

## Overview

LHCb scripts are stored below \$LHCBSERIPTS (/afs/cern.ch/lhcb/scripts) with 4 sub-directories: shell, cern, win32, python.

- \$LHCBSERIPTS/cern - contains cern-centric scripts, cannot be used outside.
- \$LHCBSERIPTS/shell - contains scripts which could be of general use in LHCb ( may be with some customization)
- \$LHCBSERIPTS/win32 - contains \*.bat scripts to be used on Windows
- \$LHCBSERIPTS/python - contains python scripts
- \$LHCBSERIPTS - contains softlinks to some shell/ and cern/ scripts and some wrapper scripts to python scripts.

Some of the scripts are saved on CVS in \$CVSROOT/scripts.

Some of the scripts are saved in platform-dependent tar files for exportation (mkscripstar).

- Following a *cvs commit*
  - ◆ tar files should be rebuilt
  - ◆ win32 DFS repository should be updated:
    - ◇ G:\Experiments\lhcb\scripts
    - ◇ cvs update

## Shell scripts

- **lhcbsetup.csh, lhcbsetup.sh**
  - ◆ lhcbsetup.(c)sh is run at login time to set some CERN LHCb environment variables.
  - ◆ all LHCb scripts and applications assume LHCb environment is set
- **CMT.csh**, **CMT.sh**
  - ◆ CMT.(c)sh is run at login time: *source \$LHCBSERIPTS/CMT.(c)sh*
    - ◇ set \$CMTROOT, \$CMTCONFIG, \$CMTDEB, \$CMTPATH, \$LHCBPROJECTPATH
    - ◇ set all release\_area: LCG\_release\_area, Gaudi\_release\_area, LHCb\_release\_area, etc....
    - ◇ set aliases such as <Project>Env, setenv<Project>, cmt<Project>, run<Project>
    - ◇ set \$PATH and \$LD\_LIBRARY\_PATH when necessary for not default compiler
    - ◇ set ROOTSYS and \$LD\_LIBRARY\_PATH if not defined to please make
    - ◇ to compile and run slc3 on lxplus : *lbcmt gcc323*
- **ExtCMT.csh, ExtCMT.sh**
  - ◆ is equivalent to CMT.(c)sh for LOCAL installation.
  - ◆ is distributed with any project tar ball.
  - ◆ it requires the setting of \$MYSITEROOT and \$CMTSITE=LOCAL beforehand
  - ◆ \$MYSITEROOT is the full path (no symlink) of the LOCAL installation.
  - ◆ it is available in \$MYSITEROOT/scripts
- **ProjectEnv.csh, ProjectEnv.sh**
  - ◆ source ProjectEnv.(c)sh <project> <version> to set CMTPATH for projects built **without\_installarea**
- **setenvProject.csh, setenvProject.sh**
  - ◆ source setenvProject.(c)sh <project> <version> to set CMTPROJECTPATH and user working area for projects built **with\_installarea**
  - ◆ if CMTPROJECTPATH is not set : it sets it

- ◆ if \$User\_release\_area/<project>\_<version> does not exist : it creates it
- ◆ cd \$User\_release\_area/<project>\_<version>
- **SetupProject.csh, SetupProject.sh**
  - ◆ execute python \$LHCBPYTHON/SetupProject.py \$\*
  - ◆ SetupProject [options] <project> [<version>|--ask] will make a *source setup.(c)sh* in the first <project>Sys/<version>/cmt directory found on the CMTPROJECTPATH
- Lbglimpse [↗](#)
  - ◆ get all occurrences of a string in a project and its dependencies
    - ◇ Lbglimpse <a\_string> <Project> <version>
- mkscriptstar [↗](#)
  - ◆ build a tar file, stored on \$LHCBTAR/scripts, for Linux or Win32 with a selection of usefull scripts
    - ◇ mkscriptstar Win32
    - ◇ mkscriptstar Linux
- mkexternaltar [↗](#)
  - ◆ build CMT\_<version> and OpenScientist\_<version> binary tar file for different platforms.
    - ◇ mkexternaltar CMT <version> <linux|win32|mac>
    - ◇ mkexternaltar OpenScientist <version> <binary>

## Win32 scripts

- lhcbsetup.bat
- ExtCMT.bat
- ProjectEnv.bat, <project>Env.bat
- setenvProject.bat
- SetupProject.bat
- getpack.bat
- usedProjects.bat
- lcgspi\_local.bat
- localsetup.bat
- setcmt.bat
- make.bat
- which.bat
- copy-Win2afs.bat
- mkproject.bat

## Python scripts

- install\_project.py
  - ◆ install a project with all its dependencies on `pwd` path:
    - ◇ cd <somewhere>
    - ◇ setenv MYSITEROOT `pwd`
    - ◇ setenv CMTCONFIG "one of the LHCb binary"
    - ◇ python install\_project.py -p <project> -v <version> -b
- LHCb\_config.py [↗](#)
  - ◆ is imported by all mkxxxx.py scripts to describe and configure LHCb projects.
  - ◆ it contains project names, project volume sizes, application names, etc...
- vol\_for\_releases.py [↗](#)
  - ◆ is called by mkproject to create a volume for a project release
- mkLHCbtar.py
  - ◆ is called by mkproject to create tar files for various platform.
  - ◆ must be run to create tar files of just release of DBASE, PARAM packages.
- mkproject.py

- ◆ used to make a full release of a project.
- mkLCGCMTtar.py
  - ◆ must be run to create a LCGCMT tarfile which contains all external (external and lcg) packages used by a given Gaudi version for a given platform.
    - ◇ cd \$LHCBTAR/source
    - ◇ mkLCGCMTtar -n GAUDI\_<version> -b <binary>
    - ◇ check the mkLCGCMTtar.log file and the existence of LCGCMT\_<vers>\_<binary>.tar.gz
- mkGENSERtar.py
  - ◆ was used to create a GENSER binary tar file for up to Gauss DC06 version.
  - ◆ it is now obsolete: for Gauss version > v30r\* mkMCGentar.py should be used instead.
- mkMCGentar.py
  - ◆ should be used to create a binary tar file containing all generators used by a given Gauss version
    - ◇ cd \$LHCBTAR/source
    - ◇ mkMCGentar -n GAUSS\_<version> -b <binary>
    - ◇ check the mkMCGentar.log file and the existence of GENSER\_<vers>\_<binary>.tar.gz
- copy-Win2afs.py
  - ◆ should be run on win32 to *cmt config* and *cmt build vsnet* a project residing on afs and to copy the InstallArea and package binary directories on afs
    - ◇ cd F:\LCG\_LHCbSoft\lhcb\&lt;PROJECT>\<PROJECT>\_<version>
    - ◇ copy-Win2afs
- lcg-mirror-externals [↗](#)
  - ◆ SPI script to copy all external packages referenced by a LCGCMT version from afs to local win32
- usedProjects [↗](#)
  - ◆ get all dependencies of all projects available on \$CMTPROJECTPATH
    - ◇ setenv CMTPROJECTPATH \$LHCBPROJECTPATH
    - ◇ usedProjects
- SetupProject [↗](#)
  - ◆ set the project environment
    - ◇ SetupProject <Project> <version>

## Cern scripts

-- FlorenceRanjard - 28 Feb 2007

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This topic: LHCb > ShellScripts

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