workshop on a specific topic next to its regular meeting. The event was attended by 35 people (of which 13 joined and interacted via video conference, on-line streaming, and chat) and concluded as a great success. The TERENA secretary was Peter Szegedi.

The meeting agenda was approved without changes. Presentations are available at:

<http://www.terena.org/activities/tf-noc/meeting4/programme.html>

The previous meeting minutes were approved with no comments. All the action items have been completed. Check the latest updates on the Wiki at

<https://confluence.terena.org/display/NOC/Action+points>

2. NOC Tool Workshop

Pierre Wallemacq (Belnet) presented their Nagios monitoring tool plug-in developments (<http://www.terena.org/activities/tf-noc/meeting4/slides/111011-nagios.pdf>) that gained significant interest among the workshop participants and led to an agreement to organise a dedicated *Nagios plugfest session* during the next coming TF-NOC meeting. A small group of Belnet people has been doing these Nagios development so far and the idea to build a broader developer community around the tool with the help of TF-NOC will be followed up on the mailing list.

Slavko Gajin (AMRES, director of university IT department) presented their NetFlow analyser tool (ICmyNet.Flow), as well as their multimedia traffic (ICmyNet.Media) and Domain Name Server (DNS) monitoring (ICmyNet.DNS) solutions. All these tools are open source and codes are available to the research and education community for free. The AMRES support team must be contacted for the source codes and licences.

- ICmyNet.Flow: <http://www.terena.org/activities/tf-noc/meeting4/slides/111011-flow-sg.pdf>
- ICmyNet.Media: <http://www.terena.org/activities/tf-noc/meeting4/slides/111011-flow-sg.pdf>
- ICmyNet.DNS: <http://www.terena.org/activities/tf-noc/meeting4/slides/111011-dns-sg.pdf>

Vilmos Bilicki (representative of NIIF/HUNGARNET and University of Szeged, Hungary) presented their DWDM plug-in (<http://www.terena.org/activities/tf-noc/meeting4/slides/111011-dwdm-vb.pdf>) to extend the topology discovery function of the cNIS tool, developed and maintained by PSNC, the Polish Supercomputing Centre. The holistic view of the network elements is not enough; we need a view on the topology either. The current version is capable of Ethernet and MPLS level discovery on Cisco and Juniper boxes (Alcatel support is on the pipeline).

Jaime Perez (RedIRIS) talked about their work on how to monitor Identity Providers (IdPs), (<http://www.terena.org/activities/tf-noc/meeting4/slides/111011-fedmon-jp.pdf>) especially hub-and-spoke federations. For instance, eduroam is monitored by this tool at RedIRIS. It is Nagios compliant and independent on the federation protocol (i.e. Shibboleth, SAML, OpenIDP, Papi, etc.) Code is openly available but its implementation depends on the actual IdP's implementation.

Gro-Anita Vindheim (NTNU, Norway) demonstrated their NAV tool to monitor large computer networks at campuses (<http://www.terena.org/activities/tf-noc/meeting4/slides/111011-nav-gav.pdf>). In Norway it is widely used, it is available under the UNINETT software licence umbrella.

Andree Toonk (BCNET, Vancouver, Canada) gave a remote presentation (<http://www.terena.org/activities/tf-noc/meeting4/slides/111011-bcnet-at.pdf>) and demonstration (<http://www.terena.org/activities/tf-noc/meeting4/slides/111011-bcnet-demo-at.mp4>) on their home-grown network management tool that has excellent features and user-friendly interface. The idea of custom made tool platforms was very welcome by the workshop attendees and may lead to further discussions with BCNET as soon as they open source their code as it is planned.

The lively panel discussion, chaired by Maria Isabel Gandia Carriedo (CESCA), concluded that open source development is the key but just the beginning of the story (<http://www.terena.org/activities/tf-noc/meeting4/slides/111011-noc-tool-panel-mi.pdf>). Issues with licensing, code stability and versioning, security, privacy (such as hardcoded root passwords) are considered as main obstacles. Not only open source codes are needed but a community around the development that can ensure the continuity of the tool support and enhancements. Workshop attendees expressed their wish to organise similar workshops in the

future co-located with the TF-NOC meetings and team up around monitoring tools that are in common interest of the NREN community (such as Nagios).

3. Community and Work Items' update

The second day of the event was dedicated to the general TF-NOC task force discussions and work item updates. As Peter Szegedi (TERENA, TF-NOC Secretary) summarised (<http://www.terena.org/activities/tf-noc/meeting4/slides/111012-community-ps.pdf>), TF-NOC started in September 2010, roughly one year ago, so it was time to look back and see what has been achieved so far. Started at no definition and common understanding on Network Operation Centres (NOCs) and their main roles and responsibilities, thanks to the TF-NOC task force, now participants have a decent knowledge and good ideas on how NOCs should look like and operate. Task force participants had the opportunity to learn from each other, share their experiences openly and getting feedback on what they are doing and how they are solving their problems is in line with what others facing with similar issues do.

Work item updates were given by:

- Gareth Eason (HEAnet) - Work Item B
<http://www.terena.org/activities/tf-noc/meeting4/slides/111012-wib-update-ge.pdf>
- Maria Isabel Gandía Carriedo (CESCA) – Work Item C
<http://www.terena.org/activities/tf-noc/meeting4/slides/111012-wic-update-mi.pdf>
- Wiktor Procyk (PSNC) – Work Item D
<http://www.terena.org/activities/tf-noc/meeting4/slides/111012-communication-wp.pdf>

4. Discussions and Actions on various topics

The task force closed its first survey (<http://www.terena.org/activities/tf-noc/meeting4/slides/111012-survey-ps.pdf>) primarily focusing on NOC tools and agreed to put significant efforts into the analysis of the results that will eventually be made publically available.

ACTION 25 on Stefan Liström (NORDUnet) is to organise a Work Item Leader VC on how to do the survey analysis and invite other task force participants (if interested).

Partly motivated by the NOC Tool Workshop discussions and the presentation done by Ernst Heiri (SWITCH) on their small tools and scripts (<http://www.terena.org/activities/tf-noc/meeting4/slides/111011-scripts-eh.pdf>), participants agreed to create a script library under the TF-NOC Wiki where useful scripts will be collected that can help the day-to-day operations. All the participants agreed to find and upload at least one script that they think might be useful for other NOCs to look at. It is also possible to express their wishes for useful scripts that may be provided by others.

ACTION 26 on All (TF-NOC) is to publish either small script(s) useful for NOC operations or a wish-list of script(s) on the dedicated Script library Wiki page at <https://confluence.terena.org/display/NOC/Script+library>

In addition to it, due to the particular interest in the Nagios monitoring tool, the meeting

participants expressed their wish to try and organise a Nagios related half-day event or session next time.

ACTION 27 on Peter Szegedi (TERENA), Ernst Heiri (SWITCH), and Pierre Wallemacq (Belnet) is to investigate the possibility of organising a "Nagios plugfest" session at the next coming TF-NOC meeting.

The preliminary analysis of the survey results showed that at least five NOCs are in a situation that they have best practice documents publicly available about more than 25% of the internal NOC procedures. It was agreed to approach these organizations and start collecting common best practices on the TF-NOC Wiki immediately.

ACTION 28 on Pieter Hanssens (Belnet) is to check the relevant survey results and start collecting the publicly available Best practice documents on the Wiki at <https://confluence.terena.org/display/NOC/Best+practice+documents>

Wiktor Procyk (PSNC) talked about managing virtualized IPv6 networks (<http://www.terena.org/activities/tf-noc/meeting4/slides/111012-virt-ipv6-wp.pdf>). Applications existing on the market provide only basic support for IPv6, many do not support it at all. PSNC's proposal is to use pmacct and pmacct-snmp.

Gareth Eason (HEAnet) introduced the result of his mini-survey on "*the 3 most important things for your NOC and how you handle them*". (<http://www.terena.org/activities/tf-noc/meeting4/slides/111012-top3-ge.pdf>) The top 3 includes: procedures – standards in documented way; incident management – good supporting toolset; and monitoring.

There was an open discussion about using social media tools in NOC communications. Participants agreed that not the medium but the abstract level of communication matters. Among the attendees there were more Facebook than Twitter users. Some NRENs and NOCs already have their Facebook page. The discussion concluded that NRENs need a strategy regarding social media tools (even if the strategy is not to use social media at NOCs).

5. Next steps, AOB, and close

There was a round table on what TF-NOC should do/achieve in the next coming year. The discussion concluded that the Wiki page should turn into an active source of information including written form of NOC practices that can be further discussed and refined. The focus of the activity should be more on monitoring solutions, standard procedures, and incident management practices in the future that may lead to new work items within the task force focusing on these specific topics. The meeting attendees found the two-day event very useful and informative with respect to its openness and collaborative fashion.

At the end of the day, Gareth Eason announced that he is leaving HEAnet therefore stepping down as leader of the NOC front-end Work Item. "It was a wonderful period of collaboration with all" – he said. Gareth was one of the initiators and key figures of TF-NOC from the very beginning of the activity. TF-NOC extended its thanks for his work over the years, and plans to confirm his replacement by the next coming task force meeting in February-March 2012 timeframe.

Participants expressed their wish to try and co-locate the next coming TF-NOC meeting with the GN3 APM group. Peter Szegedi (TERENA) is going to investigate the possibilities.

List of actions

TSec(11)046	Who	What	Deadline
Action 25	Stefan Liström (NORDUnet)	to organise a Work Item Leader VC on the survey analysis and invite other task force participants too.	ASAP
Action 26	All (TF-NOC)	to publish either small script(s) useful for NOC operations or a wish-list of script(s) on the dedicated Script library Wiki page.	by December 2011
Action 27	Peter Szegedi (TERENA) Ernst Heiri (SWITCH) Pierre Wallemacq (Belnet)	to investigate the possibility of organising a "Nagios plugfest" session at the next coming TF-NOC meeting.	by December 2011
Action 28	Pieter Hanssens (Belnet)	to check the relevant survey results and start collecting the publicly available Best practice documents on the Wiki.	ASAP

List of participants

NAME	AFFILIATION
Gyorgy Balazs	CERN
Tony Barber	DANTE
Vilmos Bilicki	NIIF/USZ
Giovanni Cesaroni	GARR
Gareth Eason	HEAnet
Slavko Gajin	AMRES
Maria Isabel Gandia Carriedo	CESCA
Pieter Hanssens	Belnet
Ernst Heiri	SWITCH
Alessandro Inzerilli	GARR
Håvard Kusslid	UNINETT
Stefan Liström	NORDUnet
Pasquale Mandato	GARR
Ana Medina Barahona	RedIRIS
Brian Nisbet	HEAnet
Fabio Pellegrini	GARR
Wiktor Procyk	PSNC
Jaime Pérez	RedIRIS
Peter Szegedi	TERENA

Vegard Vesterheim	UNINETT
Gro-Anita Vindheim	NTNU
Pierre Wallemacq	Belnet
<i>Andreas Polyrakis</i>	<i>GRNET*</i>
<i>Yannis Mitsos</i>	<i>GRNET*</i>
<i>Kurt Bauer</i>	<i>ACOnet*</i>
<i>Ronald van der Pol</i>	<i>SARA*</i>
<i>Sandor Rozsa</i>	<i>USLHCnet*</i>
<i>Dusan Pajin</i>	<i>AMRES*</i>
<i>Bojan Jakovljevic</i>	<i>AMRES*</i>
<i>Marko Stojakovic</i>	<i>AMRES*</i>
<i>Nino Ciurleo</i>	<i>GARR*</i>
<i>Andree Toonk</i>	<i>BCNET*</i>
<i>Marilyn Hay</i>	<i>BCNET*</i>
<i>Rachael Holt</i>	<i>HEAnet*</i>
<i>Suzi Limberg</i>	<i>Sentry Insurance*</i>

** remote participant via VC and/or Streaming & Chat*