CTO Forum - 2 March 2017

Logistics

- date: 02.03.2017
- time: 10:00 - 15:00 CEST
- venue: NORDUnet office Kastrup (tentative)
- VC room for remote participation: 632462520

Agenda (tentative)

1. In-depth topics
    a. Data Analytics services.
    b. Network monitoring and probes
2. Review of CTO Forum Charter
3. Lunch (45 minutes)
4. Updates (45 mins)
    a. NORDUnet next-generation network preparations
    b. GÉANT next-generation network discussions
    c. GN4 update
    d. Nordic Network maps
    e. Nordic booth for TNC2017
    f. NTW2017 - program committee
    g. Tenders
5. Country / NORDUnet updates (max. 15 minutes per NREN)
    - FUNET slides
    - SUNET slides
    - UNINETT slides
    - DeIC slides
    - RHnet slides
    - NORDUnet slides
6. AOB

Participants

Notes

- Data Analytiics Services: Olav Kvittem introduced UNINETT innovation projects during 2015-2017 on the use of container technologies to achieve cloud-based hosting of applications. UNINETT has been experimenting with cloud application platforms since 2008. Now favouring Kubernetes as an orchestrator platform for Docker. These technologies have now reached a state where UNINIETT Sigma is setting up a production service for researcheres (NIRD) to be launched in spring 2.0. Meanwhile, UNINETT runs an internal service based in IPnett VMs
    - Sigma has made a survey and had responses from a range of Norwegian research groups. Sigma is doing the customer contact and profiling, UNINETT develops the techologies and investigates the options. UNINETT Sigma manages services and service roadmaps, organising user communities, gathering requirements, and building consensus where needed. UNINETT also has the role of **leading** the community to establish prototype services and showing the way. (this needs funds for innovation, which UNINETT has).
    - In Sweden, the landscape is more fragmented, so while the technology is possible, organising a user base is far more difficult.
    - The basic realization (from Sigma and others) is that there's a need for something more than traditional HPC services.
    - On the technology side, UNINETT is moving to deep learning and as building a GPU cluster.
    - Initial UNINETT investment was 1/2 FTE for 2-3 years for technology investigations. For building the current services, about 2000 PH.
    - Next steps (UNINETT): UH-Sky cloud pilot to build distributed Kubernetes platform. NeIC Glenna Project (UNINETT, CSC, DeIC, UiO, UiB) - 2 PY per year per country for 3 years. Much effort on OpenStack, but also a Kubernetes effort by CSC and UNINETT:
    - Olav: it's achievable to have a Nordic production platform within 2-3 years.
    - Related project: Delingr (also a NeIC project), for sharing HPC resources between countries.
    - UNINETT now working on portalts for automating the setup of applications in containers, with no manual steps.
    - According to UNINETT calculations, building on-prem saves cost compared to using commercial resources.
    - Is there an opportunity to build a Nordic-level service here, or having a nordic-level platform? If so, what is the NORDUnet role, and what is the thing we want to do?
    - Martin B: we may also go after the public cloud users.
    - Can we identify Nordic pilot users? Can we approach them across two or three countries?
- Measurements and probes
    - NORDUnet is deploying PerfSONAR 4.0. Initial deployment is 4 nodes. If successful, it will be brought to all NDN nodes. A report will be delivered at a future meeting / at NTW2017
    - UNINETT has been doing experiments with micro-dependabilities in routed networks. Initially this was for network research, but using elastic search this is now being streamlined into a operations-focused tool. The tool gives a view of small outages in the routed IP network, and can be used as a starting point for forensics. Several BGP issues were identified in UNINETT based on this. UNINETT is moving to fast re-route based on this. PN disagree. This also leads to a drive towards partial routing, to reduce convergence time.
    - One possible next step is to talk to the PerfSONAR team and learn if there's an option for adding another type of measurement to PS.
- CTO Forum charter: LF will summarize to CTO list in preparation of material for BM101 (21 March)
- NTW2017: We are soliciting members of the program committee. Leif believes that we should have only Open Space. Per suggests one day of Open Space. We will reach out to Nordic Groups to solicit input.
- Tenders:
    - GÉANT IaaS tender: Per highlight that suppliers are not obliged to work with the NRENs, and can go directly to campuses. VN: this is part of a learning process for NRENs and GÉANT.
    - LMS tender standstill ends 3 March

- VC tender discussions w/ vendors ongoing. There will be a framework agreement with 4 vendors. We are preparing vendor call-off. We favour a concurrent user model. We expect to have vendor responses by end March.
- Media management tender closes 10 March. Currently 4 vendors registered.
- IP Routing Equipment tender going out soon. NDN need this to close in June '17. NRENs need to clarify if they can participate or have overlapping contracts.
- Desktop storage tender to launch in a few weeks. There's some interest in having multiple possible vendors.
- ESA storage tender; deadline is 27 March.
- Updates
  - NORDUnet: new core routers to be deployed within 4 weeks
  - DeIC
    - Optical network acceptance test is delayed but will happen in a month or two
    - Preparing launch of dynamic procurement system for fibre (and transmission lines). Objective is to interest both national and local fibre owners.
  - FUNET
    - Has organized a network administration courses on "wireless network administration" for campuses. This has been very popular with FUNET partners
    - On request of campuses, seminar room features are being added to adobe connect. Procurement has been "complicated"
    - FUNET2020 planning work launched. This is a complete renewal (fibre, transport, routing)
  - SUNET
    - Network deployment has been completed. Some outstanding challenges with RAMAN amplifiers, in preparation of possible 400 Gbps upgrade.
    - SUNET looking to add federated ID capability to OpenID connect. Various further development of eduroam planned as well.
    - Large interest in LMS tender
  - UNINETT
    - Major re-organization upcoming for the entire R&E sector in Norway. This includes all levels of the sector, from public schools to universities, and so impacts all level of governance (city, region, country).
    - Potential impact of the above on services and organization at UNINETT is so far unknown.
    - University of Agder is using IaaS to run student labs. UNINETT believe all universities should do the same.
    - UNINETT is contributing NAV work to GÉANT Network Management as a Service. Part of this is a cloud-based deployment of NAV tools that may also apply to deployment in Norway.
    - New fibre projects coming; Stavanger - Newcastle, MIdgaardsormen, Arctic Connect (Norway, Russia, Japan, China)
    - BIg effort in having stronger operational security.

Actions