

# Put the “work” in Networks

PoP community Forum  
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**Belnet**

Connecting communities

.be

**Chapter 1**




# Belnet? Again?

## Remember last year?


### Belnet's Backbone

Worst acronym of 2023: EoL

- Lots of hardware to be replaced
- Optical and IP impacted
- Tip: it's not only hardware
- Tip: make it an integral part of your :
  - Capacity/Asset management
  - CFT's, contracts and orders



22/06/2023 | PoP Community Forum: Network Facts



## Hardware replacement: the numbers



27

21

26


## Hardware replacement: the numbers

54

620+

40

## Hardware replacement: the numbers



0

## Hardware replacement: the numbers



2

(\* ) with some help of Nomios

## Hardware replacement

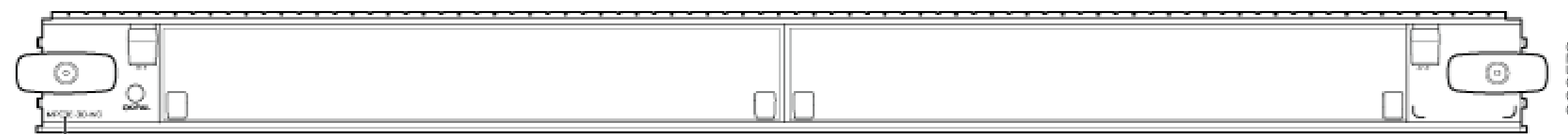
This was a majorly complex operation, practically a full migration of the network

This was only possible due to:

- Extensive lab testing
- Due diligence and scrutiny by our CAB and ITSM team
- Close collaboration with the integrator
- A verified and strict procedure (and the verification that the procedure was followed post-intervention)
- Four-eyes control
- Highly skilled engineers (Pierre and Henri)

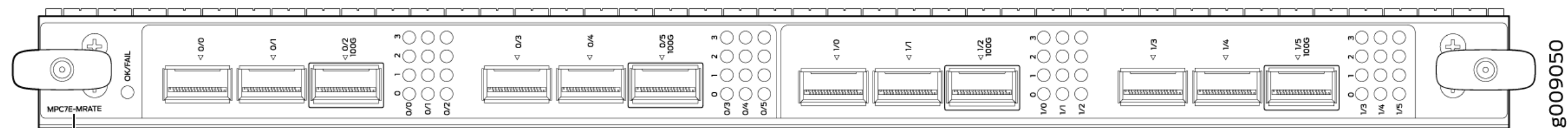
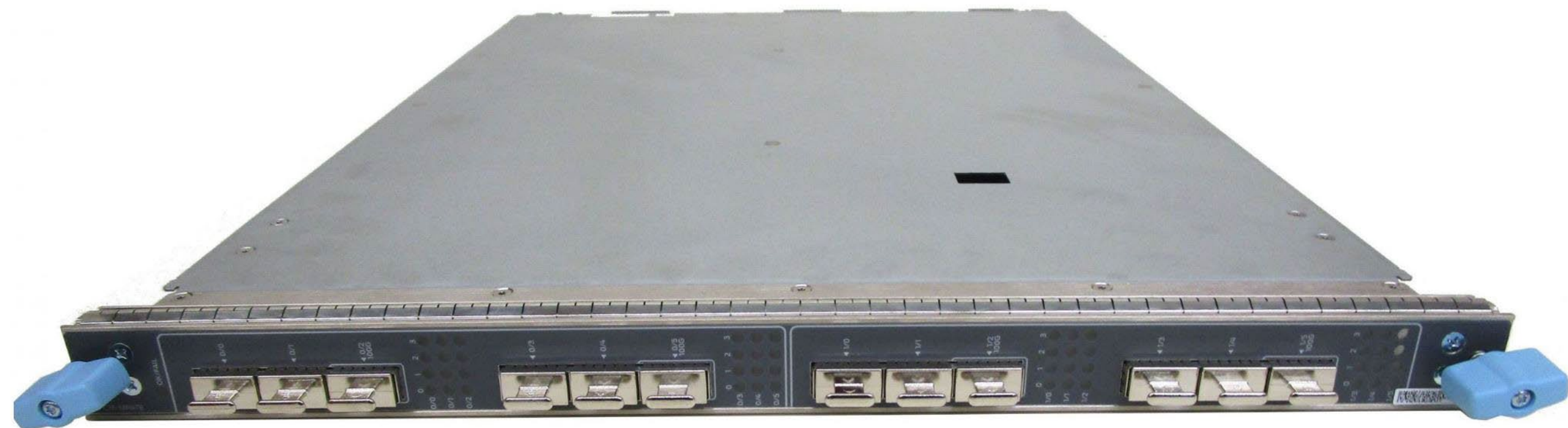


# Hardware replacement: about the new hardware



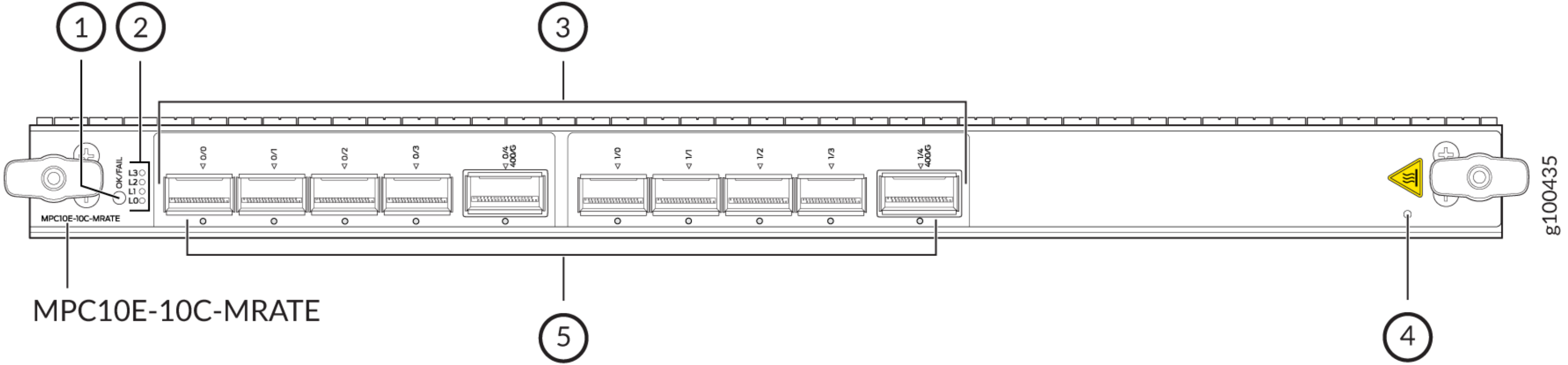
MPC3E-3D-NG

# Hardware replacement: about the new hardware



MPC7E-MRATE

## Hardware replacement: about the new hardware



## Hardware replacement: MPO Cables

Used in high density interfaces



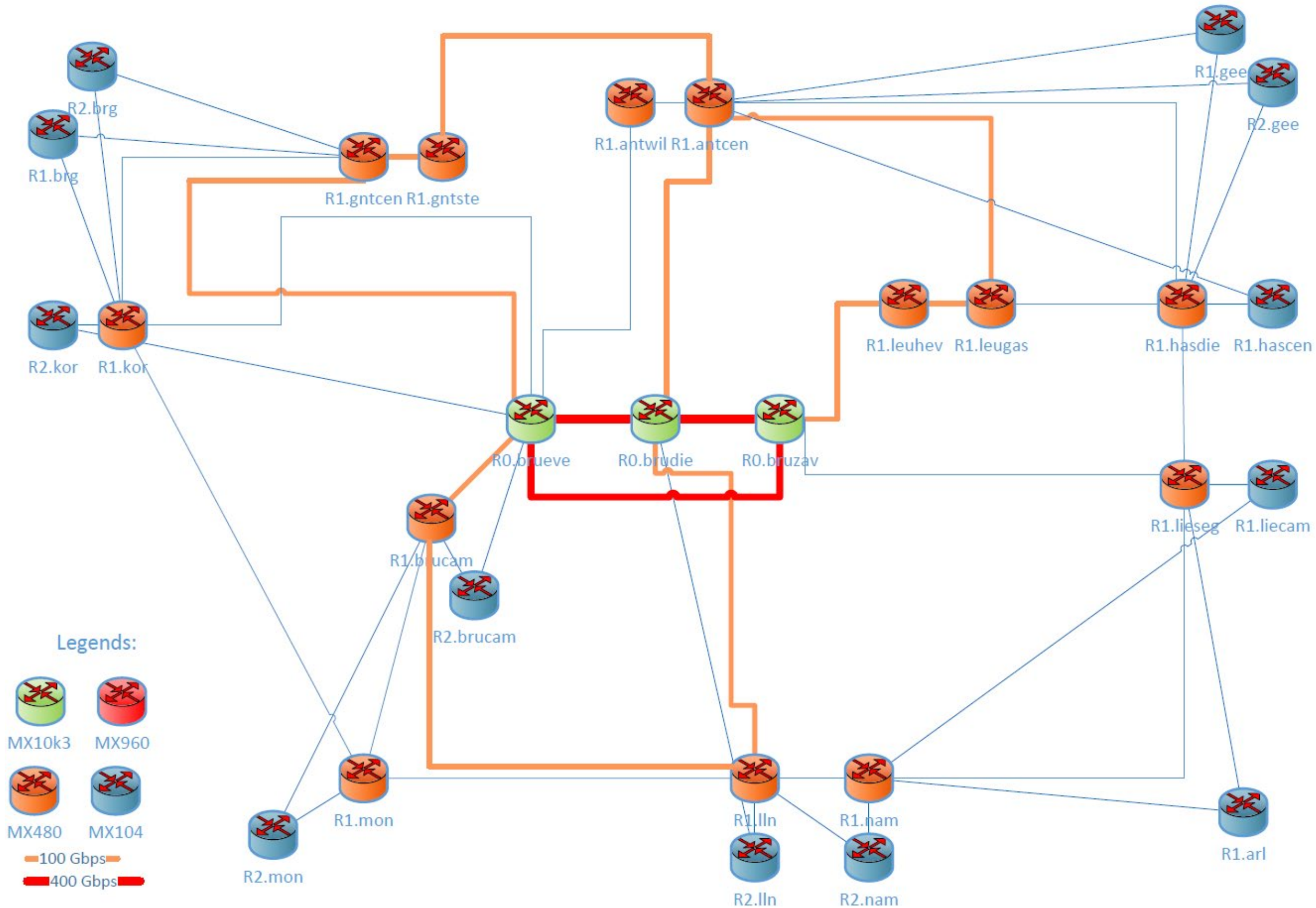
## Hardware Replacement: <melodramatic melody starts playing>

This was not possible without your help

Thanks for assistance and patience. YOUR Hands & Eyes on site, like reboots of secondary equipment, RX/TX swaps, optics troubleshooting have helped us lot, saved a lot of time, energy and carbon emissions!

We strive to be as efficient as possible, also incorporating our scalability effort in the mix when replacing hardware

## An updated map of the network



Chapter 2

Is it over yet?  
**Please?**

## No, your network keeps evolving

- Terminal server replacements
- WSS in Ciena's for 2025
- Replacement or removal of MX104's
- QKD installations in the concerned PoPs
- PoP audits



## Chapter 3

So you proved  
you are **working...**

## There is still some other stuff

- FedWAN in full swing
- BNIX migrations & finalisation in Q1 2025
- QKD: Belnet might heavily be involved in the next phase
- QKD: developing products
- BOOSTED project: investing into Time & Frequency signals
- Operation Desk involvement
- Automation Effort
- CFT of hardware needs replacing

## There is always other stuff...

We never stop upgrading the network:

- Bugs aplenty, subjective feeling it's getting worse
- Due diligence (and included in our integrator contract)
- Continued support
- Two major platforms: optical and IP/MPLS

Questions?