

GIT per il progetto PCTO

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GIT Distributed Revision Control

A version control system is simply software that lets you effectively manage application versions.

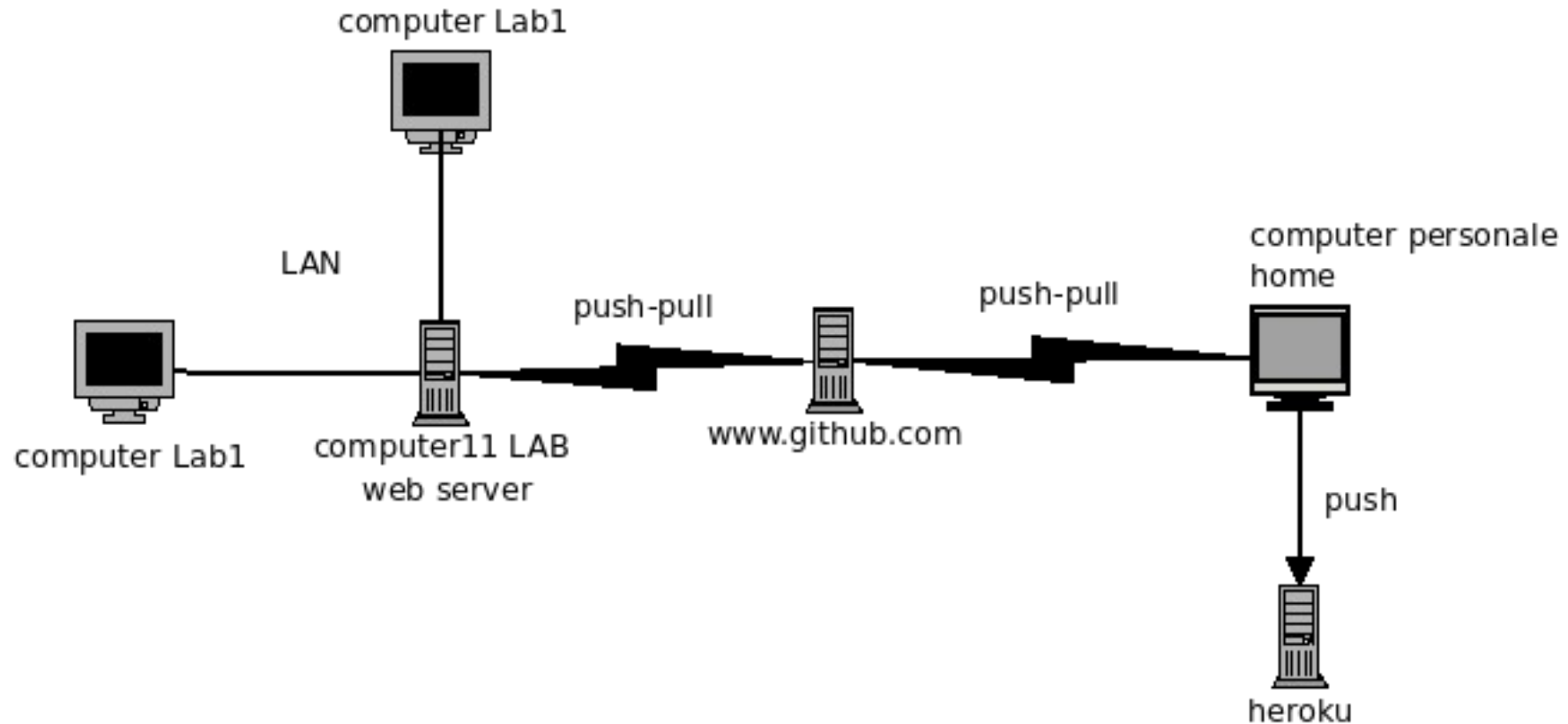
Requirements

- **Taking tracks of all changes of the codebase**
and be able to return easily to previous versions
- **Share modifications with other collaborators**
every member of the work team, could work independently on a particular task.
- **Merge all contributions at the right time**

How we'll use it

- On local computer (home or at school lab) starting with the same directory
- Sharing every change with a remote central repository:
www.github.com
- Sending our change to remote repository **PUSH** operation and receiving update bt **PULL** operation

Organizational structure



Detail Explanation

- <http://mapelli.selfip.org/pcto>
maintain the working copy of the system published on Internet. I only have credentials for connect by terminal with the server and run a **PULL** request
- A project on **github.com** maintain the complete history of development and can be share with some collaborators
They can run push or pull operation and update system from their local directory
- From **local server in lab1** (10.0.0.11 on the LAN) we can run pull o push operation target in github project
- Every work team member can use lab computer, and update via LAN (ssh connection) the lab1 server.

Using Git – installation configuration

- GIT installation on Ubuntu

```
sudo apt-get install git
```

- Configuration for the first time

```
git config --global user.name "Mario Rossi"
```

```
git config --global user.email "mario.rossi@blabla.com"
```

```
git config --global color.ui true
```

Clone command

- **git clone** <https://github.com/giuliofalco/pcto.git>

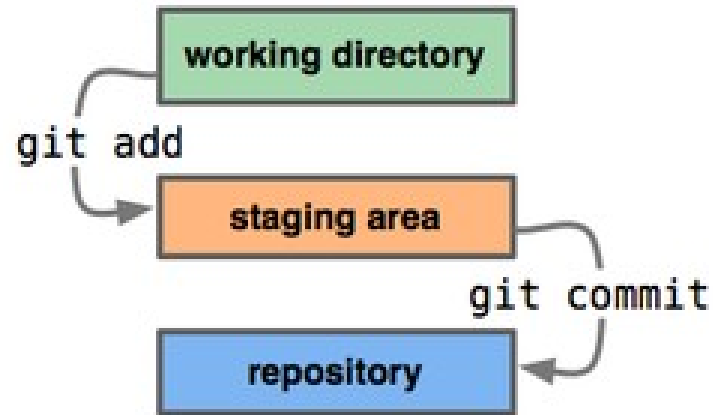
create a working copy of directory project on your own local computer.

You'll be able to **pull** future updating and if you are a collaborator, run a **push** operation in order to update the system with your changes

- **git init** initialize the system in existing directory from scratch

Main Git flow operation

git status command display files that need to be tracked (new or modified)



Repository is the local place, where every version of the file system is stored

Git main operations

- **git status**

display the current status of the system: files to be tracked

- **git add** <filename>

All files of the current directory

- **git add .**

All files of current and subdirectories

- **git add** –all

Git Commit

- **git commit** -m “comment”
- **git commit** -am “comment”
automatically add files updated, but not new files
- **git log --oneline**
display the history of commitments

Git Push an Pull

- **git push origin main**

origin is the remote address where we cloned the system
main is the current branch

- A **branch** is a label connected to a particular path in the development history

- **git pull origin main**

update our current directory with remote changes

Test your skill

- How could be useful a version control system ?
- How can I start using git ?
- Which are the main step in using git, what is the staging area ?
- Which is the command to start tracing a file ?
- By which command I copy of a directory from a remote host ?
- By which command I can update a remote copy of my repository