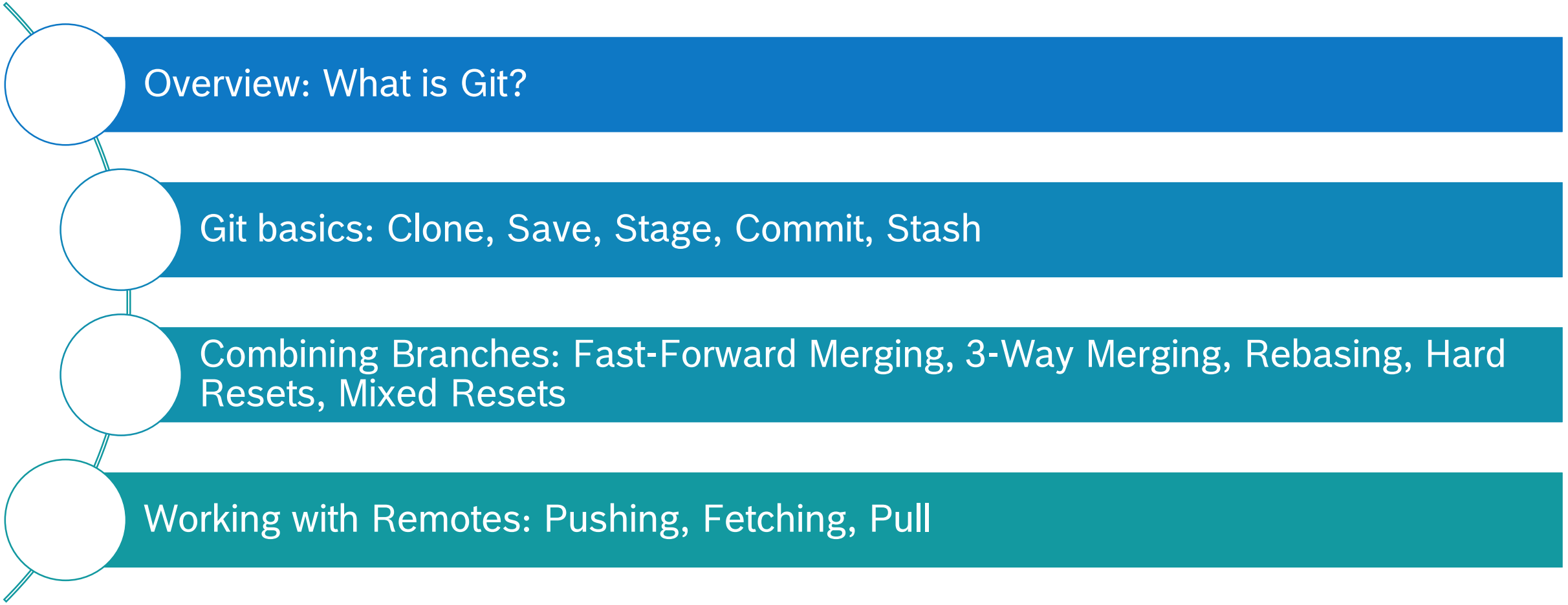
USING GIT IN FI-SSF PROJECT

Present by: Ho Quoc Vuong (RBVH/ETI4)

Reference: openSAP GIT course

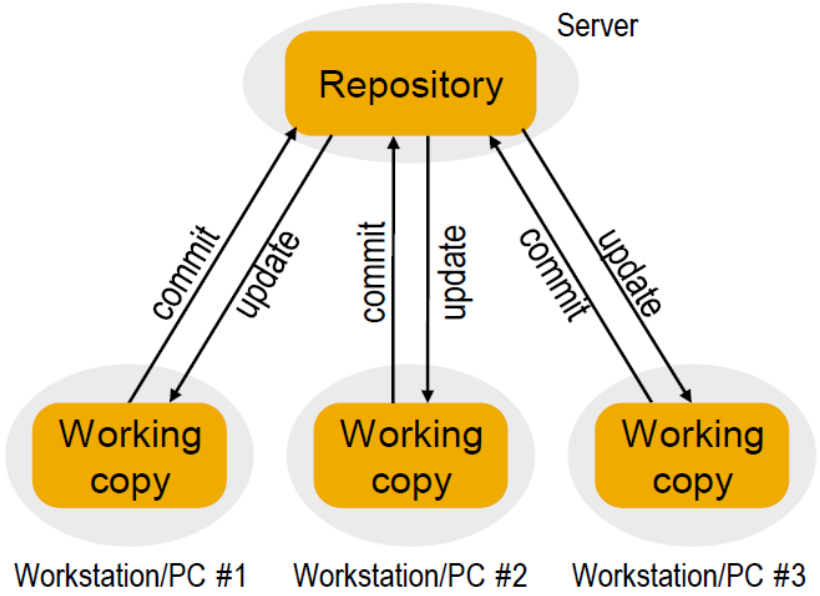
BOSCH

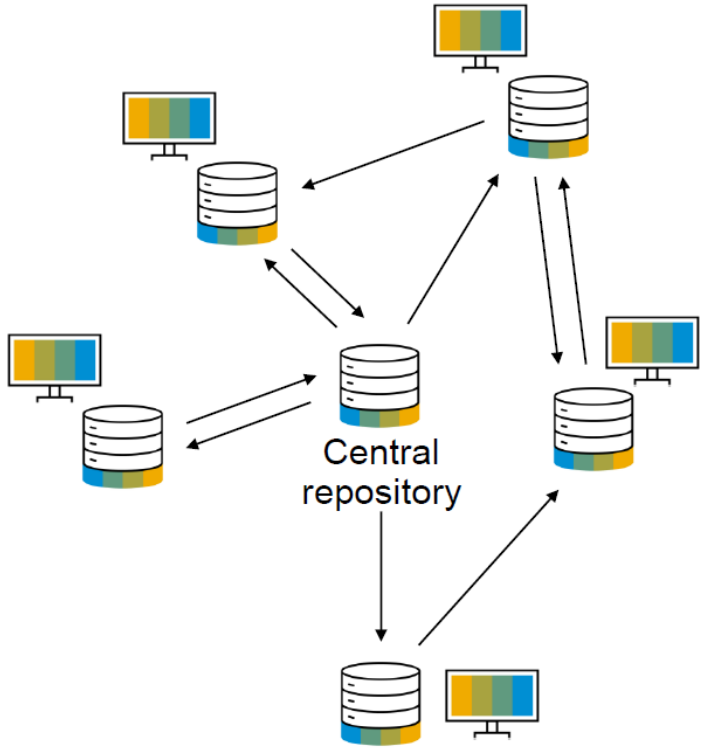
Agenda



What is Git?

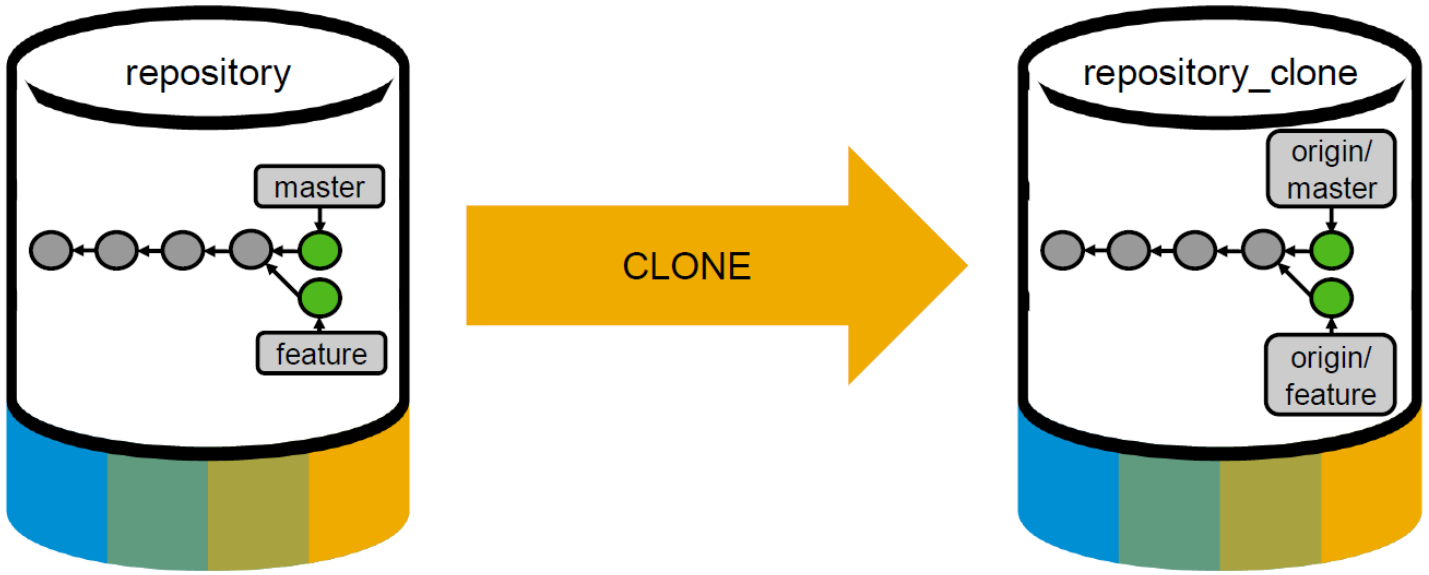
- Developed in 2005 by Linus Torvalds
- DVCS (Distributed Version Control System)
- Every developer get his or her own individual repository





Git Clone

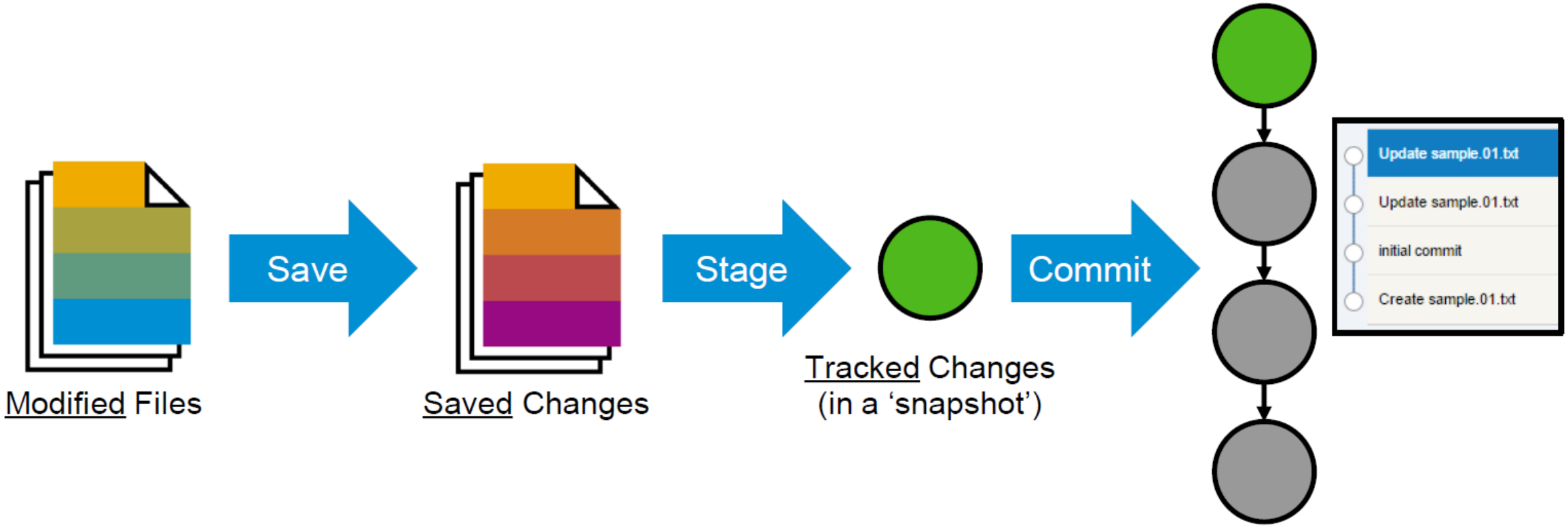
- Take an entire source code repository
- An additional branch Master is created



Remote repository

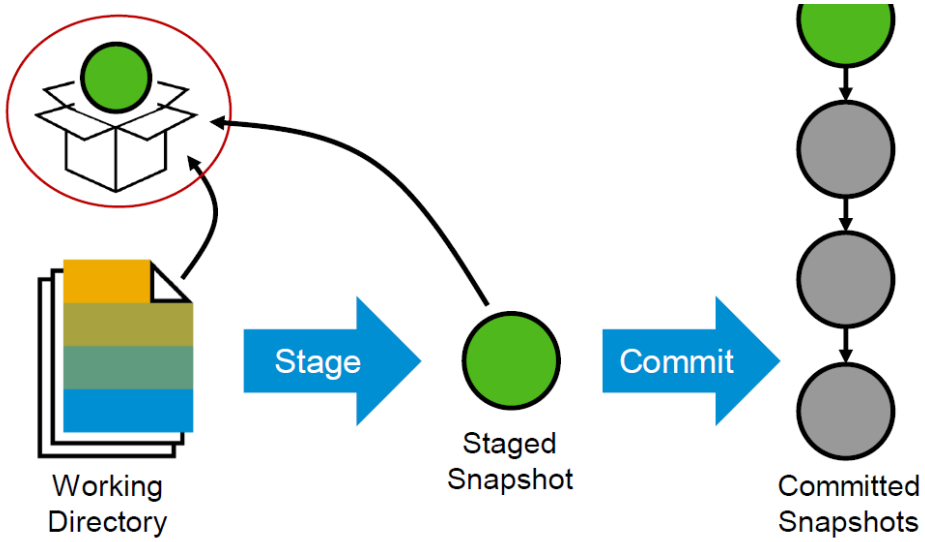
Local repository

Save, Stage, Commit

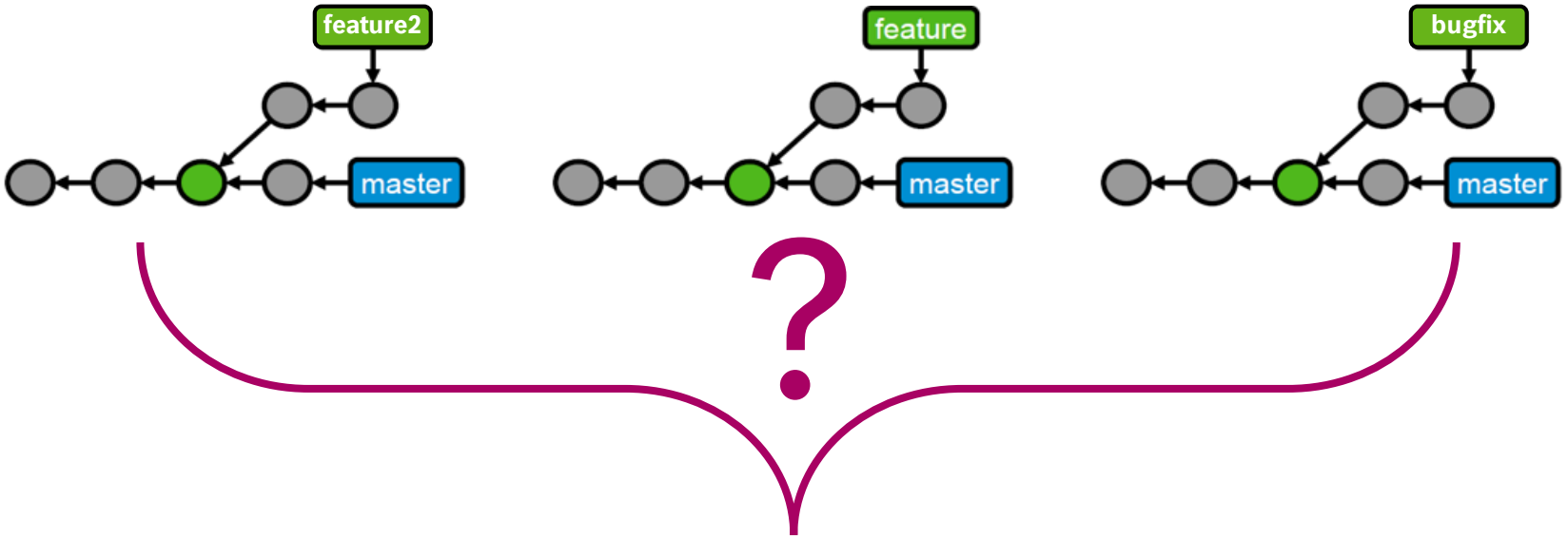


Stash

- Stashing is the way to save the changes locally, to retrieve back later.
- There are 4 options to retrieve stash:
  1. Apply: takes the top most stash in the stack and apply it
  2. Pop: similar to stash apply but it deletes the stash from the stack after it is applied
  3. Drop: Remove all stash from the stack
  4. Cancel: Do nothing



Combining Branches

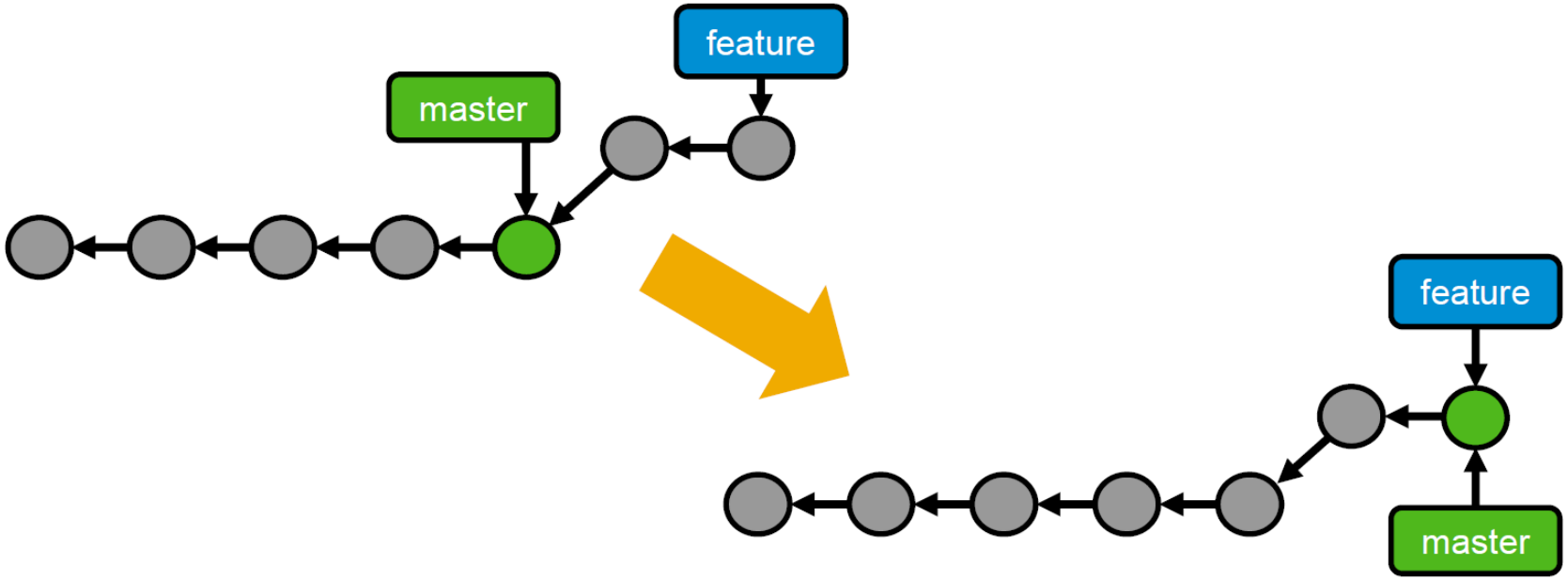


- Fast-Forward Merge & 3-Way Merge
- Rebase
- Mixed Reset

Remote Repository

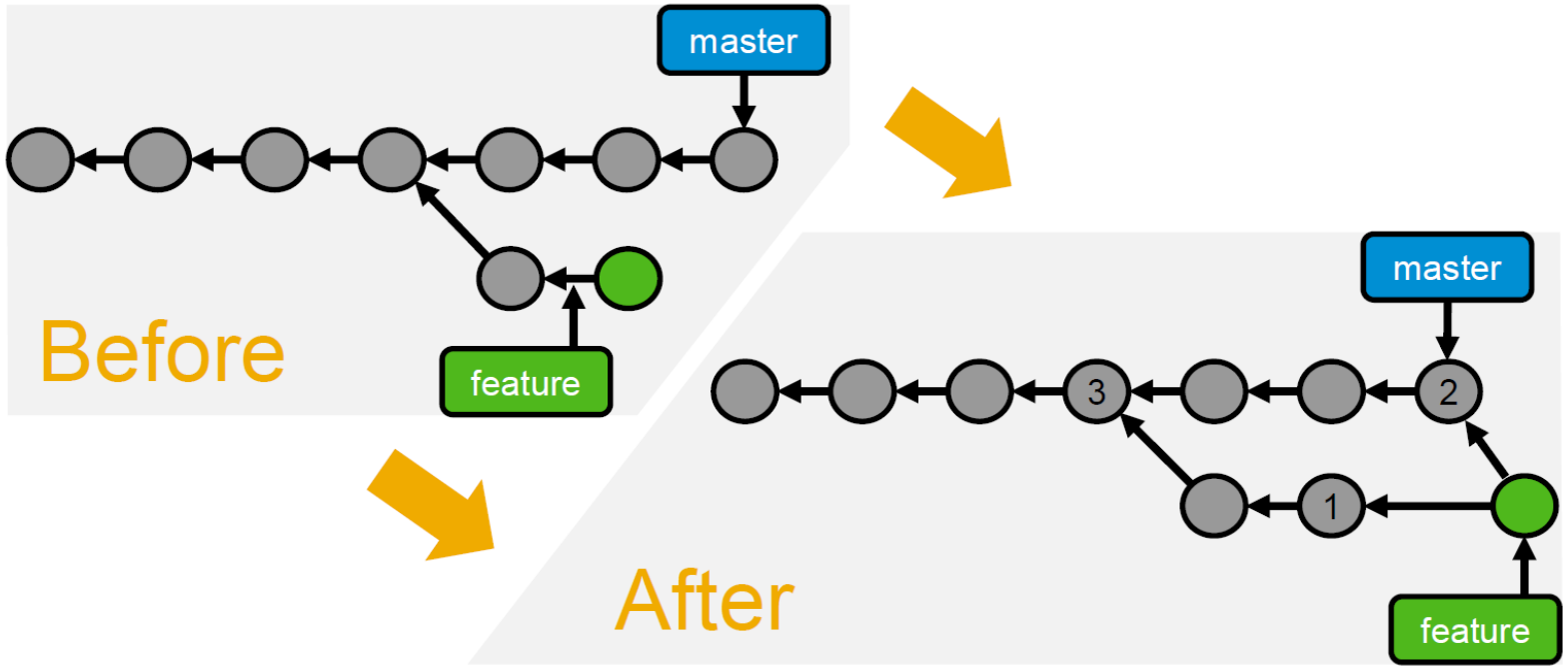
Fast-Forward Merge

- When you merge a branch onto one ahead of it (in sequence)



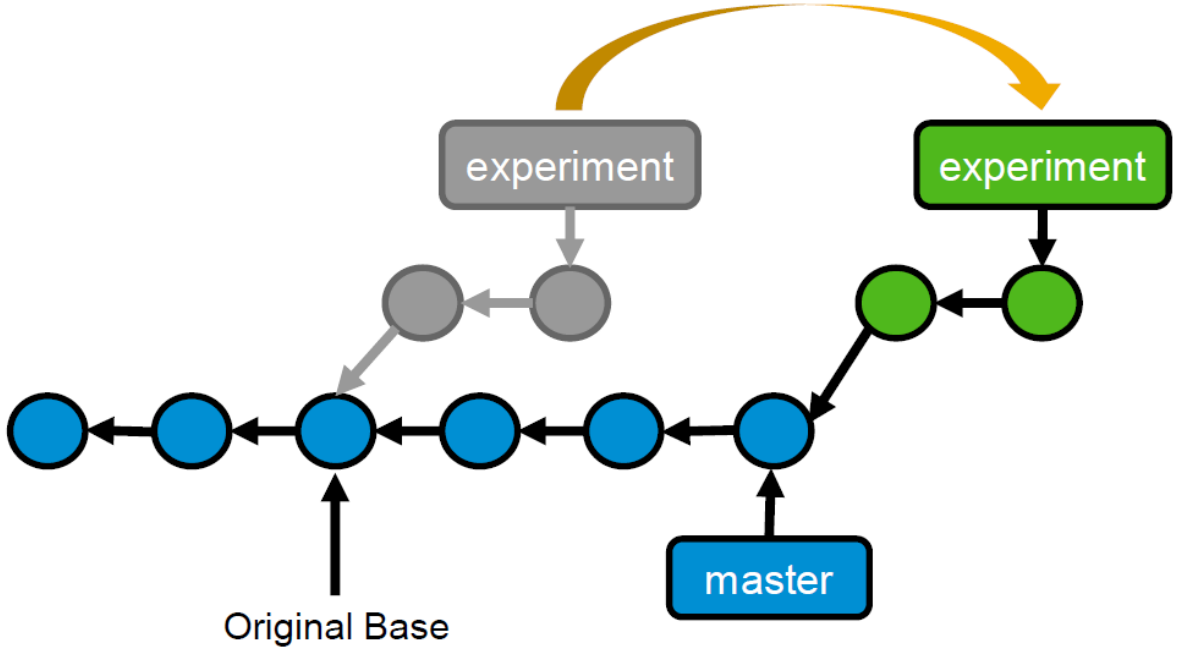
3-Way Merge

- Combine 2 branches which is separate Overview single commit
- Create new merge commit, branch pointer points to different commit.



Rebase

- Pickup all commits associated one branch, put them on the top of another branch

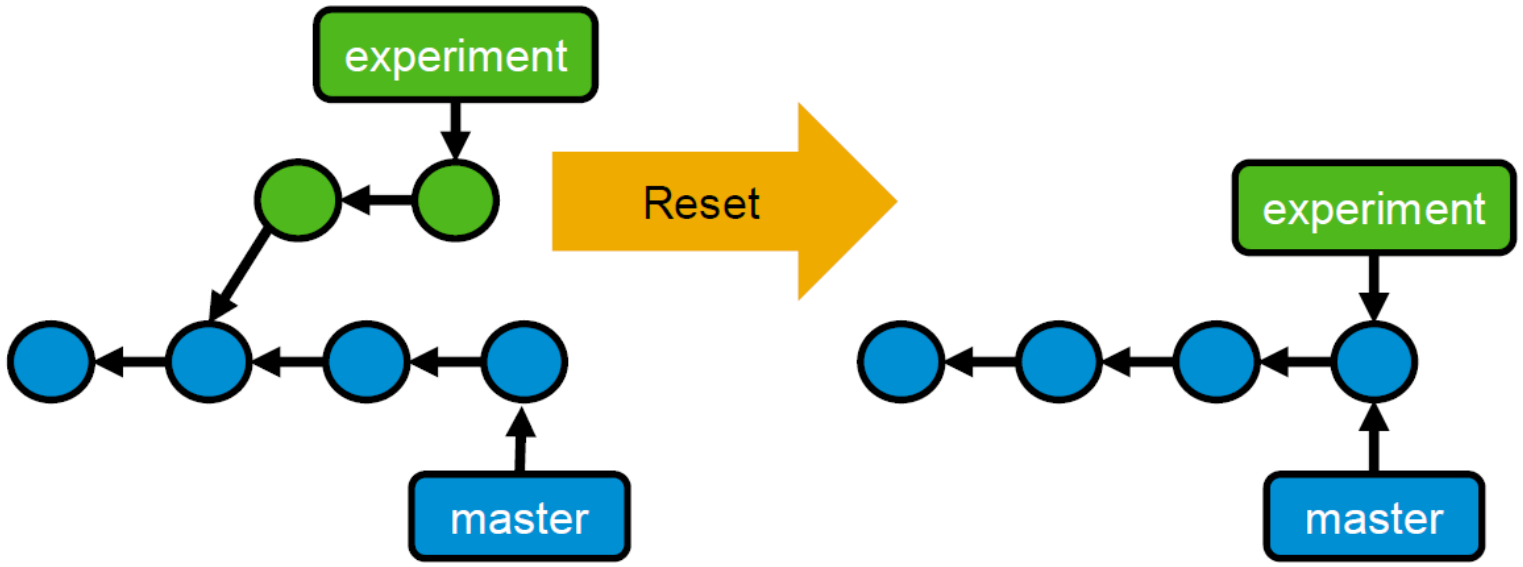


Rebasing with Conflicts

- Skip patch: skip this commit, resume the rebase with the next commit.
- Abort: back to the state before you started rebasing
- Continue: the usual choice, do this only *after* you've resolved the conflict
- Reset: cancel the rebase, move branch pointer to branch onto which you're rebasing

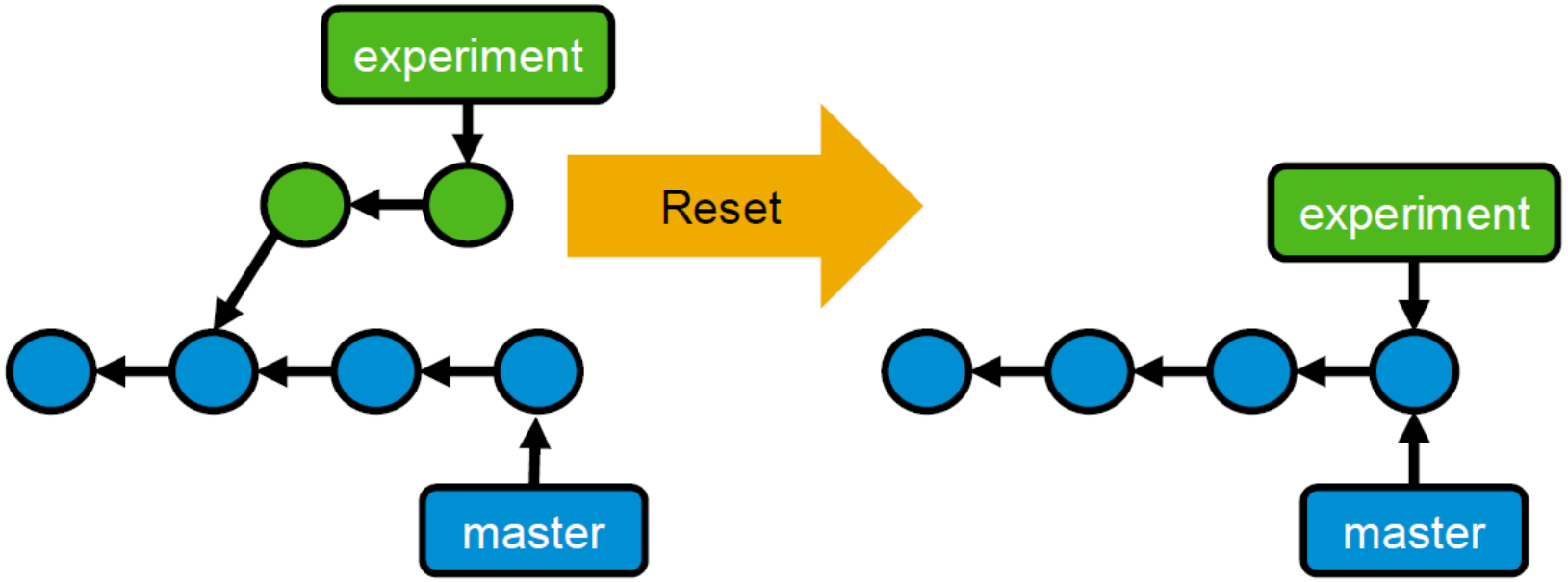
Hard Reset

- Moving a branch pointer, and losing all commits on old branch



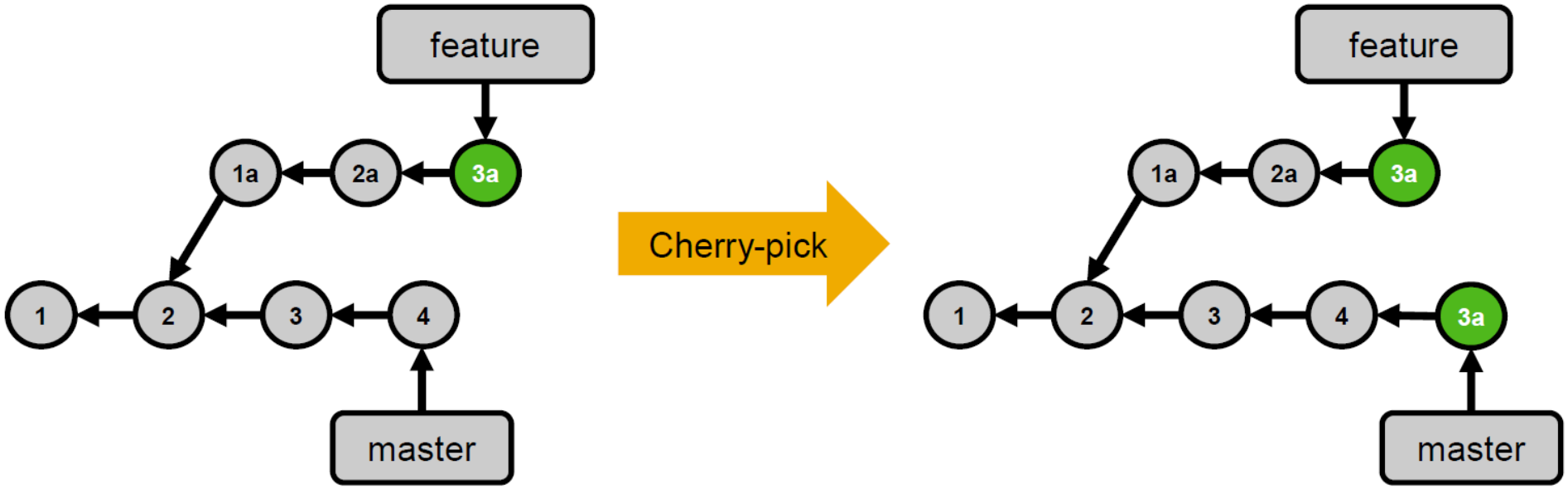
Mixed Reset

- Retain all changes between 2 two original commits and turns them into unstaged changes.
- The difference includes the uncommitted changes in your working area (both staged and unstaged)



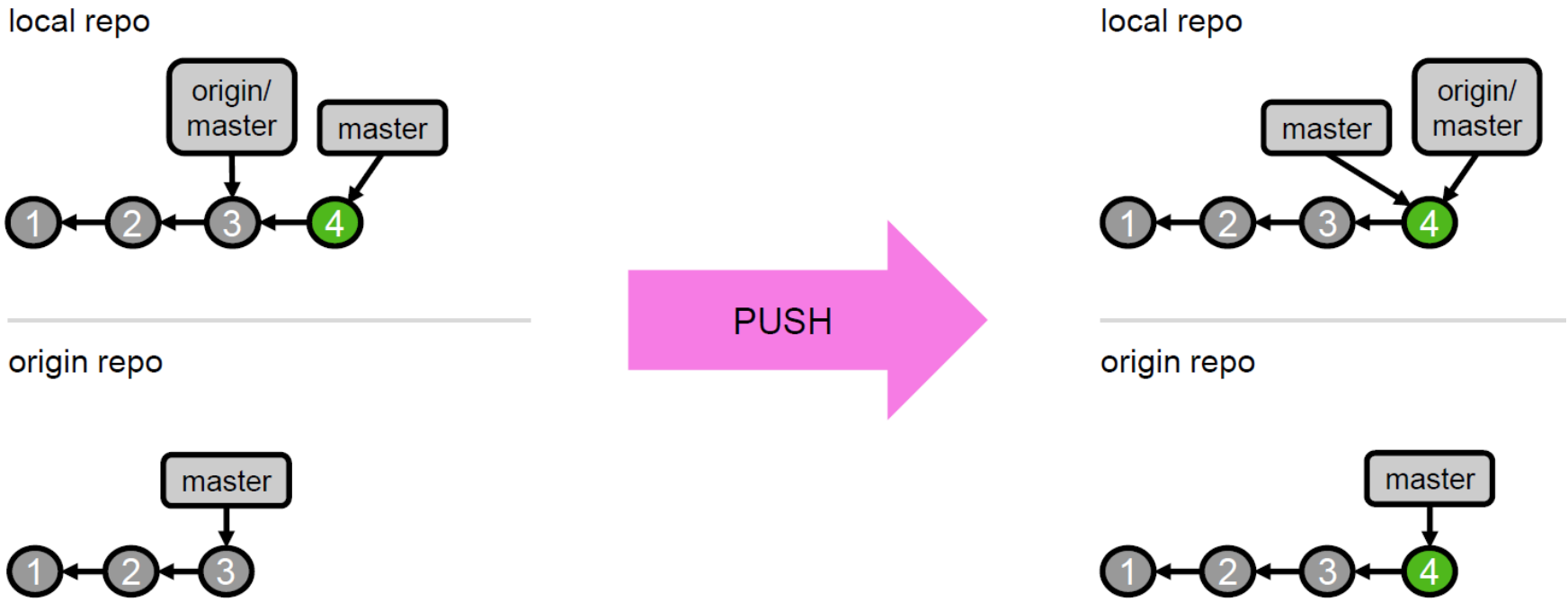
Extra tools: Cherry-Picking

- Take a single commit and copies it directly onto to any branch



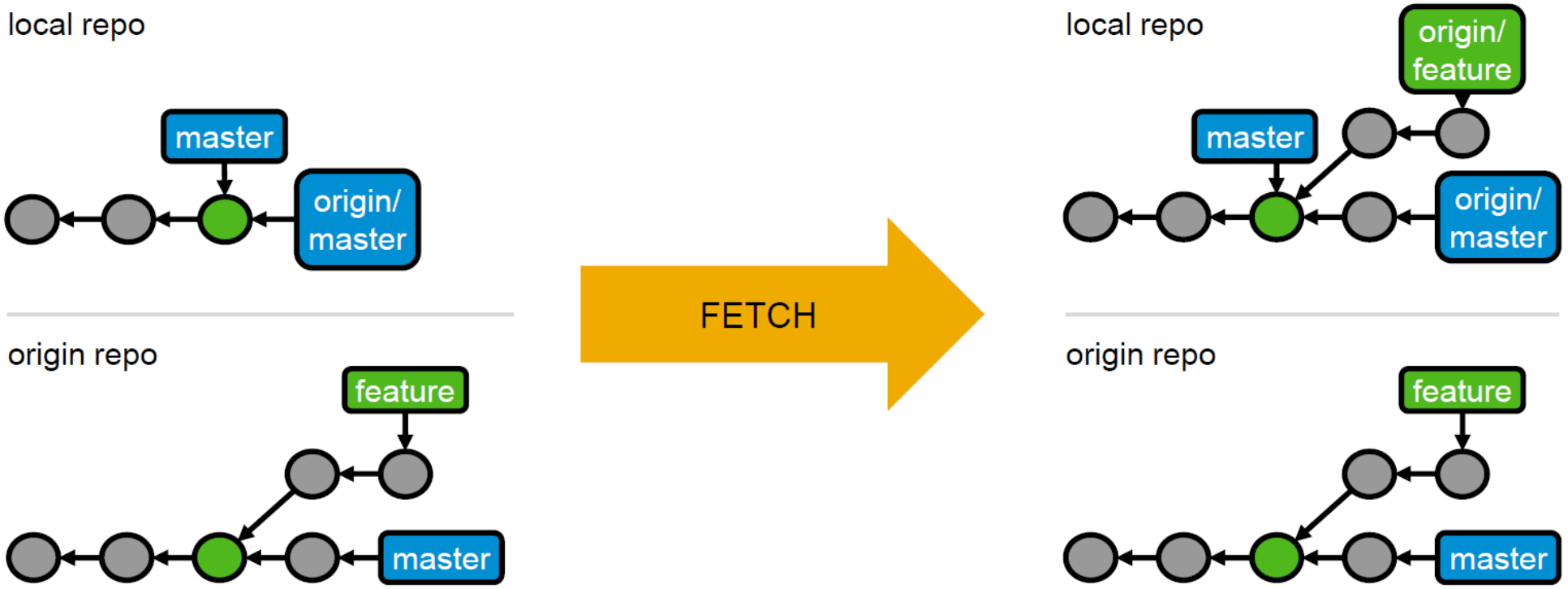
Push

- Update remote repo



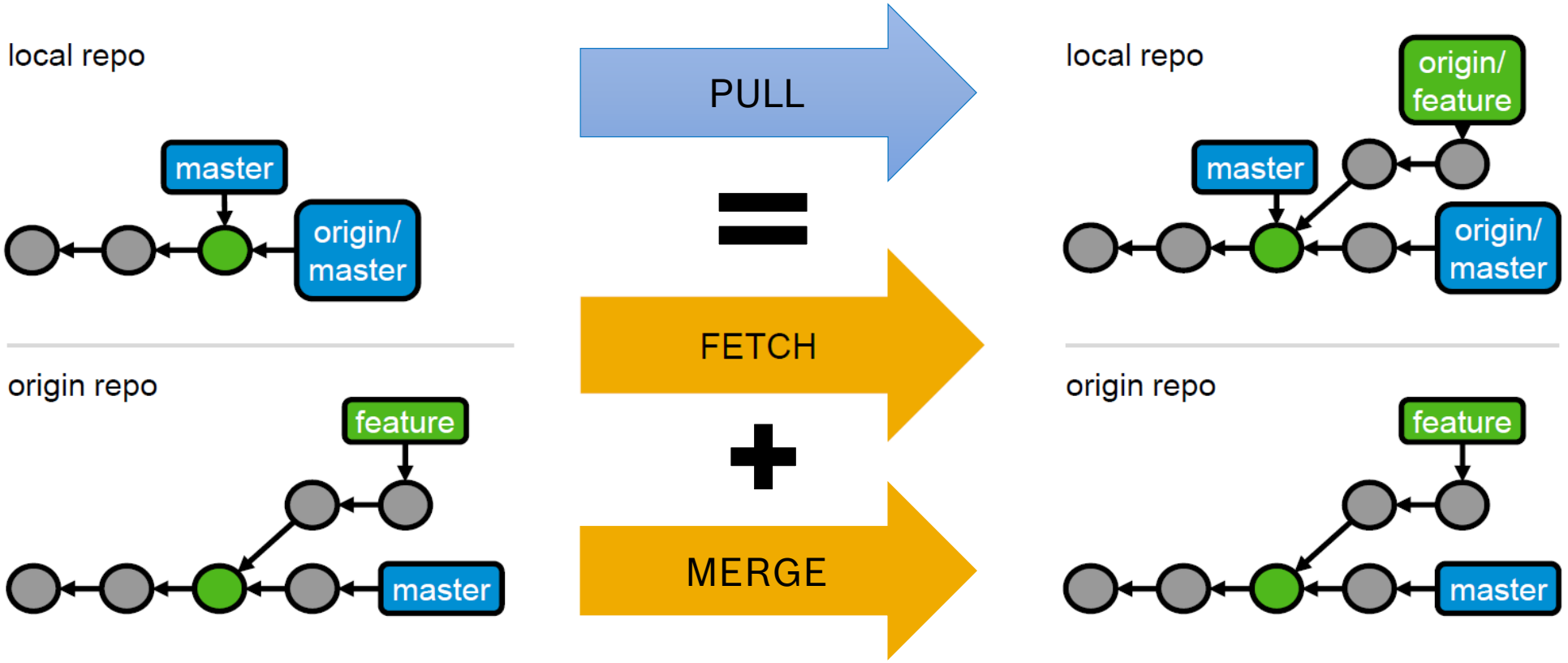
Fetching

- Update all remote branch on local repo



Pull = Fetch & Merge

- Do a Fetch (Update all remote branch on local repo), then MERGE the local branch onto remote **default** branch.



SSF Branches discussion

- Commit description convention:
  - HPALM: Defect-XXX
  - SMT: INCXXX
  - Sprint: BR-XXX
  - One commit for one task only.
- Remote repository purpose:
  - origin/master: stable version (commits are used for Go-live; Defect; Incident; Translation)
  - origin/dev_odd: sprint development (commits are used for Sprint), including defect fix
  - orgin/dev_even: latest Sprint developer
  - origin/bugfix: Fix urgent bug. (before Go-live only)