

Experimental Computing Laboratory Meeting April 25, 2024 12:30 PM

Advanced Computing Systems
Research Section

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Infrastructure/System Status

- Ubuntu 24.04 announced, but not approved for ORNL use. Will not start installations or upgrades until this happens.
- Milan2: 8 Nvidia V100 Cards (no nvlink). May prove useful in scaling studies (gift from NCCS). 7 functional – need to debug nonreporting card.
- Infrastructure moves to new hypervisor continuing
 - Part of Centos7 deprecation. Support ends June 30, 2024.

TRC (Translational Research Center) is coming

- But so is Christmas (but maybe not this year)
- No additional information since last meeting
- Will house design projects
 - Will have at least 10Gb ExCL network access

Plans for next three months

- Deploy all received systems
- Continued documentation improvements
- Looking into acquiring Hopper GPUs and other wish-list items.
- Move oswald02 & 03 to Ubuntu 22.04
- Stabilize non-ORNL-managed UID & GID assignments ExCL-wide to simplify service deployment
 - Also has implications for docker groups
- Fully deprecate /noback directories
 - No longer needed with current file services and failing tape backups.

Systems in the pipeline (1)

- 2 * H100 System
 - Order recently changed to H100 NVL (64GB to 96GB GPUs; 64GB no longer available) at no additional cost
 - 1TB main memory
 - By end of fiscal year
 - https://www.nvidia.com/content/dam/en-zz/Solutions/Data-Center/h100/PB-11773-001_v01.pdf

Systems in the pipeline (2)

- 4 * Mi300A system
 - APUs (Integrated CPUs and GPUs)
 - 128 GB HBM3 memory on each
 - Infinity Fabric Links (8)
 - PCIe 5.0x16 for peripherals (and who knows what else).
 - <https://www.amd.com/en/products/accelerators/instinct/mi300/mi300a.html>
 - “in the next few months”

Questions/Discussion?

- Which systems to use (for interns)
- Login failures and silence
 - And ssh keys – how to set up – accessing ExCL
- Removing noback references in documentation
- Thinlinc jump server issues and foxyproxy
 - Issues with foxyproxy resolved with latest updates