

Config Flags

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`./configure && make`

- `configure --with-foo-incdir=... --with-foo-libdir=...`
 - "when looking for foo, look also in ..."

`./configure && make`

- `configure --with-foo-incdir=... --with-foo-libdir=... --fail-on-missing`
- "when looking for foo, look also in ..." "and FAIL if you cannot find foo" (whether in "..." or wherever else we search)

CMake

- Implementation "based" on configure/make behavior
 - tried to be "backward compatible"
 - but several conceptual clashes
- Motivation of this exercise: get rid of ./configure&&make compatibility
 - less surprising / more "like everyone else" behavior
- Cost: backward compatibility will be broken! (but only for CMake)

My Suggestion

Feature On/Off

- -Dhistfactory=On turns a feature on
- Successful CMake == histfactory is configured to be built
 - if its dependency libxml2 cannot be found: **ERROR**
- **CHANGE** from current behavior!

Fail on Missing?

- Gone, useless. Probably simply ignore, as this is now the default

Implementation?

- Package X is enabled by default
 - if prerequisites not found, not an error!
- Specified to CMake as "=On"
 - if prerequisites not found, yes an error!
- Need to distinguish "on by default" and "switched on my user"

Dependencies

- libxml2 is needed by several packages
- Hard to understand what's needed by whom
- Make it explicit:
 - ROOT_STANDARD_LIBRARY_PACKAGE shall have new parameter EXTERNAL_DEPENDENCIES (or whatever)
 - FindXYZ will then be triggered by that EXTERNAL_DEPENDENCIES and check whether the dependency can be found, else error: FOO needs BAR which cannot be found.

Dependencies

- ROOT_STANDARD_LIBRARY_PACKAGE (FOO ...
EXTERNAL_DEPENDENCIES BAR)
- FindBAR will be triggered
- if the dependency cannot be found
 - "FOO needs BAR which cannot be found"

Discussion

- What about disabling dependencies: `-Dxml=Off`
 - should we use `-Dhistfactory=Off` instead? (i.e. disable modules, not dependencies)
- What does `-Dall=On` mean? `Discontinue == failure`?
- Builtin-management (`-Dbuiltin_foo=On`) is orthogonal, right?