

# Git Basics

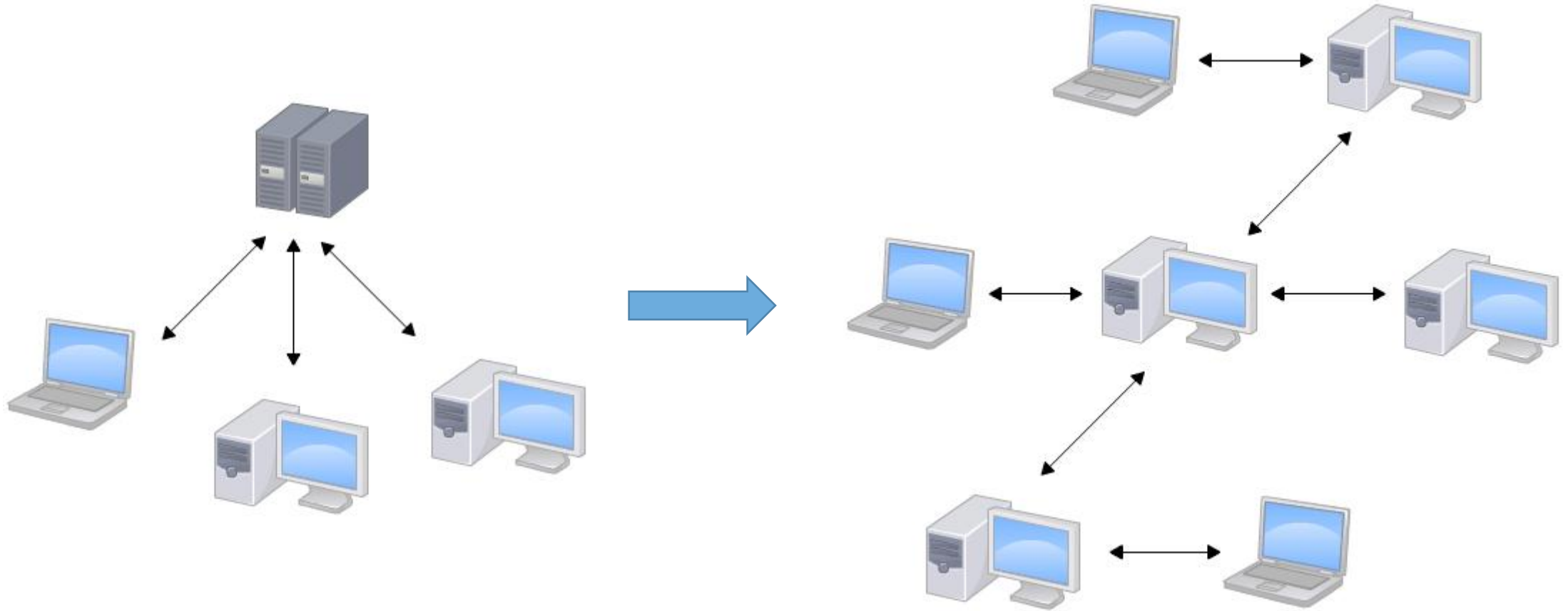
CS 35L Fall 17 Section 7

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# What is Git?

- A version control system
  - Keep track of changes in files
- Free and open source
- Git was created by Linus Torvalds in 2005
  - Used for development of the Linux kernel
  - Initially used commercial BitKeeper
  - Some developer tried to breach the license
  - The company stops the collaboration; Linus started his own project
  - It took him two weeks to write Git

# Centralized vs. Distributed

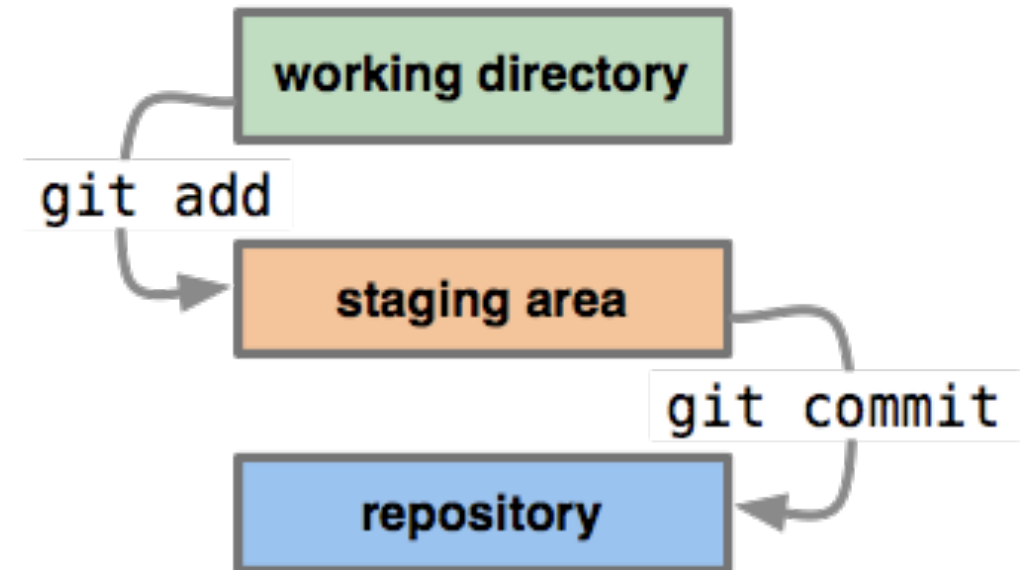


# Getting Started

- Download Git from official website
  - Or use “\$ apt-get install git” and equivalent
- \$ git config --global user.name "Your Name"
- \$ git config --global user.email "email@example.com"
- “\$ git init” to create a git directory

# Modifying files with git

- To add changes to repository
  - \$ git add
  - \$ git commit
- Check status
  - \$ git status
  - \$ git diff
  - \$ git log



# Going back

- Moving across the versions
  - \$ git reset --hard version
  - \$ git reflog
- Discard changes
  - \$ git checkout -- file
  - \$ git reset HEAD file

# Working with remote repository

- \$ git clone
- \$ git pull
- \$ git push
- Username and password / ssh protocol
  - \$ ssh-keygen -t rsa

# Branches

- \$ git branch
- \$ git checkout (-b) branch\_name
- \$ git merge
- \$ git branch -d branch\_name
- \$ git log --graph
- Resolve conflicts
- Common strategy

