



GIT - DISTRIBUTED VERSION CONTROL SYSTEM (DVCS)




GOUSERABBANI SHAIK



Topics:

The below topics are covered in this secession.

- Version control
 - Git introduction
 - Git Installation
 - Commonly used commands in git
 - Working with remote repository
- 

What is the use of Version Control System?

Let's consider the MNC company has its employees all over the world.



What is the use of Version Control System?

Connection/Association



What is the use of Version Control System?

Storing versions of Codes



What is the use of Version Control System?

Backup of Source code

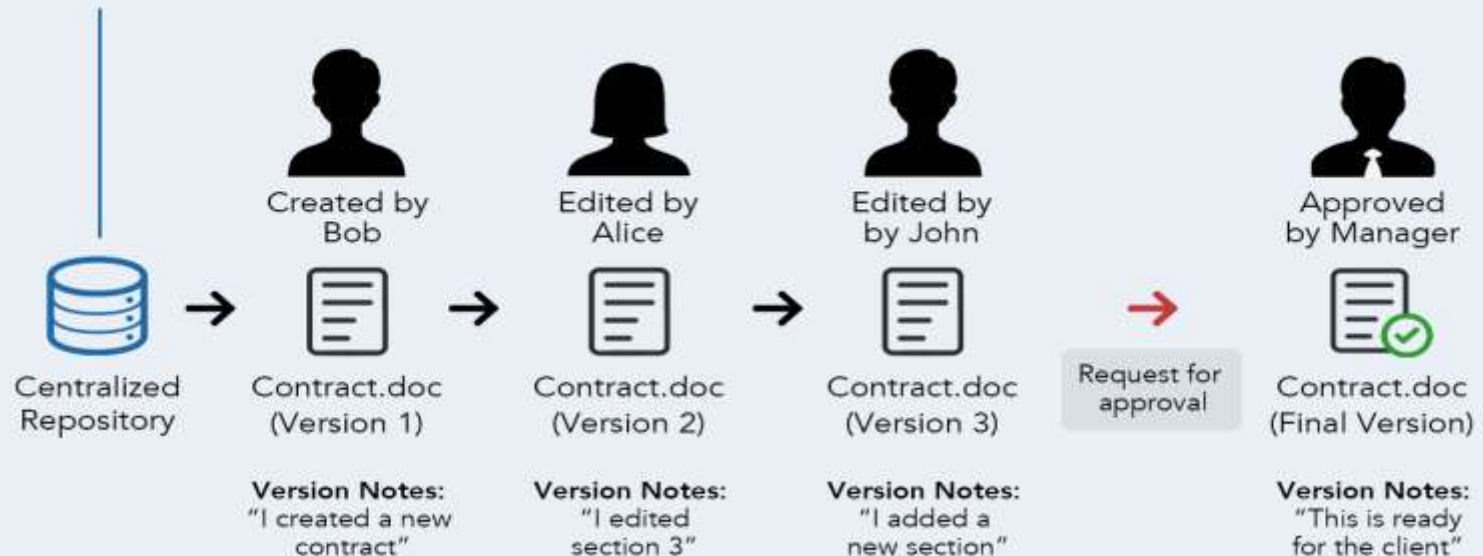


What is version control system?

Version control, also known as source control, is the practice of tracking and managing changes to software code and it is snapshot of your project over time



How Version Control Works



Version Control Types

Local Version Control System(LVC)

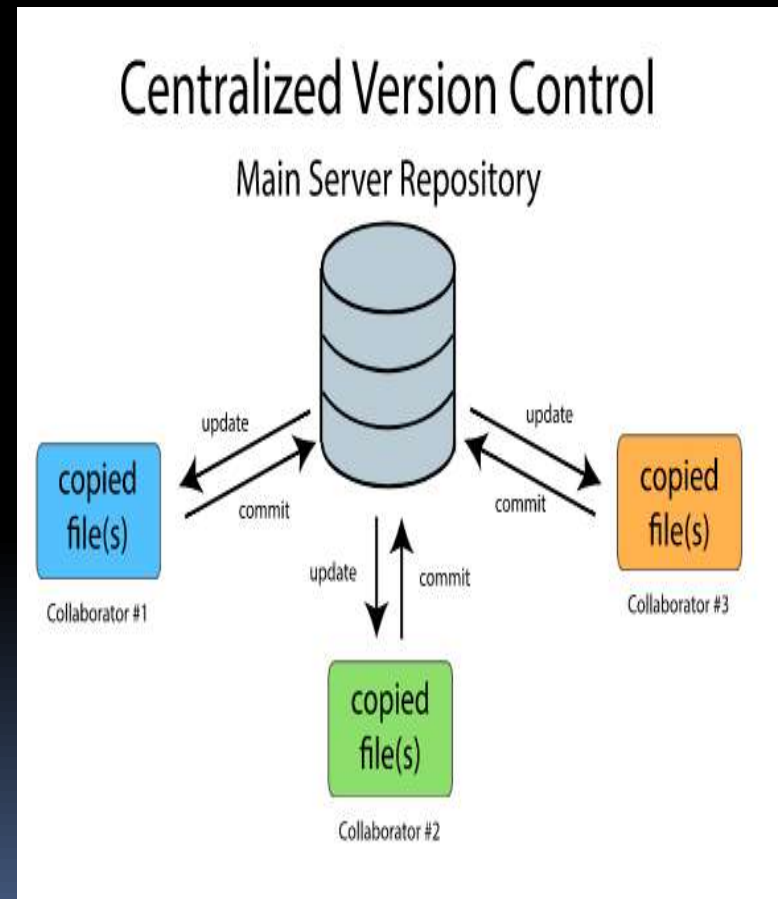
- The Practice of having version database in local Computer
- The local database keeps the record of changes made to files in version database



Version Control Types

Centralized Version Control System(CVC)

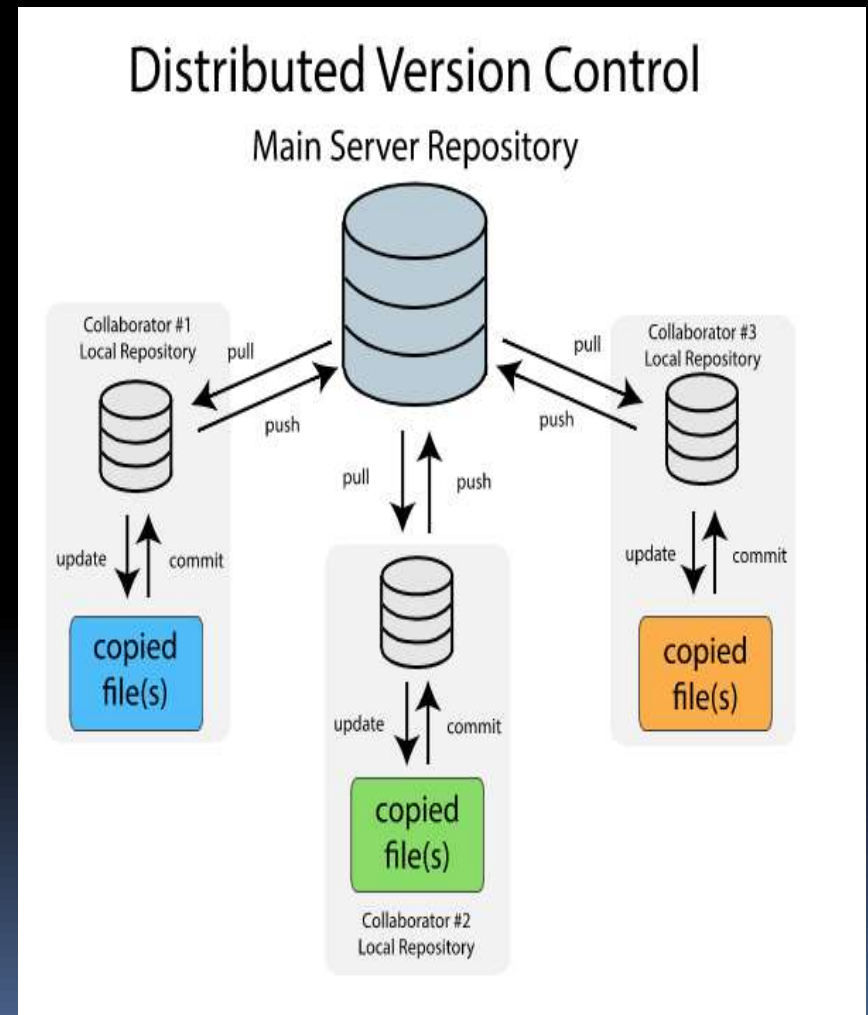
- Lvc issues are solved by the centralized version control
- In CVC, cental repository is maintained where the all versioned files are kept
- Now users can checkout and check-in files from their different computers at any time



Version Control Types


Distributed Version Control (DVC)

- Version database is stored every users local system and at the remote server
- User manipulate the local files and then upload changes to the remote server
- If any one of server die, a client server can be used to restore





Benefits of GIT

- Snapshots
 - Distributed
 - Branch Handling
 - Fast operations
 - Robust
 - Integrity
- 



What is GIT?

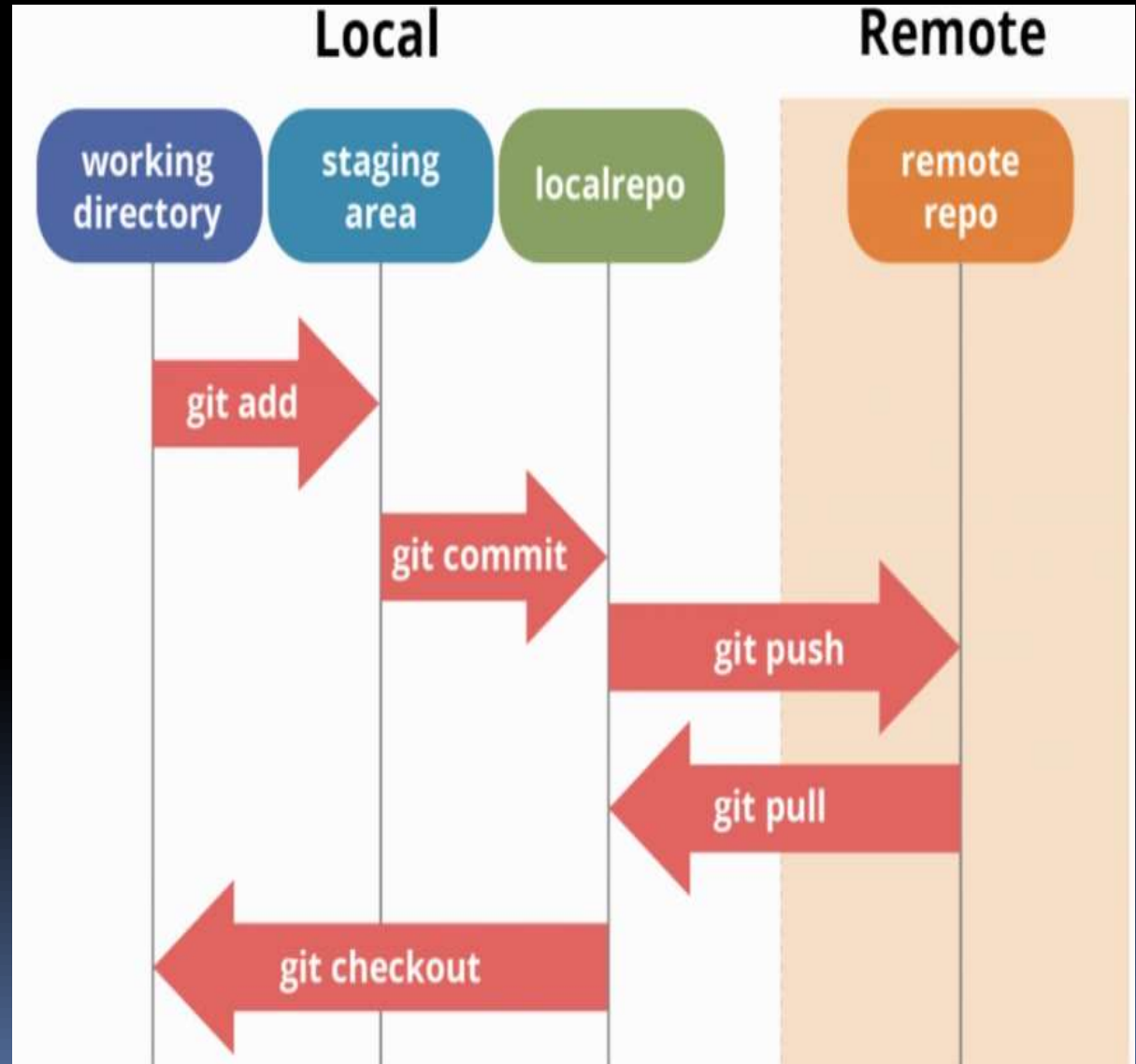
Git is a version-control system for tracking changes in computer files and coordinating work on those files among multiple people.

Git is a Distributed Version Control
System(DVCS)

What is GIT Workflow?


- There are 3 stages in Git Work Flow

- Working Directory
- Staging Area
- Local Repository







Introduction:

- You can have code in local machine as well as in remote location.
 - For remote location, we can use – GitHub/GitLab/bitbucket/AWS CodeCommit (so that we can interact with our team instead of working individually)
 - Git is a software and Git is managed by Linux, Git is installed in local machine and Git don't has user management s/m. Git was released in 2005 Git manage code repository.
- 





Code Management (Version Control):



- Version Control or the source code control is a practice of tracking and managing the changes of the software code.
 - The VCS (Version Control System) helps team to work effectively and efficiently.
 - VCS keeps track of every change happens to the code in a special kind of database and the developers can go back to their previous code state if they need.
- 

- 
- When a lot of developers work together on a code, there are good chances to mix the code and a lot of choices can happen due to changes made by many people.
 - Version Control helps us to mitigate this problem.

GIT:

- 
- Git is the most common and widely used version control system in the world.
 - It is an open-source system. Git was developed by Linus Torvalds in 2005 and GitLab CEO Sid Sijbrandij

- 
- Git is an example of Distributed Version Control System (DVCS). DVCS means rather than having one place for full version history of the software.
 - Here, you can have a separate copy of the code in your local machines as well with the full history of changes.
 - Git works on the branching strategy, which means you can have many branches from your code just like a tree having branches connected to its trunk.
 - By using Git, we can interact with our team instead of working individually

- 
- 
- All these are code hosting platform for version control and collaboration.
 - GitHub is a cloud-based solution for code versioning whereas you can use cloud-based as well as install the GitLab/Bitbucket in your environment.
 - All these platforms use in Git command line as the interactive program.