

Table of Contents

RELAX	1
Overview.....	1
Releases.....	1
RELAX_1_2_1.....	1
RELAX_1_2_0.....	2
RELAX_1_1_13.....	2
RELAX_1_1_12.....	3
RELAX_1_1_11a.....	3
RELAX_1_1_11.....	4
RELAX_1_1_10.....	4
RELAX_1_1_9a.....	5
RELAX_1_1_9.....	5
RELAX_1_1_8.....	5
RELAX_1_1_7.....	6
RELAX_1_1_6.....	6
RELAX_1_1_5.....	7
RELAX_1_1_4.....	7
RELAX_1_1_3.....	8
RELAX_1_1_2.....	8
RELAX_1_1_1a.....	9
RELAX_1_1_1.....	9
RELAX_1_1_0.....	10
RELAX_1_0_1.....	10
RELAX_1_0_0.....	11
RELAX_0_1_0.....	11
Installation.....	11
Requirements.....	11
Building.....	12
with a build script.....	12
Pointers.....	12
Savannah portal.....	12
Mailing lists.....	12
CVS repository.....	12
Release download.....	12

RELAX

- Overview
 - Releases
 - Installation
 - Pointers
-

Overview

The RELAX projects provides a set of [Reflex](#) dictionaries for commonly used libraries in LCG.

With the latest RELAX release dictionaries for the following libraries are available:

- CLHEP
- Geant4
- HepMC
- ROOT Math
- Reflex
- STL containers

The ROOT Math dictionary and the dictionary for STL containers are additions to the dictionaries generated by CINT with every ROOT release.

For a detailed list of all classes dictionaries were generated for please check the capabilities file, linked from the release notes of every release.

If you like to request changes for an already existing dictionary or a new dictionary to be added please submit either a support request on the Relax Savannah portal [or](#) send a mail to project-relax-developers@cern.ch

Releases

RELAX_1_2_1

LCG Configuration	LCG_58	
Dictionaries	CLHEP	1.9.3.1
	HepMC	2.03.11
	HepPDT	2.06.01
	Math	root 5.26.00a
	MathAdd	root 5.26.00a
	Reflex	root 5.26.00a
	STL	
	STLAdd	
Platforms	i686-slc5-gcc34-[opt+dbg]	
	i686-slc5-gcc34-[opt+dbg]	
	i686-slc5-gcc43-[opt+dbg]	
	x86_64-slc5-gcc34-[opt+dbg]	

	x86_64-slc5-gcc43-[opt+dbg]
	slc4_amd64_gcc34(_dbg)
	slc4_amd64_gcc43(_dbg)
	slc4_ia32_gcc34(_dbg)
	slc4_ia32_gcc43(_dbg)
	osx105_ia32_gcc40(_dbg)
	win32_v71_dbg
	i686-winxp-vc9-dbg

Release Notes:

- Producing new dictionaries for the upgraded HepPDT version
-

RELAX_1_2_0

LCG Configuration	LCG_57 ↗	
Dictionaries	CLHEP	1.9.3.1
	Geant4	8.0.p01
	HepMC	2.03.11
	HepPDT	2.05.04
	Math	root 5.24.00b
	MathAdd	root 5.24.00b
	Reflex	root 5.24.00b
	STL	
	STLAdd	
Platforms	i686-slc5-gcc34-[opt+dbg]	
	i686-slc5-gcc43-[opt+dbg]	
	osx105_ia32_gcc40(_dbg)	
	slc4_amd64_gcc34(_dbg)	
	slc4_amd64_gcc43(_dbg)	
	slc4_ia32_gcc34(_dbg)	
	slc4_ia32_gcc43(_dbg)	
	win32_v71_dbg	
	x86_64-slc5-gcc34-[opt+dbg]	
	x86_64-slc5-gcc43-[opt+dbg]	

Release Notes:

- New dictionary for HepPDT classes produced
-

RELAX_1_1_13

LCG Configuration	LCG_56 ↗	
Dictionaries	CLHEP	1.9.3.1
	Geant4	8.0.p01
	HepMC	2.03.09
	Math	root 5.22.00
	MathAdd	root 5.22.00
	Reflex	root 5.22.00
	STL	

	STLAdd	
Platforms	i686-slc5-gcc34-[opt	dbg]
	i686-slc5-gcc43-[opt	dbg]
	osx105_ia32_gcc40(_dbg)	
	slc4_amd64_gcc34(_dbg)	
	slc4_amd64_gcc43(_dbg)	
	slc4_ia32_gcc34(_dbg)	
	slc4_ia32_gcc43(_dbg)	
	win32_v71_dbg	
	x86_64-slc5-gcc34-[opt	dbg]
x86_64-slc5-gcc43-[opt	dbg]	

Release Notes:

- Move to new LCG Configuration 56
 - Introducing new slc5 and gcc4.3 platforms
-

RELAX_1_1_12

LCG Configuration	LCG_55a ↗	
Dictionaries	CLHEP	1.9.3.1
	Geant4	8.0.p01
	HepMC	2.03.09
	Math	root 5.18.00d
	MathAdd	root 5.18.00d
	Reflex	root 5.18.00d
	STL	
	STLAdd	
Platforms	osx105_ia32_gcc40(_dbg)	
	slc4_amd64_gcc34(_dbg)	
	slc4_ia32_gcc34(_dbg)	
	win32_v71_dbg	

Release Notes:

- Introducing the dictionary for the new HepMC version 2.03.09
-

RELAX_1_1_11a

LCG Configuration	LCG_55 ↗	
Dictionaries	CLHEP	1.9.3.1
	Geant4	8.0.p01
	HepMC	1.26.02
	Math	root 5.18.00d
	MathAdd	root 5.18.00d
	Reflex	root 5.18.00d
	STL	
	STLAdd	
Platforms	osx105_ia32_gcc40(_dbg)	
	slc4_amd64_gcc34(_dbg)	

	slc4_ia32_gcc34(_dbg)
	win32_v71_dbg

Release Notes:

- A rebuild release because of needed changes for the new osx Platform 10.5 Leopard.
-

RELAX_1_1_11

LCG Configuration	LCG_54 ↗	
Dictionaries	CLHEP	1.9.3.1
	Geant4	8.0.p01
	HepMC	1.26.02
	Math	root 5.18.00
	MathAdd	root 5.18.00
	Reflex	root 5.18.00
	STL	
	STLAdd	
Platforms	osx104_ia32_gcc40(_dbg)	
	slc4_amd64_gcc34(_dbg)	
	slc4_ia32_gcc34(_dbg)	
	win32_v71_dbg	

Release Notes:

- Rename rootmap files to ending XXX.pamtoor (rootmap in reverse), in order to avoid the dictionaries to be picked up. For dictionaries that shall be loaded the corresponding rootmap file shall be renamed to XXX.rootmap
-

RELAX_1_1_10

LCG Configuration	LCG_53f ↗	
Dictionaries	CLHEP	1.9.3.1
	Geant4	8.0.p01
	HepMC	1.26.02
	Math	root 5.14.00i
	MathAdd	root 5.14.00i
	Reflex	root 5.14.00i
	STL	
	STLAdd	
Platforms	osx104_ia32_gcc40(_dbg)	
	slc3_ia32_gcc323	
	slc4_amd64_gcc34(_dbg)	
	slc4_ia32_gcc34(_dbg)	
	win32_v71_dbg	

Release Notes:

- Fix for rootmap files on osx104_ia32_gcc401, removing the library suffix dylib from the lib name
 - Remove duplicate dictionaries with pattern "ROOT::Math::Rotation*" in MathRflx
 - add new dictionary for std::pair<int,unsigned int> in STLRLfx
-

RELAX_1_1_9a

LCG Configuration	LCG_53d ↗	
Dictionaries	CLHEP	1.9.3.1
	Geant4	8.0.p01
	HepMC	1.26.02
	Math	root 5.14.00h
	MathAdd	root 5.14.00h
	Reflex	root 5.14.00h
	STL	
	STLAdd	
Platforms	osx104_ia32_gcc40(_dbg)	
	slc3_ia32_gcc323	
	slc4_amd64_gcc34(_dbg)	
	slc4_ia32_gcc34(_dbg)	
	win32_v71_dbg	

Release Notes:

- Rebuilt of 1.1.9 because of version number change in clhep
-

RELAX_1_1_9

LCG Configuration	LCG_52a ↗	
Dictionaries	CLHEP	1.9.2.3
	Geant4	8.0.p01
	HepMC	1.26.02
	Math	root 5.14.00f
	MathAdd	root 5.14.00f
	Reflex	root 5.14.00f
	STL	
	STLAdd	
Platforms	osx104_ppc_gcc40(_dbg)	
	slc3_ia32_gcc323(_dbg)	
	slc4_amd64_gcc34(_dbg)	
	slc4_ia32_gcc34(_dbg)	
	win32_v71_dbg	

Release Notes:

- Added dictionaries for iterator classes to HepMCRflx
 - Cleanup of duplicate entries
-

RELAX_1_1_8

LCG Configuration	LCG_51 ↗	
Dictionaries	CLHEP	1.9.2.3
	Geant4	8.0.p01
	HepMC	1.26.02
	Math	root 5.14.00e

	MathAdd	root 5.14.00e
	Reflex	root 5.14.00e
	STL	
	STLAdd	
Platforms	osx104_ppc_gcc40(_dbg)	
	slc3_ia32_gcc323(_dbg)	
	slc4_amd64_gcc34(_dbg)	
	slc4_ia32_gcc34(_dbg)	
	win32_v71_dbg	

Release Notes:

- Added new dictionaries to STL for
 - ◆ `std::vector<std::pair<double,double> >`
 - ◆ `std::vector<std::pair >`
 - ◆ `std::vector<std::pair<double, std::pair<double, double> > >`
 - ◆ `std::vector<std::pair<int, unsigned int> >`
-

RELAX_1_1_7

LCG Configuration	LCG_50a ↗	
Dictionaries	CLHEP	1.9.2.3
	Geant4	8.0.p01
	HepMC	1.26.02
	Math	root 5.14.00c
	MathAdd	root 5.14.00c
	Reflex	root 5.14.00c
	STL	
	STLAdd	
Platforms	osx104_ppc_gcc40(_dbg)	
	slc3_ia32_gcc323(_dbg)	
	slc4_amd64_gcc34(_dbg)	
	slc4_ia32_gcc34(_dbg)	
	win32_v71_dbg	

Release Notes:

- Fixes for windows dictionaries with ROOT libraries
 - Generate rootmap files in install area if used
 - Adding new tests and qmtest configurations
-

RELAX_1_1_6

LCG Configuration	LCG_49 ↗	
Dictionaries	CLHEP	1.9.2.3
	Geant4	8.0.p01
	HepMC	1.26.02
	Math	root 5.14.00b
	MathAdd	root 5.14.00b
	Reflex	root 5.14.00b
	STL	

	STLAdd	
Platforms	osx104_ppc_gcc40(_dbg)	
	slc3_ia32_gcc323(_dbg)	
	slc4_amd64_gcc34(_dbg)	
	slc4_ia32_gcc34(_dbg)	
	win32_v71_dbg	

Release Notes:

- First release of cmt based RELAX
-

RELAX_1_1_5

LCG Configuration	LCG_48 ↗	
Dictionaries	CLHEP	1.9.2.3
	Geant4	8.0.p01
	HepMC	1.26.02
	Math	root 5.13.04b
	MathAdd	root 5.13.04b
	Reflex	root 5.13.04b
	STL	
	STLAdd	
Platforms	slc3_ia32_gcc323(_dbg)	
	slc4_amd64_gcc34(_dbg)	
	slc4_ia32_gcc34(_dbg)	
	win32_v71_dbg	

Release Notes:

- Moving to LCG_48
 - Move HepMC version to 1.26.02
 - New platforms osx104_ppc_gcc401(_dbg)
 - Removed duplicate entries from the Math dictionary, overlapping with the CINT dictionaries of ROOT/Math
 - Added new requested dictionaries to Math
 - New dictionary MathAdd which contains reflection information for classes already contained in ROOT/Math
 - Detailed information about the generated dictionary classes is available in the content file
-

RELAX_1_1_4

LCG Configuration	LCG_47b ↗	
Dictionaries	CLHEP	1.9.2.3
	Geant4	8.0.p01
	HepMC	1.27.02
	Math	root 5.13.04
	Reflex	root 5.13.04
	STL	
	STLAdd	
Platforms	slc3_ia32_gcc323(_dbg)	
	slc4_amd64_gcc34(_dbg)	

slc4_ia32_gcc34(_dbg)
win32_v71_dbg

Release Notes:

- moving to LCG_47b
-

RELAX_1_1_3

LCG Configuration	LCG_47 ↗	
Dictionaries	CLHEP	1.9.2.3
	Geant4	8.0.p01
	HepMC	1.27.02
	Math	root 5.13.02
	Reflex	root 5.13.02
	STL	
	STLAdd	
Platforms	slc3_ia32_gcc323(_dbg)	
	slc3_ia32_gcc344(_dbg)	
	slc4_amd64_gcc345(_dbg)	
	slc4_ia32_gcc345(_dbg)	
	win32_v71_dbg	

Release Notes:

- moving to LCG_47
-

RELAX_1_1_2

LCG Configuration	LCG_46 ↗	
Dictionaries	CLHEP	1.9.2.2
	Geant4	8.0.p01
	HepMC	1.26
	Math	root 5.12.00
	Reflex	root 5.12.00
	STL	
	STLAdd	
Platforms	slc3_amd64_gcc344(_dbg)	
	slc3_ia32_gcc323(_dbg)	
	slc3_ia32_gcc344(_dbg)	
	slc4_amd64_gcc345(_dbg)	
	slc4_ia32_gcc345(_dbg)	
	win32_v71_dbg	

Release Notes:

- Detailed information about the generated dictionary classes is available in the content file
 - Dictionary creation with the genreflex option --comments which takes into account the comments of class members (e.g. persistence options for ROOT classes)
-

RELAX_1_1_1a

LCG Configuration	LCG_45 ↗	
Dictionaries	CLHEP	1.9.2.2
	Geant4	8.0.p01
	HepMC	1.26
	Math	root 5.11.06
	Reflex	root 5.11.06
	STL	
	STLAdd	
Platforms	slc3_amd64_gcc344(_dbg)	
	slc3_ia32_gcc323(_dbg)	
	slc3_ia32_gcc344(_dbg)	
	slc4_amd64_gcc345(_dbg)	
	slc4_ia32_gcc345(_dbg)	
	win32_v71_dbg	

Release Notes:

- This is a rebuild release of RELAX_1_1_1
-

RELAX_1_1_1

LCG Configuration	LCG_44 ↗	
Dictionaries	CLHEP	1.9.2.2
	Geant4	8.0.p01
	HepMC	1.26
	Math	root 5.11.02
	Reflex	root 5.11.02
	STL	
	STLAdd	
Platforms	slc3_amd64_gcc344(_dbg)	
	slc3_ia32_gcc323(_dbg)	
	slc3_ia32_gcc344(_dbg)	
	slc4_amd64_gcc345(_dbg)	
	slc4_ia32_gcc345(_dbg)	
	win32_v71_dbg	

Release Notes:

- Detailed information about dictionary classes available in the capabilities file
 - New dictionary for STL containers "STLAddRflx". This dictionary contains reflection information for STL classes which already exist as CINT dictionaries. This dictionary is needed for applications that do not depend on ROOT/CINT but still need full STL reflection information.
 - New dictionary for instance `std::vector<std::pair<std::string, std::string> >` added to STLrflx
 - New dictionaries added to HepMCRflx
 - ◆ `std::pair<int, HepMC::GenParticle*>`
 - ◆ `std::pair<int, HepMC::GenVertex*>`
 - ◆ `std::map<int, HepMC::GenParticle*>`
 - ◆ `std::set<HepMC::GenParticle*>`
 - ◆ `std::map<int, HepMC::GenVertex*, std::greater<int> >`
-

RELAX_1_1_0

LCG Configuration	LCG_43 ↗	
Dictionaries	CLHEP	1.9.2.2
	Geant4	8.0.p01
	HepMC	1.26
	Math	root 5.10.00c
	Reflex	root 5.10.00c
	STL	
Platforms	slc3_amd64_gcc344(_dbg)	
	slc3_ia32_gcc323(_dbg)	
	slc3_ia32_gcc344(_dbg)	
	slc4_amd64_gcc345(_dbg)	
	slc4_ia32_gcc345(_dbg)	
	win32_v71_dbg	

Release Notes:

- Detailed information about dictionary classes available in the capabilities file
 - New dictionary for Geant4. The current release contains dictionaries for slc3_ia32_gcc323 and slc3_ia32_gcc323_dbg.
 - The global rootmap file for the whole RELAX release has been removed. Instead single rootmap files for each dictionary library are provided. The name is the library name with extension ".rootmap". If rootmap capabilities are needed the single rootmap files of the wanted dictionaries need to be concatenated and put as "rootmap" into the library lookup path. This change allows better selection of wanted dictionaries and prevents accidentally load and possible clashes of unwanted libraries.
 - Removed not needed dictionaries for iterator classes in HepMC
 - Added new stl containers for vectors of pairs and pairs
-

RELAX_1_0_1

LCG Configuration	LCG_42a ↗	
Dictionaries	CLHEP	
	HepMC	
	Math	
	Reflex	
	STL	
Platforms	slc3_amd64_gcc344(_dbg)	
	slc3_ia32_gcc323(_dbg)	
	slc3_ia32_gcc344(_dbg)	
	slc4_amd64_gcc345(_dbg)	
	slc4_ia32_gcc345(_dbg)	
	win32_v71_dbg	

Release Notes:

- Detailed information about dictionary classes available in the capabilities file
 - Removing duplicate entries of dictionary classes in RELAX and ROOT
 - Installation of pdb files for the windows build
-

RELAX_1_0_0

LCG Configuration	LCG_42
Dictionaries	CLHEP
	HepMC
	Math
	Reflex
	STL
Platforms	slc3_amd64_gcc344(_dbg)
	slc3_ia32_gcc323(_dbg)
	slc3_ia32_gcc344(_dbg)
	win32_v71_dbg

Release Notes :

- Detailed information about dictionary classes available in the capabilities file
 - Installation of a rootmap file, which allows seamless loading of dictionary information in the ROOT environment for all RELAX dictionary classes
 - Linking the CLHEP dictionaries against the individual CLHEP libraries (i.e. GenericFunctions, Geometry, Matrix, Random, Vector)
 - Improvements to the sconsc configuration
-

RELAX_0_1_0

LCG Configuration	LCG_41
Dictionaries	CLHEP
	HepMC
	Math
	Reflex
	STL
Platforms	slc3_amd64_gcc344(_dbg)
	slc3_ia32_gcc323(_dbg)
	slc3_ia32_gcc344(_dbg)
	win32_v71_dbg

Release Notes :

- First release of the project
-

Installation

Requirements

In order to install RELAX the following ingredients are needed:

- Scons: the build tool (<http://www.scons.org>)
- Reflex: The library and tools to build the reflection information. Reflex is usually released as a ROOT module (<http://root.cern.ch> or <http://cern.ch/reflex>)
- Python: Scons and genreflex (the dictionary building script of Reflex) are build on / use Python. (<http://www.python.org>)
- Installations of all libraries the dictionaries shall be created for (e.g. CLHEP, HepMC etc.)

All libraries/tools in this list are available from the web pages mentioned or from the LCG installation area at [/afs/cern.ch/sw/lcg/external](http://afs.cern.ch/sw/lcg/external)

Building

with a build script

If RELAX shall be built as an LCG project a simple script (buildRelax) can be used (located in [/afs/cern.ch/sw/lcg/app/spi/tools/test/scripts](http://afs.cern.ch/sw/lcg/app/spi/tools/test/scripts)).

It requires one argument which is the LCG tag to be used e.g. "source buildRelax.csh slc4_amd64_gcc345". On windows no arguments need to be given ("buildRelax.bat"). The script will produce the dictionaries install them and run the test suite. (on some platforms e.g. slc4_amd64_gcc345 the proper environment for Python needs to be setup before i.e. LD_LIBRARY_PATH)

Pointers

Savannah portal

<http://savannah.cern.ch/projects/relax>

Mailing lists

project-relax@cernNOSPAMPLEASE.ch

project-relax-developers@cernNOSPAMPLEASE.ch

CVS repository

RELAX is available for read-only access through an anonymous pserver account (no password)

[:pserver:anonymous@relax.cvs.cern.ch:/cvs/relax](pserver:anonymous@relax.cvs.cern.ch:/cvs/relax)

Release download

afs area

[/afs/cern.ch/sw/lcg/app/releases/RELAX/](http://afs.cern.ch/sw/lcg/app/releases/RELAX/)

spi download page

<http://spi.cern.ch/lcgsoft>

-- StefanRoiser - 29 Mar 2006

This topic: LCG > RELAX

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