GammaLib - Action #2196

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

Validate GammaLib installation through conda

09/27/2017 02:45 PM - Brau-Nogué Sylvie

Status:	Closed		**Start date:**	09/27/2017
Priority:	Normal		**Due date:**	10/04/2017
Assigned To:	Brau-Nogué Sylvie		**% Done:**	100%
Category:			**Estimated time:**	0.00 hour
Target version:	1.5.0			

Description

à partir des *recipes* préparées par K. Kosack, voir https://github.com/cta-observatory/cta-conda-recipes/tree/master/extern

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History

#1 - 09/27/2017 04:00 PM - Brau-Nogué Sylvie

- Status changed from New to In Progress

- % Done changed from 0 to 10

Petit test rapide à partir du dépôt https://anaconda.org/cta-observatory/gammalib

- Installation de conda sur masOS ; (package standard)

Installation gammalib/ctools

- export PATH=/Applications/anaconda2/bin:$PATH
- unset GAMMALIB
- conda install -c cta-observatory ctools
  -> çà marche pas parce qu'il ne trouve pas gammalib
- conda install -c cta-observatory gammalib
  -> çà marche pas parce qu'il ne trouve pas cfitsio
- conda install -c conda-forge cfitsio
- conda install -c cta-observatory gammalib
- python

  import gammalib -> çà marche pas car il manque libreadline

- conda install -c conda-forge readline
- python

  import gammalib
  gammalib.test() **OK**

#2 - 10/06/2017 03:29 PM - Brau-Nogué Sylvie

- Tags set to PACKAGING

- % Done changed from 10 to 70

<u>Etape suivante</u> : **partir from scratch sur MaxOS avec Python v2.7.10 avec gammalib/ctools fournis par K. Kosack (voir Feature #1490)**

- install conda/anaconda depuis https://store.continuum.io/cshop/anaconda/
  - -> package : Anaconda2-5.0.0-MacOSX-x86_64.pkg
  - **anaconda**, **conda** installés sur répertoire $HOME/anaconda2
  - l'installation a modifié le fichier .bash_profile en rajouta $HOME/anaconda2/bin dans le PATH
- unset GAMMALIB
- unset CTOOLS
- conda install -c conda-forge cfitsio
- conda install -c conda-forge readline
- conda update conda
- conda update anaconda
- conda update --all -c conda-forge
- conda install -c cta-observatory gammalib (-> https://anaconda.org/cta-observatory/gammalib v 1.4.2)
- conda install -c cta-observatory ctools (-> https://anaconda.org/cta-observatory/ctools v 1.4.2)

$ 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 operators: ......................... ok
Test HEALPix map: ................................................................. ok
Test AIT projection map: ................................... ok
Test AZP projection map: ................................... ok
Test CAR projection map: ................................... ok
Test MER projection map: ................................... ok
Test MOL 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
```

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

Traceback (most recent call last):
  File "<string>", line 1, in <module>
  File "/Users/sbn/anaconda2/lib/python2.7/site-packages/ctools/tools.py", line 2190, in test
    test_python_ctools.test(installed=True)
  File "/Users/sbn/anaconda2/lib/python2.7/site-packages/ctools/tests/test_python_ctools.py", line 99, in test
    os.system('cp -r %s/syspfiles/*.par pfiles/' % (os.environ['CTOOLS']))
  File "/Users/sbn/anaconda2/lib/python2.7/UserDict.py", line 40, in __getitem__
    raise KeyError(key)
KeyError: 'CTOOLS'
```

$ export CTOOLS=/Users/sbn/anaconda2

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

***********************
* ctools unit testing *
***********************
Test ctobssim on command line: .FE NOK
Test ctobssim from Python: ..E NOK
Test ctselect on command line: ......... ok
Test ctselect from Python: ....................E NOK
Test ctbin on command line: .......... ok
Test ctbin from Python: .................................................. ok
Test ctlike on command line: .FE NOK
Test ctlike from Python: ....E NOK
Test cttsmap on command line: .FE NOK
Test cttsmap from Python: .....E NOK
Test ctmodel on command line: .FE NOK
Test ctmodel from Python: ....E NOK
Test ctskymap on command line: ........ ok
Test ctskymap from Python: ...................E NOK
Test ctexpcube on command line: .FE NOK
Test ctexpcube from Python: ..E NOK
Test ctpsfcube on command line: .FE NOK
Test ctpsfcube from Python: ..E NOK
Test ctedispcube on command line: .FE NOK
Test ctedispcube from Python: ...E NOK
Test ctbkgcube on command line: .FE NOK
Test ctbkgcube from Python: ...E NOK
Test ctmapcube on command line: ........ ok
Test ctmapcube from Python: .................... ok
Test ctcubemask on command line: ....... ok
Test ctcubemask from Python: ............. ok
Test ctbutterfly on command line: .FE NOK
Test ctbutterfly from Python: E NOK
Test ctulimit on command line: .F... NOK
Test ctulimit from Python: ...E NOK
Test cterror on command line: .FE NOK
Test cterror from Python: ....E NOK
Test unbinned pipeline with FITS file saving: E NOK
Test unbinned in-memory pipeline: E NOK
```

#3 - 10/06/2017 03:33 PM - Brau-Nogué Sylvie

- Checklist changed from [ ] Installer conda sur Mac + 1 VM Centos, [ ] Installer ctools v 1.3 to [ ] Installer conda sur Mac + 1 VM Centos, [ ] Installer ctools v 1.3, [ ] Tester installation package gammalib/ctools préparée par K. Kosack

- % Done changed from 70 to 0

#4 - 10/06/2017 03:33 PM - Brau-Nogué Sylvie

- Checklist changed from [ ] Tester installation package gammalib/ctools préparée par K. Kosack to [x] Tester installation package gammalib/ctools préparée par K. Kosack

#5 - 10/09/2017 12:02 PM - Brau-Nogué Sylvie

- Checklist changed from [ ] Installer conda sur Mac + 1 VM Centos, [ ] Installer ctools v 1.3, [x] Tester installation package gammalib/ctools préparée par K. Kosack to [x] Installer conda sur Mac + 1 VM Centos, [x] Installer ctools v 1.4.2, [x] Tester installation package gammalib/ctools préparée par K. Kosack

- % Done changed from 30 to 100

Etape suivante : partir from scratch sur CentOS avec Python v2.7.10 avec gammalib/ctools fournis par K. Kosack (voir Feature #1490)

- même séquence que pour MacOS

Problème pour la commande **conda install -c cta-observatory gammalib**


```
$ python --version
Python 2.7.11 :: Anaconda custom (64-bit)

$ conda install -c cta-observatory gammalib
Fetching package metadata .............
Solving package specifications: .

UnsatisfiableError: The following specifications were found to be in conflict:
  - gammalib -> python 3.6*
  - python 2.7*
Use "conda info <package>" to see the dependencies for each package.
```


En effet, à la question : **$ conda search -c cta-observatory gammalib**

```
    Fetching package metadata .............
    gammalib            1.3.0                   py36_1  cta-observatory
```


Donc, installation d'une nouvelle version de Python, et activation de l'environnement **py36**


```
$conda create -n py36 python=3.6 anaconda
$ source activate py36
(py36) $ python --version
Python 3.6.2 :: Anaconda, Inc.
```


- les paquets **gammalib** et **ctools** sont installés dans **$HOME/anaconda2/envs/py36/**

TESTS pour gammalib


```
(py36)$ 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

  x_mark.png **TESTS pour ctools**

(py36) $ python -c 'import ctools; ctools.test()'

****
* ctools unit testing *
****
Test ctobssim on command line: .FE NOK
Test ctobssim from Python: ..E NOK
Test ctselect on command line: .... ok
Test ctselect from Python: ....E NOK
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: .FE NOK
Test ctlike from Python: ....E NOK
Test cttsmap on command line: .FE NOK
Test cttsmap from Python: .....E NOK
Test ctmodel on command line: .FE NOK
Test ctmodel from Python: ....E NOK
Test ctskymap on command line: .... ok
Test ctskymap from Python: ....E NOK
terminate called after throwing an instance of 'GException::fits_open_error'
  what(): *** ERROR in GFits::open(GFilename&, bool&): Unable to open FITS file "ctexpcube_cmd1.fits" (status=104)
Test ctexpcube on command line: .FAbandon (core dumped)

(py36) $

#6 - 10/09/2017 01:33 PM - Brau-Nogué Sylvie

- Description updated

- % Done changed from 100 to 80

#7 - 10/09/2017 03:32 PM - Brau-Nogué Sylvie

- Checklist changed from [x] Installer conda sur Mac + 1 VM Centos, [x] Installer ctools v 1.4.2, [x] Tester installation package gammalib/ctools préparée par K. Kosack to [x] Installer conda sur Mac + 1 VM Centos, [x] Installer ctools v 1.4.2, [x] Tester installation package gammalib/ctools préparée par K. Kosack, [ ] Valider gammalib/ctools sur CentOS

- % Done changed from 80 to 70

- % Done changed from 70 to 100

{{warning(h3. La validation du package ctools disponible sur https://anaconda.org/cta-observatory/gammalib a échoué sur CentOS)

Message d'erreur :

        Test ctskymap from Python: ....E NOK
        terminate called after throwing an instance of 'GException::fits_open_error'
        what(): *** ERROR in GFits::open(GFilename&, bool&): Unable to open FITS file "ctexpcube_cmd1.fits" (status=104)
        Test ctexpcube on command line: .FAbandon (core dumped)

}}

#8 - 10/10/2017 04:44 PM - Brau-Nogué Sylvie

- Checklist changed from [ ] Valider gammalib/ctools sur CentOS to [x] Valider gammalib/ctools sur CentOS

#9 - 10/10/2017 04:45 PM - Brau-Nogué Sylvie

Voir Action #2211 : **Prepare packages with conda**
La validation des packages est faite, il suffisait de ne rien oublier ....

#10 - 10/13/2017 10:50 PM - Knödlseder Jürgen

- Subject changed from Valider l'installation de gammalib avec conda to Validate GammaLib installation through conda

#11 - 11/23/2017 05:31 PM - Knödlseder Jürgen

- Status changed from In Progress to Closed

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