



Berner Fachhochschule  
Haute école spécialisée bernoise  
Bern University of Applied Sciences

# Git

Linux User Group Meeting #4

Thursday, 23th October 2014 17:00 - 18:00

BFH - Room HG 408 (Quellgasse, Biel)

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# Overview

▶ **Version Control**

▶ **Git Installation**

▶ **Git Configuration**

▶ **Git Basic Usage**

**Aperitif**

# Version Control System

# Version Control Systems

## **What?**

- ▶ Version or Revision Control is any kind of practice that tracks and provides control over changes.

## **Why?**

- ▶ Tracking Information: See who did what, why and when
- ▶ Handling Versions: Easy reverts, easy branching
- ▶ Exchange Content: Collaborate with others

## **How?**

- ▶ Local Version Control
- ▶ Central Version Control
- ▶ Distributed Version Control

# Git Installation

# Git Installation

## **Linux**

- ▶ `sudo apt install git`

## **Windows**

- ▶ <http://git-scm.com/download/win>

## **Mac OS X**

- ▶ <http://git-scm.com/download/mac>

## **Additional Utilities...**

- ▶ see <https://linux.bfh.ch/software/git/installation/>

# Git Configuration

# Git Configuration (1/3)

## Configuration Locations

- ▶ System: `/etc/gitconfig`  
Configuration per system, settings apply to all users and all repositories access from that system.
- ▶ Global: `~/.gitconfig` or `~/.config/git/config`  
Configuration per user, settings apply to all repositories access by that user.
- ▶ Local: `${repository}/.git/config`  
Configuration per repository, settings apply to anyone accessing that repository.
- ▶ Rule: If a configuration is made in two locations, the more specific one overwrites the less specific one.



## Git Configuration (2/3)

### **Name and Email**

- ▶ `git config --global user.name "John Doe"`
- ▶ `git config --global user.email john.doe@example.org`

### **Pull**

- ▶ `sudo git config --system pull.rebase true`

### **Colors**

- ▶ `sudo git config --system color.ui true`

### **Decorations**

- ▶ `sudo git config --system log.decorate true`

## Git Configuration (3/3)

### **Whitespace**

- ▶ `sudo git config --system core.whitespace blank-at-eol,space-before-tab,indent-with-non-tab,blank-at-eof`

### **Differences**

- ▶ `sudo git config --system diff.renames copies`

### **Push**

- ▶ `git config --global push.default matching`

### **Bash prompt and more...**

- ▶ see <https://linux.bfh.ch/software/git/configuration/>

# Git Usage

## Basic Usage (1/2)

### **Download a repository from the server to your computer**

- ▶ `git clone git@git.example.org:[...]/${repository}.git`

### **Update an existing repository with changes from the server to your computer**

- ▶ `git pull`

### **Check what has changed in the repository on your computer**

- ▶ `git status`

### **Check how it has changed in the repository on your computer**

- ▶ `git diff`

## Basic Usage (2/2)

### **Save your changes as a commit**

- ▶ `git commit -a -m "My commit message."`

### **Push your commit(s) from your computer to the server**

- ▶ `git push`

### **Show the list of your commits**

- ▶ `git log`

## Further Information

### **BFH**

- ▶ <https://linux.bfh.ch/software/git>
- ▶ <https://linux.bfh.ch/services/git>
  
- ▶ <https://linux.bfh.ch/software/openssh>
  
- ▶ ...and [bfh-linux-users@lists.bfh.ch](mailto:bfh-linux-users@lists.bfh.ch) as usual ;)

### **Manual pages**

- ▶ `man git`
  
- ▶ We can have a „Git, part 2“ meeting if desired.

Thank You for Your Attention.

♥ Source Code is freely available

```
git clone git://git.bfh.ch/git/staff/bad9/other/talks.git
```

Advertising

# **BFH Linux Desktop Presentation**

13th November 2014, 16:00-18:00

BFH – Room HG 408 (Quellgasse, Biel)