LAT Data Server Overview

Server’s Purpose
- deliver all LAT ground event data to collaborators
  - not only FITS files
  - MC
  - EM/Integration data
  - Flight data
- Perhaps act as US West Coast portal for FITS data access (if needed)

Desirements
- Hooked up to dataset catalogue (as generated by OPUS)
  - Full list of all “tasks” and their constituent datasets
  - Provide task selection to users
- Perhaps access to manually generated files
- Access to all farms’ data?
- ftp access to
  - ntuples
  - Full MC/Digi/Recon trees
  - FT1, FT2
- Event display server?
- Not slow as mud
Server Diagram

OPUS
Flight, EM data
MC

File catalogue
Oracle DB

Disk Farm
(direct)
Manually created datasets?

Server
glast02

query
User’s Browser

Temp ftp space
Event Sources

- Merit ntuple used as primary source
  - All indexed by Run/Event (for now)
  - FT1 is subset

- Apply selections to 200+ columns of Merit and generate output
  - new ntuple
  - FT1
  - find appropriate events in trees (currently - looks through the trees, not tuple)
    - Use RootIO random access to speed this up

- From all Farms?
  - Three farms at the moment: Lyon, Perugia (coming up) & SLAC
    - ntuples transferred to SLAC disk
    - Hand-ftp needed tree files for “peeling” as requested
  - Possible to have server access to all farms “locally”?
    - Knows where all files are and goes to the source…
    - xrootd?
    - GRID??
Misc

- **Event Display server**
  - Seems a similar technology
  - Work with FRED to supply events?

- **Customizable?**
  - It was handy being able to set up rules for DC1
    - Not delivering MC, for example

- **Possible speed options**
  - Index files with Run/Event; use conditional branches
  - Custom macros for pruning (don’t rely on TTree::Draw)
  - PROOF (parallel Root queries)?