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“V3 EPICS Core” or Progress on EPICS Base

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U.S. DEPARTMENT OF ENERGY

Outline

- Converting Base from CVS to Bazaar
  - Introduce Bazaar
  - Launchpad.net
  - Bazaar for CVS/SVN users
- “V3 EPICS Core”
  - Public Branches of Base
  - What’s new in the 3.14 branch?
  - Progress at the Codeathon
  - Future Releases

Bazaar

- Distributed Revision Control System (DVCS)
  - Like CVS or SVN where everyone has a local copy of the repository
  - Similar to Mercurial, Git, Darcs, etc.
- Free Software, Python, runs almost everywhere
  - Plug-in GUI supports Windows, KDE, Gnome and Mac OS X
  - Additional plug-ins for Eclipse, Emacs, Nautilus, Tortoise
  - Supported by Canonical (Ubuntu)
- Many remote access options
  - Host public projects at Launchpad, SourceForge, GNU Savannah
  - Private access via ssh, sftp, ftp, http/https (read-only)

- http://bazaar.canonical.com/

Launchpad.net

- Collaboration and hosting platform for software projects
- Projects have many features available
  - Bug tracking: Bug reports, status, discussion, patches
  - Code hosting: Bazaar repositories; can import from CVS, git, Subversion
  - Code reviews: View changes, subscribe, discuss, vote
  - Specification tracking: Community planning of new features
  - Also provides facilities for language translators, Q&A and FAQs, mailing lists, and Ubuntu package building and testing
- Setting up and managing a new project is easy
  - Importing existing code history and bug reports can take some work

https://launchpad.net/epics-base

Log in / Register

EPICS Base

Overview | Branches | Bugs | Blueprints | Translations | Answers

Registered 2009-12-10 by Andrew Johnson

The core of the Experimental Physics and Industrial Control System (EPICS) toolkit.

EPICS Base contains the build system and build tools, common and OS-interface libraries, Channel Access client and server libraries, static and run-time database access routines, the database processing code, and standard record, device and driver support.

Home page | Freshmeat record | Wiki | External downloads

Subscribe to bug mail

Downloads

Latest version is 3.14.11

baseR3.14.11.tar.gz

released on 2009-08-28

All downloads

Get Involved

Report a bug

Submit code

Register a blueprint

Project information

Maintainer: Andrew Johnson

Driver: EPICS Core Developers

Uses Launchpad for: Blueprints, Bug Tracking, and Branches.

Development focus: trunk series

lp:epics-base

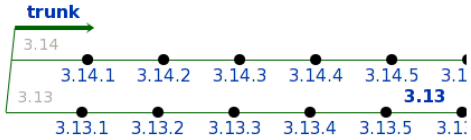
View the branch content

Programming Languages: C/C++, Perl

Licenses: Other/Open Source (EPICS Open License, http://www.aps.anl.gov/epics/license/base.txt)

RDF metadata

Series and milestones — View full history



EPICS Base trunk series is the current focus of development

View milestones

Latest bugs reported — All bugs

Bug #572589: Make dbl emit empty strings for non-existent fields
Reported on 2010-04-30

Bug #571121: Perl issue compiling with INSTALL_LOCATION set
Reported on 2010-04-28

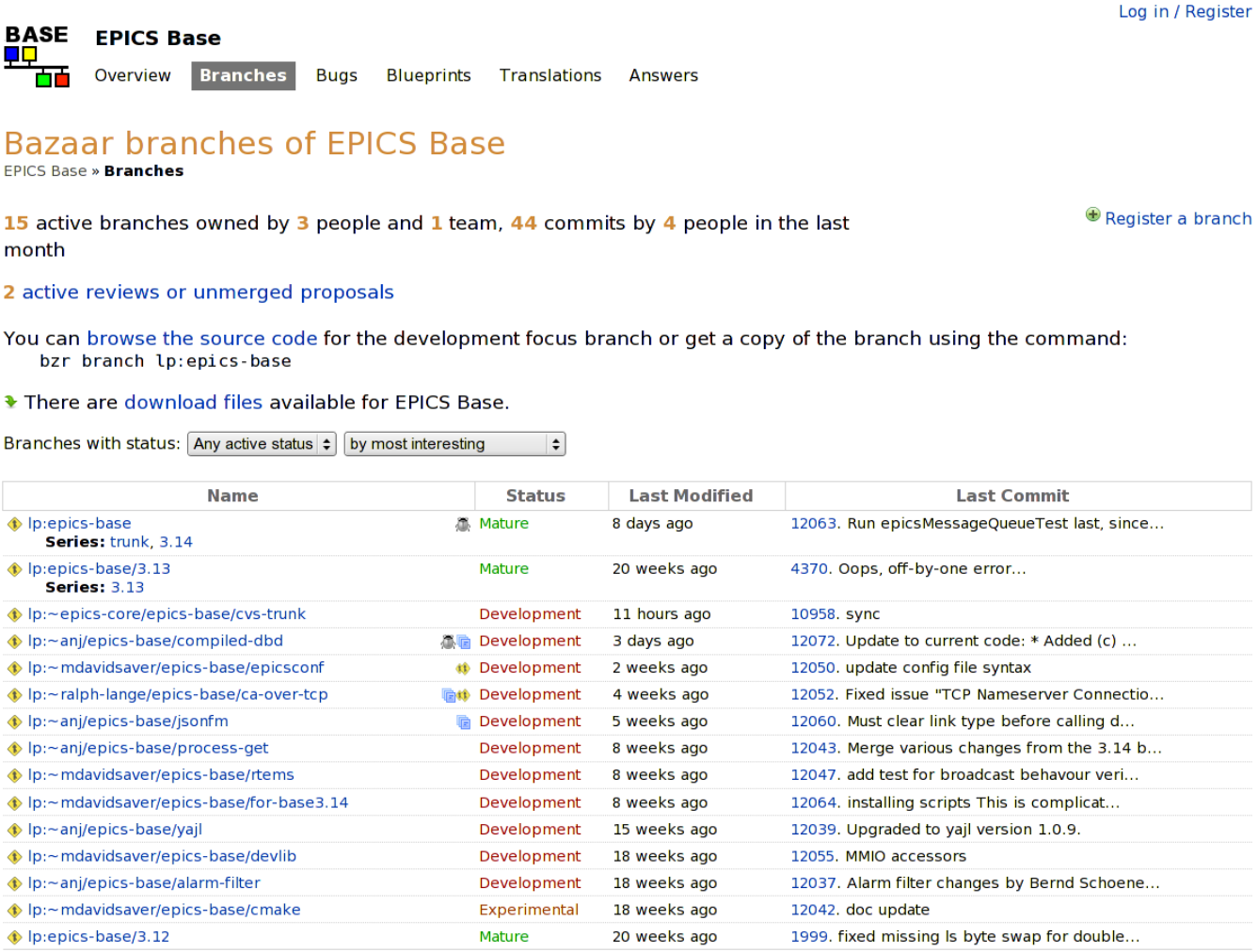
Latest blueprints — All blueprints

Port to linux-mips architecture
Registered on 2010-04-21

Compile DBD files into object code
Registered on 2010-04-08

JSON Field Modifiers
Registered on 2010-04-08

https://code.launchpad.net/epics-base



Log in / Register

BASE **EPICS Base**

Overview | **Branches** | Bugs | Blueprints | Translations | Answers

Bazaar branches of EPICS Base

EPICS Base » **Branches**

Register a branch

15 active branches owned by **3** people and **1** team, **44** commits by **4** people in the last month

2 active reviews or unmerged proposals

You can browse the source code for the development focus branch or get a copy of the branch using the command:

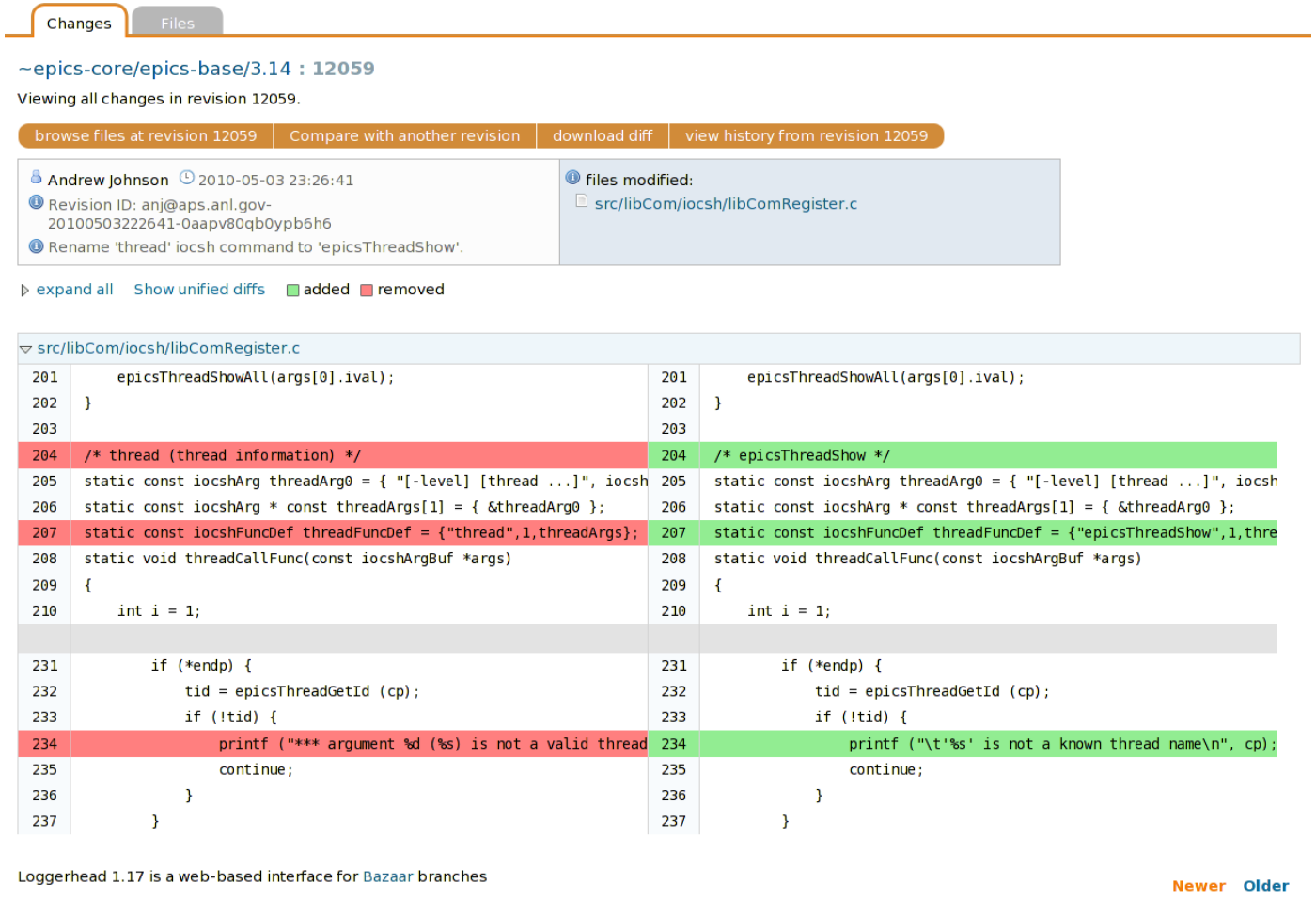
```
bzr branch lp:epics-base
```

There are download files available for EPICS Base.

Branches with status: Any active status | by most interesting

Name	Status	Last Modified	Last Commit
lp:epics-base **Series:** trunk, 3.14	Mature	8 days ago	12063. Run epicsMessageQueueTest last, since…
lp:epics-base/3.13 **Series:** 3.13	Mature	20 weeks ago	4370. Oops, off-by-one error…
lp:~epics-core/epics-base/cvs-trunk	Development	11 hours ago	10958. sync
lp:~anj/epics-base/compiled-dbd	Development	3 days ago	12072. Update to current code: * Added (c) …
lp:~mdavidsaver/epics-base/epicsconf	Development	2 weeks ago	12050. update config file syntax
lp:~ralph-lange/epics-base/ca-over-tcp	Development	4 weeks ago	12052. Fixed issue "TCP Nameserver Connectio…
lp:~anj/epics-base/jsonfm	Development	5 weeks ago	12060. Must clear link type before calling d…
lp:~anj/epics-base/process-get	Development	8 weeks ago	12043. Merge various changes from the 3.14 b…
lp:~mdavidsaver/epics-base/rtems	Development	8 weeks ago	12047. add test for broadcast behavour veri…
lp:~mdavidsaver/epics-base/for-base3.14	Development	8 weeks ago	12064. installing scripts This is complicat…
lp:~anj/epics-base/yajl	Development	15 weeks ago	12039. Upgraded to yajl version 1.0.9.
lp:~mdavidsaver/epics-base/devlib	Development	18 weeks ago	12055. MMIO accessors
lp:~anj/epics-base/alarm-filter	Development	18 weeks ago	12037. Alarm filter changes by Bernd Schoene…
lp:~mdavidsaver/epics-base/cmake	Experimental	18 weeks ago	12042. doc update
lp:epics-base/3.12	Mature	20 weeks ago	1999. fixed missing ls byte swap for double…

Browsing changes on a branch



Changes | Files

~epics-core/epics-base/3.14 : 12059

Viewing all changes in revision 12059.

browse files at revision 12059 | Compare with another revision | download diff | view history from revision 12059

Andrew Johnson 2010-05-03 23:26:41
Revision ID: anj@aps.anl.gov-20100503222641-0aapv80qb0ypb6h6
Rename 'thread' iocsh command to 'epicsThreadShow'.

files modified:
src/libCom/iocsh/libComRegister.c

expand all | Show unified diffs | added | removed

src/libCom/iocsh/libComRegister.c

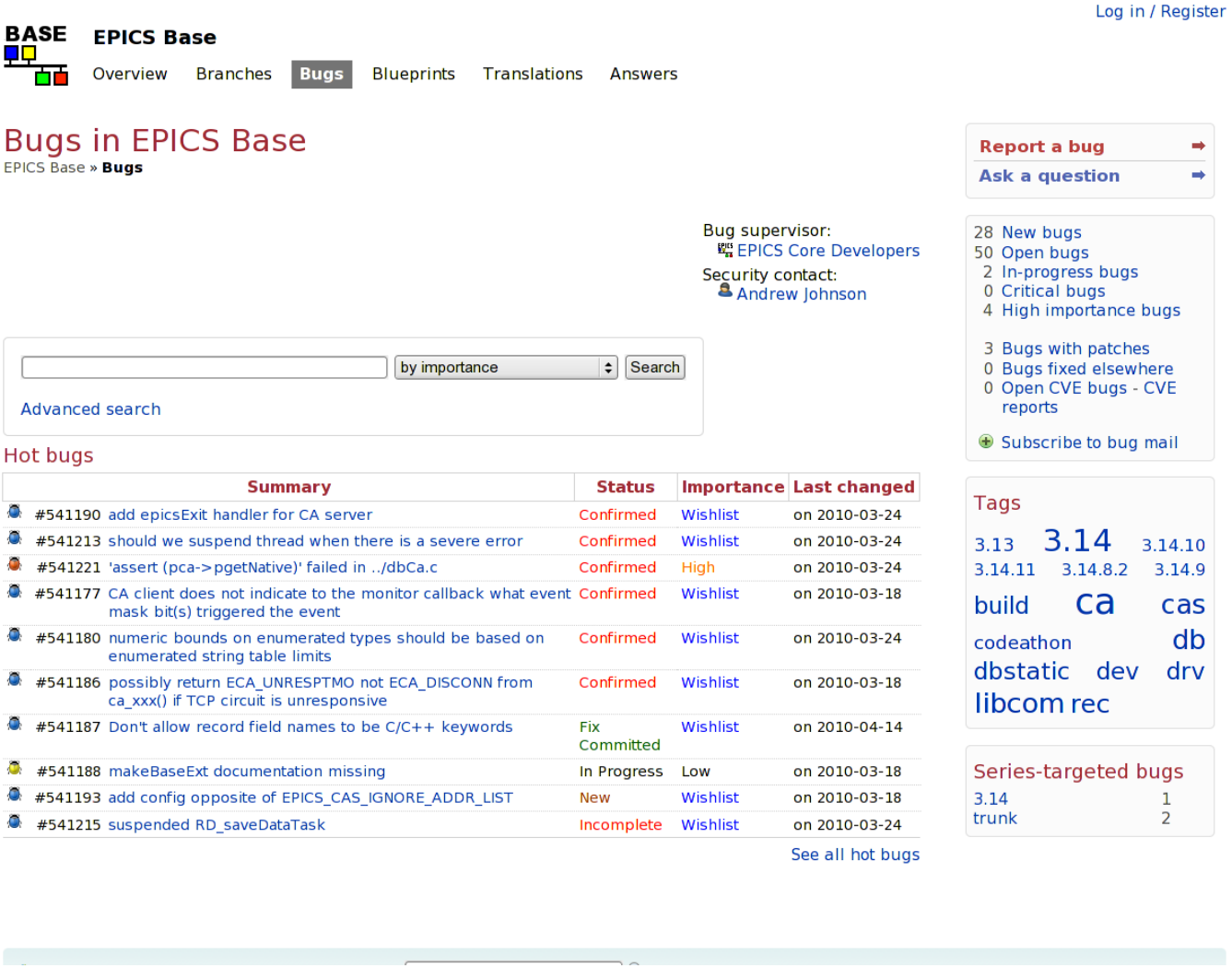
```
201      epicsThreadShowAll(args[0].ival);
202  }
203
204  /* thread (thread information) */
205  static const iocshArg threadArg0 = { "[-level] [thread ...]", iocsh
206  static const iocshArg * const threadArgs[1] = { &threadArg0 };
207  static const iocshFuncDef threadFuncDef = {"thread",1,threadArgs};
208  static void threadCallFunc(const iocshArgBuf *args)
209  {
210      int i = 1;
231          if (*endp) {
232              tid = epicsThreadGetId (cp);
233              if (!tid) {
234                  printf ("*** argument %d (%s) is not a valid thread
235                  continue;
236              }
237          }
```

```
201      epicsThreadShowAll(args[0].ival);
202  }
203
204  /* epicsThreadShow */
205  static const iocshArg threadArg0 = { "[-level] [thread ...]", iocsh
206  static const iocshArg * const threadArgs[1] = { &threadArg0 };
207  static const iocshFuncDef threadFuncDef = {"epicsThreadShow",1,thre
208  static void threadCallFunc(const iocshArgBuf *args)
209  {
210      int i = 1;
231          if (*endp) {
232              tid = epicsThreadGetId (cp);
233              if (!tid) {
234                  printf ("\t'%s' is not a known thread name\n", cp);
235                  continue;
236              }
237          }
```

Loggerhead 1.17 is a web-based interface for Bazaar branches

Newer Older

https://bugs.launchpad.net/epics-base



Log in / Register

BASE **EPICS Base**

Overview Branches **Bugs** Blueprints Translations Answers

Bugs in EPICS Base

EPICS Base » **Bugs**

Bug supervisor:
EPICS Core Developers
Security contact:
Andrew Johnson

by importance Search

Advanced search

Report a bug
Ask a question

28 New bugs
50 Open bugs
2 In-progress bugs
0 Critical bugs
4 High importance bugs

3 Bugs with patches
0 Bugs fixed elsewhere
0 Open CVE bugs - CVE reports

Subscribe to bug mail

Hot bugs

Summary	Status	Importance	Last changed
#541190 add epicsExit handler for CA server	Confirmed	Wishlist	on 2010-03-24
#541213 should we suspend thread when there is a severe error	Confirmed	Wishlist	on 2010-03-24
#541221 'assert (pca->pgetNative)' failed in ../dbCa.c	Confirmed	High	on 2010-03-24
#541177 CA client does not indicate to the monitor callback what event mask bit(s) triggered the event	Confirmed	Wishlist	on 2010-03-18
#541180 numeric bounds on enumerated types should be based on enumerated string table limits	Confirmed	Wishlist	on 2010-03-24
#541186 possibly return ECA_UNRESPTMO not ECA_DISCONN from ca_xxx() if TCP circuit is unresponsive	Confirmed	Wishlist	on 2010-03-18
#541187 Don't allow record field names to be C/C++ keywords	Fix Committed	Wishlist	on 2010-04-14
#541188 makeBaseExt documentation missing	In Progress	Low	on 2010-03-18
#541193 add config opposite of EPICS_CAS_IGNORE_ADDR_LIST	New	Wishlist	on 2010-03-18
#541215 suspended RD_saveDataTask	Incomplete	Wishlist	on 2010-03-24

See all hot bugs

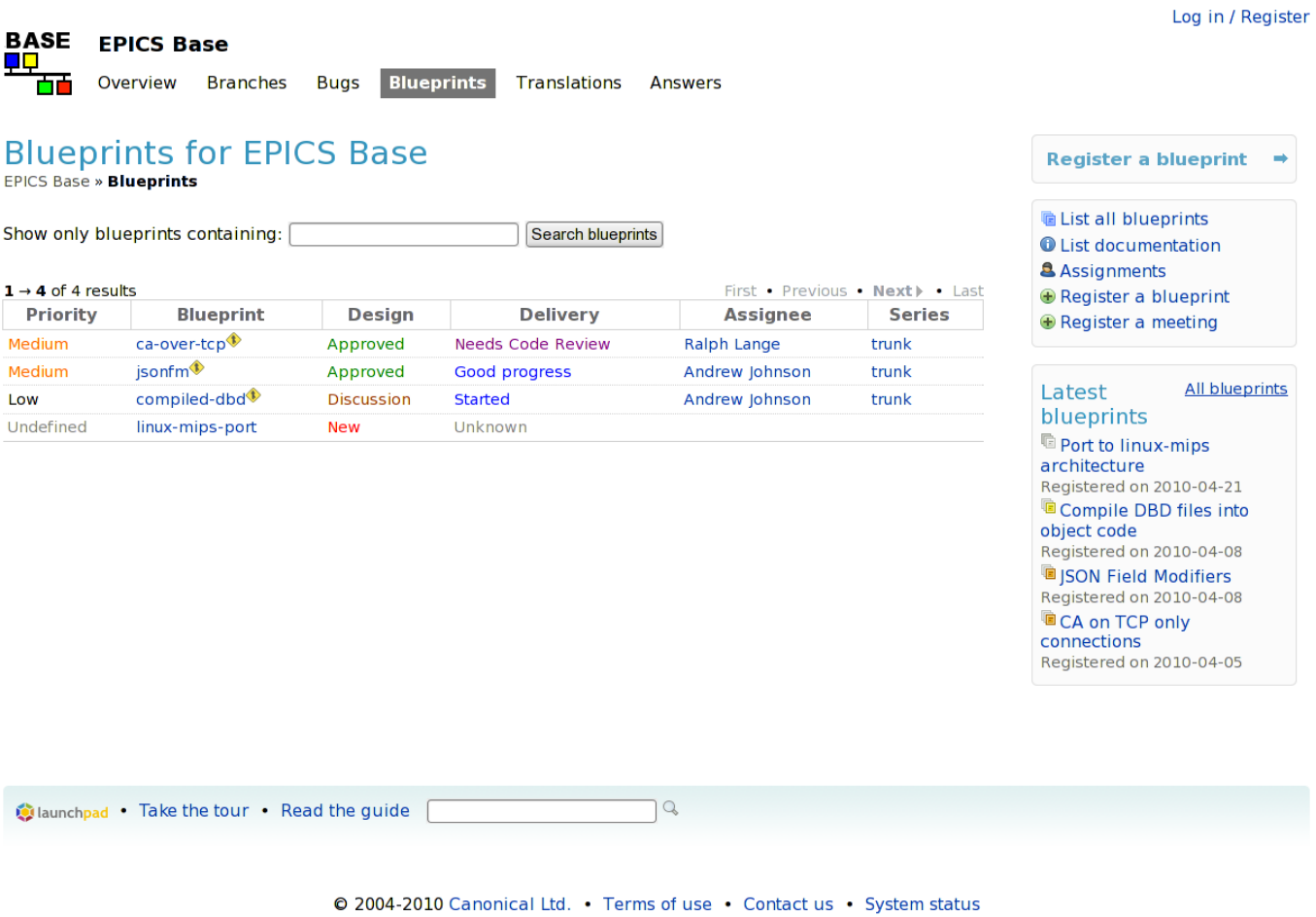
Tags

3.13 **3.14** 3.14.10
3.14.11 3.14.8.2 3.14.9
build **ca** cas
codeathon **db**
dbstatic dev drv
libcom rec

Series-targeted bugs

3.14	1
trunk	2

https://blueprints.launchpad.net/epics-base



Log in / Register

BASE **EPICS Base**

Overview Branches Bugs **Blueprints** Translations Answers

Blueprints for EPICS Base

EPICS Base » **Blueprints**

Show only blueprints containing: Search blueprints

1 → 4 of 4 results

First • Previous • **Next** • Last

Priority	Blueprint	Design	Delivery	Assignee	Series
Medium	ca-over-tcp	Approved	Needs Code Review	Ralph Lange	trunk
Medium	jsonfm	Approved	Good progress	Andrew Johnson	trunk
Low	compiled-dbd	Discussion	Started	Andrew Johnson	trunk
Undefined	linux-mips-port	New	Unknown		

Register a blueprint

List all blueprints
List documentation
Assignments
Register a blueprint
Register a meeting

Latest blueprints — All blueprints

Port to linux-mips architecture
Registered on 2010-04-21

Compile DBD files into object code
Registered on 2010-04-08

JSON Field Modifiers
Registered on 2010-04-08

CA on TCP only connections
Registered on 2010-04-05

launchpad • Take the tour • Read the guide

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Bazaar Checkouts for CVS/SVN users

- To follow the development of Base you can check out your own copy
  - **`bzr checkout --lightweight lp:epics-base/3.14 base-3.14`**
  - This copies the latest revision to a new **`base-3.14`** directory
  - If you leave off the **`--lightweight`** option Bazaar will also download the complete development history, speeding up file history browsing operations at the expense of local disk space
- See what's been committed since your checkout with
  - **`bzr missing`**
- To update your tree to the latest revision, use
  - **`bzr update`**
- The following commands are useful to examine file histories
  - **`bzr log Makefile`**
  - **`bzr tags`**
  - **`bzr diff -r tag:R3.14.8.2..tag:R3.14.10 Makefile`**

Current Branches of Base

- Converted from CVS branches
  - **`lp:epics-base/3.12`**
    - I suspect nobody is still using this...
  - **`lp:epics-base/3.13`**
    - 12 commits since R3.13.10
  - **`lp:epics-base/3.14`** also spelled **`lp:epics-base`**
    - Many bug fixes and minor enhancements since R3.14.11
  - **`lp:~epics-core/epics-base/3.14.11+patches`**
    - R3.14.11 with all patches from the Known Problems page
  - **`lp:~epics-core/epics-base/cvs-trunk`**
    - The CVS main trunk; many new (but some partially-implemented) features, most not reviewed, many of the commit log messages are unhelpful
    - We are extracting desirable features from this branch into development branches to allow community review before merging into an official release

Some Development Branches

- 12 development branches on May 14th, e.g.
  - **lp:~ralph-lange/epics-base/ca-over-tcp**
    - Ralph and Jeff's work from Codeathon 2008, re-based onto 3.14
  - **lp:~anj/epics-base/compiled-dbd**
    - DBD file parsing in Perl, re-based onto 3.14
  - **lp:~anj/epics-base/process-get**
    - Marty's 2008 work to turn putNotify into processNotify
  - **lp:~anj/epics-base/jsonfm**
    - My JSON Field Modifiers development (ICALEPCS 2009)
  - **lp:~mdavidsaver/epics-base/devlib**
    - Michael is reworking devLib, adding PCI support and MMIO wrappers
  - **lp:~anj/epics-base/alarm-filter**
    - Bernd Schoeneburg's alarm filter changes from Codeathon 2009

What's New in the 3.14 branch?

- As of May 18th:
  - Various minor bug fixes
  - Configuring READLINE on Linux simplified (libcurses)
  - Support for Windows-x64 and vxWorks 6.7
  - catools support **-l[xob]** for rounding and integer display
  - Changes to dependency file generation, created in O.<arch> dir's
  - RELEASE files may contain **:=** and **?=** assignments
  - Proper initialization of many 'last value' fields
  - Fix for Compress record when ALG field changed
  - epicsThreadOnce() detects recursion on all architectures
  - IOCsh command **thread** is now spelled **epicsThreadShow**
  - Many other internal and build-system changes

2010 Codeathon, Thursday Morning

Progress at the Codeathon

- Scan task monitor device support: Kukhee Kim
- devLib Cleanup, add PCI-bus & MMIO APIs: Michael Davidsaver
- Bug #572589, make dbl output missing fields: Kukhee Kim
- Created several new Launchpad projects and teams, requested creation of project group ‘epics’: Andrew Johnson
- Convert soft-test SVN repository to Bazaar: Andrew Johnson
- Timestamp on value change: Kukhee Kim
- Develop automated cross-platform test framework: Jon Thompson
- Framework wrappers for libCom and soft-test regression tests: Nick Rees, Jon Thompson, Matt Pearson, Ronaldo Mercado
- Named soft events: Dirk Zimoch

Progress cont…

- Convert Application Developers' Guide from FrameMaker to LaTeX: James Rowland
- Port for linux-mips architecture (linksys router): Peter Dennison
- Rewrite Hytec 8002 IP Carrier driver for inclusion in IPAC module: Jim Chen
- Fix attributes for non-VAL fields: Dirk Zimoch
- Fix aai/aao record types: Dirk Zimoch
- Byte Monitor widget for BOY: John Hammonds
- Asyn connection management: Mark Rivers
- Variable length arrays through CA: Michael Abbott
- Add capr to Base: Ronaldo Mercado

Future Releases

- 3.14.12
  - Later this year, Q3?
- 3.15 Series
  - New process
    - Take advantage of Bazaar and Launchpad, distributed development
    - Derived from the current 3.14 branch, not old CVS trunk
    - Review and test all contributions before merging
  - Current candidates for inclusion:
    - CA over TCP
    - Process Get
    - New devLib (PCIbus, MMIO)
    - JSON Field Modifiers (incomplete)
    - Alarm filters
  - When? TBD...
    - Periodic releases?