Externals Upgrade 2008

Introduction

A number of our external libraries are in need of upgrades.

Python

Staying with version 2.5.1, but in need of reorganization.

Home Page: http://www.python.org/

We have been requested to include the following modules in GLAST's python distribution:

http://confluence.slac.stanford.edu/display/core/Third-party+Python+packages+for+extlibs+distribution+%28python+2.5.1-gl1%29

In addition there is an outstanding issue with zlib on rhel4, where it seems the libraries fails to build. We'll have to see if that behavior continues in this next build. (zlib did fail again Oct 2, 2008)

As for tcl/tk 8.4, the plan is that we build python against the same version used by the ftools (sometimes referred to as heasoft). We have a copy of heasoft installed at SLAC, currently on a rh9 build..but I'll be doing a rhel4 build soon. That build is located at $GLASTROOT/applications/heasoft/

Versions installed:
numpy 1.2.0
pyfits 1.3
4SuiteXML 1.0.2

We have confirmed with Jim Chiang that it is numpy (rather than numarray) we should be supporting.

Update

Emmaunel has installed python 2.5.1 at SLAC in the GLAST_EXT rh9_gcc32 area. Documentation is available at https://confluence.slac.stanford.edu/display/SAS/Documentation+for+Installing+External+Libraries

Testing has commenced:

numpy tested via

python -c 'import numpy; numpy.test()'

pyfits tested by grabbing a FT2 file from: root://glast-rdr.slac.stanford.edu//glast/Data/Flight/Level1/LPA/prod/1.65/ft2/gll_pt_r0243158679_v001.fit then:

import pyfitshdulist = pyfits.open('blah.fit')hdulist.info()

4Suite-Xml tested via:

>>> from Ft.Xml import Domlette>>> from Ft.Xml.Xslt import Processor>>> print Processor<module 'Ft.Xml.Xslt.Processor' from '/afs/slac/g/glast/ground/GLAST_EXT/rh9_gcc32/python/2.5.1-gl1/gcc32/lib/python2.5/Ft/Xml/Xslt/Processor.pyc'>

OmniOrb

http://confluence.slac.stanford.edu/display/SAS/Building+omniORB+for+GLAST

Update (by Emmanuel Cephas)

- **Installed OmniOrb 4.1.2** at SLAC **for rh9_gcc32** and the **rhel4 machines**
    - The OmniOrb 4.1.2 directory structure is consistent with the convention for SCons (replace rh9_gcc32 with rhel4_gcc34 or redhat4-i686-32bit for the rhel4 machines)
        - **..**/GLAST_EXT/rh9_gcc32/OmniOrb/4.1.2/**gcc32/lib**
        - **..**/GLAST_EXT/rh9_gcc32/OmniOrb/4.1.2/**gcc32/include**
        - etc..
- Regenerated the following HepRepCorba files with *omniidl* (SEE http://confluence.slac.stanford.edu/display/SAS/Building+omniORB+for+GLAST) and comitted them to CVS:
    - HepRHepEventServer.hh and HepEventServerSK.cc
    - HepEventServer.hh and HepEventServerSK.cc

- Testing has commenced. Heather is testing OmniOrb against a locally modifed OmniOrb CMT requirements file (which points to the 4.1.2 version of OmniOrb with the new directory structure)

FRED

Moving to version: v0r100

ROOT

Moving to version 5.20/00

Home Page: http://root.cern.ch/

Source is available from: http://root.cern.ch/root/Version520.html

Options we set up in GLAST for building ROOT from source:

http://confluence.slac.stanford.edu/display/ROOT/Building+ROOT+on+Linux

http://confluence.slac.stanford.edu/display/ROOT/Building+ROOT+on+Windows+with+VC8

Note: Please check the configuration used by the ROOT developers to see if there are additional flags we may be interested in.

Other Libraries we'll get to in good time:

xerces

CLHEP

Gaudi