

Introduction to Git

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- Introduction IMC and Scientific Development Team
- Version Control – What is it and why do I need it?
- Why Git? – Git compared to other version control solutions
- Working alone & together
- Cloud based Git solutions
- Hands-On
 - <https://jjengelberts.github.io/eur-git-101>
- Questions & Answers

- Consultancy
- Functional Application Management
- Learning & Innovation Team
- IT Development
 - Web Development
 - Scientific Development

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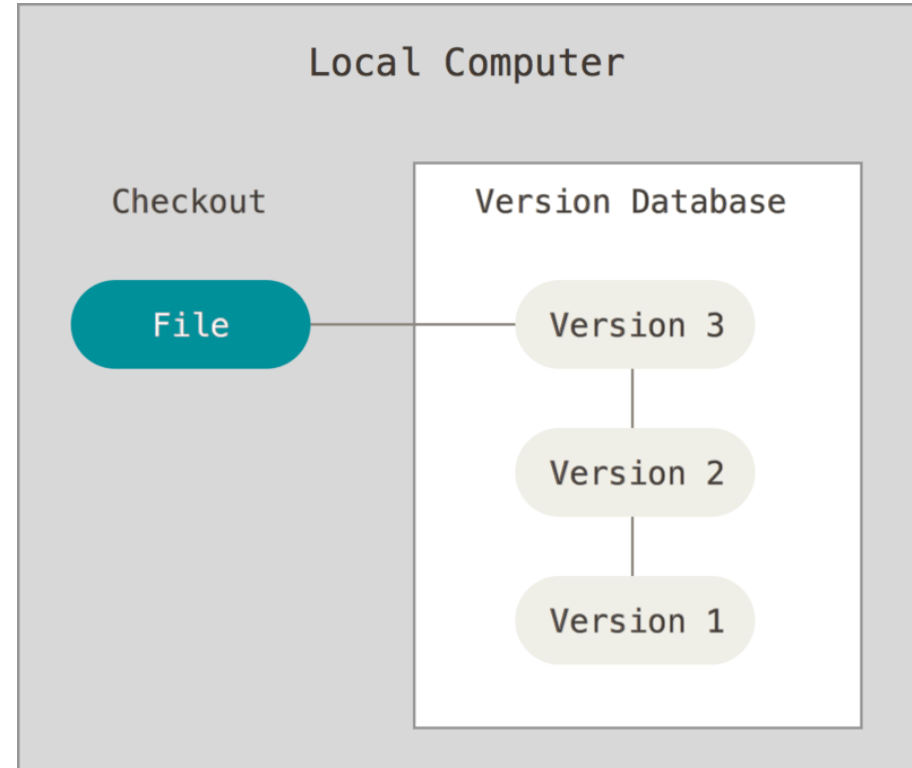
- What is version control?

“Version control is a system that records changes to a file or set of files over time so that you can recall specific versions later.” [Pro Git, Apress, 2nd – 2014, Scott Chacon, Ben Straub]
- Who should use, or who could benefit from version control?
 - Any software developer
 - Anyone writing a bunch of articles, like a PhD thesis 😊
 - Any group of people working together with many (text) files

- Advantages
 - Differences over time can be reviewed easily
 - Changes can be unrolled
 - It enables concurrent working on the same files
 - Changes are linked to individuals
 - Logging is kept (metadata) for each change
 - Date
 - Time
 - Description

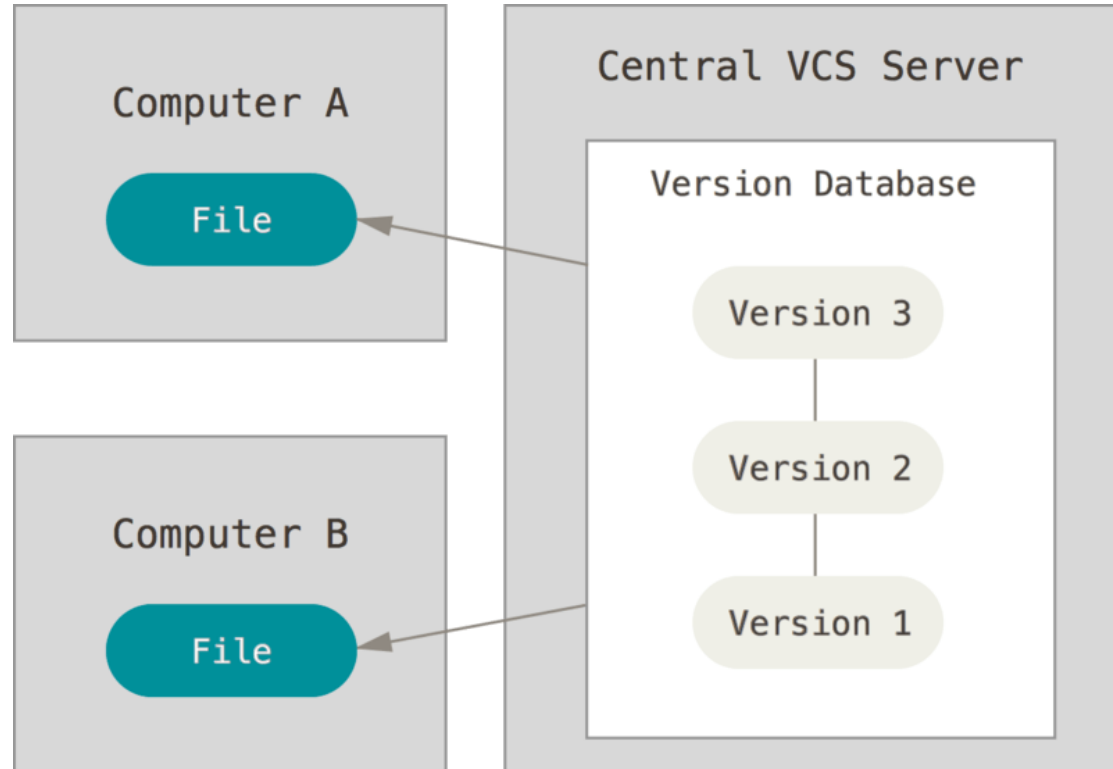
Local Version Control System

- Pro
 - Version control!
- Cons
 - Single user
 - Limited collaboration



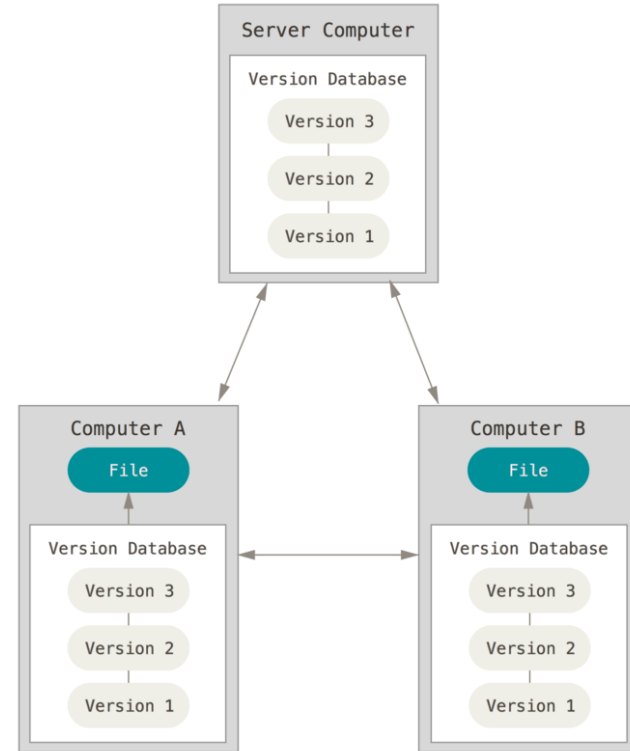
Centralized Version Control System

- Pros
 - Version control!
 - Multiple users
 - Collaboration
- Cons
 - Revisions not local
 - Merging can be challenging



Distributed Version Control System

- Pros
 - Version control!
 - Multiple users
 - Collaboration
 - Revisions are locally cloned
- Con
 - Merging complete branches can hard or even impossible



- GitHub: <http://www.github.com>
- Bitbucket: <http://www.bitbucket.com>
- GitLab: <http://www.gitlab.com>
- Coding: <http://coding.net> (Chinese only)

NB The Erasmus University has its own Bitbucket instance:

<http://stash.ict.eur.nl>

(login with your ERNA-id)



- Hands-On guide can be found here:
→ <https://jjengelberts.github.io/eur-git-101>
- It covers:
 - Installation of Git 2.18.0 on @wEURk desktop/laptop
 - Cloning an existing repository (from Github)
 - Opening an existing local repository
 - Creating a new local repository
 - Using Tags and Branches

