

Networking

NeIC NT1 Manager
Mattias Wadenstein
<maswan@ndgf.org>

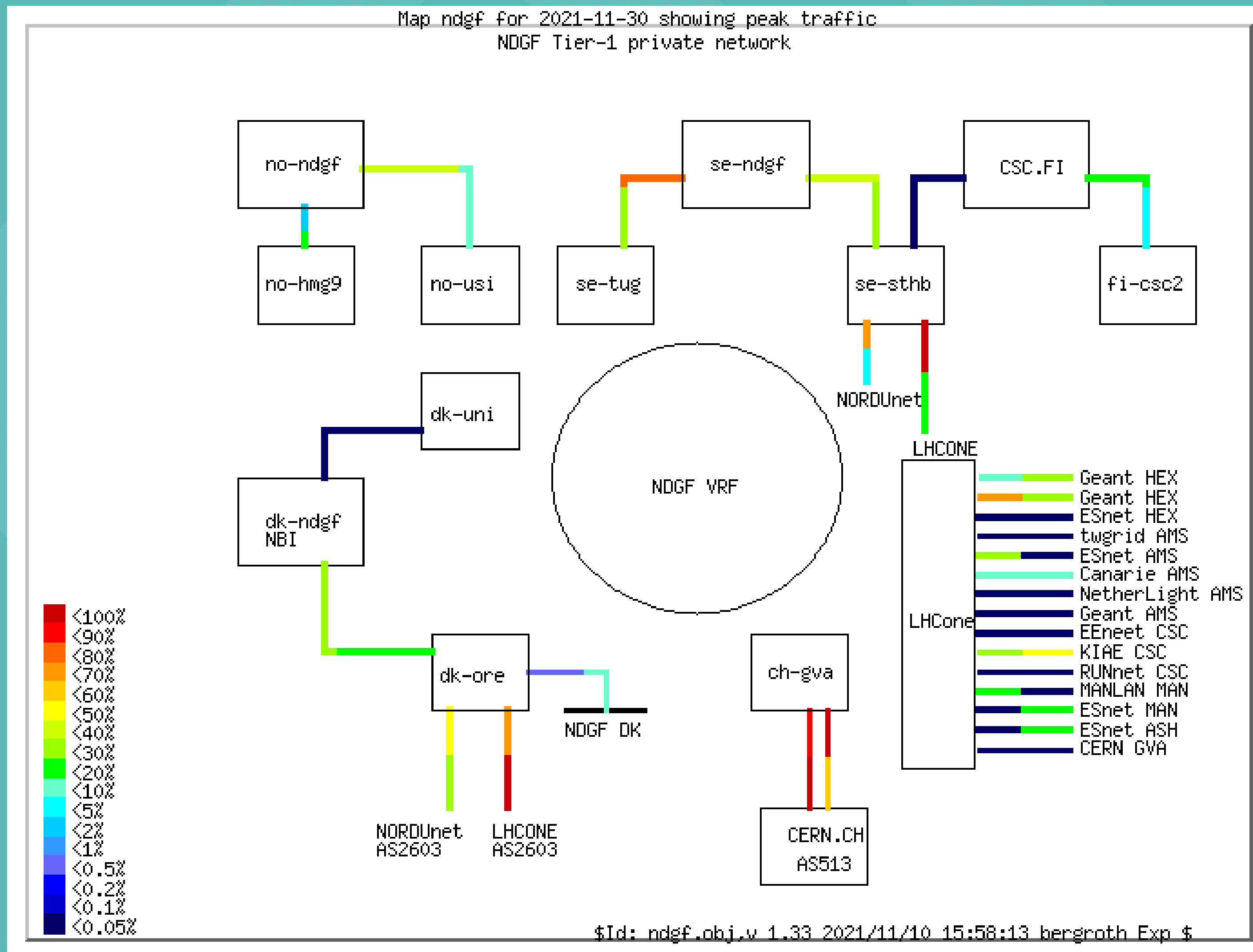
2020-12-02
NDGF All Hands
NBI, Denmark

Overview

- Current network
- Future plans



Current network



Future Plans, short term

NOTE! Preliminary discussions, not firm!

- Strengthening the connectivity to CERN
 - 100G to each of the two buildings
 - Dedicated connection up to the Nordics instead of shared with all the other traffic in Europe
- Investigate dedicated LHCONE connections
 - Instead of shared with all the other traffic going to/from GEANT
 - Don't want Zoom calls with University of Aachen stuttering just because Vega is good at staging inputs from us
 - Optimizing for Slovenia (CERN PoP, maybe?)
- Adding dedicated links where shared 100G crowded



Future Plans, HL-LHC

NOTE! Preliminary discussions, not firm!

- CERN connectivity to 400G+
 - Requirement seems to be 140-280 Gbit/s net transfer rate
 - 2x2x100G or 2x400G remains to be seen (2 buildings/routers)
- Nordic backbone on 400G links
 - Should be reasonably priced by then
 - Shared physical with overlay network mostly, maybe some dedicated links as needed
- At least 100G to each of our sites
 - Today 40G/site is minimum, will we need 10x by 2027? That's 400G
 - Ingesting 400Gbit/s into ARC cache will be an interesting challenge
 - If our typical 2U dCache pools do 1GByte/s, that's 40-50 of them...





Questions?