

Short tutorial on GNU Arch (TLA)

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Overview

- Main features
- Installing and configuring tla
- Getting help
- Naming conventions
- Setup a new source tree
- Updates, commits, and mirrors
- Example: tla-bash-complete
- « Arching » ABINIT

Main features

- Main features of GNU Arch
 - tree-oriented version management
 - changeset-oriented history (not just snapshots)
 - Text and binary data handled transparently
 - file naming constraints / renames handed cleanly
 - advanced merging features (history-sensitive)
 - web-browsable raw repository format
 - bidirectional data exchange with CVS

Installing tla

- TLA: Thomas Lord's implementation of GNU Arch
 - Debian packages: *tla*, *tla-doc*, *tla-buildpackage*, *tla-load-dirs*, *tla-tools*
 - RPM packages: *tla*
 - source tarball:
<ftp://ftp.gnu.org/gnu/gnu-arch/tla-1.2.tar.gz>
- Advice: use version 1.2 or above

Configuring tla

- Introduce yourself:

```
tla my-id "Yann Pouillon <pouillon@pcpm.ucl.ac.be>"
```

- Create an archive:

```
tla make-archive pouillon@pcpm.ucl.ac.be--tla-tutorial \  
/tmp/tutorial
```

- Setup a default archive:

```
tla my-default-archive pouillon@pcpm.ucl.ac.be--tla-tutorial
```

- Everything configuration information is stored in:

```
~/.arch-params/ (caution: avoid editing files)
```

Getting help

- *tla help*
- *tla <command> --help | -H*
- <http://www.abinit.org/tla-for-abinit.html>
- <http://regexps.srparish.net/tutorial-tla/arch.html>
- <http://wiki.gnuarch.org/> (use English version)
- <http://www.gnuarch.org/>
- pouillon@pcpm.ucl.ac.be

Naming conventions

- GNU Arch obeys **strict** naming conventions
- Archive names: `login@address--archivename`
- Project names:
category--branch--version--patch_level
Ex: `abinit--poupouille--4.3--patch3`
- File naming conventions
 - `.` and `..` / excluded
 - `source` / `precious` / `junk` / `backup` / `unrecognized`
 - per-directory conventions: `.arch-inventory`

Setup a new source tree

- Choose a project name
- *tla init-tree* <project name> in the top directory
- *tla add-id* <file> for each file of the project
- Managing files
 - *tla move-id* <old file> <new file>
 - *tla delete-id* <old file>
 - no need to do *tla delete-id* for directories
- **Check tree with *tla tree-lint***

Updates and commits

- First time: *tla import*
- Update tree: *tla update*
User's local changes always overwrite the update
- Create log file: *vi `tla make-log`*
- Commit changes: *tla commit*
- Alternative to update: replay

Mirroring archives

- *tla register-archive* <archive name>-**SOURCE** \
<remote location>
- *tla make-archive --mirror-from* \
<archive name>-**SOURCE** <local location>
- *tla archive-mirror* <archive name> to synchronize
- Note: commits to mirrors are not allowed
- Mirroring a local archive remotely:
tla make-archive --mirror <archive name> \
<remote location>

Using external archives

- Example: tla-bash-complete
- *tla register-archive sb@rinspin.com--2004 *
<http://mirrors.sourcecontrol.net/sb@rinspin.com--2004>
- *tla get -A sb@rinspin.com--2004 *
tla-bash-complete--sb--1.0 tla-bash-complete
⇒ error
- Recursive references are possible

Using external archives

- *tla register-archive *
*rwa@alumni.princeton.edu--home-2003b *
http://mirrors.sourcecontrol.net/rwa@alumni.princeton.
edu--home-2003b
- *tla get -A sb@rinspin.com--2004 tla-bash-complete--*
sb--1.0 tla-bash-complete

« Arching » ABINIT

Exercise