ALICE T2 Status Hiroshima and Tsukuba

Tatsuya Chujo (U. Tsukuba)
for ALICE Japan Tier 2 teams,
Ninth Annual ALICE Tier-1/Tier-2 Workshop
Bucharest, Romania
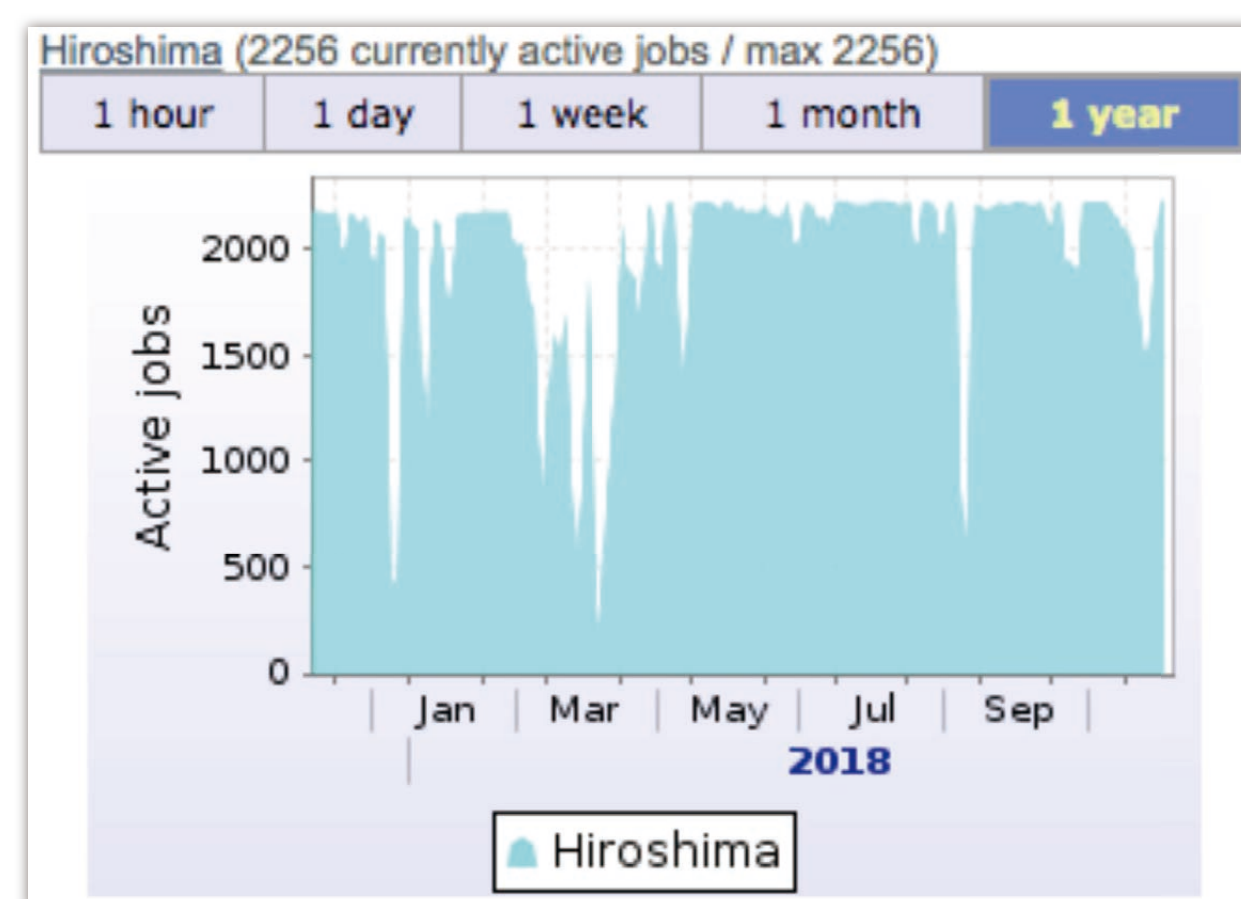15 May, 2019

- ALICE T2 site "JP-HIROSHIMA-WLCG" with EMI-3 on SL6.8… as stable as possible.

- GRID service; APEL, sBDII, CREAM-CE, CVMFS/ Squid, EOS, VOBOX… as compact as possible.

- Job Scheduler; PBS/Torque/Maui

- WN resources; 1,284 Xeon-cores in total
  Xeon5365(4c@3.0GHz) x 2cpu x 20 blades
  Xeon5570(4c@2.9GHz) x 2cpu x 26 blades
  Xeon5670(6c@2.9GHz) x 2cpu x 3 blades
  E5-2470v2(10c@2.4GHz) x 2cpu x 16 blades
  E5-2640v4(10c@2.4GHz) x 2cpu x 28 mod's

- Storage; 1,032TB disks on 8 servers, but no MS

- Around 3/4 resource deployed to ALICE GRID, and the rest for local commodity

- Firewalled; Fortigate 1500D/L3

- Network; 10Gbps/IPv4 connected to SINET5 at Hiroshima DC

- WLCG support by ASGC in Taiwan

- Responsible/operated by Prof. Toru Sugitate w/remote technical support by *SOUM* corp., Tokyo

広 島 大 学

Quark
Physics
Laboratory
Hiroshima University, Japan

- **Stable operation w/o any unscheduled stops since 2017**

- **No change on scale (# of cores, storage) after the major upgrade in 2017**

- **T. Sugitate (responsible) continues Hiroshima T2 operation**

  - 10 Gbps connection to SINET-5 since March 2017

  - Continuously monitored by Perfsonar.

  - About 250 Mbps links to/from EU/US and Asians.

  - Peak through-put beyond 9 Gbps achieved to/from CERN.

  - T2 operation accepting around 2300 jobs and completing 4-8K jobs a day.

  - SE/EOS service in operation with the capacity of 640 TB, and 72% filled.

- **Member**
  - Tatsuya Chujo (responsible)
  - Sumio Kato (technical staff)
- **Status**
  - 6 service nodes (X5355; 4 cores x 2 cpu,@2.6GHz)
  - 20 worker nodes (X5355; 4 cores x 2 cpu,@2.6GHz)
  - Network: connected to SINET-5 via HepNet-J network.
  - July 2016, Tsukuba T2 started the operation as a production site.
  - was able to accept 125 jobs running on average.
  - Suspended the operation due to some problems in CE/ network (and manpower) in October, 2017
  - **We decided to come back after purchasing the mass storage in 2019.**
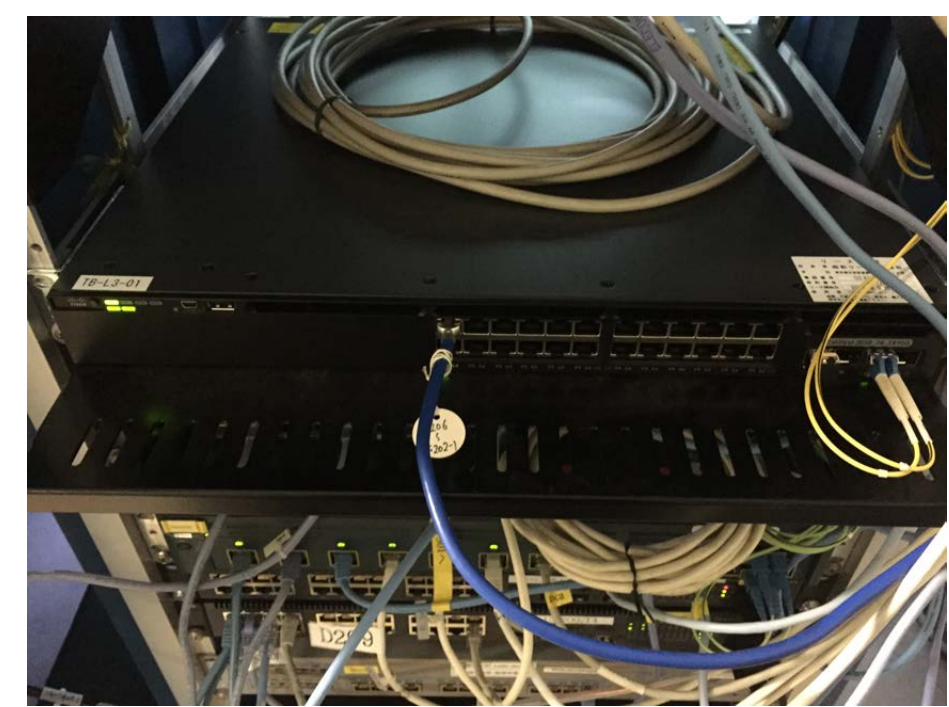
- **Status (cont.)**
  - on Feb. 2019, **a mass storage has been purchased and delivered.**
  - on May 2019, new optical fiber has been installed, enabling a direct link between from server room and SINET5 (via dedicated campus network) @ 10Gbps.
  - Updated high speed switch by Hepnet-J (KEK)

- **Plan**
  - Establish the high speed network by using the newly installed fiber and switch, direct link between server room and ACCC @ U. Tsukuba (May).
  - configuring mass storage for EOS (May-June).
  - CE configuration and WN configuration in May - June.
  - **Re-establish T2 operation by the end of June.**
  - seek a funding to add more WNs, probably together with detector upgrade proposal (FoCal), to be requested in 2019 fall.

筑波大学
University of Tsukuba

↑ ZE-G824F16-4G-N8000x24
(8TB SATA HDD x 24,
effective 168 TB (RAID6/SPARE1))

cisco Catalyst 3650-24TD

New optical fiber
@ server room