

Computing Model Simulation

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FNAL

Updates

- ▶ Extracted weeks worth of jobs with data locations
- ▶ Improved performance
 - ▶ Used igprof to analyse cProfile output
 - <http://gowdy.web.cern.ch/gowdy/cgi-bin/igprof-navigator/sitesim/self>
 - <http://gowdy.web.cern.ch/gowdy/cgi-bin/igprof-navigator/sitesim2/self>
 - ▶ A few changes made it run twice as fast
 - ▶ Looking now with remote reads
 - <http://gowdy.web.cern.ch/gowdy/cgi-bin/igprof-navigator/sitesim3/self>
- ▶ Some jobs ran on files with no location in the US
 - ▶ Put a copy of all those files at FNAL for simulation

Results

- ▶ A week of jobs in the US from the dashboard consisted of 56956
 - ▶ A handful removed that didn't have an LFN stored
- ▶ Most data at site with job but do transfers if needed
 - ▶ Total wall clock time 1.37Gs
- ▶ Locate all data at FNAL and distribute as needed by jobs
 - ▶ Total wall clock time 1.45Gs
- ▶ Simulation running time with remote reads running much slower

Next Steps

- ▶ Remote read of data from FNAL
- ▶ Allow jobs to start as quickly as possible
 - ▶ Not all batch resources fully utilised
 - ▶ Currently still start at their original start time
- ▶ Vary input assumptions to see variation of output
 - ▶ Remote read penalty
 - ▶ Max single file transfer rate