

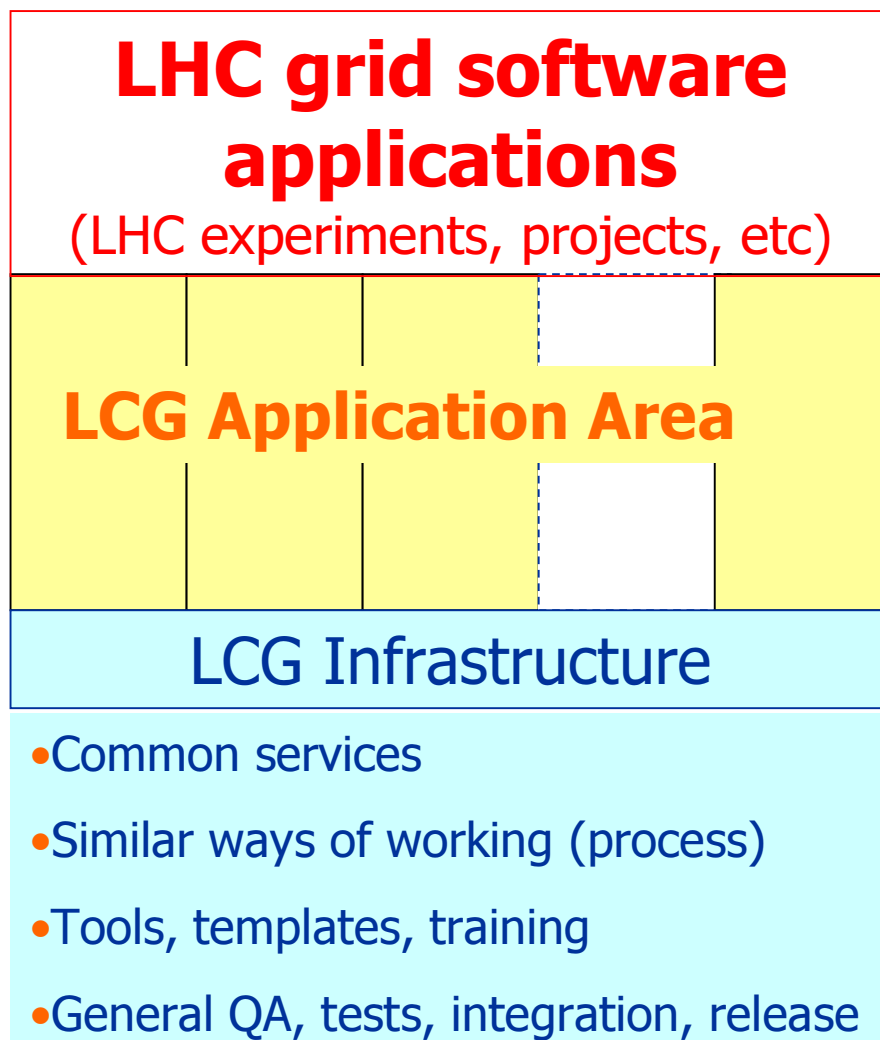


SPI Infrastructure for LCG Software Projects

Services Overview

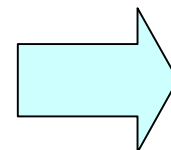
A.Aimar - CERN

Project context of LCG SPI



LCG Application Area software projects

- POOL: Persistency
- SEAL: Core common software
- PI: Physics Interfaces
- SIMU: Simulation
- ...etc...



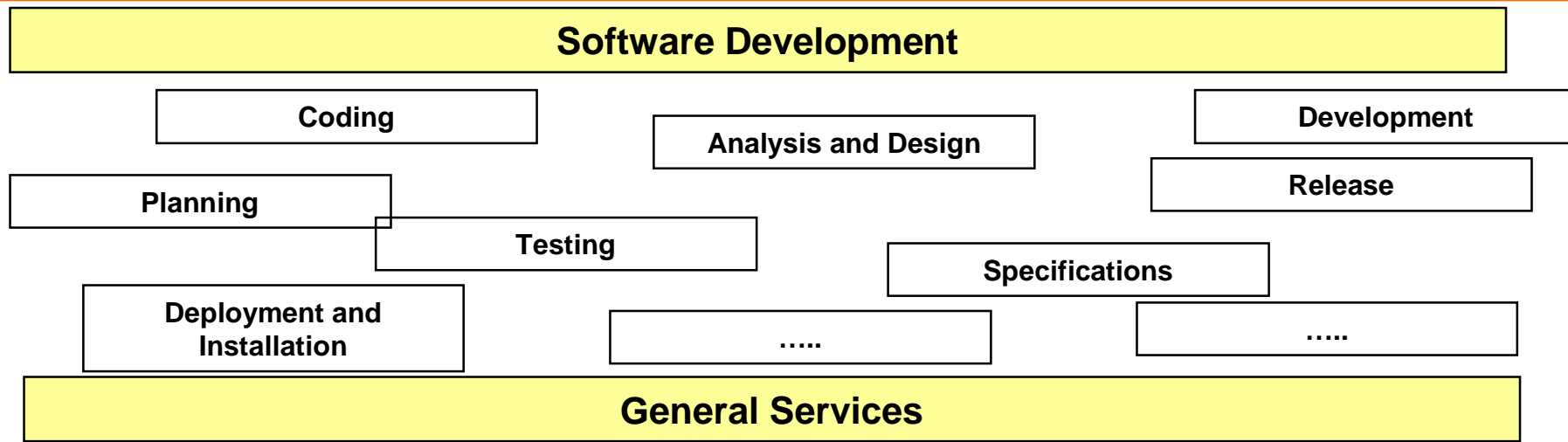
LCG SPI project

Project context of the LCG SPI

- “Software Management Process RTAG”
 - General recommendations
 - All LCG projects must adopt the same set of tools, standards and procedures
 - Adopt commonly used open-source or commercial software when easily available
 - Avoid “do it yourself solutions”
 - Avoid commercial software, if may give licensing problems
- If each project needs an infrastructure, many projects need it even more...
 - Tools, standards and procedures
 - Try to avoid complexity



Infrastructure Software Development



- Keep it “simple and modular”
 - a. Provide general services needed by each project
 - CVS repository, Web Site, Software Library
 - Mailing Lists, Bug Reports, Collaborative Facilities
 - b. Provide solutions specific to the software phases
 - Tools, Templates, Training, Examples, etc.



<http://spi.cern.ch>



[LHC Computing Grid Project](#) > [LCG Applications Area](#) > [LCG Software Process & Infrastructure](#)

SPI - Software Process & Infrastructure for LCG

SPI Quick Links

[SPI Home](#)
[SPI Index](#)

[Savannah Portal](#)

LCG App. Area

[Home Page](#)
[LCG Agenda](#)

[MATH Project](#)
[PI Project](#)
[POOL Project](#)
[SEAL Project](#)
[SPI Project](#)

External Links

[CERN](#)

NEWS

Updated: 29-Apr-2003 18:04

03/04/2003	Software Development Policies and more. LCG Development Policies published
24/03/2003	CHEP 2003: Presentation SPI: Software Process and Infrastructure for LCG projects
4/03/2003	SPI Services Overview presentation focusing on what is available to projects outside LCG, App Area meeting hosted by Atlas
3/03/2003	New Software Testing web pages
12/02/2003	Presentation of the External Software Service News and updates on the SPI projects
03/02/2003	SPI provides pre-installed tools on AFS, see the External Software Service
18/12/2002	SPI Services Overview presentation
05/12/2002	LCG SPI Project portal available
04/12/2002	Presentation: Project portal, and bug tracking
25/11/2002	New SPI Index Page (please bookmark it)
02/11/2002	Talk on Profiling by Rafi Yaari
20/10/2002	talks: Code Documentation and Unit Testing
12/09/2002	Service and Components descriptions
11/09/2002	Presentation: LCG SPI Status

Search SPI web

[Tips](#)

Index page

All links useful to the users of the SPI project and the developers of LCG

[Software Development Policies](#)

[Projects portal](#)

[External software service](#)

[SCRAM web site](#)

[LCG App.Area Workbook](#)

SPI Support page

Please write there all you support requests. Or by [email](#).

[SPI project description page](#)



OUTLINE



SPI Services

LCG software

CVS and delivery
Code documentation
Testing framework
Builds and releases
...

LCG libraries

External software
LCG software distrib.

LCG project portal

Developers' web
Bug reports
FAQ, News



OUTLINE → LCG repository

SPI Services

LCG software

CVS and delivery
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Builds and releases
...

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Software Quality and Development Policies



- CVS Directory Structure Policy
- C++ Source Code Policy
- Build Directory Policy

- Software Testing Policies
- Version Numbers, Tagging and Release Procedure
- Installation Directory Structure

- Platform string, binary names, debug flags and more



>>> CVS repository and Delivery Areas

CVS repository

- A central CVS repository managed and available to all projects
- Tools for automatic clean up of locks, etc
- Systems to browse the repositories
- We developed as little as possible knowing that we will move to the IT CVS service that is being setup up for LCG

Delivery areas

- The AFS and DFS delivery areas
 1. an area to install software of LCG application area
 2. an area for external and third party software
 3. an area for evaluation within a project
- Pre-installed software shall be in directories specifying the package name, the package version and the "OS_Compiler"

→ Code Documentation

- Features of interest:
 - Code browsing
 - Code searching
 - Code information
 - Design diagrams
- Any LCG project will have them available as part of the infrastructure
 - Doxygen
 - LXR
 - ViewCVS



Code documentation: Doxygen

Archivo Edición Ver Favoritos Herramientas Ayuda

Atrás Adelante Detener Actualizar Inicio Búsqueda Favoritos Historial Correo Imprimir Modificar Discutir

Dirección http://logapp.cern.ch/doxygen/pool/pool_0_1_0/html/DataCache_8cpp-source.html

[Main Page](#) [Packages](#) [Namespace List](#) [Class Hierarchy](#) [Alphabetical List](#) [Compound List](#) [File List](#) [Namespace Members](#) [Compound Members](#)

DataCache.cpp

```
00001 #define POOL_OBJECTCACHE_CPP 1
00002
00003 #include "DataCache.h"
00004
00005 /// Initialize static pointer
00006 //pool::CacheTable* pool::DataCache
00007
00008 /// Method to retrieve the (single)
00009 pool::CacheTable* pool::DataCache::
00010 //if(!theCache) {
00011 // theCache = new CacheTable
00012 // CacheTable* the
00013 //}
00014 return theCache;
00015 }
00016
00017 /// Method to delete the Cache inst
00018 //void pool::DataCache::deleteCache
00019 // deletes theCache;
00020 // theCache = 0;
00021 //}
00022
```

File Edit View Favorites Tools Help

Address http://lcgapp.cern.ch/doxygen/POOL/POOL_0_3_1/html/IPersistenceConfiguration_8h.html

IPersistenceConfiguration.h File Reference

```
#include "pool/Kernel.h"
#include "pool/InterfaceID.h"
```

Include dependency graph for IPersistenceConfiguration.h:

```
graph BT
    IPersistenceConfiguration_h[IPersistenceConfiguration.h] --> pool_InterfaceID_h[pool/InterfaceID.h]
    IPersistenceConfiguration_h --> pool_Kernel_h[pool/Kernel.h]
    IPersistenceConfiguration_h --> pool_Status_h[pool/Status.h]
    pool_InterfaceID_h --> pool_Kernel_h
    pool_Kernel_h --> typeinfo[typeinfo]
```



Code documentation: LXR



The screenshot shows two browser windows. The left window displays the source code for `MethodBuilder.cpp` with line numbers 1 through 27. The right window shows the search results for the term "int", listing various occurrences in the `Geant 4.4.0/Configure` file with line numbers and associated code snippets.

```
File /home/lxr/source/current//POOL_0_1_0/ReflectionBuilder/src/MethodBuilder.cpp
1 // $Id: MethodBuilder.cpp,v 1.4 2002/10/11 18:03:03 roiser Exp $
2
3 // Include files
4 #include "reflect/ClassBuilder.h"
5 #include "reflect/MethodBuilder.h"
6
7 #include "reflect/Method.h"
8 #include "reflect/Class.h"
9 #include "reflect/Namespace.h"
10
11
12
13 //-----
14 Reflect::MethodBuilder::MethodBuilder(const std::string& name,
15                                     const std::string& desc,
16                                     const std::string& returnType,
17                                     const std::vector<std::string>& argumentTypes,
18                                     void*(vfpvs)(void*,std::vector<void*>),
19                                     int modifiers)
20 //-----
21 : ItemBuilder(name, desc, modifiers),
22   m_returnType(returnType),
23   m_argumentTypes(argumentTypes),
24   m_vfpvs(vfpvs),
25   m_vfps(0),
26   m_vfpv(0),
27   m_vfp(0)
```

Search for:

Too many hits, displaying first 1000

int

- Geant 4.4.0/Configure, line 140 -- hint="
- Geant 4.4.0/Configure, line 378 -- printf("%s\n", str);
- Geant 4.4.0/Configure, line 385 -- printf("%s\n", substr(str, i));
- Geant 4.4.0/Configure, line 388 -- printf("%s\n", c);
- Geant 4.4.0/Configure, line 391 -- printf("%s\n", substr(str, i + 1));
- Geant 4.4.0/Configure, line 400 -- print "?";
- Geant 4.4.0/Configure, line 493 -- -h : print this help message and exit (with an error status).
- Geant 4.4.0/Configure, line 506 -- -V : print version number and exit (with a zero status).
- Geant 4.4.0/Configure, line 758 -- set x `awk '{print \$1}' <\${src}/MANIFEST | grep \.SH`
- Geant 4.4.0/Configure, line 761 -- set x `(cd \$src; find ./config/scripts -name "*SH" -print)`
- Geant 4.4.0/Configure, line 970 -- You may also start interactively and then answer '& -d' at any prompt to turn
- Geant 4.4.0/Configure, line 971 -- on the non-interactive behaviour for the rest of the execution.
- Geant 4.4.0/Configure, line 1124 -- echo "Hopefully test is built into your sh." > /dev/null
- Geant 4.4.0/Configure, line 1128 -- echo "Using the test built into your sh." > /dev/null



Code documentation: ViewCVS

- CVSgraph: Displays the tree of revisions and branches graphically
- Enscript: Colorize files in the CVS repository.

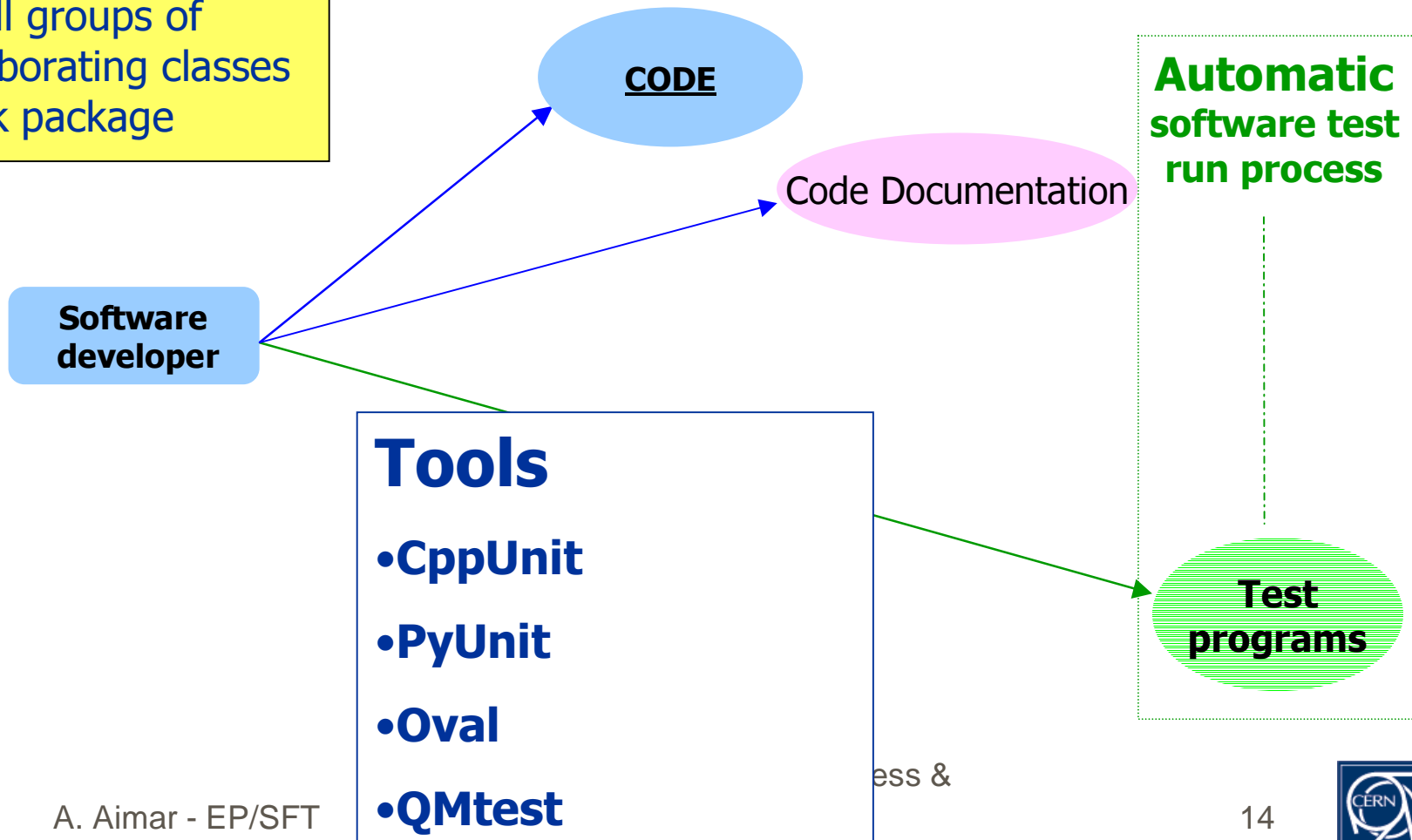
The screenshot displays two browser windows. The left window shows the source code for `pool/PersistencySvc/src/DataTransform.cpp` at revision 1.4. The code includes headers for `pool/poolDb.h`, `pool/Gui.h`, `pool/DataCallBack.h`, `pool/DataTransform.h`, `pool/DbTypeInfo.h`, `reflect/Class.h`, `<iostream>`, `<algorithm>`, and `<map>`. It defines a namespace `pool` with a `typeName` function and typedefs for `Conversion`, `ShapeVector`, and `Shapes`. A `RegInfo` class is also defined.

The right window shows the 'Revision graph of pool/PersistencySvc/src/ConversionSvc.cpp'. The graph starts with a 'MAIN' node at revision 1.0. It branches into 1.1 (44-Sep-2002 17:09:36) and 1.1.1 (44-Sep-2002 17:09:36). Revision 1.1.1 branches into 1.1.1.1 (44-Sep-2002 17:09:36) and 1.2 (10-Sep-2002 15:56:35). Revision 1.2 branches into 1.3 (10-Sep-2002 16:59:51) and 1.4 (01-Oct-2002 19:06:19). Revision 1.3 branches into 1.3.1 (10-Sep-2002 16:59:51) and 1.4. Revision 1.4 branches into 1.4.1 (01-Oct-2002 19:06:19) and 1.5 (11-Oct-2002 11:00:36). Revision 1.5 is the HEAD. The graph also shows a branch from 1.1.1.1 to 1.1.1.1.1 (44-Sep-2002 17:09:36) labeled 'arelease'.

>>> Software Testing

Tests of classes

- individual class
- small groups of collaborating classes
- work package



Test frameworks: CppUnit

Similar tools: Junit,
PerlUnit, PyUnit,
QtUnit

Output in XML,
compiler or text

Windows version for
MVC++

```
xterm <6>
!!!FAILURES!!!
Test Results:
Run: 19  Failures: 2  Errors: 0

1) test: StringToolsTest::testToStringInt (F) line: 33 StringToolsTest.cpp
equality assertion failed
- Expected: 12345678
- Actual   : 123456789

2) test: ComplexNumberTest::testEquality (F) line: 22 ComplexNumberTest.cpp
assertion failed
- Expression: *m_10_1 == *m_1_1

PASS: test
=====
All 1 tests passed
=====
make[1]: Leaving directory `/home/user/mgallas/CppUnit-examples/newtest'
[pcitapi31] ~/CppUnit-examples/newtest > 
```

A simple test

1. Subclass the TestCase CppUnit class
2. Override the method runTest().
3. call CPPUNIT_ASSERT



Test frameworks: Oval

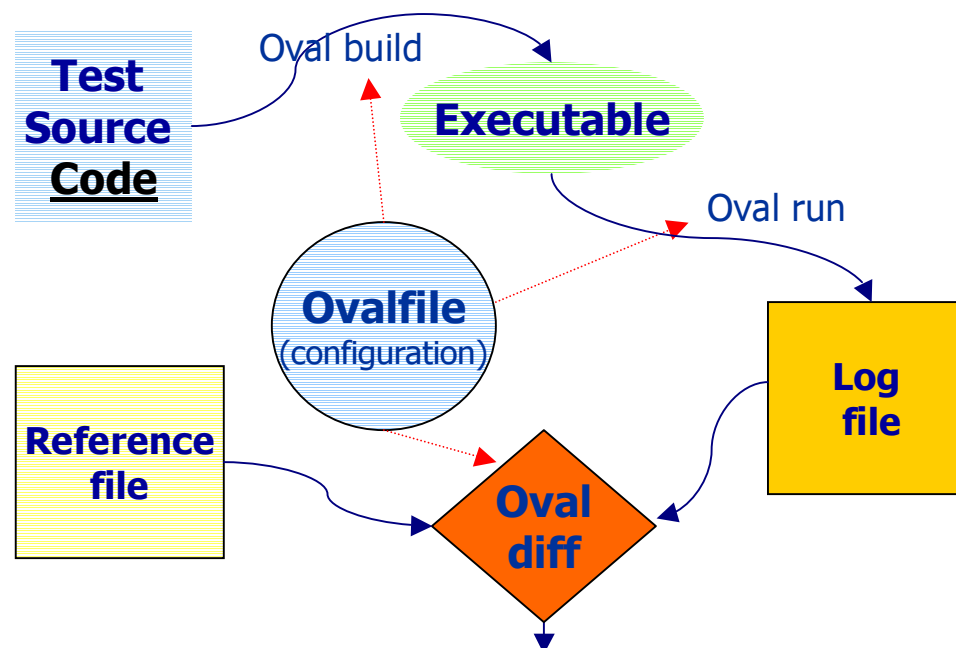
Oval:

- validation
- regression

Was used for used for Unit-test but is a framework that can run and compare any test output

It is possible to set different run environments

Can run external scripts and external binaries



```

xterm <6>
[pcitapi31] ~/OVAL-examples/subtest1 > oval p
Prog1: build, run, diff.
Prog2: build, run, diff (DIFFS).

xterm <6>
[pcitapi31] ~/OVAL-examples/subtest1 > oval diff Prog2
===== diff =====
(DIFFS)
=== log #29 !~ ref #65 (>15%)
log: [OVAL] result = 1.2
---
ref: [OVAL] result = 1
=====
[pcitapi31] ~/OVAL-examples/subtest1 >
  
```





- Uses a graphical interface for creating and running tests
- Runs tests in parallel
- Organizes tests hierarchically
- Supports execution of a single test or many at once
- Records dependencies between tests
- Can be run in batch mode -> easy integration with the Nightly-Building systems

The screenshot shows the QMTest web interface in a Mozilla browser window. The main window displays a summary of test results for 'SPI - Software Testing'. Below the summary is a table with the following data:

Outcome	# of Tests	% of Total	# Unexpected	% of Total
FAIL	3	37.5%	3	37.5%
PASS	5	62.5%	0	0%
Total	8	100%	3	37.5%

Below the table is a list of tests with their outcomes:

- datasvc_cachemgrtest (PASS)
- datasvc_datasvcctest (PASS)
- datasvc_reftest (FAIL)
- datasvc_retrievstest (PASS)
- pool_1_0_0_simplereader (FAIL)
- tests_datasvc_crossreference (PASS)
- tests_datasvc_inheritance (PASS)
- tests_filecatalog_functionality (FAIL)

An inset window shows the details for the 'datasvc_cachemgrtest' test, which passed. The details include the test name, outcome (PASS), and a log of the test execution, showing that all methods (get, set, remove, clearCache) passed successfully.



User support: How-To

The screenshot shows a Microsoft Internet Explorer browser window displaying the LCG SPI Software Testing page. The page is titled "LCG Application Area - LCG Infrastructure SW - Testing" and contains several sections:

- Sw-Testing Policies:** Software testing policies within LCG AppArea projects.
- FrameWorks for Sw-Testing:** Currently four test-framework tools are provided as External Software Service. These are: CppUnit and PyUnit can cover from unit to validation tests, and QMTest will interface to organize and run the tests. A set of HowTo's are available and can help with this tools.
- Sw-Testing HowTo:**
 - HowTo make SW-Tests
 - HowTo for CppUnit TestFramework
 - HowTo for Oval TestFramework
 - HowTo for PyUnit TestFramework
 - HowTo-TestFramework-QMTest
 - HowTo for Test Execution Frameworks
- Sw-Testing documentation and planning:**
 - testplan_template.html - The main purpose of this document is to schedule the testing process with all necessary software and staff responsibilities. Under testplan.html you can find test case specifications and data along with the expected results for a particular test.
- Support:** If you need to report a bug or ask for support, please use the bug report system and support area.

Three blue arrows point to specific sections:

- Arrow 1 points to the "Grid Links" section in the sidebar.
- Arrow 2 points to the "Support:" section.
- Arrow 3 points to the text "Follow sw-testing policies" below the screenshot.

Follow sw-testing policies



A. Aimar - EP/SFT

Infrastructure

18



Many components available

- Build and release tool → Scram
- Memory Leaks → Valgrind
- Coding guidelines → RuleChecker
- Standard directory structures → SPI policies
- Automatic Builds → Nicos

- Software distribution
- Developers workbook
- Software documentation, templates, etc

OUTLINE → LCG Software Library



SPI Services

LCG software

CVS and delivery
Code documentation
Testing framework
Builds and releases
...

LCG libraries

External software
LCG software distrib.

LCG project portal

Developers' web
Bug reports
FAQ, News



Service: Software Library

- Limited to LCG projects needs
- All software needed by more than one LCG projects shall be installed in common areas
- Available for several compilers and operating systems
- Maintained centrally with support and help to the user
- External documentation available
- Contact with the authors if the software is developed in HEP or LCG
- Distribution and pre-installation to all LCG user

Current status

- Central installation of HEP or open source software needed by LCG related projects or following their requests in term of version and platforms (Linux, Windows and Solaris, when needed).
- Standard installation & location
- Availability
 - AFS: /afs/cern.ch/sw/lcg/external/
 - DFS: \\cern.ch\dfs\project\lcg\external\ (just started)

```
sundev005 /afs/cern.ch/user/l/lcgspi [87]> ls
/afs/cern.ch/sw/lcg/external/
Ant/                JACE/              Python/            edg-rls-client/
png-lib/            valgrind/          TJDO/             expat/
Boost/             JDK/              XalanJ/           gccxml/
root/              wxPython/         XercesC/          mysql/
CMake/             JDORI/            XercesJ/          mysql++/
scripts/           Log4J/            doxygen/          packages/
Colt/              MMySQL/
tarFiles/
CppUnit/
test.html*
GSL/
uuid/
```



External Software Service - alphabetic (CERN LCG SPI) - Microsoft Internet Explorer fourni par Bluewin

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Address http://spi.cern.ch/extsoft/ Go Links

LHC Computing Grid Project > Application Area > Software Process & Infrastructure

External Software Service

Home News How to Contact us Search




External Software










The purpose of the **External Software Service** is to provide software tools and libraries to LCG development teams.

[Alphabetic order](#)
[Language order](#)
[Category order](#)

Used in LCG Projects

External Software alphabetic list

The 3 icons ( for Linux,  for MS Windows and  for Solaris) indicate the currently **available** platforms in AFS (/afs/cern.ch/sw/lcg/external/) and DFS (\\cern.ch\dfs\Projects\LCG\external\). If the platform you are interested in is not present, just [contact us](#) and ask for it.

	AIDA	Abstract Interfaces for Data Analysis
	Anaphe	C++ libraries for data analysis and visualisation tools
 	Ant	Apache Ant is a Java-based build tool. In theory, it is kind of like Make, but without Make's wrinkles
	Boost	Portable C++ source libraries
 	Colt	Open Source Libraries for High Performance Scientific and Technical Computing in Java
  	Cunit Init	The C++ Unit Test Library

SPI Quick Links

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[SPI Index](#)

[Projects Portal](#)

Internet



LCG Software

The purpose of the **External Software Service** is to provide software tools and libraries to LCG deve

[Home](#)

External Software

- [Alphabetic order](#)
- [Language order](#)
- [Category order](#)
- [Used in LCG Projects](#)

External Software used by LCG projects

LCG projects	PI	Pool			Seal	
Versions	0.1.0	0.4	0.5.0	1.0.0	0.1.1	0
Platforms	rh73_gcc32	rh73_gcc32	rh73_gcc32	rh73_gcc32	rh73_gcc32	rh73
AIDA	3.0.0					
Anaphe	5.0.3					
Ant		1.5.1	1.5.1	1.5.1		
Boost	1.29.0		1.29.0	1.29.0		
bz2lib						
Colt		1.0.2	1.0.2	1.0.2		
CppUnit			1.8.0	1.8.0		
doxygen						
edg-rls-client		1.1.3	1.1.3	1.2.11		


SPI Quick Links

mysql++ (CERN LCG SPI) - Microsoft Internet Explorer provided by CERN

File Edit View Favorites Tools Help

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Address <http://spi.cern.ch/extsoft/mysql++/html> Go Google gridpp7 Search Web Search Site



External Software Service

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LCG Software

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External Software

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SPI Quick Links

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MySQL++

A C++ binding to MySQL.

Description

MySQL Connector/C++ (or MySQL++) is an application programming interface for the C++ programming language. This adds a powerful level of abstraction on top of the standard C API that makes it possible to work with query result sets in a manner consistent with the standard C++ template libraries (STL).

Availability

`/afs/cern.ch/sw/lcg/external/mysql++/1.7.9/rh73_gcc32/`
`/afs/cern.ch/sw/lcg/external/mysql++/1.7.9/rh73_gcc2952/`
`/afs/cern.ch/sw/lcg/external/mysql++/1.7.9/rh61_gcc2952/`

Documentation

- Provided documentation
 - Provider: <http://www.mysql.com/documentation/mysql++/index.html>

Local intranet



OUTLINE → LCG project portal

SPI Services

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Project Portal and Bug Tracker

Project Portal

- The development front-end of every project
- With all features needed, configured and integrated
 - News and Faq
 - Task management
 - Mailing lists access
 - Bug tracking access
 - Download area
 - Access to the CVS repository
- We have customized "Savannah" from GNU
<http://savannah.gnu.org>

Bug Tracker

- A central installation so that each project has an available bug tracker system
- Centrally managed but customizable for different needs
- Easier to post bug if projects use similar systems
- No work of maintenance and upgrade on the projects
- Web based

savannah: Welcome - Microsoft Internet Explorer fourni par Bluewin

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Address http://savannah.cern.ch



Development Portal

Login Status:
NOT LOGGED IN
Why Log In? ▾
Login via SSL ▾
New User via SSL ▾

Projects
Hosted Projects ▾
Help Wanted ▾

Portal Help
User Docs ▾
Admin Docs ▾
Support ▾

Search

Software/Group
People
Require All Words

Search

The LCG software development portal

This web site is provided by the [LCG Software Process & Infrastructure \(SPI\)](#) project. It offers facilities for development, distribution and maintenance of LCG software projects.

If you would like to use these facilities for your project, then go to the **Register new project** menu entry that is displayed after login.

If you have questions about using this site, please consult the **user docs/admin docs** (left menu bar). If you don't find an answer to your problem, use the **support** link and then choose **Submit a Request** in the menu bar which will appear at the top of the page.

The software used to run this site has been developed by the [GNU Savannah](#) project and customized for LCG use by SPI.

Latest News

SERVER MIGRATION - Fri Apr 25th
dfeich - 2003-Apr-24 15:33 - 0 messages
Savannah will move to <http://savannah.cern.ch>. The service will be unavailable from 9-11h on Fri Apr 25th. After that all access to lcgappdev.cern.ch/savannah will be redirected. Please update your bookmarks!

SERVER UPGRADE Wed Apr 9th 2003
dfeich - 2003-Apr-09 11:40 - 0 messages
Savannah will be unaccessible from 11:30h to 12:00h due to a server upgrade...SECURITY UPGRADE FINISHED!

Administrators: New user management features.
fjob - 2003-Feb-10 14:26 - 0 messages
The group member administration page ""Administration: Main" -> "Manage Members" now sports a new interface which would be more suited for dealing with large number of users. The interface for managing user permissions is relegated to another page, ""Message Member Permissions" (linked to as "Message Member")

Server Statistics

Hosted Projects: **50**

- 4 infrastructure
- 7 LCG Application Area
- 8 CMS
- 5 LHCb
- 2 LCG Grid deployment
- 1 HepPackages
- 22 ATLAS
- 1 CERN IT
- + 0 Registrations Pending

Registered Users: **244**

Newest Infrastructure Projects

(10/24) [testproject](#)
(10/23) [savcern](#)

[\[all infrastructure projects\]](#)

Newest LCG Application Area Projects

(02/26) [CASTOR](#)
(02/21) [PI](#)
(02/12) [SCRAMToolBox](#)
(01/20) [SEAL](#)
(12/16) [SCRAM](#)
(12/02) [POOL](#)
(10/31) [SPI](#)

[\[all LCG Application Area projects\]](#)

Newest CMS Projects

(05/01) [OCTOPUS](#)
(12/16) [OVAL](#)
(12/16) [OSCAR](#)
(12/16) [ORCA](#)
(12/16) [FAMOS](#)
(12/16) [DDD](#)



Benefits

- Totally web based
- Single entry point to project(s)
- Uniform access to project information
- Set up common web infrastructure for a project without coding



savannah: Project Info - SPI - Microsoft Internet Explorer fourni par Bluewin

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Address <http://savannah.cern.ch/projects/spi/> Go Links



LCG
Development Portal

Login Status:
NOT LOGGED IN
Why Log In? ▾
Login via SSL ▾
New User via SSL ▾

Projects
Hosted Projects ▾
Help Wanted ▾

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Admin Docs ▾
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Software/Group
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Require All Words

Search

SPI - Summary

Public Areas: [Main](#) | [Homepage](#) | [FAQ](#) | [Bugs](#) | [Support](#) | [Patches](#) | [Mailing Lists](#) | [Tasks](#) | [News](#) | [CVS](#) | [Files](#)

Project Type: LCG Application Area projects

This project is for the communication among the LCG/SPI team members. There are no sources associated with it.

License: Other
Registration Date: Oct 31, 2002
Development Status: 2 - Pre-Alpha

Developer Info

Project Admins:
mancera
dfleich
fjob
aimar
testadmin

Developers:
13 [View Members]

Group id:
5

Public Areas

- [Project Homepage](#)
- [Frequently Asked Questions](#)
- [Bug Tracking \(14 open bugs, 33 total \)](#)
- [Tech Support Manager \(5 \)](#)

Latest News

New look for ViewCVS
mancera - 2003-Mar-21 15:02 - 0 messages
A new look for ViewCVS has been set.
Please check and mail me your opinion.

New look for LXR pages and Doxygen index
mancera - 2003-Mar-19 10:51 - 0 messages
The LXR pages and the Doxygen index have been updated to match with SPI web pages style.
<http://lcgapp.cern.ch/doxygen/>



Bug tracker

- Fields customizable for each project
- File uploads
- Audit trail
- Full text searches
- Cc forwarding



savannah: Browse Bugs - Microsoft Internet Explorer fourni par Bluewin

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Y Search FTD.COM Flowers

Address https://savannah.cern.ch/bugs/?group_id=5 Go Links

SPI - Bugs

Public Areas: [Main](#) | [Homepage](#) | [FAQ](#) | **[Bugs](#)** | [Support](#) | [Patches](#) | [Mailing Lists](#) | [Tasks](#) | [News](#) | [CVS](#) | [Files](#)
 >> [Search Bugs](#) | [Submit a Bug](#) | [Browse Open Bugs](#) | [Browse My Bugs](#) | [Reporting](#)

Administration: [Main](#) | [Bugs](#) | [Support](#) | [Patches](#) | [Mailing Lists](#) | [Tasks](#) | [News](#) | [Files](#)

Browse Bugs using report (or use [Advanced Search](#))

Category (?) Bug Group (?) Assigned to (?) Status (?)

bugs at once.

13 matching bugs

Click a column heading to sort results (up or down), or [Sort by Severity](#) or [Reset sort](#). You can also [Activate multicolumn sort](#). (Printer version)

Items 1 - 13

Bug ID	Summary	Submitted On	Assigned To	Submitted By
23	Change CVSweb link in SPI home page to a ViewCVS link	2002-Nov-06 18:23	None	mancera
100	missing web access to internal howtos	2003-Jan-09 09:57	None	pfeiffer
110	Spontaneous bug report generation	2003-Jan-14 13:02	dfeich	mato
119	OVAL: OvalFile format	2003-Jan-22 11:02	None	laman
158	Oval asymmetries (sun/linux)	2003-Feb-06 14:43	mgallas	laman
197	oval for rh73_gcc32	2003-Feb-14 10:49	mgallas	laman
233	lgspl.csh setup script	2003-Feb-24 11:23	moscicki	beringer
275	Ever remaining from CVS	2003-May-05 11:00	mgallas	simex



Personalize web page

- A logged in user gets
 - a customizable personal entry page
 - display of current work status
 - User's bugs, tasks, ...
 - Monitored news threads
 - Bookmarks



savannah: My Personal Page - Microsoft Internet Explorer fourni par Bluewin

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print

Address <https://savannah.cern.ch/my/> Go Links

My Personal Page

My: [Personal Page](#) | [Account Configuration](#) | [Logout](#)

Your personal page contains lists of bugs [A]ssigned to or [S]ubmitted by you, tasks that you are assigned, monitored forums and packages plus a list of groups that you are a member of.

aimar's account

- [My Personal Page](#)
- [My Account Conf](#)
- [Bookmark This](#)
- [Logout](#)

Projects

- [Hosted Projects](#)
- [Help Wanted](#)
- [Register New Project](#)

Portal Help

- [User Docs](#)
- [Admin Docs](#)
- [Support](#)

Search

Software/Group

People

Require All Words

My Bugs

▼ SPI [3]

275	Error removing from CVS [S]
356	redundant link on the index page [A]
441	Error in Commit log in CVS [S]

My Tasks

You have no open tasks assigned to you

My Bookmarks

[Browse Support Requests By Status: Open](#) [Edit]

[Software Project Registration](#) [Edit]

My Support Requests

No Open SR are assigned to you or were submitted by you

Monitored Forums

You are not monitoring any forums

If you monitor forums, you will be sent new posts in the form of an email, with a link to the new message.

You can monitor forums by clicking "Monitor Forum" in any given discussion forum.

My Projects

[savcern](#)

[A.Aimar test project to evaluate Savannah](#) [Admin]

[SPI](#) [Admin]

Priority Colors:

1 2 3 4 5 6 7 8 9



And much more...

- News system
- Task manager
- Consolidate project links
 - ViewCVS (, Doxygen, LXR, Bonzai, ...)
 - Project homepage
 - Mailing lists (subscribe/unsubscribe)
- FAQ system (user/admin documents)
- Support manager
- Download area
- Patch manager
- Projects administrators can choose what to use for each project



Specific implementations

- General bug fixing and improvements
- Implemented bulk user registration
 - Get a list of users and add/remove them all without registering them one by one
- Integration with AFS authentication
 - Added a PAM module to verify a login against the AFS authentication
 - The user can still define a password not using the AFS password
- Sending back to Savannah our changes, patches and fixes
- **More than 50 projects LCG, LHC experiments, and other projects at CERN**
- **<http://savannah.cern.ch>**



Conclusions

- Homogeneity is important for the LCG and for its projects
 - Help people to move from project to project or work across projects
 - common structure, same tools, etc
 - Common services are avoiding many annoying tasks to projects
 - software library, repository
 - A single users/developers entry for multiple projects
 - projects portal

- SPI's address is → <http://spi.cern.ch>

