

## **Netnod Updates**

15 June 2022

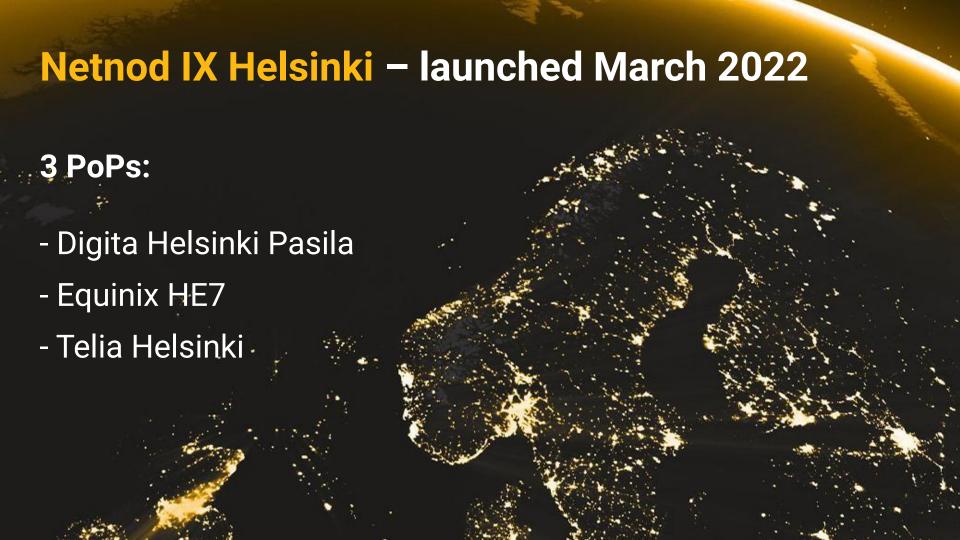
**Interconnecting the Nordics** 

- Peak traffic >2 Tbps
- 200+ connected ASNs
- 100% uptime since 2002

**New IX** 

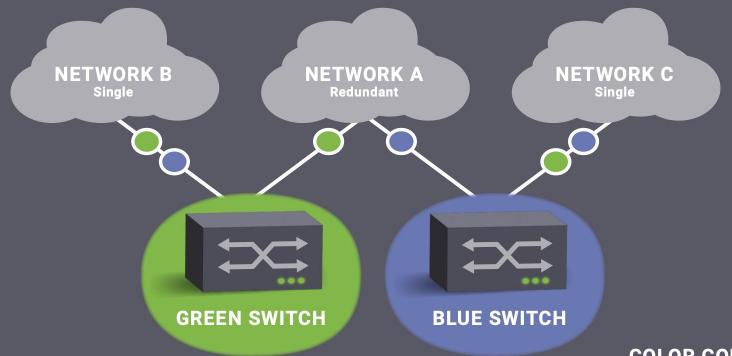
**Netnod IX Helsinki** 











#### **COLOR CODES**



Blue Peering LAN



Green Peering LAN

**Interconnecting the Nordics** 

- WDM transport
- Shaped Port
- Remote IX



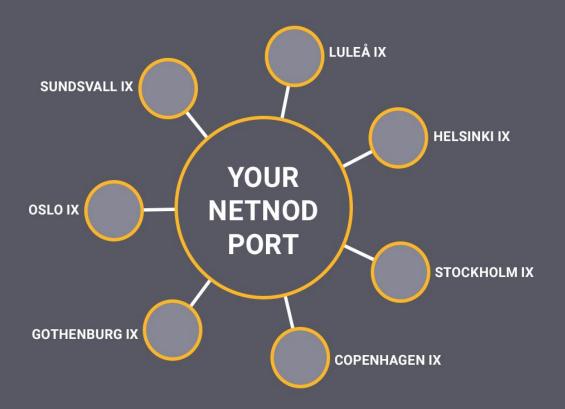


## SHAPED PORT



EASY UPGRADES IN INCREMENTAL STEPS





- Use your existing port
- No extra cross-connect, colo or hardware costs
- Secure transport
- Full redundancy
- 10G prices from475 EUR per month









# Time and Frequency services

NTP, NTS and PTP



### Time and frequency

- Netnod distributes Swedish time UTC(SP)
- Redundant time nodes with Caesium clocks in 5 locations in Sweden
- Network Time Protocol (NTP) service - free for anyone
- Network Time Security (NTS)
  developed standard and one of first implementations









## **Precision Time Protocol Service**



## White papers and best practises

- Best practises
  - How to connect to NTS
  - NTP best practices

- White Papers
  - How does NTS work and why is it important?
  - The world's first hardware implementation of NTS

• Industry presentations: <u>NTS in an FPGA</u> (RIPE 84)





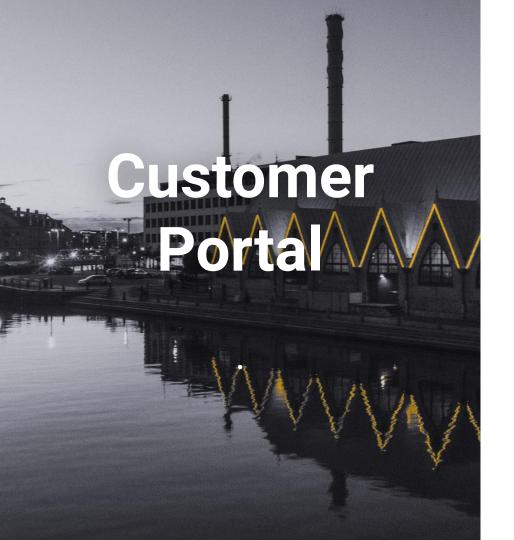


## OpenBGPD - is live

- Went live last week.
- Running OpenBGPD 7.3 on Debian Bullseye
- Available in the looking glass <u>https://lg.netnod.se</u> - AliceLG 5.1.0









#### Now

- See traffic stats per port
- Bit errors, light levels for troubleshooting
- Invoices and contracts
- Easy access to technical details

#### Later

- Upgrade your ports
- Order new services

Please let us know what you would like to see!



## **About Netnod**

- A neutral, Internet infrastructure organisation
- Largest IXP operator in the Nordics
- Manages I-root, one of the world's 13 root name servers
- Provides DNS services to TLDs, including some of the largest ccTLDs
- Provides time and frequency services (Swedish national time, Network Time Security)

