IT at the IIHE

O. Devroede, D. Dutrannois, S. Gérard, R. Rougny,
S. Rugovac, A. Scodrani, P. Vanlaer
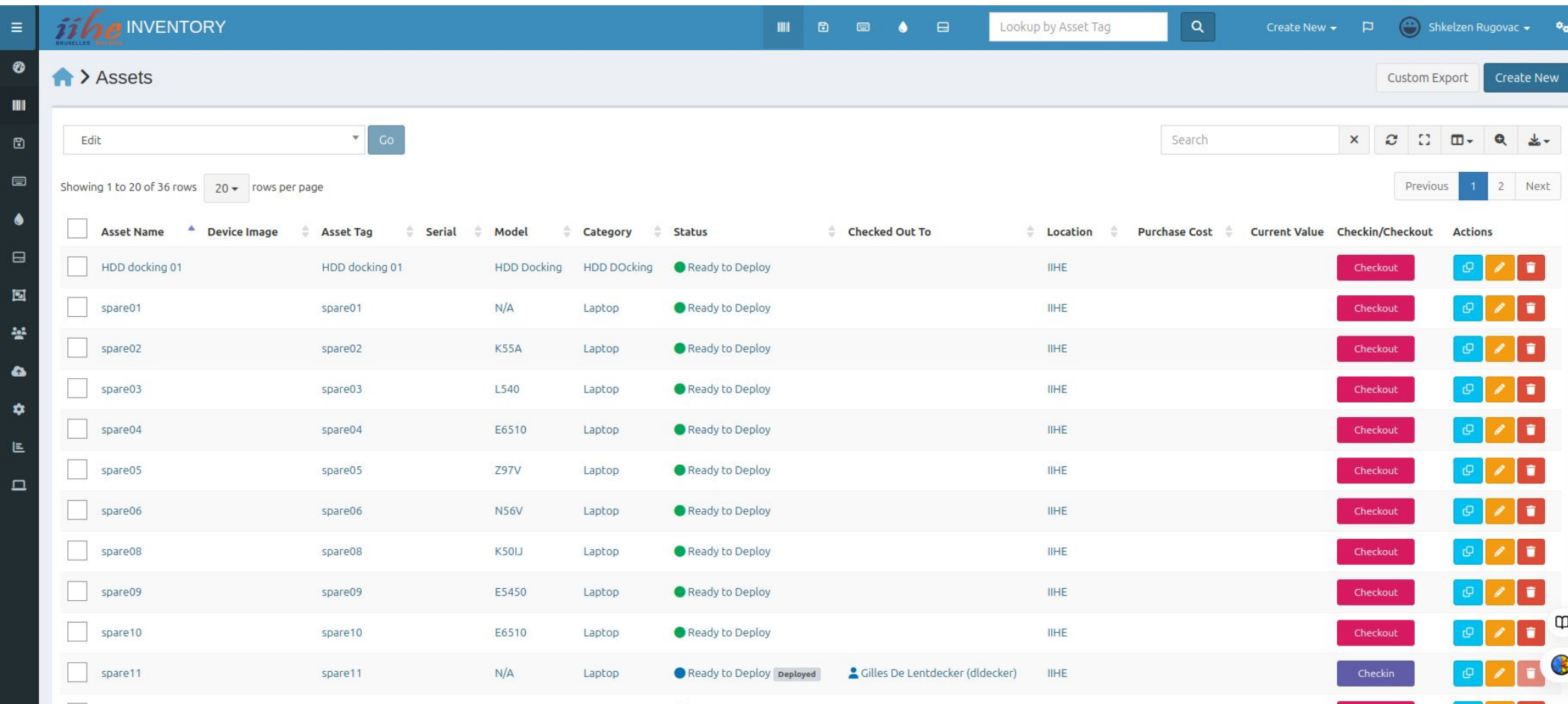
Support Activities

New hardware & Software

- New printer installed at level 1
  - Leased printer from Ricoh
  - New ink cartridges should arrive automatically
    => some hiccups

- Migration web services CentOS7 -> AlmaLinux9
  - Herculean task (~20 VMs, each being a special case)

- Finally ALL machines are now centrally managed
  - Last 2 were very important services:
    - DNS refactoring
    - LDAP directory migration

New tools

- **Snipe-IT**
  - New and improved way to track IT borrows
    - Inventories spare laptops and small items
  - Users receive emails when check-in/check-out

New tools

- **Self print door labels when you change office**
  - Update your room number in your profile

- **Immich** as photos repository
  - Photoview is no longer maintained
  - Immich is under fast development
  - Common credentials found on the intranet homepage
  - Google photos look and feel

intranet homepage
my.iihe.ac.be

- Edit your profile
- Wiki
- Travel documents ULB/VUB
- Chat
- IIHE photo repository
  - Username:
  - Password:
- Door labels
- IIHE logos
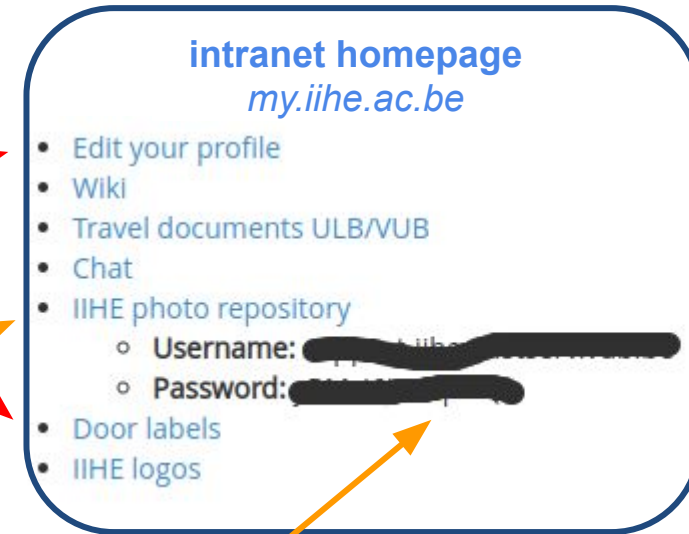
Q Search your photos

Photos

Explore

Map

Sharing

LIBRARY

Favorites

Albums

Utilities

Archive

Locked Folder

Trash

Albums

All   Owned   Shared   Q Search albums   ⊞ Create album   ↓ Most recent photo   ⊡ Group by year   ⇅ ⤫   ☰ Lis

2025 (6 Albums)

2025 - RECFA
Sept 2025
73 items • Shared

2025 - Juno
Jul 2023 - Aug 2025
11 items • Shared

2025 - T2_Relocation
Jun - Jul 2025
38 items • Shared

2025 - Visit Spokesperson CMS
Apr 2025
82 items • Shared

2025 - Party Jorgen
Mar 2025
43 items • Shared

2025 - CleanRoom
Feb 2025
113 items • Shared

2024 (3 Albums)

2024 - News
Dec 2024
9 items • Shared

2024 - Annual Meeting
Nov 2024
49 items • Shared

2024 - VUB BBQ
Jun 2024
54 items • Shared
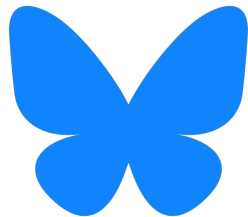
2023 (5 Albums)

Storage space
0 B of 0 B used

● Server Online   v2.0.1

Miscellaneous

- VUB Laptops
    - Brand new framework agreement with DELL

- IIHE accounts on Bluesky & LinkedIn

T2B Activities

Move to Nexus (Zellik)

Move to Nexus (Zellik)

- Decision to move to Zellik
    - Agreement between ULB-VUB at the level of the Vice-Rectors
    - Scheduled for end-October 2025 but brought forward to July
        (In May, instabilities of the ULB datacenter were discovered)

- Preparation
    - Done in emergency in 2 months
    - Re-organise the racks topology
        - Optimize floor space
        - Stay under the rack limit of power consumption allowed
    - New cable label convention (to comply with the VUB one)

    - Buy dedicated network equipment

Move to Nexus (Zellik)

Move to Nexus (Zellik)

- ~~Photos of the Racks at Nexus~~

- Instead strict security measures
    - No photos allowed inside
    - Access is very restricted
        - Badge to enter the building
        - Badge + finger prints to pass an airlock to datacenter part
        - Badge + PIN to enter the server room

Move to Nexus (Zellik)

- Benefits of the new housing
    - Increase of the bandwidth from 20 to 30 Gbps to the Grid
    - Power redundancies
    - Greener solution:
        - Solar panels (~5% of the consumption)
        - A wind turbine is foreseen
        - Co-heating with neighborhood buildings foreseen
        - Efficient mist-cooling solution for summer

- Future perspectives
    - Belnet POP physically foreseen for 13 November
    - 100 Gbps link to the Grid (needed by HL-LHC)
    - Close proximity with VUB-VSC clusters (Hydra & Tier1)

Collaboration with VSC

… investigating collaborations was strongly suggested by FWO

- Possibility to use VUB HPC cluster (Hydra) opportunistically
  - T2B is 90% full, Hydra only 70% (on average)
  - We are currently trying to:
    - Run a local cms job on Hydra ✔
    - Set up a 'CE' that sends grid jobs to Hydra ✔
      - Only simulation for now (low I/O)
      - Once Hydra moves to Zellik, we could interconnect our storage and so normal jobs could be an option (earliest next year March)

- Already sharing expertise on technologies:

- More synergies coming: OS & deployment tool

Optimization of the user experience

- Stress tests running every 5 minutes:

  - We monitor:
    - 'ls' performance on /pnfs
    - 'ls' performance on /user
    - performance of a normalised user job
    - git clone
    - cvmfs loading
    - machine load
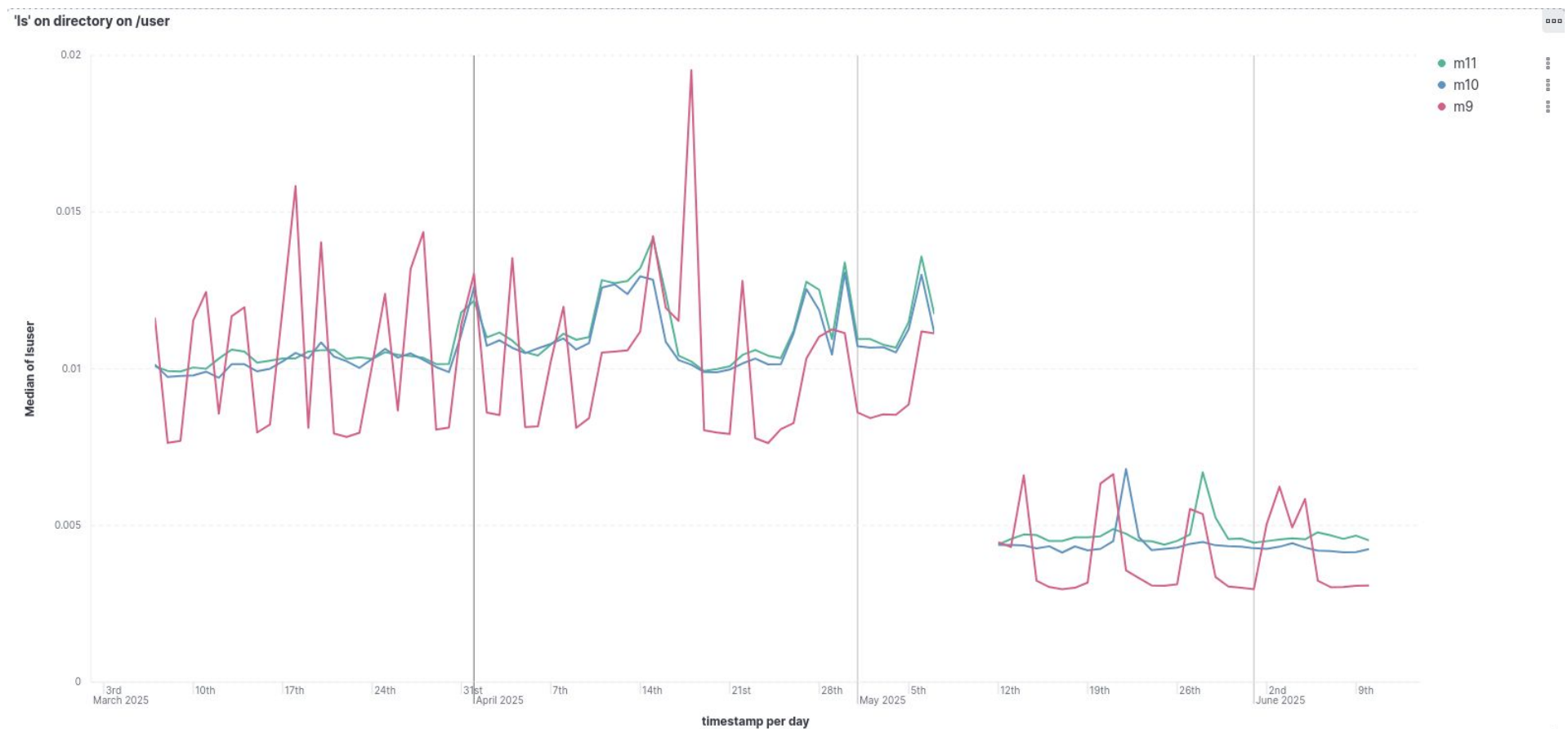   - number of running processes
    - nfsstat

Optimization of the user experience

- Detection of problems and effect of our actions
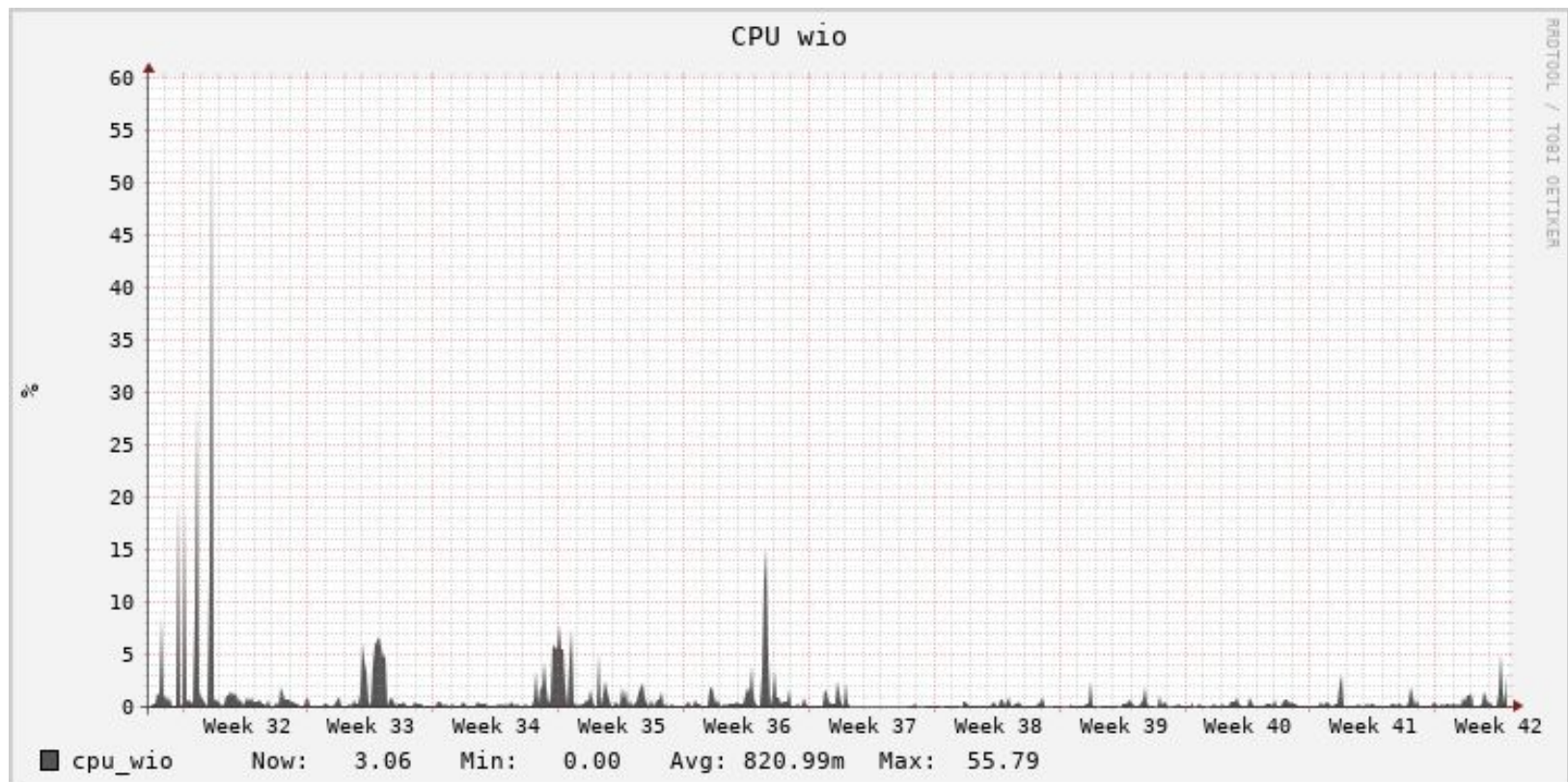   - eg /pnfs slowness disappears after restart of the NFS service
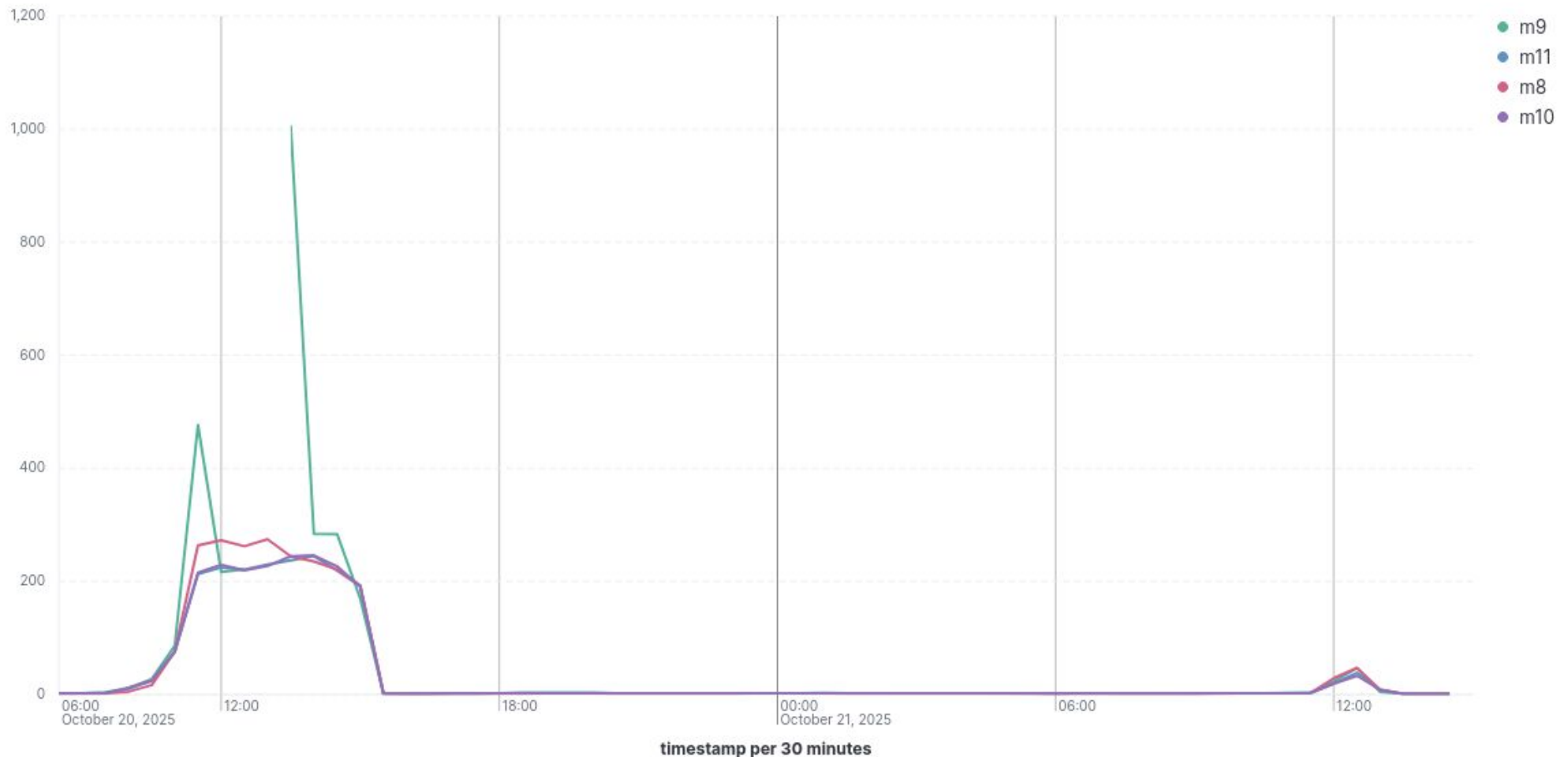
Optimization of the user experience

- Ceph (/user) is more stable thanks to new kernel + new Ceph release

Optimization of the user experience

- Identified some load problems on m9
    - More CPU I/O wait than other machines
    - Solution: switch from HDD to SSD

The IT team

Adriano Scodrani

Denis Dutrannois

General Support
support-iihe@listserv.vub.be

Stéphane Gérard · Romain Rougny

Olivier Devroede · Shkelzen Rugovac

Tier2 Belgium
grid_admin@listserv.vub.be

Chat: *chat.iihe.ac.be*
Phone : +32 2 629 33 26

Thanks !
Questions ?

chat.iihe.ac.be

IIHE Annual Meeting 2025

Backup slides

Move to Nexus (Zellik)

- Benefits of the new housing
    - Increase of the bandwidth from 20 to 30 Gbps to GEANT

Up/Down bandwidth in [Gbps] during 1 YEAR

In: 23.67PB
Out: 9.83PB

Some News

- Harica certificates for Grid (replacing Sectigo)
    - Server certificates (SSL + IGTF)
    - ULB & VUB members can use it through Univ. IDP
        - See wiki page for HowTo for User Grid Cert

- Software upgrades
    - HTcondor release 24.0
    - Preparing dCache 10.2, OpenNebula 7, Ceph Squid

- Cluster migration to AlmaLinux9 continues
    - EL7 machines to be decommissioned
        - **<u>Stop on 1/1/2026</u>**
    - Still possible to use EL7 via container

- 2 new Virtual Organizations: Ship, Virgo