

GammaLib - Action #2211

Feature # 1490 (Closed): Build binary conda packages for Gammalib and ctools

Prepare packages with conda

10/09/2017 05:35 PM - Brau-Nogué Sylvie

Status:	Closed	Start date:	10/09/2017
Priority:	Normal	Due date:	10/31/2017
Assigned To:	Brau-Nogué Sylvie	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:	1.5.0		
Description			
Tout est dans le titre ...			
En s'inspirant largement des recettes préparées par K. Kosack, voir https://github.com/cta-observatory/cta-conda-recipes/tree/master/extern			

History

#1 - 10/09/2017 05:45 PM - Brau-Nogué Sylvie

- Status changed from New to In Progress

- % Done changed from 0 to 90

Create environment for Python 2.7

```
$ conda create -n ctatest python=2.7 anaconda
$ source activate ctatest
(ctatest) $ conda install -c conda-forge cfitsio
(ctatest) $ conda update --all
```

Prepare recipes

```
git clone https://github.com/cta-observatory/cta-conda-recipes
cd cta-conda-recipes/extern
(ctatest) $ conda update conda
```

Create package

```
(ctatest) $ conda build gammalib-1.3.0.conda --python=2.7
BUILD START: gammalib-1.3.0-py27_1
Can't build $HOME/cta-conda-recipes/extern/gammalib-1.3.0.conda due to unsatisfiable dependencies:
- cfitsio
- gammalib ==1.3
- cfitsio
```

La solution : conda config --append channels conda-forge

```
(ctatest) $ conda build gammalib-1.2.0.conda --python=2.7
```

```
BUILD START: gammalib-1.3.0-py27_1
```

The following NEW packages will be INSTALLED:

```
ca-certificates: 2017.08.26-h1d4fec5_0
certifi: 2017.7.27.1-py27h9ceb091_0
```

```
libedit: 3.1-heed3624_0
libffi: 3.2.1-h4deb6c0_3
libgcc-ng: 7.2.0-h7cc24e2_2
libstdcxx-ng: 7.2.0-h7a57d05_2
ncurses: 6.0-h06874d7_1
openssl: 1.0.2l-h9d1a558_3
pcre: 8.41-hc71a17e_0
pip: 9.0.1-py27hbf658b2_3
python: 2.7.14-h1aa7481_19
readline: 7.0-hac23ff0_3
setuptools: 36.5.0-py27h68b189e_0
sqlite: 3.20.1-h6d8b0f3_1
swig: 3.0.10-0
tk: 8.6.7-h5979e9b_1
wheel: 0.29.0-py27h411dd7b_1
zlib: 1.2.11-hfbfcf68_1
```

WARNING: conda-build appears to be out of date. You have version 2.1.17 but the latest version is 3.0.25. Run

```
conda update -n root conda-build
```

to get the latest version.

```
Source cache directory is: /home/osboxes/anaconda2/conda-bld/src_cache
Downloading source to cache: gmmalib-1.3.0.tar.gz
Downloading http://cta.irap.omp.eu/ctools/releases/gmmalib/gmmalib-1.3.0.tar.gz
INFO:fetch.start:(u'gmmalib-1.3.0', 29075351)
INFO:fetch.update:16384
INFO:fetch.update:32768
```

[.....]

```
INFO:fetch.update:29065216
INFO:fetch.update:29075351
INFO:fetch.stop:None
Success
Extracting download
Package: gmmalib-1.3.0-py27_1
source tree in: /home/osboxes/anaconda2/conda-bld/gmmalib_1507557279726/work/gmmalib-1.3.0
+ source /home/osboxes/anaconda2/bin/activate
```

```
+ ./configure
```

```
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... /usr/bin/mkdir -p
checking for gawk... gawk
.....
```

```
/home/osboxes/anaconda2/conda-bld/linux-64/gmmalib-1.3.0-py27_1.tar.bz2
updating index in: /home/osboxes/anaconda2/conda-bld
updating index in: /home/osboxes/anaconda2/conda-bld/noarch
updating index in: /home/osboxes/anaconda2/conda-bld/linux-64
updating: gmmalib-1.3.0-py27_1.tar.bz2
updating index in: /home/osboxes/anaconda2/conda-bld
Nothing to test for: /home/osboxes/anaconda2/conda-bld/linux-64/gmmalib-1.3.0-py27_1.tar.bz2
INFO:conda_build.config:--dirty flag and --keep-old-work not specified.Removing build/test folder after successful build/test.
```

```
# Automatic uploading is disabled
# If you want to upload package(s) to anaconda.org later, type:
```

```
anaconda upload /home/osboxes/anaconda2/conda-bld/linux-64/gmmalib-1.3.0-py27_1.tar.bz2
```

```
# To have conda build upload to anaconda.org automatically, use
# $ conda config --set anaconda_upload yes
```

```
anaconda_upload is not set. Not uploading wheels: []
```

#####

Source and build intermediates have been left in /home/osboxes/anaconda2/conda-bld.

There are currently 4 accumulated.

To remove them, you can run the ``conda build purge`` comman

Local install

```
conda create -n py27 python=2.7 anaconda
```

```
source activate py27
```

```
conda install --offline /home/osboxes/anaconda2/conda-bld/linux-64/gammalib-1.3.0-py27_1.tar.bz2
```

#2 - 10/09/2017 05:53 PM - Brau-Nogu  Sylvie

- % Done changed from 90 to 70

Install then preliminary tests

Set conda environment

- source activate py27
- conda config --append channels conda-forge
- conda config --append channels cta-observatory

Set gammalib/ctools environment

```
export GAMMALIB=$HOME/anaconda2/envs/py27
```

```
export CTOOLS=$HOME/anaconda2/envs/py27
```

Gammalib is OK

----- INSTALL -----

```
(py27) $ conda install --offline /home/osboxes/anaconda2/conda-bld/linux-64/gammalib-1.3.0-py27_1.tar.bz2
```

----- TEST -----

```
(py27) $ source $GAMMALIB/bin/gammalib-init.sh
```

```
(py27) $ python -c 'import gammalib; gammalib.test()'
```

* Python interface testing *

```
Test GLog: ..... ok
```

```
Test GApplication: ..... ok
```

```
Test GApplicationPars: .. ok
```

```
Test GFits class: ..... ok
```

```
Test GFitsImage class: ..... ok
```

```
Test GFitsTable class: . ok
```

```
Test GFitsTableCol classes: ..... ok
```

```
Test GVector: ..... ok
```

```
Test GMatrix: ..... ok
```

```
Test GMatrixSparse: ..... ok
```

```
Test GMatrixSymmetric: ..... ok
```

```

Test GModels: ... ok
Test Gfft: .. ok
Test GEnergy class: ..... ok
Test GEnergies class: .... ok
Test GTime class: ..... ok
Optimizer module dummy test: . ok
Test sky map methods: ..... ok
Test sky map friend methods: ..... ok
Test sky map operators: ..... ok
Test HEALPix map: ..... ok
Test AIT projection map: ..... ok
Test AZP projection map: ..... ok
Test CAR projection map: ..... ok
Test GLS projection map: ..... ok
Test MER projection map: ..... ok
Test MOL projection map: ..... ok
Test SFL projection map: ..... ok
Test SIN projection map: ..... ok
Test STG projection map: ..... ok
Test TAN projection map: ..... ok
Test FK5 to Galactic coordinate conversion: .. ok
Test GNodeArray: ..... ok
Test GUrlFile: ... ok
Test GUrlString: ... ok
Test GFilename: ..... ok
Test GCsv: ..... ok
Test module dummy test: . ok
XML module dummy test: . ok
Test GPha: ... ok
Test GARf: ... ok
Test GRmf: ..... ok
Test GVOclient: . ok
MWL dummy test: . ok
Test CTA effective area classes: ..... ok
Test CTA PSF classes: ..... ok
Test CTA energy dispersion classes: ..... ok
Test CTA response classes: . ok
Test CTA On/Off analysis: ..... ok
LAT dummy test: . ok
COMPTEL dummy test: . ok

```

ctools is OK

----- INSTALL -----

```
(py27)$ conda install --offline /home/osboxes/anaconda2/conda-bld/linux-64/ctools-1.3.0-py27_1.tar.bz2
```

----- TEST -----

```
(py27) $ source $CTOOLS/bin/ctools-init.sh
```

```
(py27) $ python -c 'import ctools; ctools.test()'
```

```
*****
```

```
* ctools unit testing *
```

```
*****
```

```

Test ctobssim on command line: ..... ok
Test ctobssim from Python: ..... ok
Test ctselect on command line: ..... ok
Test ctselect from Python: ..... ok
Test ctphase on command line: ..... ok
Test ctphase from Python: ..... ok
Test ctbin on command line: ..... ok
Test ctbin from Python: ..... ok
Test ctlike on command line: ..... ok
Test ctlike from Python: ..... ok
Test cttsmap on command line: ..... ok
Test cttsmap from Python: ..... ok
Test ctmodel on command line: ..... ok
Test ctmodel from Python: ..... ok
Test ctskymap on command line: ..... ok
Test ctskymap from Python: ..... ok
Test ctexpcube on command line: ..... ok

```

Test ctexpcube from Python: ok
Test ctpscube on command line: ok
Test ctpscube from Python: ok
Test ctediscube on command line: ok
Test ctediscube from Python: ok
Test ctbkgcube on command line: ok
Test ctbkgcube from Python: ok
Test ctmapcube on command line: ok
Test ctmapcube from Python: ok
Test ctubemask on command line: ok
Test ctubemask from Python: ok
Test ctbutterfly on command line: ok
Test ctbutterfly from Python: ok
Test ctulimit on command line: ok
Test ctulimit from Python: ok
Test cterror on command line: ok
Test cterror from Python: ok
Test ctprob on command line: ok
Test ctprob from Python: ok
Test unbinned pipeline with FITS file saving: . ok
Test unbinned in-memory pipeline: . ok

#3 - 10/10/2017 02:09 PM - Brau-Nogu  Sylvie

- % Done changed from 70 to 90

<<<<< All tests passed successfully >>>>>

Procedure summary

Prerequisites

- the py27 environment exists (*previously created by the command : conda create -n py27 python=2.7 anaconda*)
- set variable ANACONDA_PATH (*\$HOME/anaconda2 in this example*)

Set conda environment

- source activate py27
- conda config --append channels conda-forge
- conda config --append channels cta-observatory

Set gammalib/ctools environment

- export GAMMALIB=\$ ANACONDA_PATH/envs/py27
- export CTOOLS=\$ ANACONDA_PATH/envs/py27

Local install conda packages

- conda install --offline \$ANACONDA_PATH/conda-bld/linux-64/gammalib-1.3.0-py27_1.tar.bz2
- conda install --offline \$ANACONDA_PATH/conda-bld/linux-64/ctools-1.3.0-py27_1.tar.bz2

Gammalib

- source \$GAMMALIB/bin/gammalib-init.sh
- python -c 'import gammalib; gammalib.test()'

ctools

- source \$CTOOLS/bin/ctools-init.sh
- python -c 'import ctools; ctools.test()'

#4 - 11/23/2017 05:29 PM - Knödseder Jürgen

- Status changed from *In Progress* to *Closed*

- % Done changed from 90 to 100

Conda package generation is now integrated in the release pipeline (#2278).