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Subject: Package management for non-system locations  
Posted by [Christopher Huhn](#) on Tue, 16 Aug 2005 17:09:29 GMT  
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Simon Lang, who coordinates the Hades software in /misc/hadessoftware, rose the issue of using a package management system for the software management.

After thinking about it for a while, I realized this problem might be tackled on a larger scale as it fits more use cases i.e. to clean up the software installation mess in /usr/local.

I do not have any good solution yet, but these may be requirements for a package management system that installs to non-system locations:

- Package installation shall be possible with normal user privileges

- All parts of a software package must be installed below a single directory tree. No files should require to be installed in (/usr)/bin, /etc, /var or the like

- Multiple versions of the same software shall be installed in different trees at the same time without interference/conflicts

- The package database should also reside below this directory

- Features as known from normal package managers should be available:

  - List package contents

  - List to which package a specific file belongs

  - Tell if a file has been modified since installation

  - Obey defined package dependencies

Maybe wishlist: allow interdependencies between different installation trees (maybe troublesome, but at least explicit)

My ideas on this matter by now are:

- Maybe there exists a solution (at another HEP institute)?

- Maybe dpkg can be modified to run no-root-privileges chroot or the like?

- Tackle this problem with a version control system and make heavy use of tagging and trunking? This may solve at least some issues.

- Maybe I install software you (we?) package into system locations instead? This is done by us anyhow, but multiple parallel versions of stuff are generally troublesome.

Did I forget something important?

What do you think?

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