

Introduction to ILCSIM

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ILC Simulaton Machines

- ▶ ilcsim.fnal.gov
 - ▶ 32bit SLF 3
- ▶ ilcsim2.fnal.gov
 - ▶ 64bit SLF 4
- ▶ gateway to grid
- ▶ Kerberos principal required for access

Available Packages

- ▶ LCIO
 - ▶ fixes as of last night
 - ▶ java 1.6.0
 - ▶ setup lcio
- ▶ Mokka v06-04-p03
 - ▶ geant4 v4_9_0_p01
 - ▶ lcio (latest)
 - ▶ java 1.6.0
 - ▶ setup mokka

Marlin v00-09-09

- ▶ support packages
 - ▶ CLHEP 2.0.2.2
 - ▶ ROOT 5.08.00
 - ▶ latest Icio
 - ▶ java 1.6.0
 - ▶ CERN 2005
 - ▶ GSL 1.8
 - ▶ GEAR v00-06-01
 - ▶ LCCD v00-03-06
 - ▶ RAIDA v01-02

Marlin v00-09-09

- ▶ Marlin packages
 - ▶ LCFIVertex v00-01-01
 - ▶ MarlinReco v00-04
 - ▶ MarlinUtil v00-04
 - ▶ Overlay v00-01
 - ▶ PandoraPFA v01-01
 - ▶ SiliconDigi v00-01

Marlin notes

- ▶ built with ilcinstall
 - ▶ without cmake
- ▶ appears to be a consistent set of packages (guidance lacking)
- ▶ not tested
- ▶ setup marlin
 - ▶ preferred to using *.sh script in Marlin

What's with this “setup” stuff?

- ▶ UPS/UPD
 - ▶ Fermilab product support
- ▶ “table” file defines environment
- ▶ environment properly established
 - ▶ all Bourne and csh variants
 - ▶ **adds to path ONCE**
- ▶ setup xyz
- ▶ unsetup xyz (not often necessary)
- ▶ a bit clunky when dealing with complex situations

Disk Resources

- ▶ BlueArc network mounted storage
 - ▶ fast access
 - ▶ NOT backed up
- ▶ available on ilcsim[2] and [ILC/GP] grid
 - ▶ NOT available on general OSG VO's
- ▶ /ilc
 - ▶ long term storage of datasets
 - ▶ 2 TB initially for ILD (renegotiated as necessary)
- ▶ /grid/app/ilc/detector – applications/libraries needed by grid
- ▶ /grid/data/ilc/detector – short term storage of datasets
- ▶ /scratch (non-bluearc NFS mounted) – not on grid
- ▶ /local (local scratch) – not on grid – not shared

grid ⇒ ILC VO

- ▶ separation promotes harmony
- ▶ resources can be renegotiated

/ilc/accelerator	225 nodes	
/ilc/detector	25 nodes	secondary use
/ilc/ilc4c	125 nodes	4th concept
/ilc/ild	125 nodes	ILD
/ilc/sid	125 nodes	SiD

Register with the Grid

- ▶ <http://ilc.fnal.gov/detector/rd/physics/technical/resources/grid.shtml>
- ▶ Register your certificate
 - ▶ KCA or DOEGrid
 - ▶ select both /ilc/detector and /ilc/ild
 - ▶ 2 step process
- ▶ time lag to get databases in sync
 - ▶ about 2 hours
- ▶ ILC VO defined in OSG

Working on the Grid

- ▶ Hans' instructions (SiD centric)
 - ▶ <http://confluence.slac.stanford.edu/display/ilc/How+do+I+use+the+OSG+Grid>
- ▶ `source /fnal/ups/grid/setup.[c]sh`
- ▶ KCA cert:
 - ▶ `kx509`
 - ▶ `kxlist -p`
- ▶ `voms-proxy-init -voms ilc:/ilc/ild [-noregen]`
 - ▶ MUST use `-noregen` if using KCA cert
- ▶ `condor_submit myjob.run`
 - ▶ see either set of grid instructions
 - ▶ everything is copied to a grid machine and runs there
 - ▶ NO access to your home directory or environment

Resources

- ▶ ILC detector simulation info

- ▶ <http://ilc.fnal.gov/detector/rd/physics/technical/>
- ▶ <http://cepa.fnal.gov/> -> ILC Detector Simulation

- ▶ Accounts on ilcsim

- ▶ get FNAL Kerberos principal
 - ▶ <http://computing.fnal.gov/cd/forms/>
- ▶ send mail to garren@fnal.gov
- ▶ identify yourself
 - ▶ who are you working with, etc.