
GangaCK Documentation

Release

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Improving Ganga for better productivity.

```
LHCbDataset.new(

    'some/local/file.dst', # LOCAL

    'root://some-remote-file.dst', # REMOTE

    'file:///another-remote-file.dst', # REMOTE

    '/lhcb/MC/Dev/LDST/00041927/0000/00041927_00000002_1.1dst', # LFN

    'evt+std://MC/2012/42100000/Beam4000GeV-2012-MagDown-Nu2.5-Pythia8/...', # BKQ

    'sim+std://LHCb/Collision12/Beam4000GeV-VeloClosed-MagDown/...', # BKQ

    '$EOS_HOME/ganga/4083/000.dst', # EOS

    '/cvmfs/lhcb.cern.ch/.../pool_xml_catalog_Reco14_Run125113.xml', # XML

    open('text_file_with_url_per_line.txt'), # local list

    jobs(123), # output from another Ganga job.

    LHCbDataset(['foo', 'bar']), # another ds.

) # accept heterogenous input appropriately,
```

Magics: because ganga is embedded inside IPython, why not more magics?

- `jv`: show status of subjobs from all running jobs. Extremely useful for monitoring.
- `jt`: for improved jobtree operation.
- `peek`: based on `Job.peek`, but look deeper when possible.
- `jsh` [provide shell-like syntax to operate `Job` with less (no-shift) typing,] for example, `jsh 197.12 remove True` instead of `jobs("197.12").remove(True)`. Less typing saves your life's time...
- `grun`: similar to the built-in magic `ganga`, but it'll pick the local `ganga*.py` immediately or ask in case of ambiguity.
- `resubmit`: Smartly handle resubmission/backend.reset of failed Dirac jobs based on its failing status (e.g., "Pending Requests", "Job has reached the CPU limit of the queue", "Stalling for more than ...", etc.)

Additional instance methods:

- `Job`: `lfn_list`, `lfn_size`, `lfn_purge`, `pfn_size`, `ppl_list`, `eos_list`, `humansize`, `is_final`.
- `Gauss`: nickname, to retrieve nickname from `$DECFILESROOT`.

Scripts:

- `ganga_cache_viewer`: display the list of cache made by this package.
- `ganga_cleaner`: Complete all-in-one script for tidying your ganga environment.
- `offline_ganga_reader`: Quick script to read the content in Ganga's JobTree offline.
- `xmlgensum`: Report summary of `GeneratorLog.xml` from all subjobs of Ganga-Gauss-Job
- `xmlmerge`: Merge summary.xml files from Ganga's subjobs and neatly archive the dir.

CHAPTER 1

Installation

It's available on pip: `pip install gangack`

CHAPTER 2

Disclaimer

This package was written and used during my PhD in 2013-2017 at EPFL (Lausanne) and LHCb collaboration (CERN), for the work in $Z \rightarrow \tau \tau$ cross-section measurement and $H \rightarrow \mu \tau$ searches at LHCb (8TeV).

As such, it's developped during the period of Ganga 5.34 – 6.0.44. Because of the fast-pace development and non-backward compat nature of Ganga, this package can be obsoleted against newer version of Ganga.

CHAPTER 3

Indices and tables

- `genindex`
- `modindex`
- `search`