

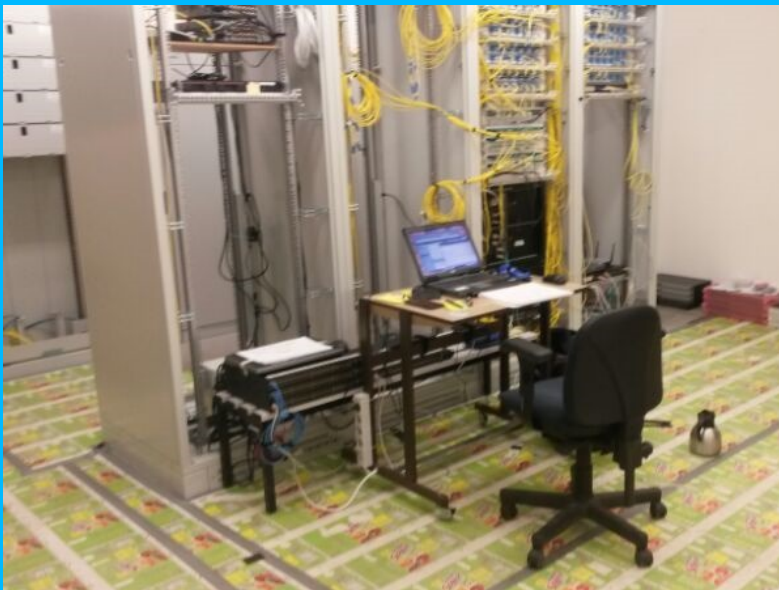
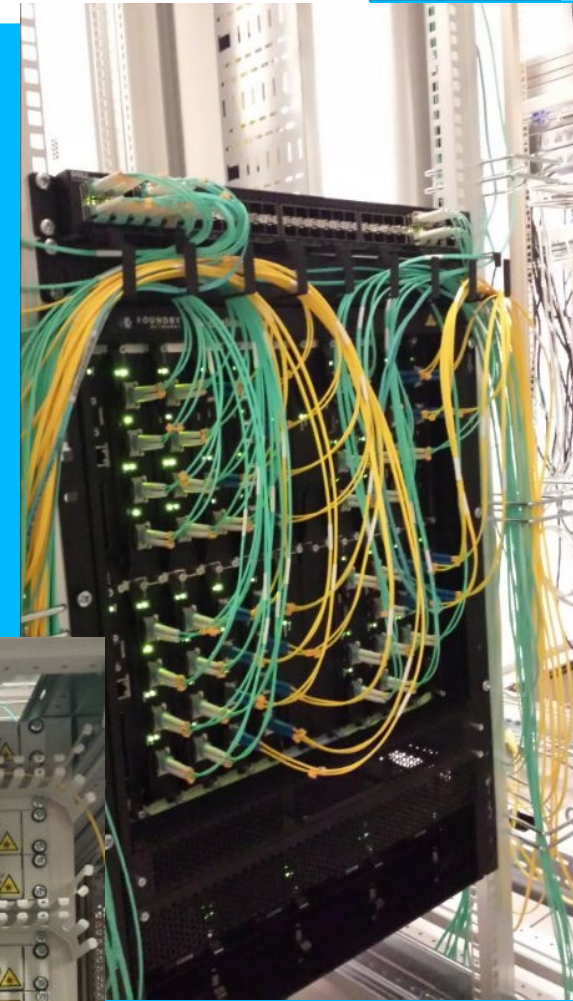
Network Reconfiguration

LSM 2015-06-10
Jan David Mol

- What?
 - Full network layout change @ CEP Groningen
 - Full network layout change @ CN Exloo
 - Replace optics @ 17 Dutch stations
 - Expansion of power & cooling @ CEP Groningen
- Why?
 - Simpler network design → fewer issues
 - Removed unsupported hardware
 - Ready for Dragnet, CEP4, more ingest servers (lexar)
- Planned: Mon May 18th – Fri May 29th
- Executed: Mon May 18th – Wed June 3rd

Status

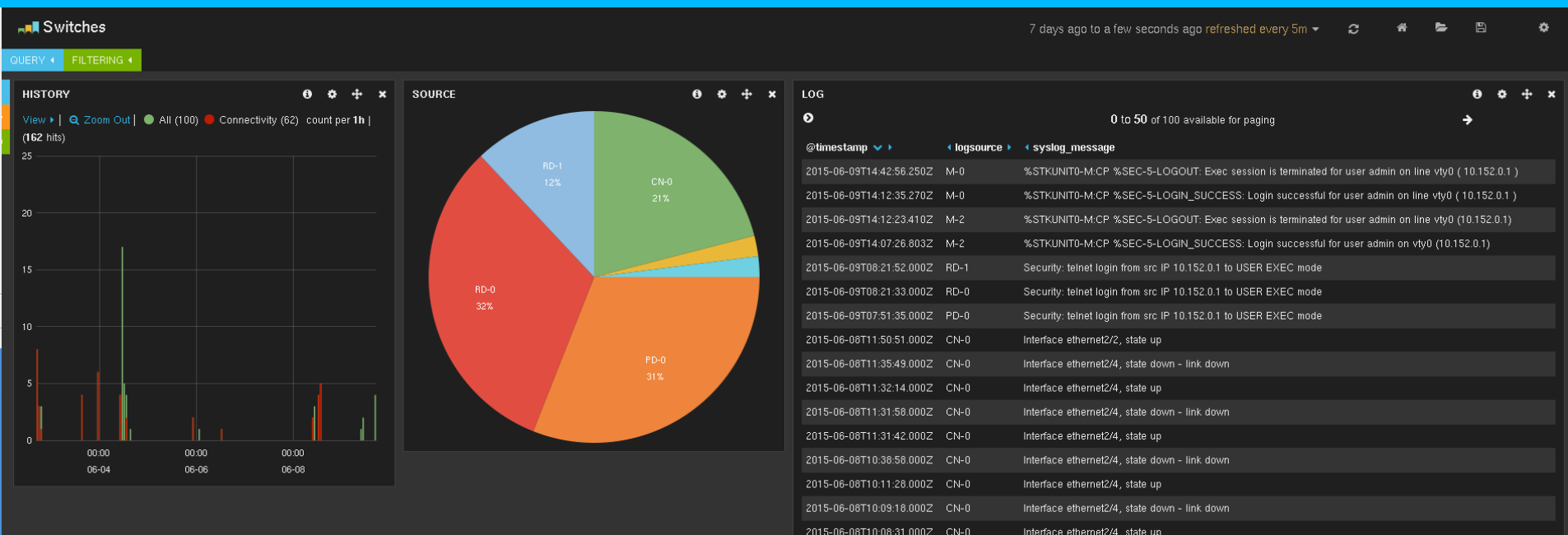
- Everything is operational!
 - Stations show 0.0% packet loss
 - Bandwidth Cobalt → CEP2 nominal
 - Bandwidth CEP2 → LTA nominal
 - Bandwidth CEP3 ↔ CEP2 nominal



- Reboot of almost all stations
- RS stations: Clock restabilises → clock drift (for few hours)
- Most RS stations online @ Fri May 29th
 - RS210 online @ Mon June 1st
 - RS306 online @ Tue June 2nd
- **Clock offset introduced** for core (CS) stations (~**19ns**):
 - SynOptic feeder cable in CN was changed (1m → 5m).
 - All core stations have exact same offset.
 - Will be recalibrated.

Network Monitoring (Layer 2)

- Enriches monitoring of higher layers (3=IP, 4=TCP, etc)
- Allows faster troubleshooting
- Monitored through Zabbix (=central system monitor)
- Monitored through Logstash (=new central logging server)



- Mission succesful
- Data unaffected
 - Except for 19ns clock drift @ core
- Increase in expected uptime:
 - Future proof design
 - Fewer issues
 - Easier troubleshooting