The Current L3/DAQ

- L3/DAQ
- COOR
- L3 Supervisor
- VRC1a
- VRC2a
- VRC3a
- VRC3b
- ETG/SB
- Farm000
- Farm001
- Farm002
- L3 Monitoring
Control and Monitoring of L3/DAQ

- **Supervisor**
  - Configures VRCs, ETG/SB, Nodes
    - Routing
    - L3 Trigger Programming

- **AutoStart**
  - Starts and stops VRC, ETG/SB, Node executables
    - Also does version control
  - Displays logfiles
  - Simple WWW interface

- **Monitoring**
  - Concise WWW displays of L3/DAQ status
    - ETG/SB mainly
    - Suggestions always welcome

- **http://d0l3super.fnal.gov/shifter**
What Happens in the L3/DAQ When…

• You click “Start Run” in the Taker
  – COOR tells Super which crates, farm nodes and triggers to include in the run.
  – Super stops any triggers running
  – Super configures the ETG/SB routing, and sends trigger programming to Nodes
  – Super tells the VRCs to start sending data and tells the ETG to start triggers
What to do when...

- Data doesn’t flow
- Super complains in Taker
  - Bad XML for trigger?
  - L3/DAQ machine down/slow?
    - Check AutoStart…all log files available?
      - No logfile available for a machine indicates the needed process isn’t running
    - If L3/DAQ machine down…stop all runs, reset L3/DAQ via AutoStart
What to do when…

- **Run starts, no events in Taker**
  - Are triggers firing?
    - See DAQMon/TrigMon or ETG/SB Monitoring (total trigger count is shown)
    - Is there a busy? Where is it coming from?
  - Crates providing data?
    - Is the VRC up?
    - VRC logfile prints out a line for every crate when it provides data…check logfile
      - If crate not working, contact detector expert for that crate
      - If VRC is down or misbehaving, reset L3/DAQ
  - If the VRCs are getting data, check the ETG/SB
What to do when…

• Run starts, no events in Taker (cont.)
  – ETG/SB up and receiving data?
    • Check ETG/SB logfile or monitoring
      – Logfile prints out “incomplete event” and missing crate ID(s) when missing crate(s) for an event
      – Monitoring page shows which crates have gone missing, and how many times, as well as totals and current routing information
    – If VRCs are getting data from crates, ETG/SB almost always gets data.
      • A single crate missing is usually the problem…contact detector expert.
    – If ETG/SB is not complaining, check the farm nodes
What to do when...

L3/DAQ

• Farm Nodes
  – Is the FarmNode up?
    • AutoStart
  – Check logfile
    • Most complaints in the logfile come from the L3 trigger code (the Filter) that runs in ScriptRunner.
    • It may be that bad trigger programming got down to the node. Jon Hays is the Filter expert and can diagnose this easily.
    • If the node has crashed…reset L3/DAQ. If it continues to crash, it’s probably bad trigger programming.