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Universität Paderborn Softwaretechnik Prof. Dr. Wilhelm Schäfer

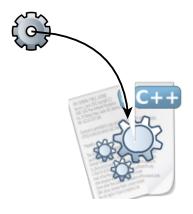
An introduction to git



Christian Stritzke



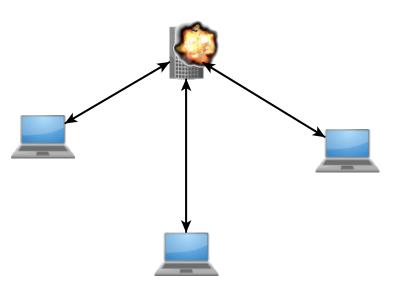
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Why git?



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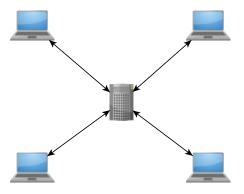


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Architectures with git repositories



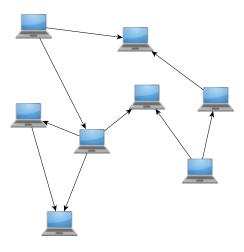
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Architectures with git repositories



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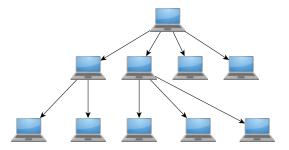


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Architectures with git repositories



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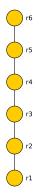
SVN history vs. git history



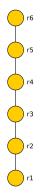
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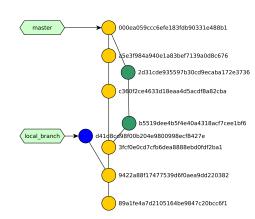
SVN log



SVN log



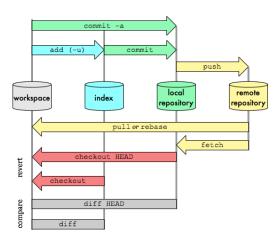
Git log



Committing and updating in with git



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Initialize empty git repository:

git init

Clone a git repository:

```
git clone https://github.com/piotr152/git-
   tutorial.git
```

Set up name and E-Mail:

```
git config --global user.name "Your Name Comes
  ..Here"
git config --global user.email you@yourdomain.
   example.com
```

Commit



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Add files to index:

git add <list of files>

Check your index:

git status

Perform the commit:

git commit -m "commit $_{\sqcup}$ message" [--amend]

Check the history:

gitk [--all]

Branching



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Create a branch:

git branch <branch_name>

Checkout a branch:

git checkout <branch_name>

Merge a branch:

git merge <branch_name>

Using remotes



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Update your repository:

git fetch origin <branch_name>

Update your working copy:

git merge origin/<branch_name>

Do both with one command:

git pull

I screwed up! What now?



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Revert a single file:

git checkout <filename>

Revert your complete workspace:

git reset --hard HEAD

Revert to a previous commit:

git reset --hard HEAD~<commits_from_here>

Get rid of untracked files:

git clean -df

Pull a git repo from an SVN repi:

git svn clone

Update your local copy:

git svn rebase

Commit your local commits to the SVN server:

git svn dcommit

Further Reading



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Linus Torvalds on git: http://youtu.be/4XpnKHJAok8

Documentation, Tutorials, (incomplete) List of GUIs: git-scm.com

Tortoise git: http://code.google.com/p/tortoisegit

SmartGit: http://www.syntevo.com/smartgit

Interactive tutorial: http://try.github.com