



Published on *ROOT* (<http://root.cern.ch/drupal>)

[Home](#) > [Printer-friendly PDF](#) > [Printer-friendly PDF](#)

ROOT Version v5-32-00 Patch Release Notes

[download](#) ^[1] [patches](#) ^[2] [v5-32-00](#) ^[3]

A new production version ROOT v5-32-04 has been released June 13, 2012.

The AFS version of v5-32-04 for many different platforms and compilers can be found at:

[/afs.cern.ch/sw/lcg/app/releases/ROOT/5.32.04/](http://afs.cern.ch/sw/lcg/app/releases/ROOT/5.32.04/)

The complete source tree for all systems (54 MB) is available here:

[ftp://root.cern.ch/root/root_v5.32.04.source.tar.gz](http://root.cern.ch/root/root_v5.32.04.source.tar.gz) ^[4]

Alternatively get the source from [Git](#) ^[5] using:

```
git clone http://root.cern.ch/git/root.git [6] root-v5-32
cd root-v5-32
git checkout -b v5-32-04 v5-32-04
```

After obtaining the source read the file [README/INSTALL](#) ^[7] (in short just do: `cd root; ./configure; make`).

To get the source of the head of the v5-32-00-patches branch do:

```
git clone -b v5-32-00-patches http://root.cern.ch/git/root.git [6] root-v5-32
```

Changes in head of v5-32-00-patches branch

- I/O
 - Corrected the calculation of the number of read calls in TRFIOFile (See the forum [post](#) ^[8] on the subject. Fixed by revision 45140).
 - Add protection against corrupted ROOT File (wrong length stored in the file header) (Revision 45170).
 - Fix for recent versions of castor (Revision 48474).
- Proof
 - Import patches [#45092](#) ^[9] and [#45093](#) ^[10] adding functions to retrieve environment information from the nodes, typically from the master (datadir or some env settings).

Warning: This change in binary incompatible.
- CINT
 - Silence warnings on MacOS 10.7 with current XCode (r46000).

Changes in version v5-32-04 (June 13, 2012)

- Core
 - Avoid risk of executing the tear down routines twice at process termination when -q is used and there is no input file descriptor. (revision 44838).
 - Fix linking of qt cint.dll when explicitly linking is required (see [the related forum post](#) ^[11]).
- Net
 - Fix in TWebFile reading using https (via TSSL Socket).
- I/O
 - Avoid seg in I/O operation if you change the prefetch settings after the cache is created (revision 44755).
 - Add an explicit 'Close' for the read cache so that we can insure that all the (concurrent) outstanding connection/use of the TFile are closed before closing the file.

Warning: Binary incompatible change in TFileCacheRead.h

- Tree
 - ReadFile() must stop at EOF (r44196, bug [#94455](#) ^[12]).
 - Prevent negative consequences of call SetAutoFlush with a default value (44279, bug [#94669](#) ^[13]).
 - Repair the plotting of string histogram by TTree::Draw
 - Fixes issue in TChainIndex that made reading the first entry of the 2nd and subsequent files in the TChain not beeing properly reading when using the index. (Fixes Savannah [#94910](#) ^[14]).
 - Avoid an unnecessary flushing of the TTreeCache after the first time it filled (revision 44750)
- Proof
 - Import patch [#44397](#) ^[15] changing the default merging procedure used histograms to cover correctly all the cases.
 - Import patch [#44048](#) ^[16] removing the automatic creation of TDrawFeedback by TProofChain.
 - Import patch [#44701](#) ^[17] fixing several stability issues in xproofd. Patch is server side only; only the upgraded xproofd (or libXrdProofd) is required.
 - Import patch [#42703](#) ^[18] removing unused variables in xproofd.
- CINT
 - genreflex: fix an issue with base classes defining operator new() (bug [#94981](#) ^[19], r44426).
- RooFit
 - Fix bug in binned generation of extended pdf (patch [#44630](#) ^[20])
- Hist
 - Fix bug in merging histograms and profile when first histogram to merge is empty (bug [#95190](#) ^[21] and [#94295](#) ^[22])

Changes in version v5-32-03 (May 9, 2012)

- Build System
 - Port to gcc 4.7 in both c++03 and c++11 mode.
- Core
 - Fix a (10 year) old issue with wrong MacOS X TZ reporting (which for OSX included the DST). Now we return purely the geographical TZ offset from UTC independent of DST (as for all other platforms).
 - On MacOS X correctly return the physical memory in GetSysInfo().
 - Enable AltGr on Windows (r44098, bug [#94123](#) ^[23]).
- I/O
 - In TFileMerger and hadd when objects can not be merged do **not** overwrite the last object in the set with the first (but rather, appending it to the output file like the others elements of the set). This fixes Savannah [#93193](#) ^[24]
 - In TSeqCollection::Merge (and hence in TFileMerger), do not append non-mergeable object but rather add a copy of the original. This fixes Savannah issue [#93401](#) ^[25].
 - In TFileMerger and hadd, re-enable the warning about non-mergeable objects.
- Tree
 - Fix circular TTree when its contains objects. This fixes Savannah issue [#93282](#) ^[26].
- TreeViewer
 - Fix a problem with array names (e.g. fVertex[]) as reported [on the forum](#) ^[27].
- Proof
 - Import patch [#42921](#) ^[28] to add also to TXUnixSocket the possibility to disable reconnections via the variable TXSocket.Reconnect (0 disable reconnections; default is 1) .
 - Import patches [#42775](#) ^[29], [#42788](#) ^[30], [#42882](#) ^[31] and [#42883](#) ^[32] enabling parallel dataset verification.
 - Import patches [#43101](#) ^[33], [#43884](#) ^[34] and [#43886](#) ^[35] adding in proofbench full support for dataset generation on external storage.
 - Import patch [#43567](#) ^[36] fixing a few issues with dataset verification of back-ends different from xrootd.

Changes in version v5-32-02 (March 27, 2012)

- Build System
 - Fix for building with external OpenSSL in non system location. Fixes issue [#92502](#) ^[37], r43338.
- CINT
 - Avoid creating dictionary where TClass can not find the CINT dictionary for an STL collection (case of nested collection where the inner collection are requested with the explicit std::). This fixes the Savannah report [92491](#) ^[38].
- I/O
 - Fix the merging (hadd and TFileMerger) of TTree in subdirectories when an incremental merge is requested (or needed). See the post [#92486](#) ^[39].
 - In TChainIndex (and hence tree friendship involving chains), properly handle the case where the requested

index is too high. (See Forum [#61833](#)) ^[40].

- Proof
 - Import patch [#43245](#) ^[41] fixing an issue with forcing local copies of files before merging (bit not always honored).
 - Import patch [#43295](#) ^[42] to remove dependencies of netx on xrootd-related internal headers (the patch also removes external support for xrootd versions older than 4 years)
 - Import patch [#43107](#) ^[43] to add the possibility to force submerging at node level, i.e. one submerger per physical machine; in this way the network traffic can be minimized, for example when merging large output files.
 - Import patch [#43426](#) ^[44] fixing a problem with TProofOutputFile (more flexibility in the automatic definition of the env LOCALDATASERVER).
 - Import patch [#43440](#) ^[45] fixing an issue with the username used to access a remote file in the xproofd daemon. Fixes a problem when retrieving files from workers where the username is different, e.g. PoD on gLite.
 - Import patch [#43470](#) ^[46] fixing an backward compatibility issue affecting TProofBench::MakeDataSet.
- QT
 - Repair generation of qtcint (see the forum post [#13636](#) ^[47].
- Histfactory
 - adjusts the ranges of the nuisance parameters for the statistical uncertainties and adds a simple method that is needed for the analytical Barlow-Beeston-lite-like optimization.
 - fix a typo in the XML parsing for an option that has rarely been used.

Changes in version v5-32-01 (February 29, 2012)

- Build System
 - Various corrections to the cmake build system.
 - Better Solaris 11.11 / CC 5.12 support (r42776, r42777).
 - Make distribution roottest-able, add missing stress files (r42879, r42880).
 - Do not remove essential files during make clean (bug [#90487](#) ^[48], r43131).
- Cint
 - Import patch [#42566](#) ^[49] fixing an issue preventing the generation on the dictionary for MathCore on some 32bits distributions This fixes [#90906](#) ^[50].
 - Import patch [#42805](#) ^[51] fixing the problem [#83909](#) ^[52] which leading to failure of the auto-dictionary generator when dealing with class template inside a namespace.
 - Fix parsing of templated function names in Linkdefs (Savannah [#90486](#) ^[53], [r42849](#) ^[54]).
 - Fix G__ONELINE at 1024 even if configuring --with-cint-longline (bug [#90330](#) ^[55], r42584).
 - Warn if selection.xml references a field that does not exist (bug [#90061](#) ^[56], r42899).
 - Silence warning in Shadow.h on Windows (r42902).
 - Fix the executing of TPad * pp = (TPad*) gPad, see the [report on the forum](#). ^[57]
- Core
 - Import patch [#42757](#) ^[58] fixing memory leak due to multiple allocations of gLibraryVersion.
 - Add missing implementation for TGenericClassInfo::GetDirectoryAutoAdd.
- I/O
 - Initialize the thread local gDirectory to gROOT rather than null (this is in particular useful to support TObject::Clone which needs a non-zero gDirectory)
 - Resolve [#88174](#) ^[59] which lead to failure in hadd and the TFileMerger (See patch [#42802](#) ^[60]).
- TTree
 - Resolve [#89645](#) ^[61] which could lead to segmentation fault when writing a sparse branch (in a large TTree) with a very long branch name.
 - Make sure that in the tertiary operator implementation we always load the branch that are needed (even in the case cond ? y : -y where cond is false). This fixes [#90826](#) ^[62].
- Net
 - Fix in case of redirection in TWebFile (fixes issue [91689](#) ^[63]).
- RooFit
 - Extend string parsing buffer in RooWorkspace factory to 10k
 - Allow explicit control over normalization of constraint terms through argument GlobalObservables() in RooAbsPdf::fitTo()
 - In RooMultiVarGaussian Support analytical integration of parameters as well
 - Faster parameter lookup inside RooMinuit
 - Bug fix in RooAddPdf in handling of recursive fractions with non-extended pdfs
 - Bug fix in RooAddPdf::expectedEvents() with fraction coefficients where transformation by range integral ratio is needed for expected yield
 - Bug fix in RooHist::makePullHist (solves Savannah [#89945](#))
 - Bug fix in RooCurve::findPoint (solves Savannah [#89949](#))
 - Bug fix in RooDataHist::adjustBinning (solves Savannah [#89947](#))
 - Bug fix in error messaging in RooProdPdf (solves Savannah [#89125](#))
 - Bug fix in private copy ctor of RooDataHist (solves Savannah [#85506](#))
 - Documentation fix for RooAbsData (solves Savannah [#84662](#))

- Add option house average instead of bin center for residual and pull histograms (patch #4948)
- Use `createIntegral()` inside `RooAbsReal::createPlotProjection` so that pdf projections with multiple ranges are supported
- Bug fix in `RooAbsData::fillHistogram` (solves Savannah #83858)
- Apply auto-conversion to vector-based data storage in legacy `RooDataSet` constructors that take `TTrees` as argument
- In `RooAbsOptTestStatistic` disable cache-and-track optimization if storage class is not `RooVectorDataStore` (as it is only supported by this class)
- Bug fix in `RooRealMPFE` -- pass `applyWeightSquared` flag to remote server - fixes problems with weighted likelihoods calculated with >1 CPU (solves Savannah #84369)
- Bug fix in `RooAbsTestStatistic`, forward `applyWeightSquared` flag to all components (solves Savannah #88479)
- In `RooTruthModel` fix analytical integration ranges for 'expBasis' for non-standard ranges
- Bug fix in `RooAbsHiddenReal` - fix infinite loop cause by typo
- In `RooAbsAnaConvPdf` only evaluate convolutions that are prefixed by a non-zero coefficient
- Bug fix in `RooEffProd` normalization when explicit normalization range is used
- In `RooVectorDataStore` fix caching of conditional pdfs in level-2 cache mode
- In `RooVectorDataStore` restrict cache recalculation to active elements (restores normal performance scaling behavior for $N_{CPU} > 1$)
- Fix bug in `RooAbsAnaConv` so that generation from convoluted pdfs also works after persistence (solves Savannah #90986)
- Fix bug in `RooCachedReal` so that passthrough debug mode is functional
- Fix uninitialized data member in `RooCachedReal` to fix unreproducible behavior when fitting with parameterized integral caching
- Bug fix in `RooGaussModel` in `sinh` and `cosh` convolution terms (solves Savannah #90845)
- Bug fix in expression of partial integral in `RooSpHarmonic`
- Reduce abundant info messages in operation of `RooAbsCachedReal` and `RooCachedReal` to debug stream
- Make size of `RooAICRegistry` payload scale dynamically to support complex fits
- Fix memory leak in `RooAbsTestStatistic`
- In `RooEffGenContext` use known maximum of efficiency function if advertised for more efficient operation
- Fix persistence problems in `RooUnblind*` classes (solves Savannah #91268)
- In `RooProdPdf` terminate calculation when value is \leq cutoff rather than
- In `RooAbsAnaConvPdf` improve performance by caching range name strings in `RooNameReg`
- Make payload of `RooCacheManager` scale dynamically to improve performance of complex fits
- In `RooHistPdf` also fast-track integration over named ranges if these map to the full range definition
- In `RooDataHist` fix bug in partial bin volume corrections in partial integrals.
- Remove stray debug comment in `RooAbsData`
- Make `RooDataSet::fillHistogram()` also work correctly for weighted datasets
- **RooStats**
 - Use flag=2 for constant term optimization in the evaluation of the profile likelihood test statistic
 - Fix a bug in running an automatic scan in the `HypoTestInverter`.
 - Fix a bug in making the Asimov data set in the `AsymptoticCalculator` when using workspaces generated with the new `HistFactory` version (see this [RootForum post](#) ^[64]).
 - Add possibility to make an `AsimovDataSet` using nominal nuisance parameter values
 - Add `ProfileLikelihoodTestStat::SetOneSidedDiscovery()` for q_0 and added `::SetSigned()` option to allow test statistic to probe fluctuations corresponding to p-values >50%.
 - Misc. fixes to `SamplingDistPlot` and `HypoTestPlot`
- **HistFactory**
 - Fix a bug in `ParamHistFunc` constructor needed for bin-by-bin uncertainties (`StatError Activate="True"` and `ShapeFactor`) to work properly
 - Change Poisson constraint terms to use "no rounding" flag, important for asymptotic calculations.
 - Added `InterpCode=4` to `FlexibleInterpVar` which avoids kink in likelihood near $\alpha=0$ that cause problems for MINUIT.
- **Hist**
 - Remove extra semicolon in `THnSparse_internal.h` (bug [#89917](#) ^[65], r42532)
- **Proof**
 - Import in `stressProof` the patches introducing new tests, adding a return code consistent with standard test facilities and the option '-noprogess' to switch off the progress information which may create problems in wrapper applications intercepting the output (e.g. `ctest`). Patches imported: 42000,42142,42302,42303,42376,42386,42387,42393,42400,42416,42434,42451,42462 .
 - Import patch [#42578](#) ^[66] fixing in `getProof.C` some issues mostly related to PROOF-Lite.
 - Import class to analyse the performance tree (see [description](#) ^[67])
 - Adapt patch [#42671](#) ^[68] fixing a problem with `TProof::Load` reported in the PROOF forum, caused by the fact that the additional files were not copied in the master sandbox but left in the cache.
 - Import patch [#42798](#) ^[69] in `TDataSetManagerFile` consolidating the way duplicates are removed.
 - Import patch [#42904](#) ^[70] in `TProofOutputFile` changing the default mode for merging histograms in `TFileMerger`,

- to reduce the memory footprint.
- Import patch [#43074](#) ^[71] fixing the way errors are handled when uploading files (e.g. UploadPackage).
- Import patch [#43157](#) ^[72] fixing a compilation issue with xrootd 3.0.2 .
- Core / Textinput
 - Handle '{' on windows keyboards requiring Shift+AltGr+... ([bug #90192](#) ^[73], r42582, r42595).
- Graf3D
 - Import rev 42084 from trunk: Fix crash on exit when stamped element map is not empty.
- GUI
 - Import patch [#42940](#) ^[74] fixing a problem with new style when using SetBackgroundPixmap() with flat buttons.
- PyROOT
 - Patch for [#91505](#) ^[75]: allow null-characters in strings passed through the binding.

Changes in v5-32-00 (December 2, 2011)

- Build System
 - Refine (aka fix) configuration of internal CINT array sizes (r42210, [#88752](#) ^[76]).
- Hist
 - Import fix [#42155](#) ^[77] from the trunk to fix for bug [#88561](#) ^[78]
 - THnSparse: fix calculation of number of entries (r42190)
 - Import r42237 to optimize the merging of histograms in case of equal axes.
- Minuit2
 - Import fix [#42147](#) ^[79] in Minuit2Minimizer for fixing bug [#89111](#) ^[80] seen only on Windows
- RooFit
 - Add binned integration support for RooStats
- HistFactory
 - Add ParamHistFunc for bin by bin statistical errors for template shapes
- Math
 - Fix warning "undefined order of evaluation" in KDTree (r42191).
- Proof
 - Adapt patch [#42142](#) ^[81] fixing the return code of stressProof.
 - Import patch [#42238](#) ^[82] fixing checks of controlling envs and parameters in TPerfStat.
 - Import patch [#42248](#) ^[83] fixing name of the internal directory in the draw functions of TProofBench.
- Core
 - Zero out unused slots in TClonesArray::ExpandCreateFast(), was causing stale TClonesArray elements across TTree entries (r42333).
- I/O
 - Fix issue in case of corrupted file with unreadable StreamerInfo record ([#87896](#) ^[84]).

Changes in v5-32-00-rc2 (November 16, 2011)

- Build System
 - Port to IBM AIX 7.
 - Port to Solaris 11.11.11.
 - Fix for libMathCore being removed from root.exe by smart linkers like on Ubuntu 11.
 - Fixing missing dependency on Windows cmake build.
 - Enable configuration of internal CINT array sizes (r41942, [#88752](#) ^[76]).
- Core
 - Fix the user of TThread static function before the creation of any TThread object.
 - Make TSystem::StackTrace() work on Solaris and Ubuntu.
- Proof
 - Import patch [#41771](#) ^[85] fixing an issue locating the xrootd authentication framework plugin in the PROOF client
 - Import patch [#41772](#) ^[86] fixing an issue with the configuration of xrootd lib paths when xrootd libs are in system lib paths.
 - Import patches [#41785](#) ^[87] and [#41786](#) ^[88] fixing an issue with packetizers preventing proper entry range processing and the file ordering in datasets.
 - Import patch [#41788](#) ^[89] fixing an issue with AddInputData when objects are TTree or derived.
 - Import patch [#41801](#) ^[90] fixing an issue in the packetizers potentially crashing PROOF-Lite at exit when using file-resident outputs.
 - Import patch [#41869](#) ^[91] cleaning-up and simplifying the configuration of xrootd-related list of libraries.
 - Import patches [#41958](#) ^[92] and [#41999](#) ^[93] to improve checks, definition and cleaning of the working dir in tutorials/proof/getProof.C
 - Import patch [#41904](#) ^[94] extending TProofMgr::Ping functionality to 'xrootd' too. This is useful to test if an xrootd server is available at a given address.
- Hist

- Import patch #42017 to fix a bug in SetContent with time display histograms
- TCanvas::SaveAs() in a .C produced invalid C++ code for histograms drawn with the option COLZ (patch #42107)
- MathCore
 - Import patch #41834 to fix a bug in TMath::Quantiles
 - Import patch #41984 for fixes in Fitter classes for weighted and extended likelihood fits
- MathMore
 - Import patch #42011 for fixing pruning of warning messages in Interpolation classes
- RooFit/RooFitCore
 - Import patch #41862^[95], #41871, #41899, #41976 to improve cache optimizations
 - Patch #42089 (add new bin-integrator)
 - Patch #42128 (various optimizations in pdf handling)
 - Patch #42153 (further optimizations, expand bin-integrator to 2/3d, support for mixed binned/unbinned generation)
- RooStats
 - Import patch #41799 to fix NLL evaluations in the AsymptoticCalculator
 - Import patch #41810 to fix computation of expected limits in HypoTestInverterResult
 - Import patch #41985 to fix for zero toys in HypoTest calculators
 - Import patch #41887 to fix for reusing of NLL in SimpleLikelihoodRatioTestStat

© 1995-2013 The ROOT Team

Source URL: <http://root.cern.ch/drupal/content/root-version-v5-32-00-patch-release-notes>

Links:

- [1] <http://root.cern.ch/drupal/category/package-context/download>
- [2] <http://root.cern.ch/drupal/category/package-context/patches>
- [3] <http://root.cern.ch/drupal/category/package-context/v5-32-00>
- [4] ftp://root.cern.ch/root/root_v5.32.04.source.tar.gz
- [5] <http://root.cern.ch/drupal/content/git-howto>
- [6] <http://root.cern.ch/git/root.git>
- [7] <http://root.cern.ch/drupal/content/installing-root-source>
- [8] <http://root.cern.ch/phpBB3/viewtopic.php?f=3&t=14673&p=64367#p64367>
- [9] <http://root.cern.ch/viewvc?rev=45092&root=root&view=rev>
- [10] <http://root.cern.ch/viewvc?rev=45093&root=root&view=rev>
- [11] <http://root.cern.ch/phpBB3/viewtopic.php?t=14943>
- [12] <https://savannah.cern.ch/bugs/?94455>
- [13] <https://savannah.cern.ch/bugs/?94669>
- [14] <http://savannah.cern.ch/bugs/?94910>
- [15] <http://root.cern.ch/viewvc?rev=44397&root=root&view=rev>
- [16] <http://root.cern.ch/viewvc?rev=44048&root=root&view=rev>
- [17] <http://root.cern.ch/viewvc?rev=44701&root=root&view=rev>
- [18] <http://root.cern.ch/viewvc?rev=42703&root=root&view=rev>
- [19] <https://savannah.cern.ch/bugs/?94981>
- [20] <http://root.cern.ch/viewvc?rev=44630&root=root&view=rev>
- [21] <https://savannah.cern.ch/bugs/?95190>
- [22] <https://savannah.cern.ch/bugs/?94295>
- [23] <https://savannah.cern.ch/bugs/?94123>
- [24] <https://savannah.cern.ch/bugs/?93193>
- [25] <https://savannah.cern.ch/bugs/?93401>
- [26] <https://savannah.cern.ch/bugs/?93282>
- [27] <http://root.cern.ch/phpBB3/viewtopic.php?f=3&t=14507>
- [28] <http://root.cern.ch/viewvc?rev=42921&root=root&view=rev>
- [29] <http://root.cern.ch/viewvc?rev=42775&root=root&view=rev>
- [30] <http://root.cern.ch/viewvc?rev=42788&root=root&view=rev>
- [31] <http://root.cern.ch/viewvc?rev=42882&root=root&view=rev>
- [32] <http://root.cern.ch/viewvc?rev=42883&root=root&view=rev>
- [33] <http://root.cern.ch/viewvc?rev=43101&root=root&view=rev>
- [34] <http://root.cern.ch/viewvc?rev=43884&root=root&view=rev>
- [35] <http://root.cern.ch/viewvc?rev=43886&root=root&view=rev>
- [36] <http://root.cern.ch/viewvc?rev=43567&root=root&view=rev>
- [37] <https://savannah.cern.ch/bugs/index.php?92502>
- [38] <https://savannah.cern.ch/bugs/index.php?92491>
- [39] <https://savannah.cern.ch/bugs/index.php?92486>
- [40] <http://root.cern.ch/phpBB3/viewtopic.php?p=61833>
- [41] <http://root.cern.ch/viewvc?rev=43245&root=root&view=rev>
- [42] <http://root.cern.ch/viewvc?rev=43295&root=root&view=rev>
- [43] <http://root.cern.ch/viewvc?rev=43107&root=root&view=rev>
- [44] <http://root.cern.ch/viewvc?rev=43426&root=root&view=rev>
- [45] <http://root.cern.ch/viewvc?rev=43440&root=root&view=rev>
- [46] <http://root.cern.ch/viewvc?rev=43470&root=root&view=rev>
- [47] <http://root.cern.ch/phpBB3/viewtopic.php?t=13636>
- [48] <https://savannah.cern.ch/bugs/index.php?90487>

[49] <http://root.cern.ch/viewvc?rev=42566&root=root&view=rev>
[50] <https://savannah.cern.ch/bugs/?90906>
[51] <http://root.cern.ch/viewvc?rev=42805&root=root&view=rev>
[52] <https://savannah.cern.ch/bugs/index.php?83909>
[53] <https://savannah.cern.ch/bugs/index.php?90486>
[54] <http://root.cern.ch/viewvc?rev=42849&root=root&view=rev>
[55] <https://savannah.cern.ch/bugs/index.php?90330>
[56] <https://savannah.cern.ch/bugs/index.php?90061>
[57] <http://root.cern.ch/phpBB3/viewtopic.php?t=14197>
[58] <http://root.cern.ch/viewvc?rev=42757&root=root&view=rev>
[59] <https://savannah.cern.ch/bugs/index.php?88174>
[60] <http://root.cern.ch/viewvc?rev=42802&root=root&view=rev>
[61] <https://savannah.cern.ch/bugs/index.php?89645>
[62] <https://savannah.cern.ch/bugs/?90826>
[63] <https://savannah.cern.ch/bugs/index.php?91689>
[64] <http://root.cern.ch/phpBB3/viewtopic.php?f=15&t=13863>
[65] <https://savannah.cern.ch/bugs/index.php?89917>
[66] <http://root.cern.ch/viewvc?rev=42578&root=root&view=rev>
[67] <http://root.cern.ch/drupal/content/analysing-performance-tree>
[68] <http://root.cern.ch/viewvc?rev=42671&root=root&view=rev>
[69] <http://root.cern.ch/viewvc?rev=42798&root=root&view=rev>
[70] <http://root.cern.ch/viewvc?rev=42904&root=root&view=rev>
[71] <http://root.cern.ch/viewvc?rev=43074&root=root&view=rev>
[72] <http://root.cern.ch/viewvc?rev=43157&root=root&view=rev>
[73] <https://savannah.cern.ch/bugs/index.php?90192>
[74] <http://root.cern.ch/viewvc?rev=42940&root=root&view=rev>
[75] <http://savannah.cern.ch/bugs/?91505>
[76] <https://savannah.cern.ch/bugs/?88752>
[77] <http://root.cern.ch/viewvc?rev=42155&root=root&view=rev>
[78] <https://savannah.cern.ch/bugs/index.php?88561>
[79] <http://root.cern.ch/viewvc?rev=42147&root=root&view=rev>
[80] <https://savannah.cern.ch/bugs/?89111>
[81] <http://root.cern.ch/viewvc?rev=42142&root=root&view=rev>
[82] <http://root.cern.ch/viewvc?rev=42238&root=root&view=rev>
[83] <http://root.cern.ch/viewvc?rev=42248&root=root&view=rev>
[84] <https://savannah.cern.ch/bugs/?87896>
[85] <http://root.cern.ch/viewvc?rev=41771&root=root&view=rev>
[86] <http://root.cern.ch/viewvc?rev=41772&root=root&view=rev>
[87] <http://root.cern.ch/viewvc?rev=41785&root=root&view=rev>
[88] <http://root.cern.ch/viewvc?rev=41786&root=root&view=rev>
[89] <http://root.cern.ch/viewvc?rev=41788&root=root&view=rev>
[90] <http://root.cern.ch/viewvc?rev=41801&root=root&view=rev>
[91] <http://root.cern.ch/viewvc?rev=41869&root=root&view=rev>
[92] <http://root.cern.ch/viewvc?rev=41958&root=root&view=rev>
[93] <http://root.cern.ch/viewvc?rev=41999&root=root&view=rev>
[94] <http://root.cern.ch/viewvc?rev=41904&root=root&view=rev>
[95] <http://root.cern.ch/viewvc?view=rev&revision=41862>