

Automatically version controlled directory with bazaar on linux

Dropbox-like file versioning functionality with bazaar VCS and inotifywait.

I have some folders I edit from various places and modes: ssh, remote connection, etc. This is an important folder, so I decided to make it versioned somehow following all the modifications made to all files.

After spending hours of reading about version control, autosync, push, pull, etc, it became clear, that there are no software solutions for this right now but the filesystems themselves like btrfs or zfs, but I did not want to convert my ext4.

Since I'm quite stubborn, I still wanted to achieve this somehow. The solution: I have a folder, which contains a bazaar repository. This repository is checked out locally - this is the one to be reached with ssh, ftp, DAV, etc. I fire inotifywait monitors for various events with various actions to commit the changes - and that's all.

I'm still testing the effectiveness, but it looks good. And of course: this tutorial comes without any responsibility or expectation.

On Ubuntu, you need to install bazaar and inotifytools.

```
sudo apt-get install inotify-tools bazaar bzrtools
```

bash

Now create a new repository.

```
# change directory
cd path/to/repository/directory/root
# create repository main dir
mkdir www-repository;
# init repository
bazaar init-repo www-repository;
# change into repository directory
```

bash

```

cd www-repository;
# create main branch directory
mkdir trunk;
# init main branch
bzip init trunk;
# change into main branch directory
cd trunk;
# copy file you want at checkout
cp -a /path/to/the/files/you/want/at/first/checkout ./;
# add copied file
bzip add *;
# commit changes
bzip commit -m "repository initialisation";
# change to www parent directory
cd path/to/www/parent;
# create www dir & checkout repository trunk in it
# lightweight means it's not a full repo, just the files, it
requires the trunk to be
# always accessible, but since its on the same server, it's OK
bzip checkout --lightweight path/to/repository/directory/root/
www-repository/trunk/ ./www;

```

Start monitoring for changes recursively on the checkout repository.

```

#!/bin/bash

```

bash

```

# go to checkout repository folder you want to watch
cd path/to/www/parent/www
# start watching the directory for changes recusively,
ignoring .bzip dir
# comment is made out of dir/filename
# no output is shown from this, but wrinting a filename
instead of /dev/null would
# allow logging
inotifywait --exclude .bzip -r -q -m -e CLOSE_WRITE --
format="bzip commit -m 'autocommit for %w/%f'" ./ | sh 2>/dev/
null 1>&2 &
# disown the pid, so the inotify thread will get free from
parent process
# and will not be terminated with it
PID=`ps aux | grep inotify | grep CLOSE_WRITE | grep -v grep |

```

```
awk '{print $2}'`
disown $PID

# this is for new files, not modifications, optional
inotifywait --exclude .bzz -r -q -m -e CREATE --format="bzz
add *; bzz commit -m 'new file added %w/%f'" ./ | sh 2>/dev/
null 1>&2 &
PID=`ps aux | grep inotify | grep CREATE | grep -v grep | awk
'{print $2}'`
disown $PID

exit 0;
```

And if you want to create a public resource, these lines will start a bazaar server for the repository:

```
#!/bin/bash

# start bzz server
bzz serve --port=localhost:8888 --directory=/path/to/
repository/directory/root 1>/dev/null 2>&1 &
PID=`ps aux | grep bzz | grep serve | grep -v grep | awk
'{print $2}'`
disown $PID

exit 0;
```

bash

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