

Merging branches and solving conflicts

Merge check-list:

1. Commit.
2. `bzr merge ...`
3. Solve conflicts (if any).
4. Write merge changelog.
5. Commit.

IMPORTANT

ALWAYS commit
just before *and* after merging!

Conflict check-list:

1. File `myfile` has a conflict
⇒ `myfile.BASE`: before divergence
⇒ `myfile.THIS`: local version
⇒ `myfile.OTHER`: from other tree
2. `kdiff3 myfile.BASE myfile.THIS`
↔ `myfile.OTHER` # One line only
3. Save result as `myfile`.
4. `bzr resolve myfile`
→ removes files created at step 1!

IMPORTANT

If *myfile* does not exist when typing
`bzr resolve`, it will automatically
be marked as *removed* by `bzr`.

Useful addresses

Abinit Forge

`bzr+ssh://archives.abinit.org/abinit/
↔ <developer>/<branch>/`
*All of the URL should be typed at once (one line only, no
space).*

Abinit Website - Developer's Corner

<http://www.abinit.org/developers/>
Reference information for developers.

Abinit Forums

<http://forum.abinit.org/>
*All new committers have to ask to be added to the
"Committers" group.*

Bazaar Website

<http://bazaar-vcs.org/>
Home page of the Bazaar Version Control System.

Mailing lists

Announcements

announce@abinit.org
*Low-traffic list for important announcements about
Abinit.*

Committer List

gnuarch@abinit.org
*For developers having an access to the Abinit Forge
(restricted).*

Need help?

To get help on all Bazaar commands, just remember
`bzr help`.

ABINIT FORGE



Quick reference for committers

Read this first

The Abinit website contains a section dedicated to Bazaar. Please read the documents located therein carefully (URL: one line, no space).

```
http://www.abinit.org/developers/  
→ dev-environment/bazaar/
```

Structure of the Abinit Forge

Full URL of a branch (one line, no space):

```
bzr+ssh://forge.abinit.org/abinit/  
→ <repository>/<branch>/
```

Repository name: *trunk*, or committer login.

Branch names:

- x.y.z-private
- x.y.z-public
- x.y.z-training

x: major version number (era)

y: minor version number (development cycle)

z: micro version number (patch level)

The *private* branch is where all developments go.

The *public* branch contains what is merged into *trunk*.

The *training* branch is there for learning, and is created for beginners and tutors only.

```
BEFORE ACCESSING THE FORGE  
export EDITOR="/path/to/my/editor" (BASH)  
in $HOME/bashrc  
or  
setenv EDITOR "/path/to/my/editor" (CSH)  
in $HOME/.cshrc
```

Useful commands

Result	bzr ...
help	Get help
info	Get source tree info
status	Get status report

Working with branches (recommended)

A *branch* is an autonomous copy of the source code. All history is kept locally, except when explicitly *pushed* by the committer.

Action	Command
Get	bzr branch url [local_dir]
Sync	bzr pull [url]
Publish	bzr push [url]
Off-line	bzr commit

Typical use: decentralized development.

If the working tree is empty, run bzr checkout from within. If it is inconsistent or outdated, run bzr update from within.

Public branches can and should only be synchronized with private ones by using the `~abinit/exttras/bzr_helpers/bzr-publish` script from already-pushed private branches.

Working with checkouts

A *checkout* is a branch, the history of which is kept on the Forge. It can however be used off-line temporarily.

Action	Command
Get	bzr checkout url [local_dir]
Sync	bzr update
Publish	bzr commit
Off-line	bzr commit --local

Typical use: fast network connections.

Writing changelogs

Template:

One short summary line (no trailing dot)

* dir1/sub1/file1: Some changes. Make

full sentences.

* dir2/sub2/file2, dir3/sub3/file3: Some

other changes.

* dir4/sub4/file4: Related changes (no

blank line before).

* Additional notes and issues.

GNU changelog format: please make sure that all lines are > 80 characters and start at the first column. For a complete reference (one-line URL, no space):

```
http://www.gnu.org/prep/standards/  
→ html_node/Change-Logs.html
```

Committing

Check-list:

1. bzr status

2. Process files marked as unknown.

Go back to 1 until no file is marked

as unknown.

3. Write changelog (see above).

4. bzr commit --strict [-F logfile]

Use -F option if your changelog is

in a file.

5. Push at least once a day.

NOTE

Pushing to a public branch triggers heavy processes on various computers. Please use your private branch as much as possible.