

bdaq trouble and improvement plan

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DAQ meetng

bdaq slow down

- bdaq global network is now running at **100 Mbps (!)**
 - 10 GbE NIC (**Intel X540-T2**), connected to a GbE switch
 - Reason unknown, didn't recover by power cycle or use of different cable or switch port
 - Other port (daqnet) of the same NIC is running at **1000 Mbps**
- **Motivation for 10 GbE**
 - NFS connection between bdaqa and bdaq, as the first step
 - **Not activated yet:** bdaq NIC is installed, but bdaqa NIC is not yet
- **10 GbE NIC does not work well on bdaq**
 - Global network connection was **up at 10000Mbps** when connected to a 10G switch
 - But after a few hours, NIC (global and daqnet) **stopped working by overheat**

```
[26282.362702] ixgbe 0000:01:00.0 eth0: Network adapter has been stopped because it has over heated. Restart the computer. If the problem persists,
power off the system and replace the adapter
[26282.363066] ixgbe 0000:01:00.1 enp1s0f1: NIC Link is Down
[26282.363354] ixgbe 0000:01:00.0 eth0: NIC Link is Down
[26282.369431] ixgbe 0000:01:00.1 enp1s0f1: Network adapter has been stopped because it has over heated. Restart the computer. If the problem persists,
power off the system and replace the adapter
```

What next?

- **X540 is known to be hot** — what can be done?

- Another NIC: X550 is slightly better (X540-T2: 17.4W, X550-T2: 13W)
- Use a **USB NIC (2.5G or 5G)** for global, while keeping 10G only for daqnet
- **Combination of above**
- Anyway, need to buy something, and should wait till July

- **Further plan 1 — Extend 10G inside B3**

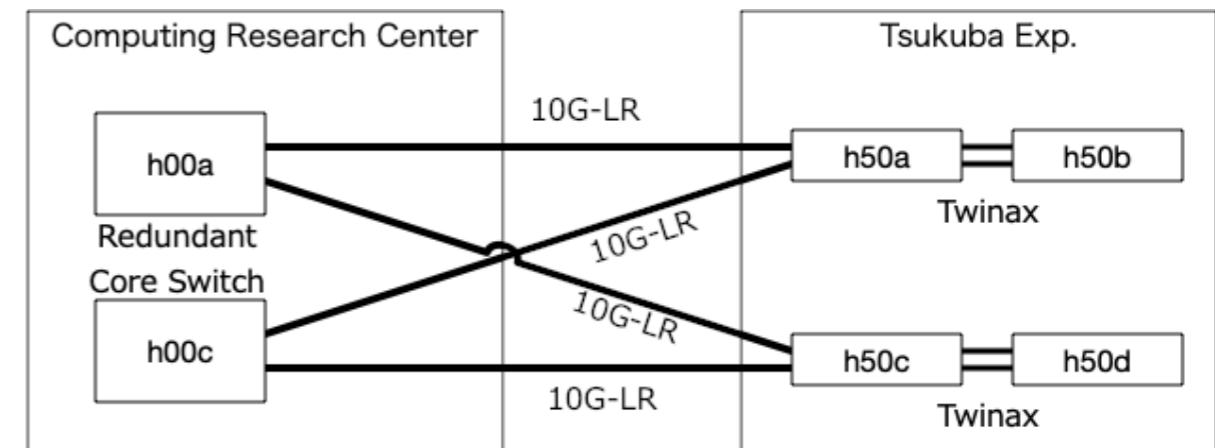
- At least full 1G bandwidth for each of b2dbX, b2archX (but this is not for b2nsm)

- **Further plan 2 — Extend 10G to global**

- 10G-LR lines are already coming to Tsukuba-hall
- File copy to KEKCC will be faster
- Maybe only little benefit for the VPN connections

- **Further plan 3 — Extend 10G to E-hut**

- (Beyond my territory, Yamada-san can take it over)



No 10G-T and all downlinks are 1000T
But we can connect 10G-T switch on
h50b or h50d via Twinax.

Shopping list

- 10Gx4 (RJ45 or SFP+) + 1Gx8 — QNAP QSW-M408-4C
- 10Gx2 (RJ45) + 2.5G/1Gx8 — QNAP QSW-M2108-2C
- (already in hand) 10Gx2 (RJ45) + 2.5G/1Gx4 — BUFFALO LXW-10G2/2G4
- 2.5GbE USB-LAN — Planex USB-LAN2500R
- 10Gx2 NIC (RJ45) — no-brand X550-T2

Plan

