

„Should I stay or should I Git?“

Git für Nutzer der klassischen TFVC-Versionskontrolle

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Uwes morgendlicher Psychotest:

**Welcher
Sourcecode-Kontrolltyp
sind Sie?**

KONTROLLE



BASTA!
NET, WINDOWS, JAVASCRIPT

Kreativität

Ordnung

Freiheit



BASTA!
NET, WINDOWS, JAVASCRIPT

Git 69%

CVS 4%

Dateisystem 9%

Mercurial 8%

Subversion 36%

Team Foundation Server 12%



Von Larry Ewing, Simon Budig, Garrett LeSage - <http://www.home.unix-ag.org/simon/penguin/>,
garrett/Tux on GitHub, CC0, <https://commons.wikimedia.org/w/index.php?curid=753970>



BASTA!
.NET, WINDOWS, JAVASCRIPT



git

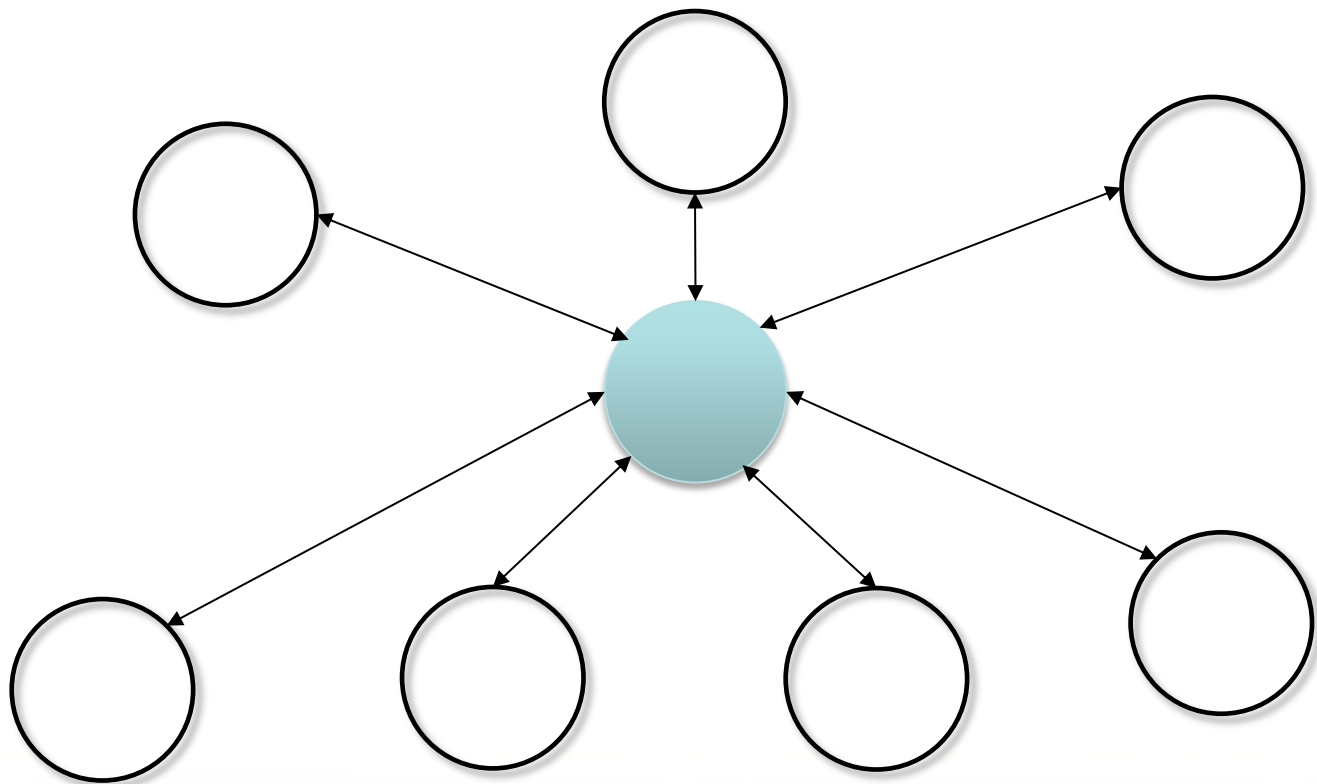
vs.

 Visual Studio

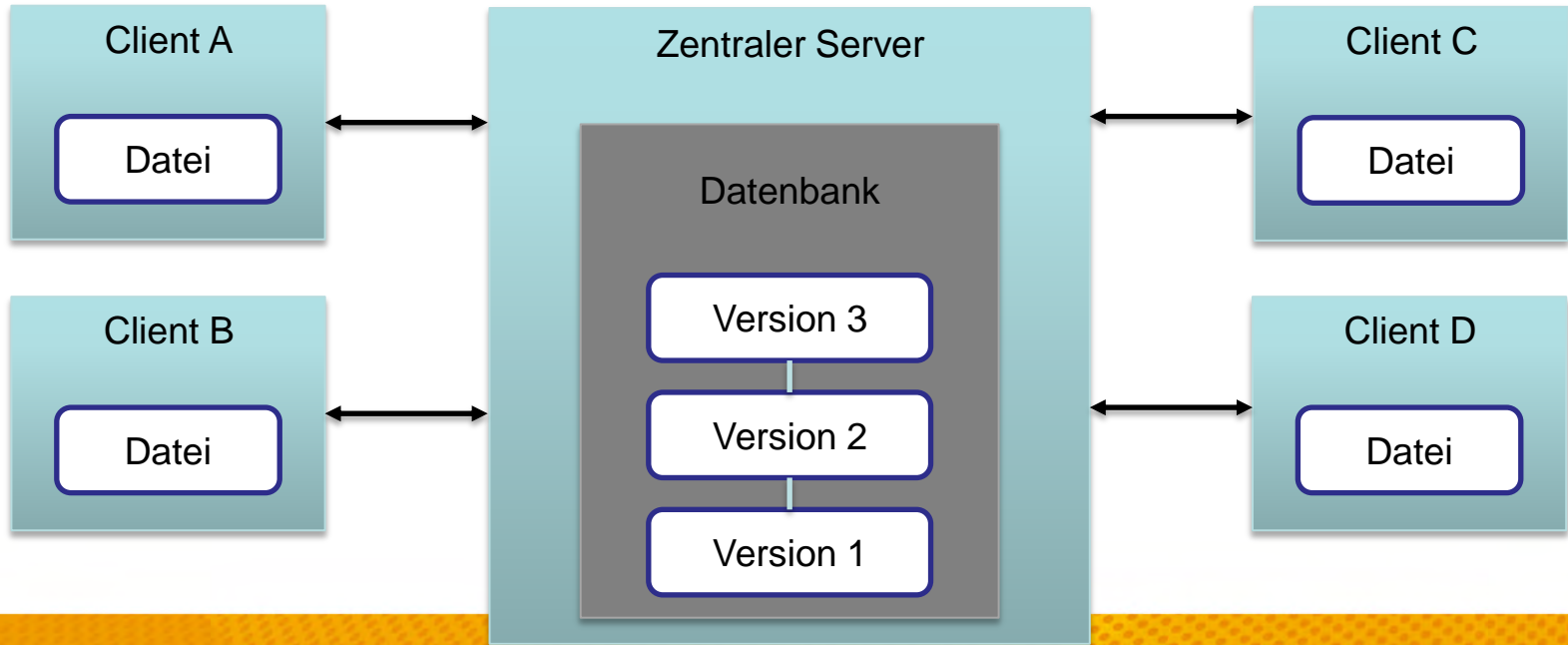
Team Foundation Server

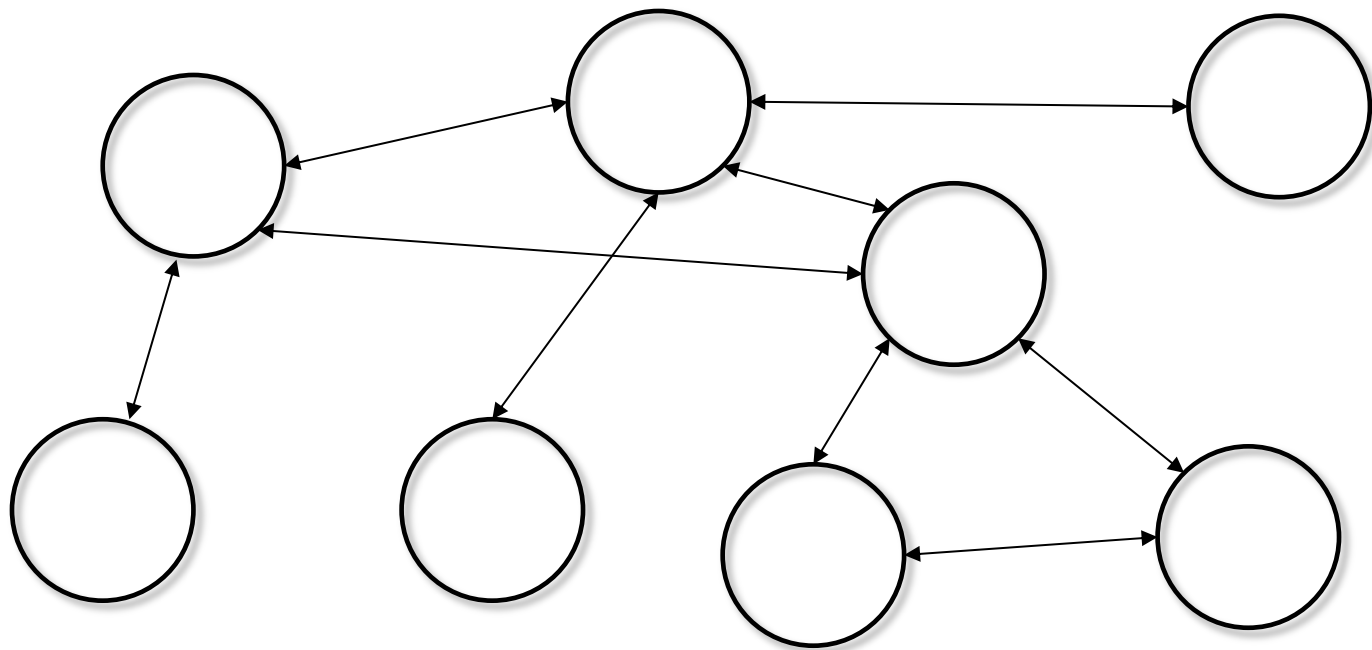


BASTA!
.NET, WINDOWS, JAVASCRIPT

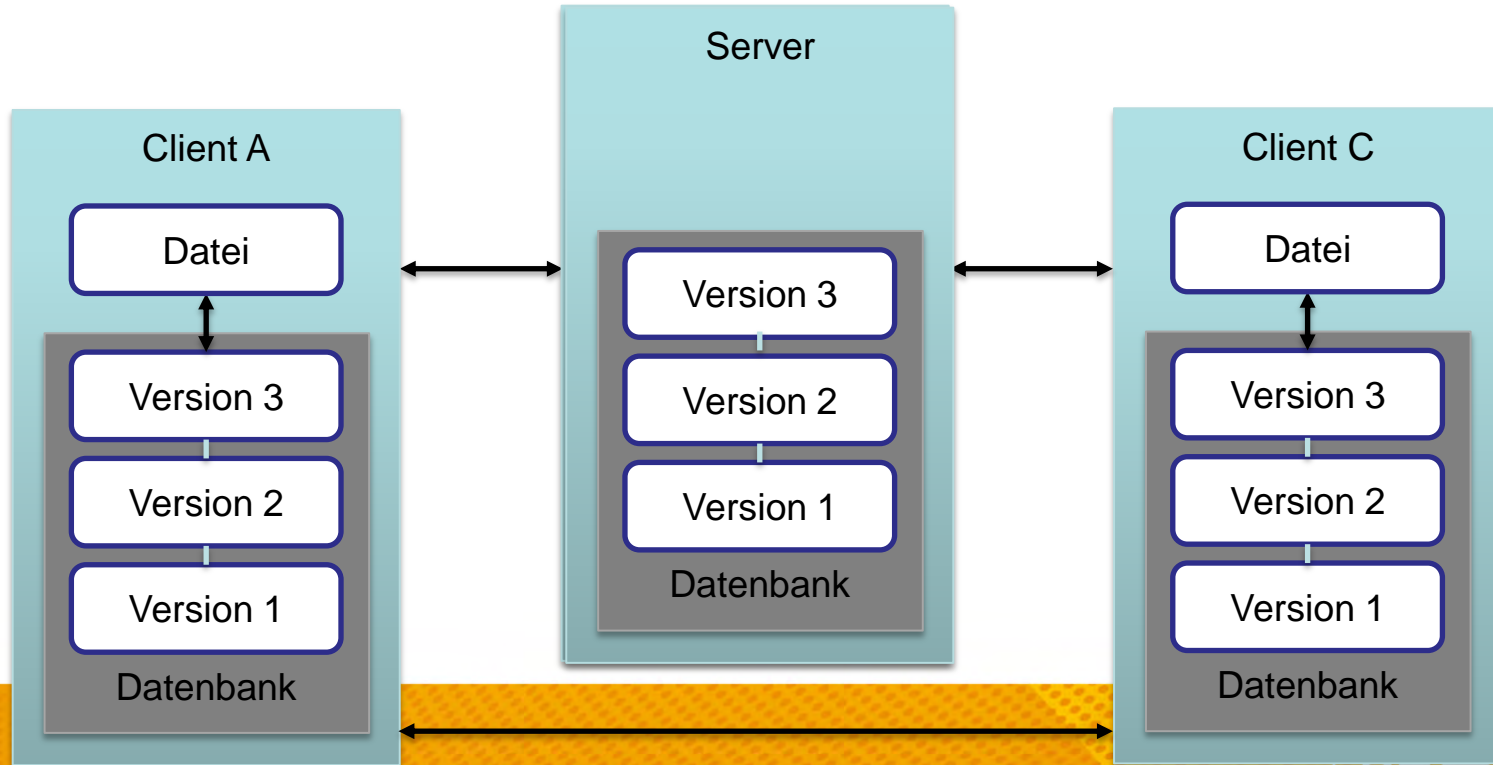


Zentrale Versionskontrolle (CVS)

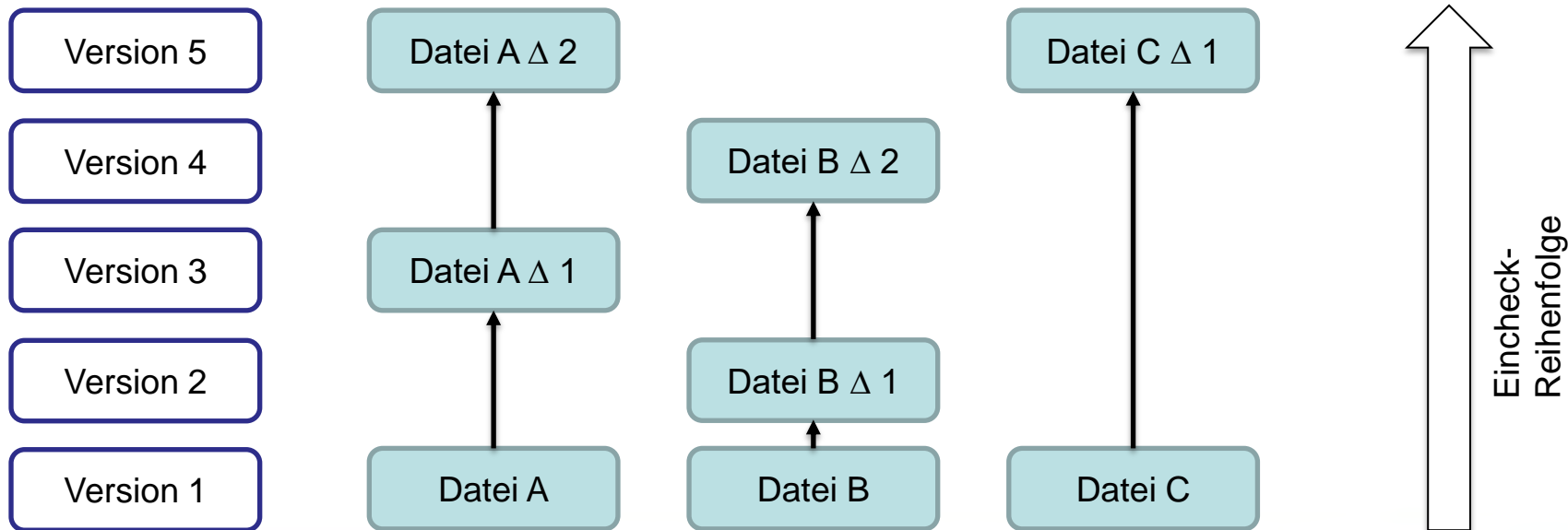




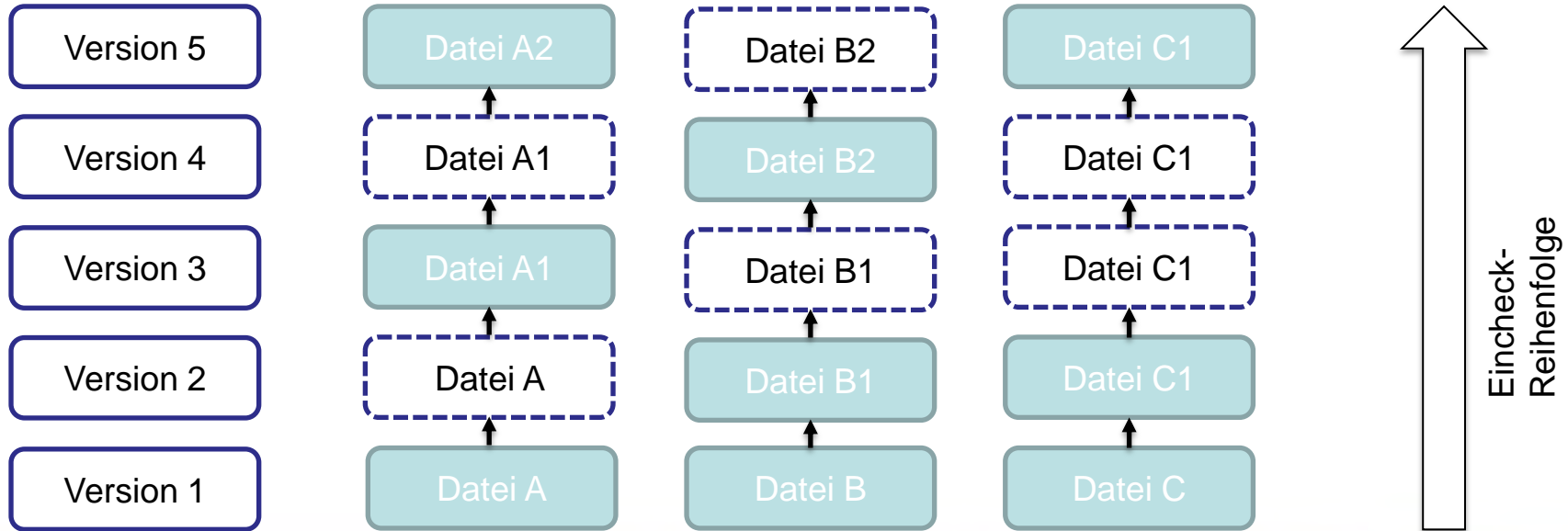
Verteilte Versionskontrolle (DVS)



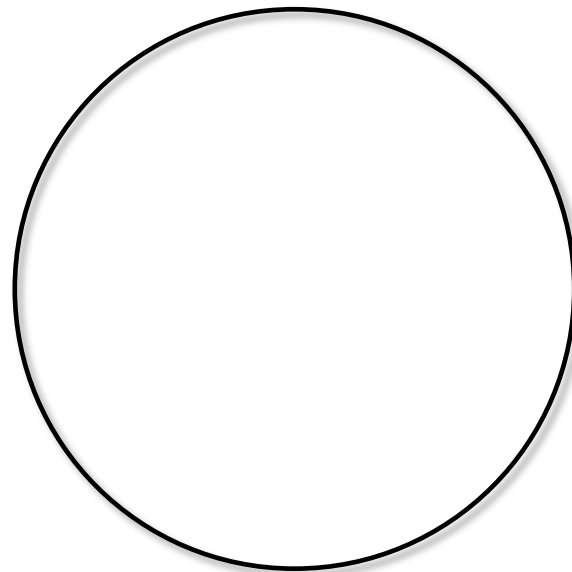
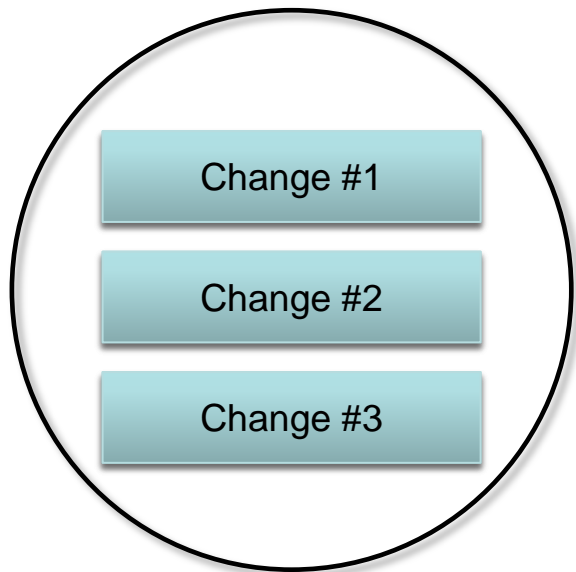
CVS: Fileänderungen als Deltas



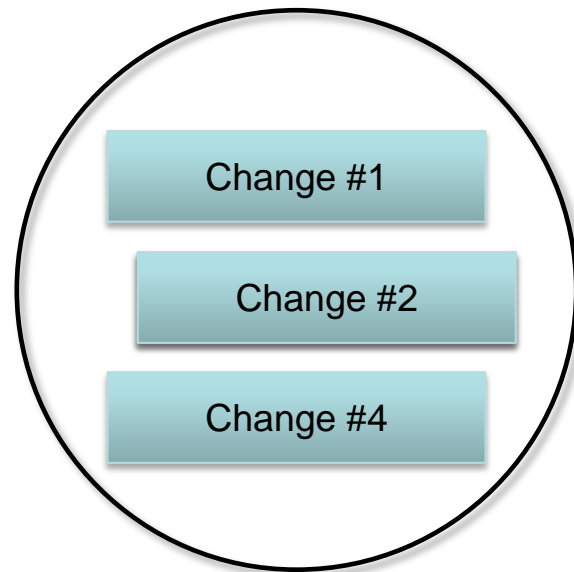
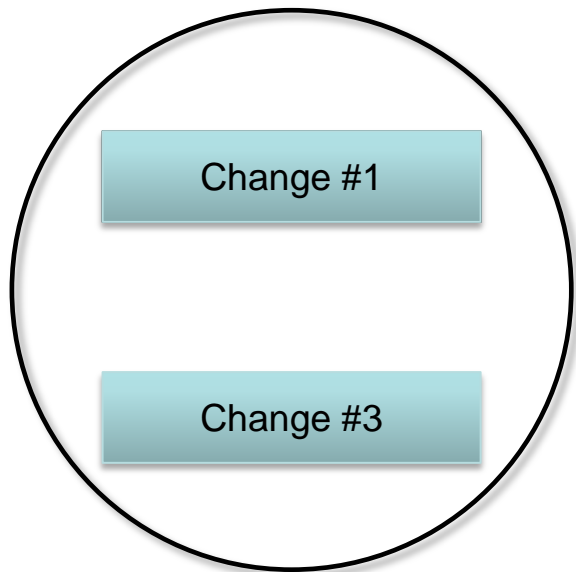
DVS: Fileänderungen als Snapshots



Cloning



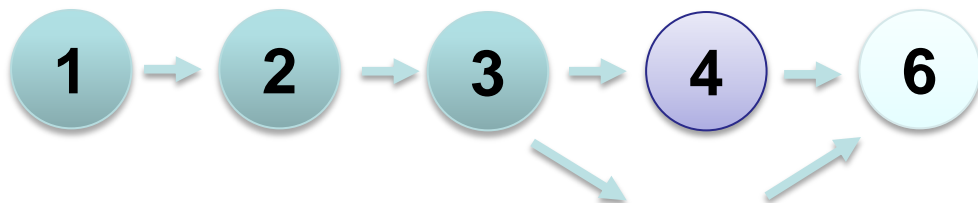
Push



Pull

Versionsgeschichte

Mein Repository



Bertas
Repository

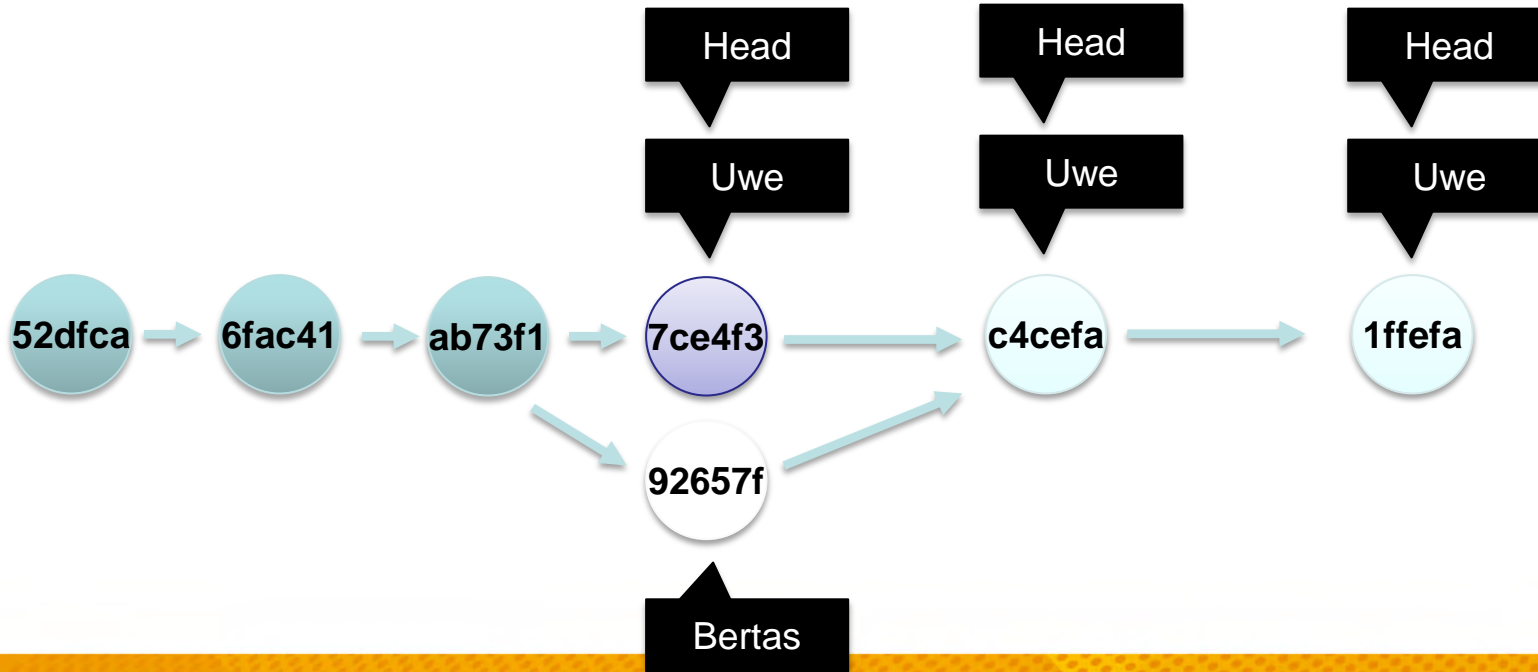


Eindeutige Commits IDs



- Es gibt keinen zentralen Server, der „Primary Keys“ verteilen kann (vgl. TFVC Changeset-Nummern)
- ID = Hashwert (SHA1) der Inhalte eines Commits

Zugriff auf Commits über Zeiger



Demo



... unter Windows
... mit TFS 2017

Versionsgeschichte umschreiben

Change #1

„Datei angelegt“

HalloWelt.txt

Hallo Wält

Change #2

„Rechtschreibung
korrigiert“

HalloWelt.txt

Hallo Welt

Change #3

„Komma hinzugefügt“

HalloWelt.txt

Hallo, Welt

Change #3

„Ausrufezeichen
hinzugefügt“

HalloWelt.txt

Hallo, Welt!



git

gegen



Visual Studio

Team Foundation Server



Checkout Locks



Offline arbeiten



Branching



Versionsgeschichte



Performance



BASTA!
.NET, WINDOWS, JAVASCRIPT

Performance?

7 GB git Repository

95 min

Initialer Commit

22 min

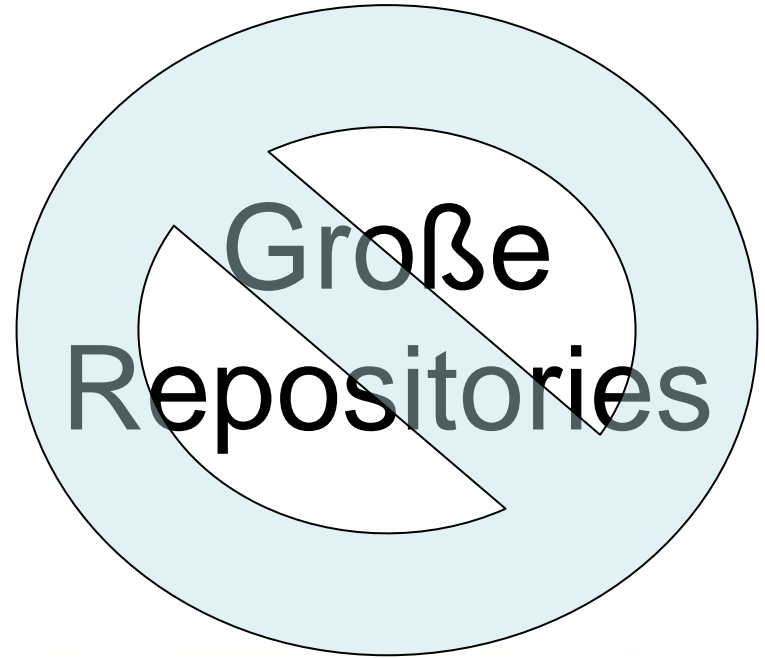
Voller Clone

15 min

Wenige Files auschecken



git



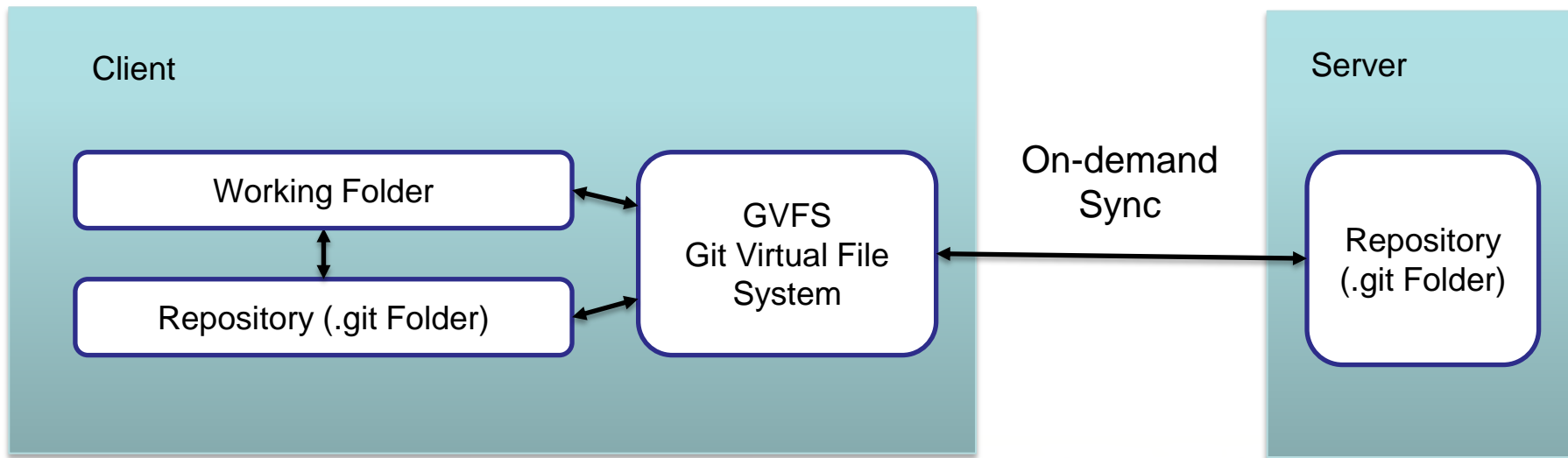
*„git can smell
your fear“*

Microsoft goes Git

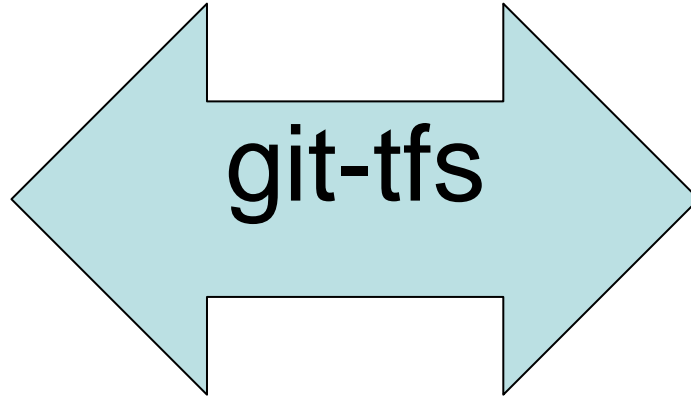
„[...] Source control systems generate intense loyalty – more so than just about any other developer tool. So the argument between TFVC, Source Depot, Git, Mercurial, and more was ferocious and, quite honestly, we made a decision without ever getting consensus – it just wasn't going to happen. **We chose to standardize on Git for many reasons.** Over time, that decision has gotten more and more adherents.”

Brian Harry, 3.2.2017

Git Virtual File System



Migration zu git



<http://git-tfs.com>



Fazit

- Git ist anders!
Steile Lernkurve, neue Konzepte
- Viele Vorteile: Flexibilität, Offlinefähigkeit, Performance bei kleinen Repos, Teamwork
- Potentieller Showstopper: Performance bei großen Repos ... noch! Abwarten...

Ressourcen

- **Git Homepage und Doku**

<http://git-scm.com>

- **Enormous git Repos**

<https://samthursfield.wordpress.com/2016/03/16/enourmous-git-repositories/>

- **Migrating a TFVC-based Team Project to git**

<https://www.microsoft.com/en-gb/developers/articles/week02mar2014/migrating-a-tfs-tfvc-based-team-project-to-a-git-team-project-retaining-as-much-source-and-work-item-history-as-possible/>

Ressourcen

- **Handling big git Repos**

<https://blogs.atlassian.com/2014/05/handle-big-repositories-git/>