DL DAQ/SlowCtrl

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DL CM, TRIUMF, July 2024

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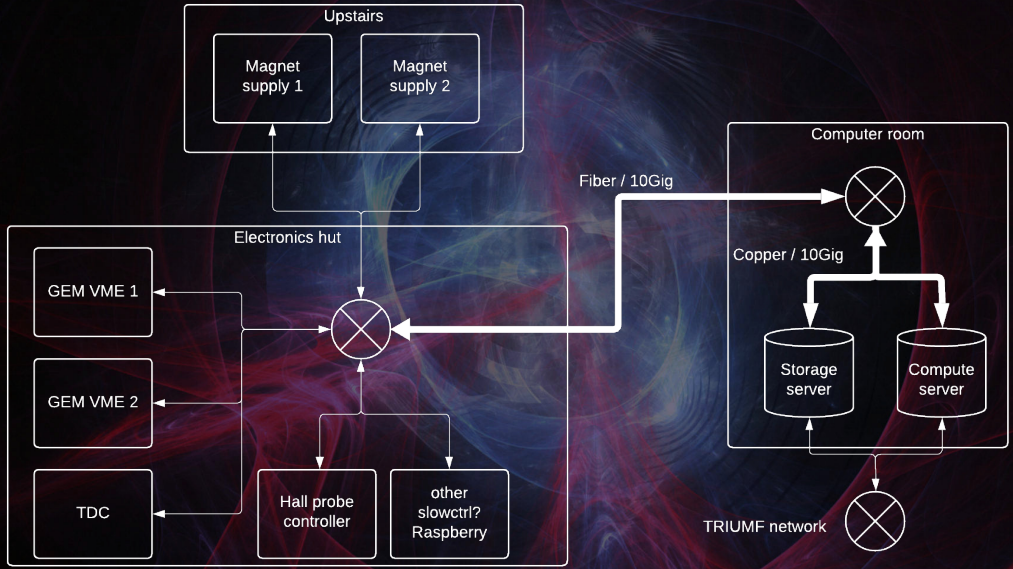
Overview


Upstairs
Magnet supply 1
Magnet supply 2
Computer room
Fiber / 10Gig
Electronics hut
Copper / 10Gig
GEM VME 1
GEM VME 2
Storage server
Compute server
TDC
Hall probe controller
other slowctrl? Raspberry
TRIUMF network

I ordered computer parts.... Servers

- 2 servers, one with disks, one as spare / compute
- Each:
  - 7950x 16 cores/32 threads
  - 64 GB ram,
  - 4TB work disk, 1TB boot disk
  - 10 gig network interface
  - Rackmount
- Disks: 8x 18 TB in Z2-raid (ZFS) (and 1 cold spare drive)
- Server with disks will be placed in computer room
- Spare will be placed either in the hall, or also computer room
- Will run slowctrl, database and MIDAS event builder

...Clients

- Two Clients for slowctrl/UI etc
  - 13600K
  - 32GB
  - 1TB disk
  - Mini-Tower
- Two monitors each!

Network for DAQ/ Slowctrl readout

- Got 2 10G switches, one for CR, one for hall. Might need to buy SFP+ adapters (depends what fibers exist)
- Hall
  - Magnet power: 2x 1gig
  - Spectrometers: 2x 1gig?
  - Hall probes: 2x 1gig
- CR
  - Server(s)
- Clients will connect via standard TRIUMF network?!?!?

DAQ questions

- How many VME CPUs?
- How do we do busy? Will the trigger have a busy logic? How to release busy?
- How to talk to the trigger?
- Do I need to buy ethernet cables?