EPICS Base Releases and Plans, 2015 Edition

Andrew Johnson
AES-SSG, Argonne
Outline

- Recent Releases
  - Base 3.14.12.5
  - Base 3.15.2

- Future plans
  - Base 3.16
  - Base 4.x

- Help needed!

- One more thing...
Base R3.14.12.5

- Released on March 24th
- Incorporated all bug fixes from the 3.14.12 Known Problems page
- New features
  - dbLoadRecordsHook (back-ported from 3.15 branch)
  - asTrapWrite listeners can now see the client’s put data
  - ai.ROFF and ao.ROFF fields are now DBF ULONG
  - New CMD_xxx variables for builds, for use on command-line only
- Target-specific changes
  - New targets win32-x86-static and windows-x64-static
  - Support for Solaris 11 (untested)
  - Cross-build win32-x86-mingw on Linux hosts
  - RTEMS build rules for building GESYS modules
  - New relPaths.sh target for Cygwin IOCs, equivalent to Windows’ dllPath.bat
- See Release Notes for full list and more detail
Base 3.15.2

- Released last week (May 14th)
  - Ralph Lange now manages releases on the 3.15 branch
- Incorporates all bug fixes and enhancements from
  - 3.14 branch up to Base 3.14.12.5
  - 3.15 branch — Known Problems plus other fixes
- Other changes
  - MSI now generates build dependency files (.d) so is no longer compatible with old version
    - A new variable MSI3_15 is now used by the build to locate MSI, must support -D option
  - Link field values in database files can be up to 255 characters long
    - Limit was 79 chars; in 3.16.x there will be no limit
  - Parallel builds work better on Windows (use GnuMake 4.x and ‘make -j8’ or similar)
  - More build warnings cleaned up
Base 3.16

- Aiming for a release in December
  - Michael Davidsaver (NSLS-2, BNL) is doing a lot of the development on this branch

- Current/pending features
  - Record link parsing refactored
  - Record scanning API enhancements
  - Lock-sets being rewritten to remove global lock
  - Many more self-tests of internal functionality
  - Variable length array support in local CA channels and pcas
  - epicsTime routines return a status value, not just ERROR
  - Other stuff that Michael hasn’t posted/developed/described/thought of yet
    - Monotonic time?
**Base 4.x**

- Timescale TBD
  - Probably after 3.16 (i.e. next year)
- Merge some EPICS V4 C++ modules into Base
  - At least pvDataCPP, pvAccessCPP and pvaSrv
- Needs work in the IOC to support record links over pvAccess
  - Hope to make it possible to choose which server and client protocols are supported by each IOC
Help Needed!

- Does your site make local changes to EPICS Base?
  - (other than just configuring it before building)

- Is there additional functionality you would like EPICS Base to provide?

- We need developers!
  - Work on new features
  - Review other people’s code
  - Triage, locate and fix bugs
  - Update and correct documentation

- Contact me <anj@aps.anl.gov> if interested
Janet Anderson is Retiring

- Approximately 48 years of service at Argonne

- EPICS Base
  - Developed and maintained the EPICS build system (telephone support)
  - Worked on C and Perl code throughout the tree

- APS Extensions
  - Motif and X11 application development and maintenance
    - ALH, StripTool, Probe, MEDM
    - These programs are now “essential maintenance only”

- APS Accelerator
  - Managed our extensions and IOC support module builds