

# Git & Github Fundamental by Rajesh Kumar

# About me



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# What is git

Manage your source code versions

# Who should use Git

- Anyone wanting to track edits
  - Review a history log of changes made
  - View differences between versions
  - Retire old versions
- Anyone needing to share changes with collaborators
- Anyone not afraid of command line tools

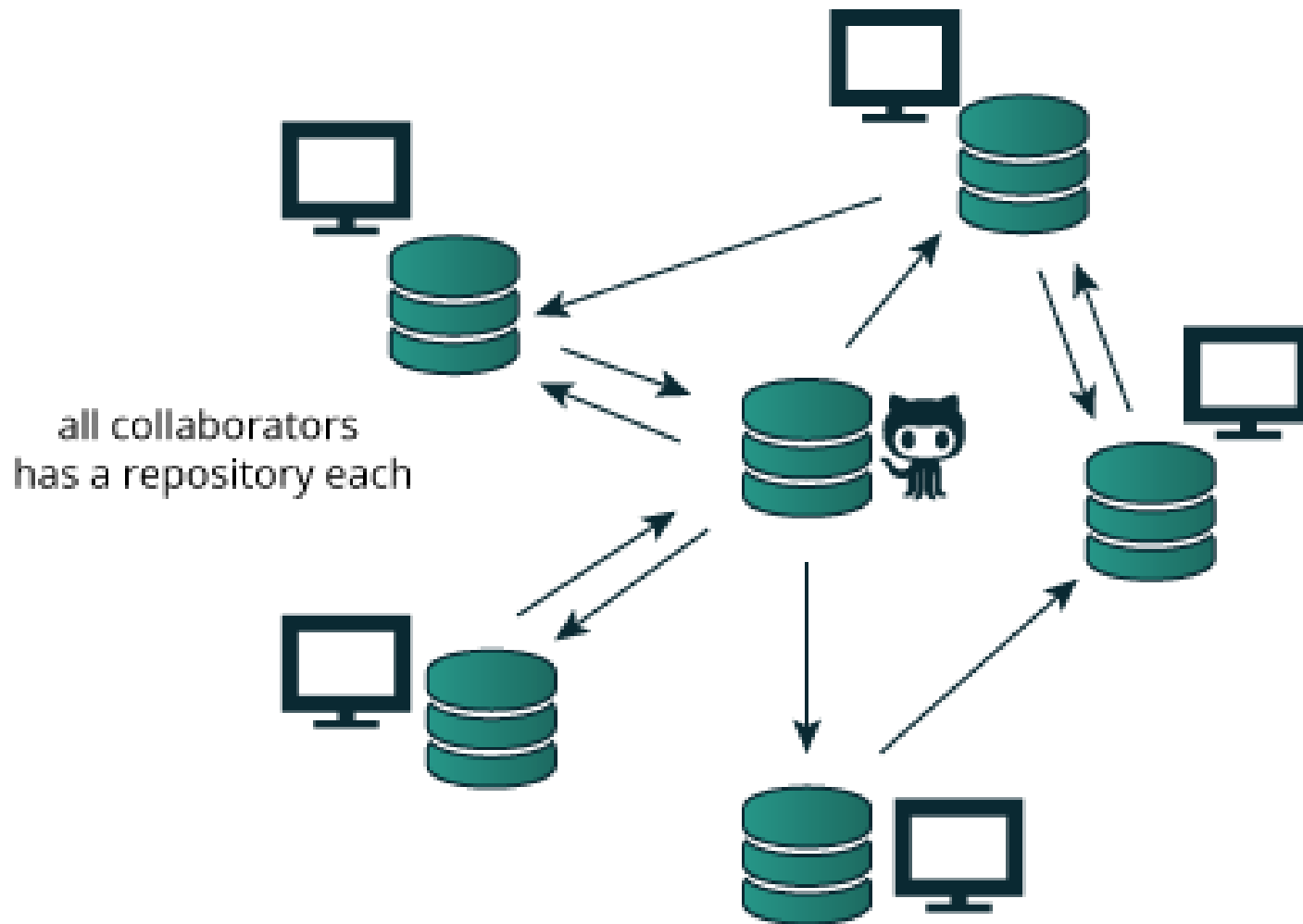
# Git is Popular

- **Distributed Version Control**
- Open source and free software
- Compatible with Unix-like Systems (Linux, Mac OSX, and Solaris) and Windows
- **Faster than other SCMs (100x in some cases)**

# Distributed version Control

- No Need to communicate with a central server
  - Faster
  - No network access required
  - No single failure point
  - Encourages participation and “forking” of projects
  - Developers can work independently
  - Submit change sets for inclusion or rejection

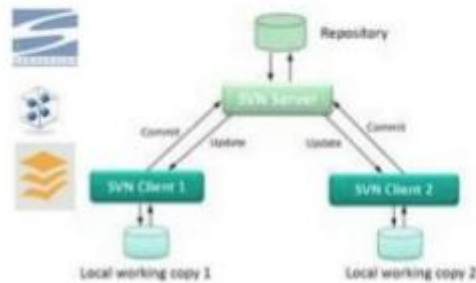
# Distributed



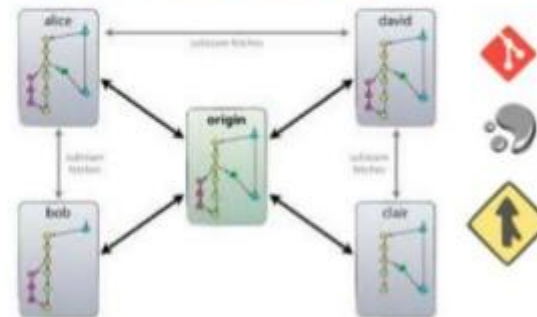
# Centralized Vs Distributed

GIT is distributed

## Centralized



## Distributed





# No network Needed

- Performing a diff
- Viewing file history
- Committing Changes
- Merging branches
- Obtaining other revision of file
- Switching branches

# Get a Virtual Machine

<http://bit.ly/scmGalaxy-getvm>

# Install

<http://git-scm.com/downloads>

# Verify

> git --version

> which git (linux)

# Git Basic Workflow

## (working with local git repo)

### – git init

- It create a git empty repo. Also creates a .git in the current dir

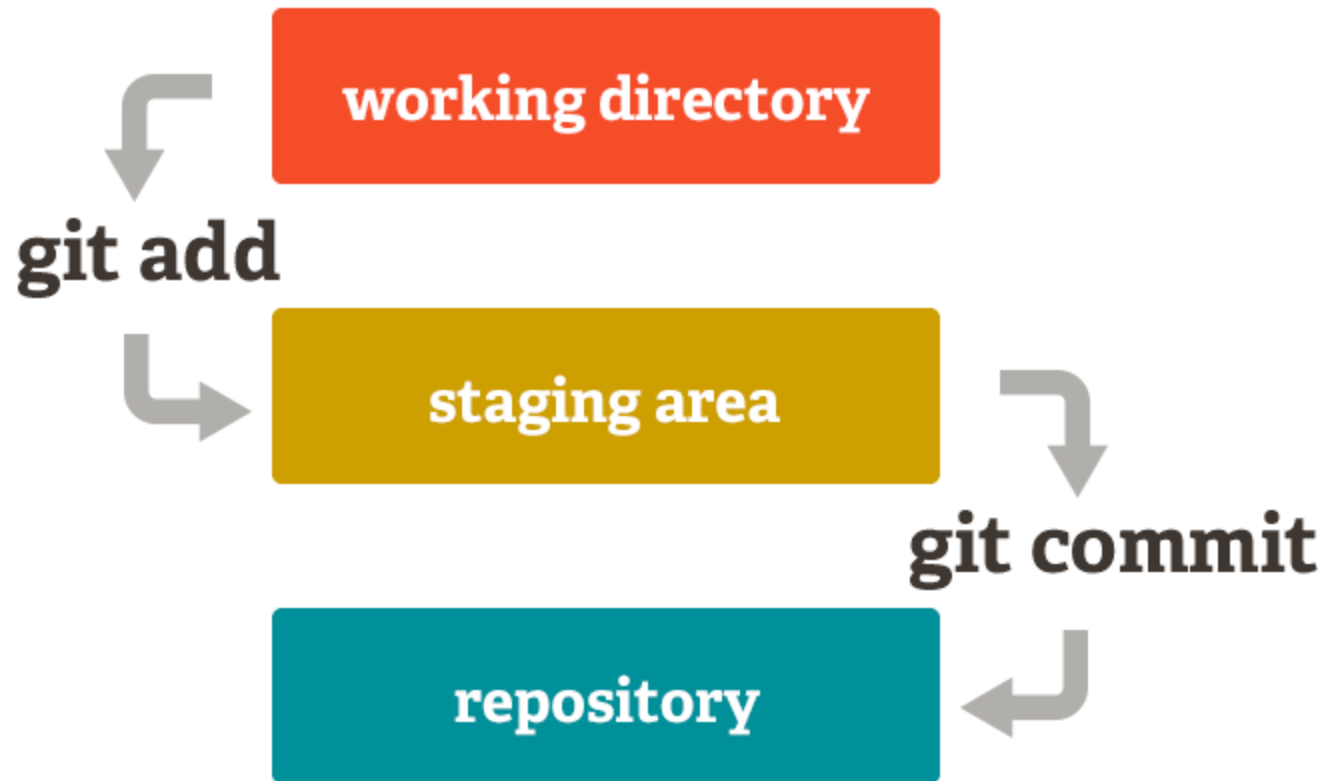
### – git add <directory tree>

- Adds all files (except .git)

### – git commit

- Commits the changes (in this case initial commit)
- Creates a branch named **master**
- HEAD points at master

# Git workflow



# Create a git repo

```
> git init
```

# Configuring Git...

- `git config --global user.name "rajesh kumar"`
- `git config --global user.email someon@nowehre.com`
- `git config --list`



# Create some files/code

- Linux
  - touch filename
  - vi filename
  - cat > filename
  - echo “some text” >> filename

# Add file to git repo

```
> git add <filename>
```

# Commit to git repo

```
> git commit -m "This is my First commit"
```

# Check the list of commit

```
> git log
```

# Check the status of current repo

> `git status`

# Working with remote repo (github)

# Git Basic Workflow

## (working with remote git repo)

Sign up

<https://github.com/>

# Create a new repos in github

## GitHub Bootcamp

### 1 Set up Git

A quick guide to help you get started with Git.

### 2 Create repositories


Repositories are where you'll work and collaborate on projects.

### 3 Fork repositories

Forking creates a new, unique project from an existing one.

### 4 Work together


Send pull requests, follow friends. Star and watch projects.



### You've been added to the microsoft-scmgalaxy organization!

Here are some quick tips for a first-time organization member.

- Use the switch context button in the upper left corner of this page to switch between your personal context (**scmgalaxy**) and organizations you are a member of.
- After you switch contexts you'll see an organization-focused dashboard that lists out organization repositories and activities.


 defunkt

### Create Pull Requests in GitHub for Windows

Pull requests are fantastic. Create pull requests without leaving the warm embrace of GitHub for Windows.

[View 111 new broadcasts](#)

### Repositories you contribute to


 **opencart/opencart** 1,686 ★


### Your repositories


13 [+ New repository](#)



Find a repository...



All Public Private Sources Forks

 **dsadasdasd**

 **march19**

 **rajtest**

 5 hours ago  
**nineetha** pushed to **master** at **microsoft-scmgalaxy/19march**  
 825012d second commit

 6 hours ago  
**nineetha** pushed to **master** at **microsoft-scmgalaxy/19march**  
 699b8cb this is new commit

<http://www.scmgalaxy.com/>



# Add remote depot to config

> `git remote add origin git@github.com:scmgalaxy/dsadasdasd.git`

# Push to Remote repo

```
> git push -u origin master
```

# github to local git workflow

- **Working with Remote Repos**

- git clone

- Creates a git repo from an existing repo
    - All remote branches are tracked
    - Remote HEAD branch checked out as your initial master branch as well

- git add <directory tree>

- Adds all files (except .git)

- git commit

- Commits the changes (in this case initial commit)
    - Creates a branch named **master**
    - HEAD points at master

- git push

# github

<https://github.com/>

Linux	Linux	Git
pwd – Current Directory	mkdir git-training – Create a directory called git-training	git init
ls – Listing the directory	ls – Listing the directory	git --version – To know the version of git.
which git – where the git is installed	history – Display the list of all run commands	git status – To know the status of my current git repo
sudo apt-get install git – To install a git in Ubuntu	cd – Change directory.	git add . Or git add <filename>
clear – Clear the screen	ls -la – To List files in directory including hidden	git commit -m "This is my message"
	touch ashok.txt – To create a file	git log
	vi harikiran.txt – To create a file	
	cat > rajesh.txt – To create	

# scmGalaxy Community



<https://twitter.com/scmGalaxy>



<https://www.facebook.com/scmgalaxy>



<http://www.scmgalaxy.com/>



<http://bit.ly/scmgalaxy-linkedin>

Questions?

<http://bit.ly/scmgalaxy-forum>