jFEX/L1Topo Installation

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What's Installation ?

- Install hard and heavy infrastructure and services
  - Racks
  - Cooling
  - Power
  - Shelves
  - PCs
- Install (fibre) cabling, terminate into RTMs (with dust caps)
- Provide basic services
  - Networking
  - Module control
  - Debug tools
  - Some level of environmental monitoring
  - Safety mechanisms
- Slide in modules   < < < < < < <�
- Many threads in parallel:
  - Validate connectivity
  - Complete services
  - Get firmware, software, databases ready for physics

Requirements for module installation

- All heavy items in
- Some connectivity available
  - One module will be the first one with nothing to talk to
  - Basic networking
- We have many layers of protection
  - FPGA unconfigure on over-temperature
  - Local monitoring on IPMC
  - Data from IPMC into DCS
  - I2C based monitoring via module controller (Zynq)
  - Zynq I2C data can be read out directly from Zynq PS
  - Same data read out via IPbus
  - Some of that needs to be available before 1st module goes in
- Need some personal equipment laptop, JTAG, meters, …

Grow the system

- No desire to chuck large numbers of modules into freshly installed shelves
- Start with individual modules, prototype/pre-production first
- Assume that possibly jFEX-L1Topo might be the first interface to be tested under ground
- Need to find out a few facts about MUCTPI and CTP
- Include further module types as they arrive

- The assumption here is that for quite a while activities in USA15 and STF are being run concurrently
- Reduce clashes between various test requirements
- Few people available for installing/maintaining modules & systems
- Ideally plenty of people working at both P1 and STF remotely
- Full shelf of modules (3×L1Topo, 6×jFEX) operation at P1 is certainly a milestone, though not an exciting one. Expect shelves full of modules to be in full operation at STF prior to that.