Setting-up of a new sever system for CALET in Kanagawa Unversity

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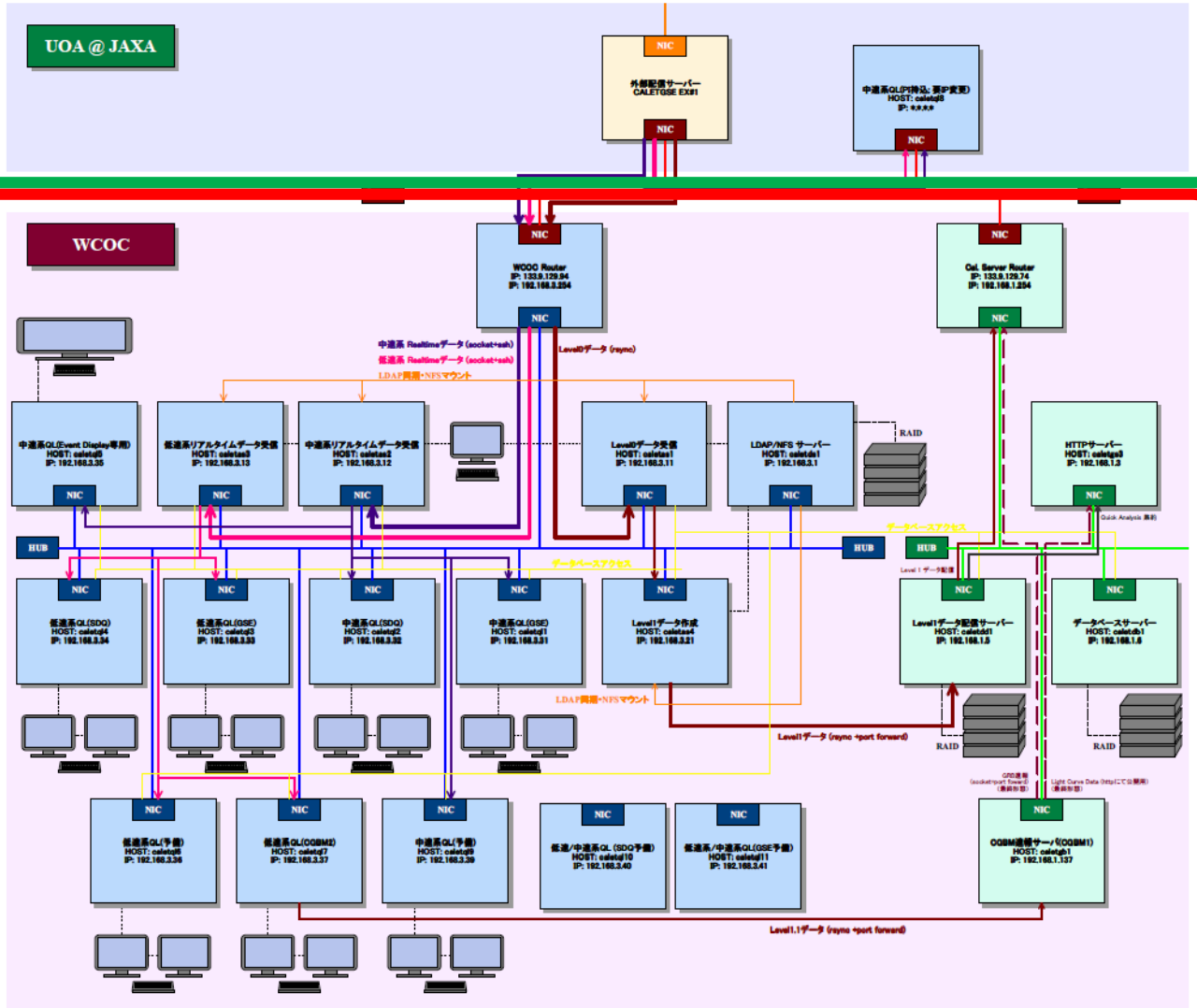
CALET-TIM @ Florence Italy

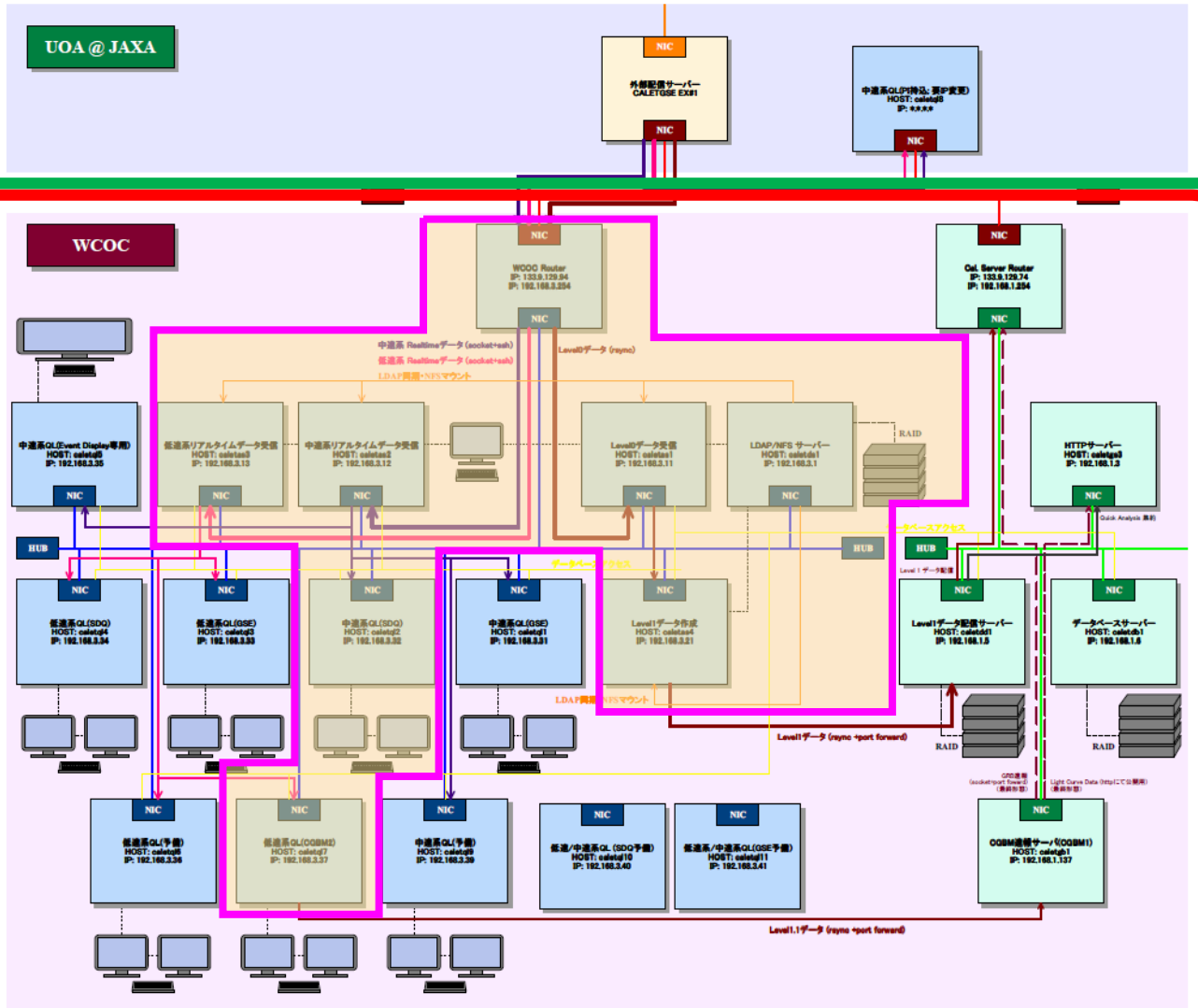
JAXA

WCOC



JAXA

WCOC



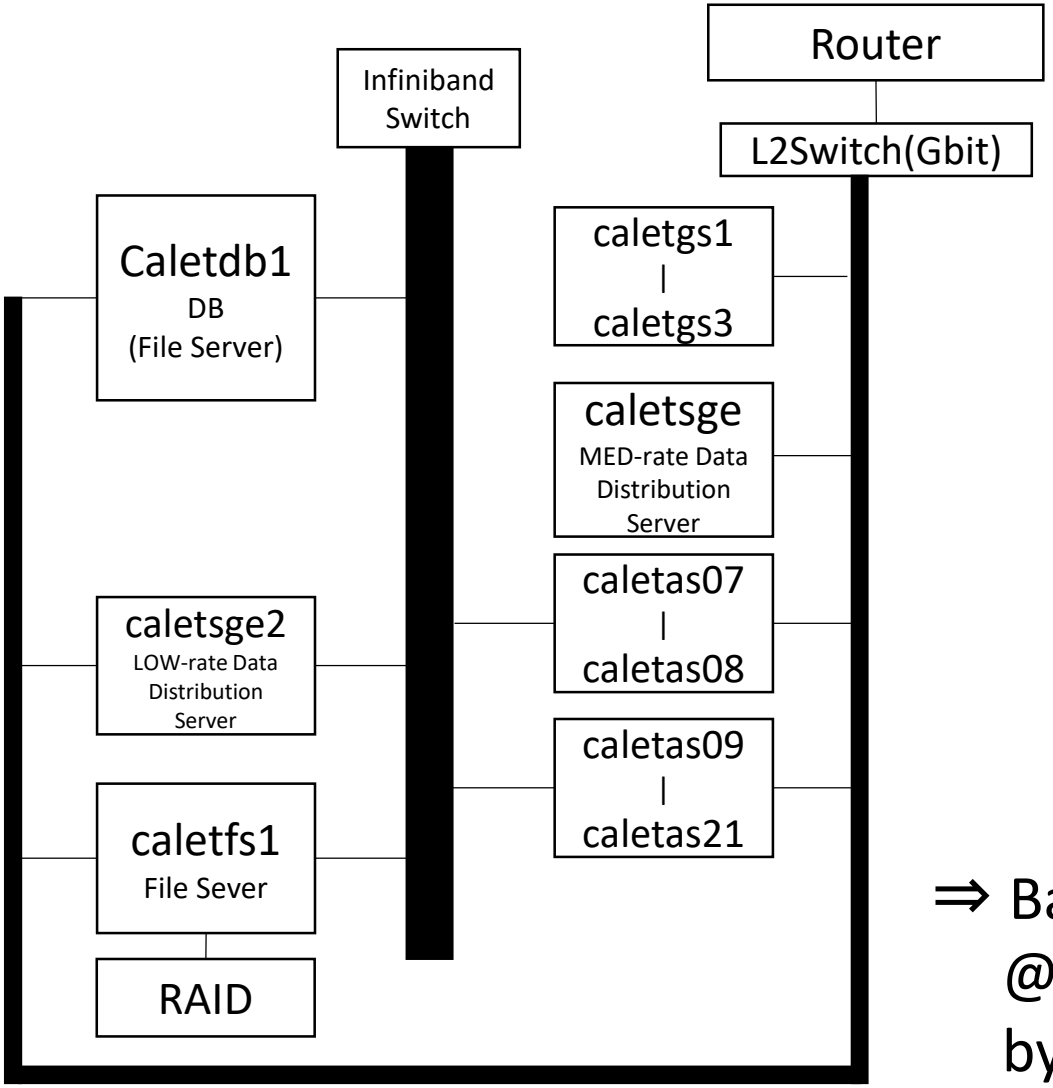
・A part of WCOC server system for operation
→ TKSC-JAXA (MAXI room)

CALET Sever (Sci.Team) @ TKSC-JAXA

- Data
  - caletds1: File sever
- Operation
  - caletas1: Main sever
  - caletas2: MED-rate data receive/distribution
  - caletas3: LOW-rate data receive/distribution
  - caletas4-6: analysis servers for CGBM (GRB search)
- Quik Look
  - caletql2: QL @ WCOC
  - caletql7: CGBM (GRB alert)
  - caletql8: QL @ Kanagawa Univ.

QL Monitor @ Kanagawa Univ.

CALET Server @ WCOC



⇒ Backup system
@ Kanagawa Univ.
by Torii-san's KAKENHI

CALET Server @ Kanagawa Univ.

- Backup of CALET Server of WCOC
  - ➢To build level-2 or higher level data
  - ➢Main & File server (1 node)
  - ➢Analysis server (5 nodes)

Main & File server (2U)

1 Node (× 2 CPU = 24 core) + 12 HDD (96 TB)

Node Spec.

Processor : Intel Xeon CascadeLake-SP 4214 2.2GHz 12Core 16.5M × 2
Memory : 96GB (8GB × 12) DDR4-2666 ECC Registered
SSD (System) : 960GB SATA 6Gb/s 2.5" × 2 (RAID-1)
HDD (Data) : 8000GB Serial ATA 7,200rpm × 12 (RAID-6, Hotspare × 1)
Ether Interface : 10GBase-T × 2 (On-board)
InfiniBand HCA : Single Port InfiniBand EDR HCA × 1

CALET Server @ Kanagawa Univ.

Analysis 1 (2U)

4 Node (× 8 CPU = 384 core) + 1536 GB Memory

x2

Node Spec.

Processor : Intel Xeon CascadeLake-AP 9242 2.3GHz 48Core 71.5M × 2

Memory : 384GB (16GB × 24)

SSD : 240GB M.2 SATA3 × 1, 480GB M.2 SATA3 × 1

NIC : InfiniBand EDR Single Port ,RJ45 (1GbE) × 1

Analysis 2 (1U)

1 Node (× 2 CPU = 40 core) + 192 GB Memory

Node Spec.

Processor : Intel Xeon CascadeLake-SP 6230 2.1GHz 20Core 27.5M × 2

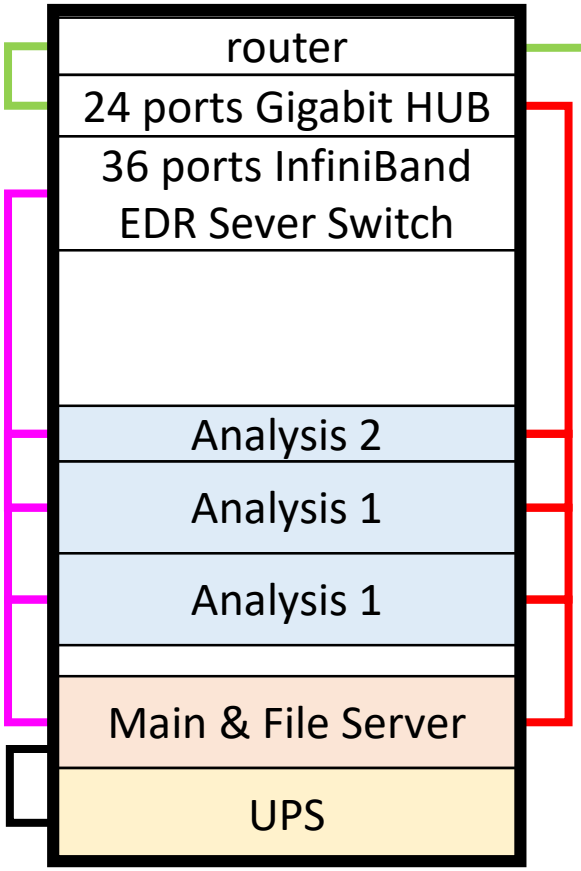
Memory : 192GB (16GB × 12)

HDD (System) : 960GB SATA 6Gb/s 2.5" × 1

Ether Interface : 1GbE LAN Ports × 2 (On-board)

InfiniBand HCA : Single Port InfiniBand EDR HCA × 1

Server Configuration



6 Nodes
CPU : 448 cores
Memory : 1728 GB
Storage : 96 TB

Linux OS

- Scientific Linux 6.10
  - Tools have been developed on SL6 at WCOC.
  - Support of SL6 will be finished in Nov. 2020
- Scientific Linux 7
  - Almost all analysis tools have been confirmed on also SL7.
  - Some tuning may be necessary for compilation.
  - Support of SL7 will be finished in Jun 2024
  - Development of SL is moved to Cent OS. (SL7 is the last)

Summary

- Backup of WCOC server is setting up in Kanagawa University to build Level 2 or higher level data.
- Total CPU 448 cores, Memory 1728 GB, Storage 96 TB
- Electrical work for power line (200 V) was finished on Jan.31.
- Server will be installed in the middle of February.
- This work is supported by KAKENHI, Grant-in-Aid for Scientific Research (S).