

## **NORDUnet Q3 2009 Update**

### **Operational Status:**

There have been a high level of activity in both IP and Optical areas, caused by sfw. upgrades and other work in preparation of the upgrade to 40G in the core networks. Outside these self-inflicted activities the NORDUnet network has been stable.

A number of problems with the Junos code have been experienced, mainly in areas relating to multicast support. A "get well plan" that will take us to a single stable version for both the T1600 and the MX480 platforms has been agreed with juniper.

### **HEADS-UP renaming of Connections:**

As a result of implementing the NORDUnet Naming standards, explained below, all lines, circuits or services delivered by NORDUnet will be named according to this and will have a Service number associated. There will be separate information regarding this distributed during October.

### **Naming Standard:**

Nordunet has completed the full naming standardization for all platforms and services.

The main document is the Generic Naming Standard document, which encompasses all aspects of naming within a network technical operational environment.

For each of the NORDUnet network platforms or specific technical areas, the NORDUnet specific adaption of the naming standard is defined, and the usage explained in the below documents. All of these shall be seen as appendixes to the generic naming convention.

- Cabling (pdf) (physical connections)
- RM Transport (pdf) (Alcatel LM)
- BM Ethernet (pdf) (Alcatel TSS)
- IP Equipment (pdf) (Juniper/Cisco) and Services
- DNS (pdf)
- Server (pdf)

Any questions in relation to a specific document, please contact the author of the document.

All documents can be found at [www.nunoc.net](http://www.nunoc.net).

### **IP Transit:**

The IP Transit tender has been completed and contracts awarded to Telia and TINET (former Tiscali) . This will result in a cost saving in excess of 40% based on current traffic volumes.

The contracts with Telia are for; a primary 10GBps flat rate and a secondary 10GBps metered burst able. The traffic is split over 2 or 3 physical 10G links. The traffic volumes are calculated together as a total over the 2 or 3 links.

The contract with TINET is for a tertiary 10GBps metered burst able link.

### **Upgrade of the NORDUnet – NREN IP network connectivity:**

RHnet: 2 Juniper MX480 routers have been installed in Reykjavik. The main OC192 connection is in service, the backup connection via London is under implementation,

UNINETT: The backup connection to UNINETT has been upgraded to 10GE.

SUNET: The backup connection has SUNET has been upgraded to 2\*OC192.

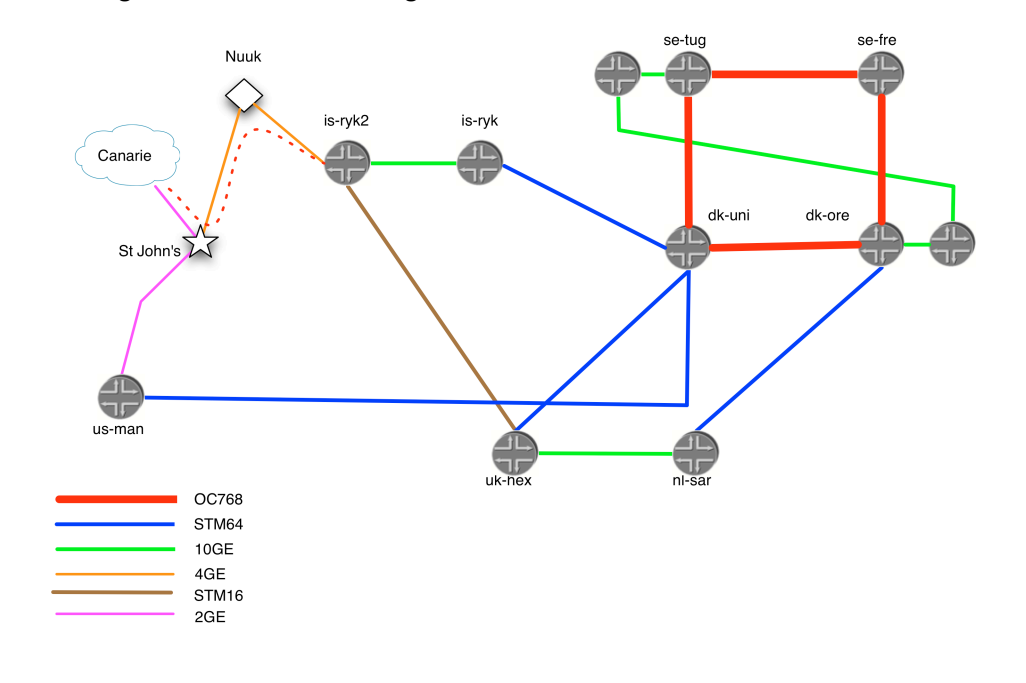
FUNET: The backup connection to FUNET has been upgraded to OC192.

Forskningsnettet: The backup connection to Forskningsnettet has been upgraded to 10GE.

## The IP core network:

The upgrade of all IP Core nodes to T1600 has been completed, and the first IP core 40G link between UNI-C and Ørestad has been put in to production. We did not experience any compatibility or other interoperability issues between Alcatel-Lucent and Juniper 40G equipment. The 3 remaining links are being upgraded as per project plan and the full core will be upgraded by end October allowing for 2 weeks stability testing on each link before it is put in to full production.

Final design to be in service during Q4:



## Peering

The LINX peering point was put in to production last week in August.

AMS-IX status:

<http://stats.nordu.net/stat-q/r-all?q=all&name=AMSIX>

261 IPv4 peerings (2 Peerings with several ISPs)

119 IPv6 peerings (2 Peerings with several ISPs)

LINX status:

<http://stats.nordu.net/stat-q/r-all?q=all&name=LINX>

105 IPv4 peerings

42 IPv6 peerings

Netnod status:

<http://stats.nordu.net/stat-q/r-all?q=all&name=NETNOD>

128 IPv4 peerings (2 Peerings with all ISPs)

30 IPv6 peerings (2 Peerings with all ISPs)

NIX status:

<http://stats.nordu.net/stat-q/r-all?q=all&name=NIX>

33 IPv4 peerings

13 IPv6 peerings

DIX status:

<http://stats.nordu.net/stat-q/r-all?q=all&name=DIX>

21 IPv4 peerings

5 IPv6 peerings

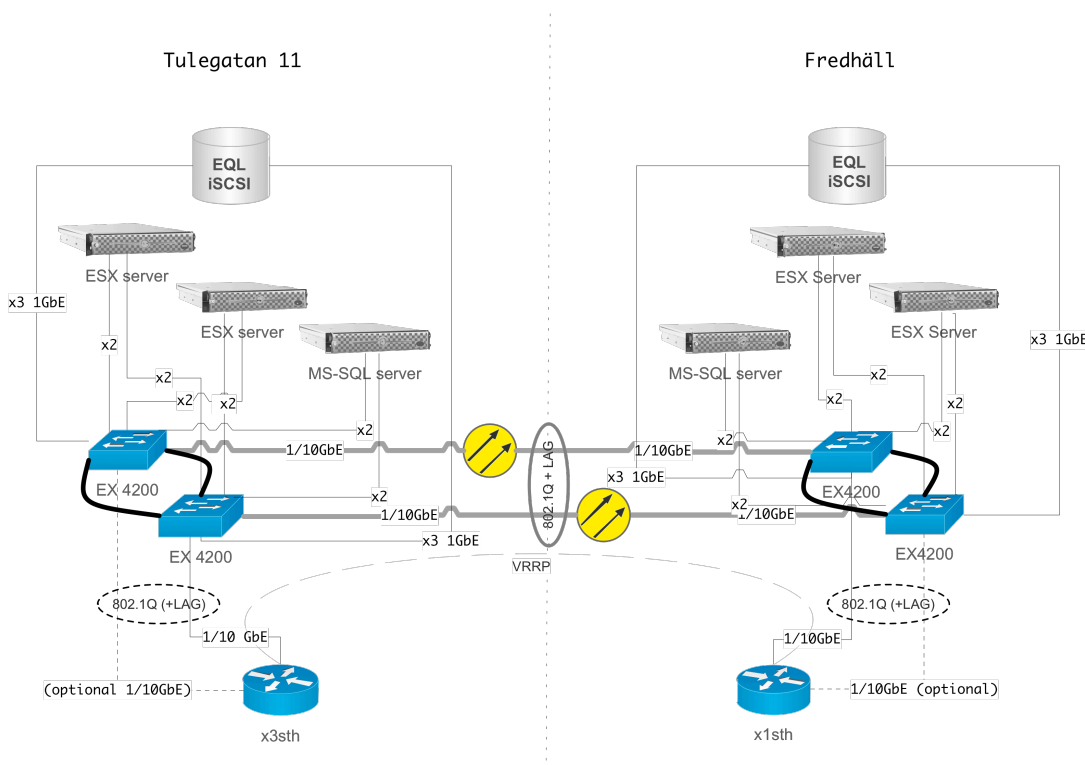
## NYIIX status:

This is continuing to drag on, we have signed a contract for housing but have yet to fix/decide on how to organize the insurance for us being in the site. We are investigating 2 options; buy the insurance ourselves or buy it through the contract with NYIIX. We expect to complete this project before end of October.

## VMWare cluster setup

We have completed a virtualized server setup in both Copenhagen and Stockholm. using DELL servers, Equallogic iSCSI storage and VMWare ESX 4.0 virtualization software. The first major application to run on the clusters is Adobe Connect Pro (video conferencing for SUNET customers) with a federated ID login, other customers are WAYF and Kalmar union.

We believe this is a sound virtualization architectural design that can easily be extended and used for further deployments.



## Optical:

The OND team is deeply involved in the GN3 activities, approximately 60% of all the resources are spent on GN3. The biggest achievements is that NORDUnet's 40G Alcatel Lucent wavelength Deployment has now been running error free in NORDUnet's Alcatel-Lucent DWDM network for several weeks. This 40G wavelength is Alcatel-Lucent's first 40G Long Haul deployment in Europe in a production network. This has shown that our WSS deployment starts to pay off in relation to operational aspects.

## New connectivity:

A total of 4 new 10G connections for DEISA , and LHC OPN projects have been provisioned.