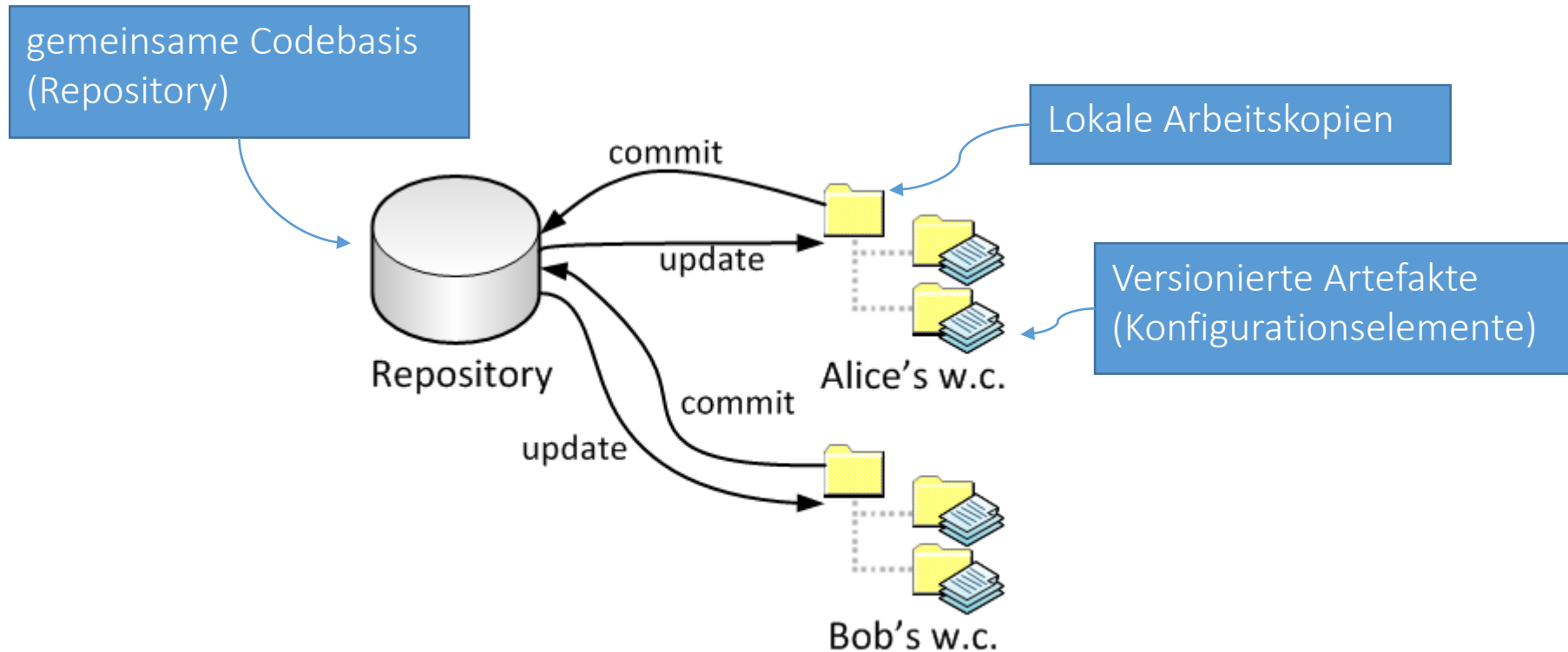


Tools des SW-Engineerings

GIT

Prof. Dr. Mark Hastenteufel

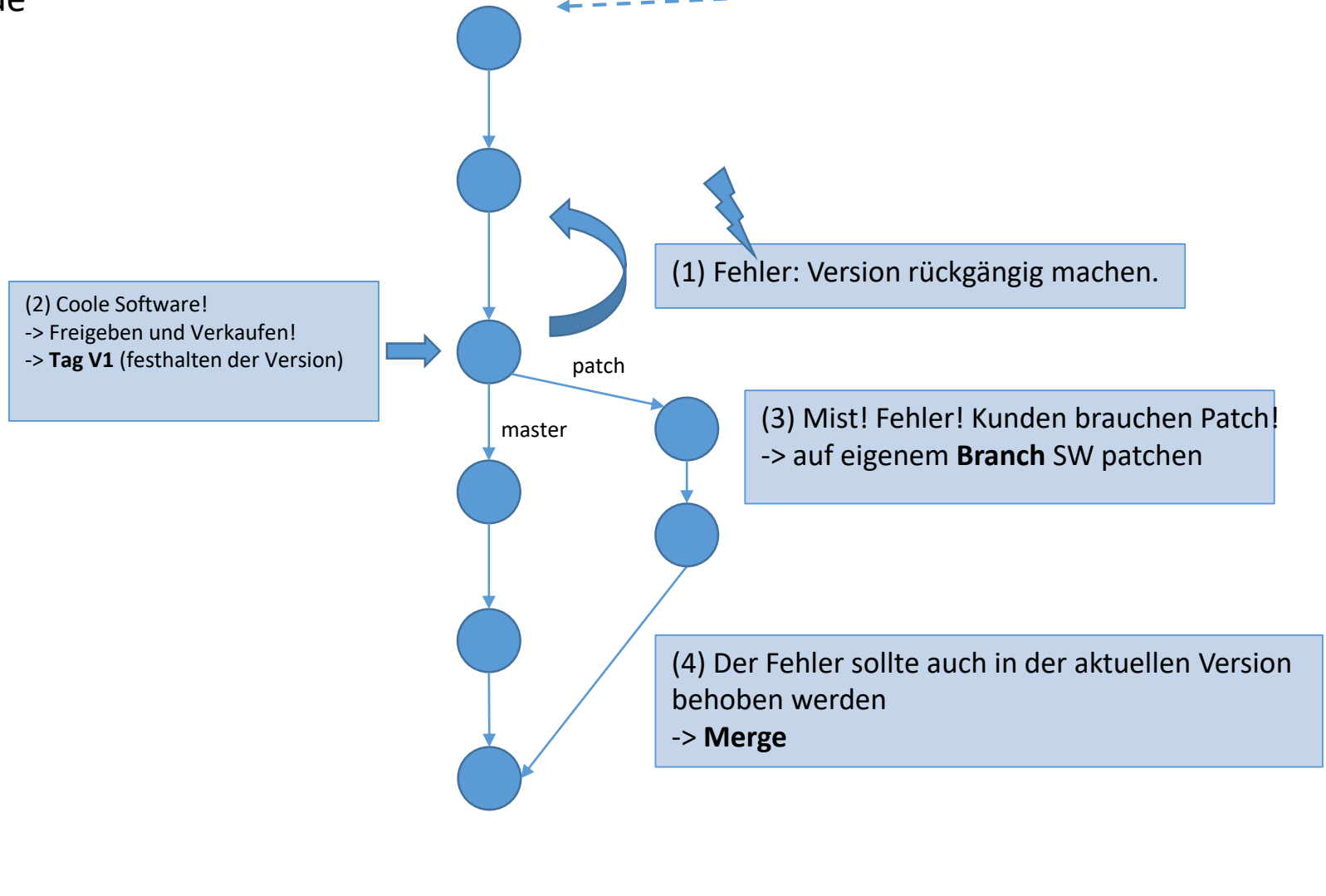
SW-Konfigurationsmanagement (1)



SW-Konfigurationsmanagement (2)

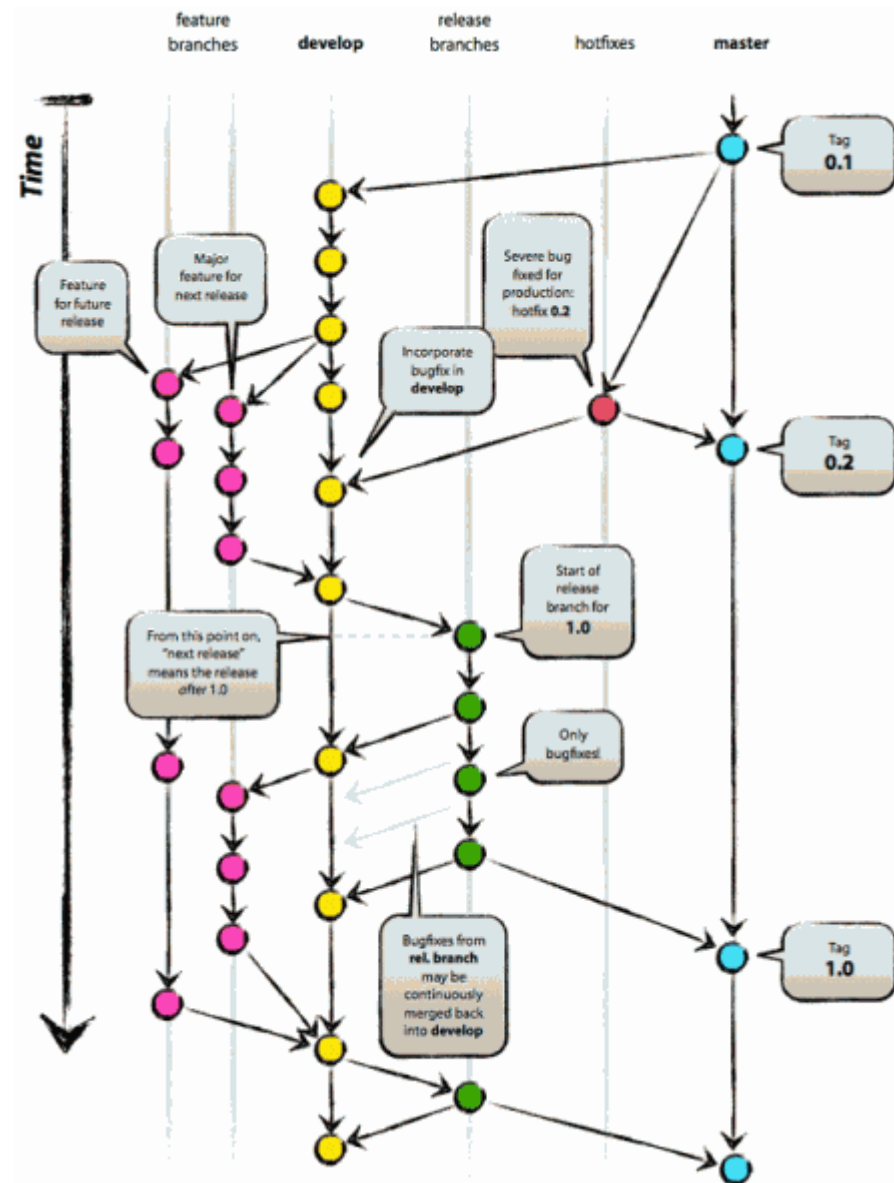
Code

Versionen



SW-Konfigurationsmanagement (3)

gleichzeitige Entwicklung an mehreren Entwicklungsständen
z.B. Neuentwicklung und Wartung

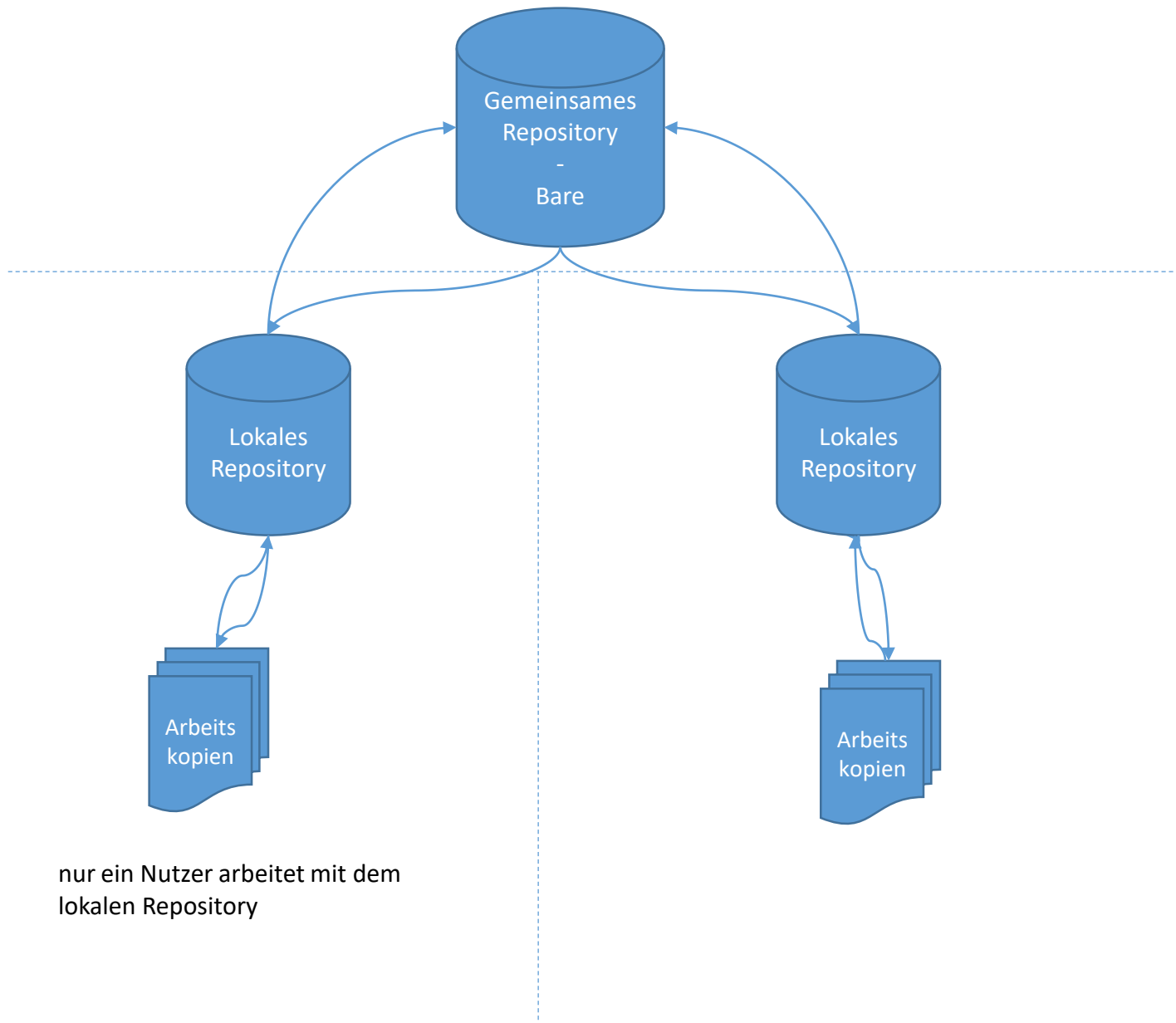


Major types of VCS

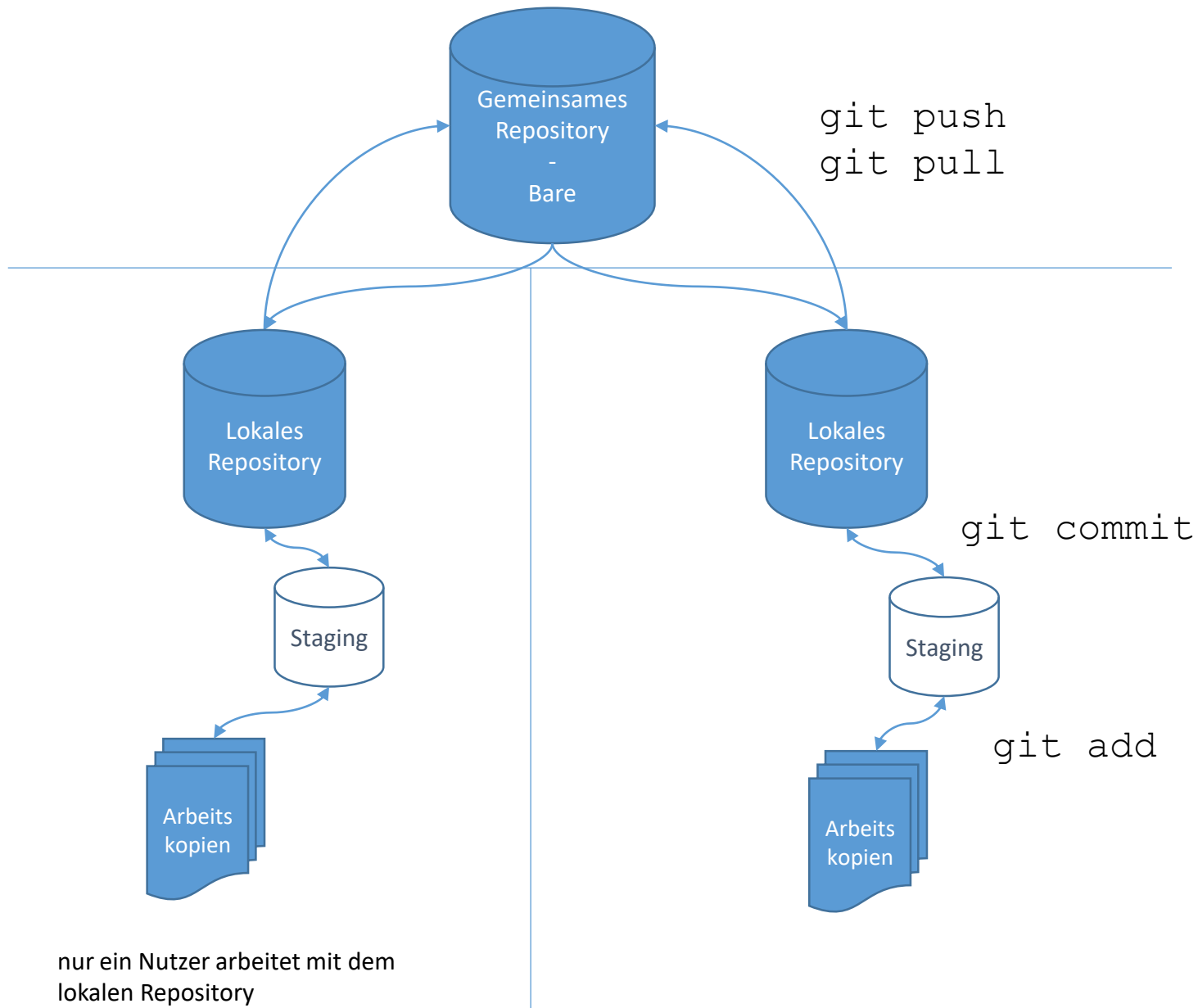
- Local VCS
 - Tracks changes only on one host, perhaps only in one file
 - Example: Microsoft Word
- Central repository
 - Develop locally
 - Only one version on the client
 - All versions on the server
 - Example: CVS, Subversion (SVN)
- Distributed VCS
 - Complete history on every client
 - One or more bare repositories
 - Example: GIT

- Dezentrale Versionskontrolle
- von Linus Torvald
- Download: <https://git-scm.com>
- Kommandozeile und Frontend Tools (<https://git-scm.com/downloads/guis>)

Entwicklung im Team, Besonderheit von GIT: Dezentral

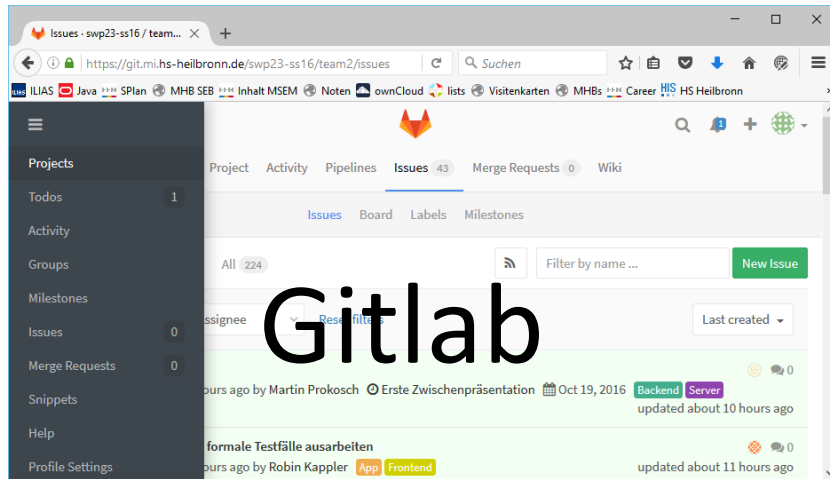


Entwicklung im Team, Besonderheit von GIT: Dezentral

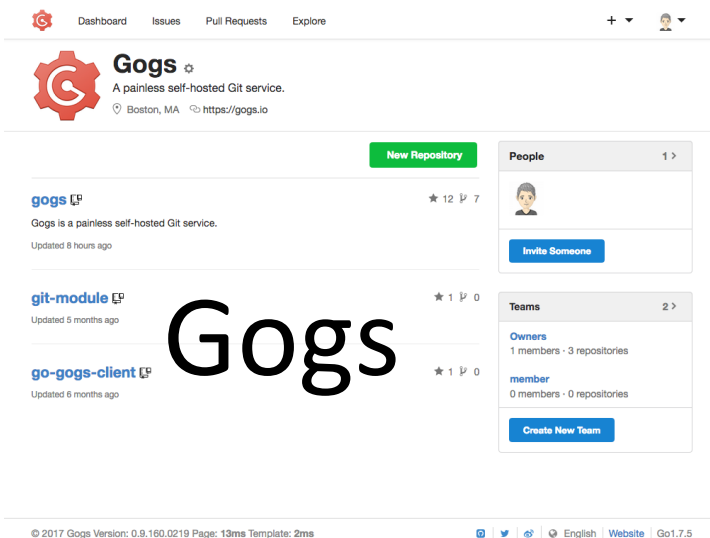


Hosting des gemeinsamen (bare) repository

eigenes Hosting (innerhalb Organisation)



<https://scm.inftech.hs-mannheim.de/gogs>

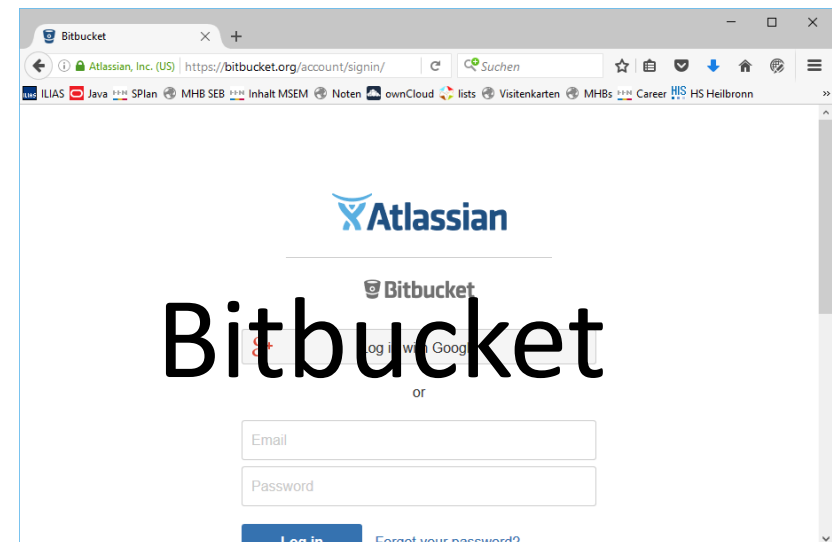


Öffentliches (public) Hosting

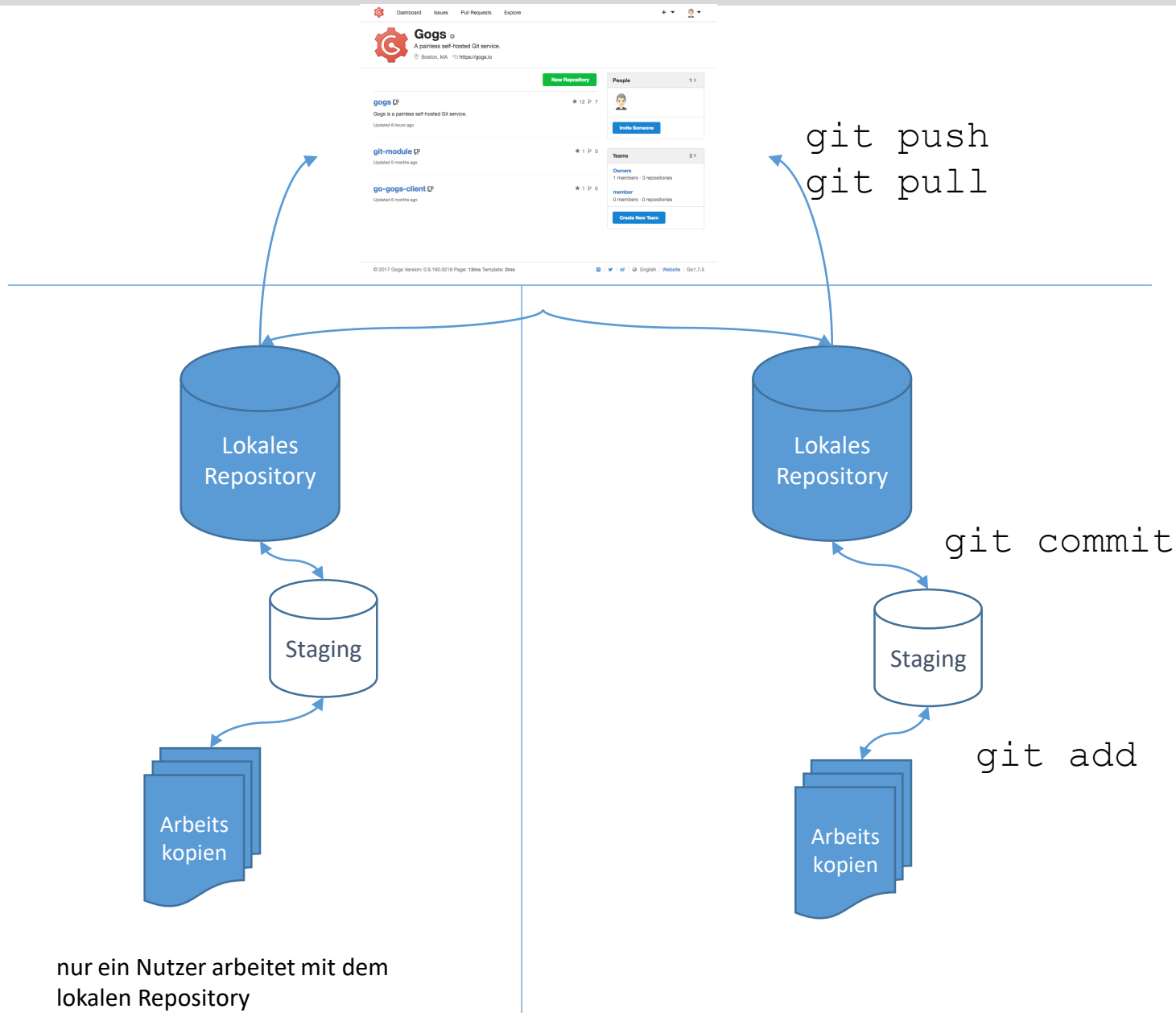
<https://github.com/>



<https://bitbucket.org/>



Gogs als gemeinsames Repository (bare)



- (Installieren Sie GIT: <https://git-scm.com>)
- Wählen Sie ein GIT Tutorial ihrer Wahl:
 - GIT Einführungsvideos: <https://git-scm.com/videos>
 - GIT Official Tutorial: <https://git-scm.com/docs/gittutorial>
- Datacamp:
<https://www.datacamp.com/courses/introduction-to-git-for-data-science>



Course Description

Version control is one of the power tools of programming. It allows you to keep track of what you did when, undo any changes you have decided you don't want, and collaborate at scale with other people. This course will introduce you to Git, a modern version control tool that is very popular with data scientists and software developers alike, and show you how it can help you get more done in less time and with less pain.

1 Basic workflow

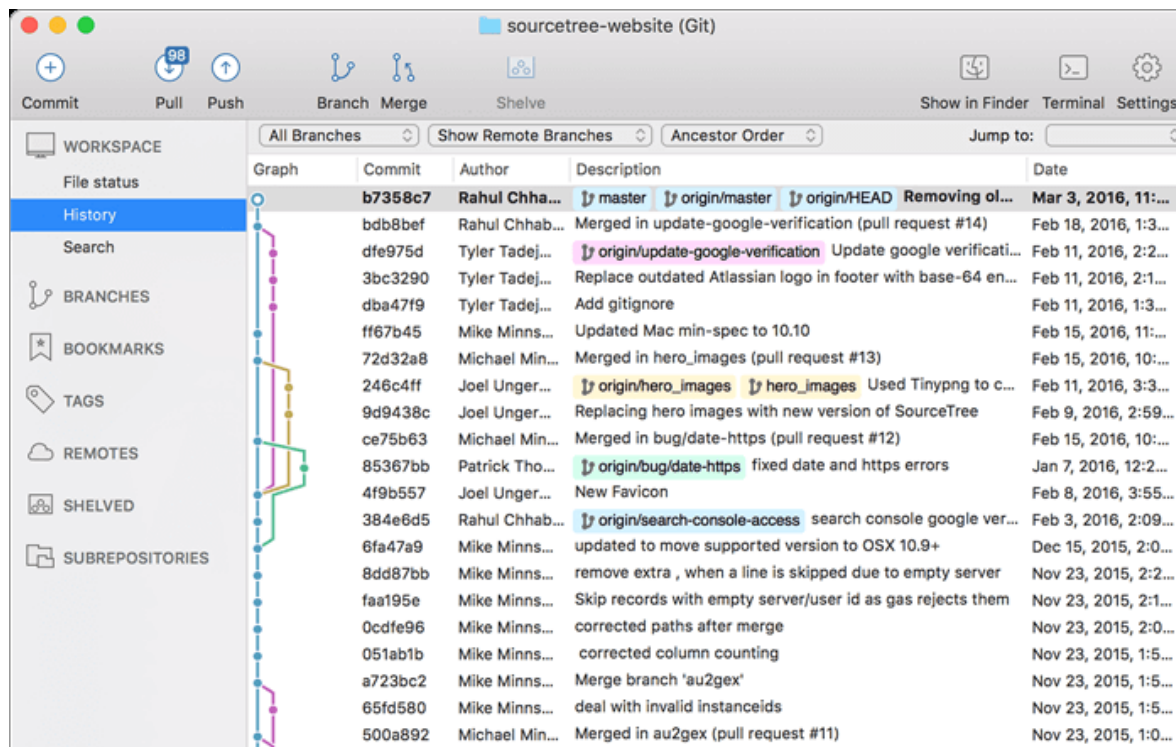
0%

This chapter explains what version control is and why you should use it, and introduces the most common steps in a common Git workflow.

Weiterführendes zu GIT

- GIT Reference: <http://gitref.org/>
- GIT eBook: <https://git-scm.com/book/en/v2>
- Cheat sheets (Zusammenstellung wichtiger Befehle) in ILIAS
- Weitere Quellen: <https://git-scm.com/doc/ext>

- <https://git-scm.com/docs/gittutorial>
- <https://git-scm.com/docs/giteveryday>
- <https://www.sourcetreeapp.com/>



Arbeiten mit Branches

```
git checkout -b Branch_Mark
```

Notepad file.txt

```
git add file.txt
```

```
git commit
```

```
git push origin Branch_Mark
```

-> jetzt nachschauen in Gogs

Arbeiten mit Branches -> merges

Lokales mergen:

```
Git checkout master
```

```
Git merge Branch_Mark
```

Merge auf Repository (Gogs):

-> Pull Request