

Session 3

Source Code Management (SCM)

Purwadhika

Outline

1. Introduction
2. Version Control System (VCS)
3. Best practices
4. Git for VCS
5. Git & GitHub for collaboration
6. Git Merge
7. Git Workflow

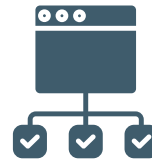
Session 3.1

Source Code Management (SCM)

Introduction

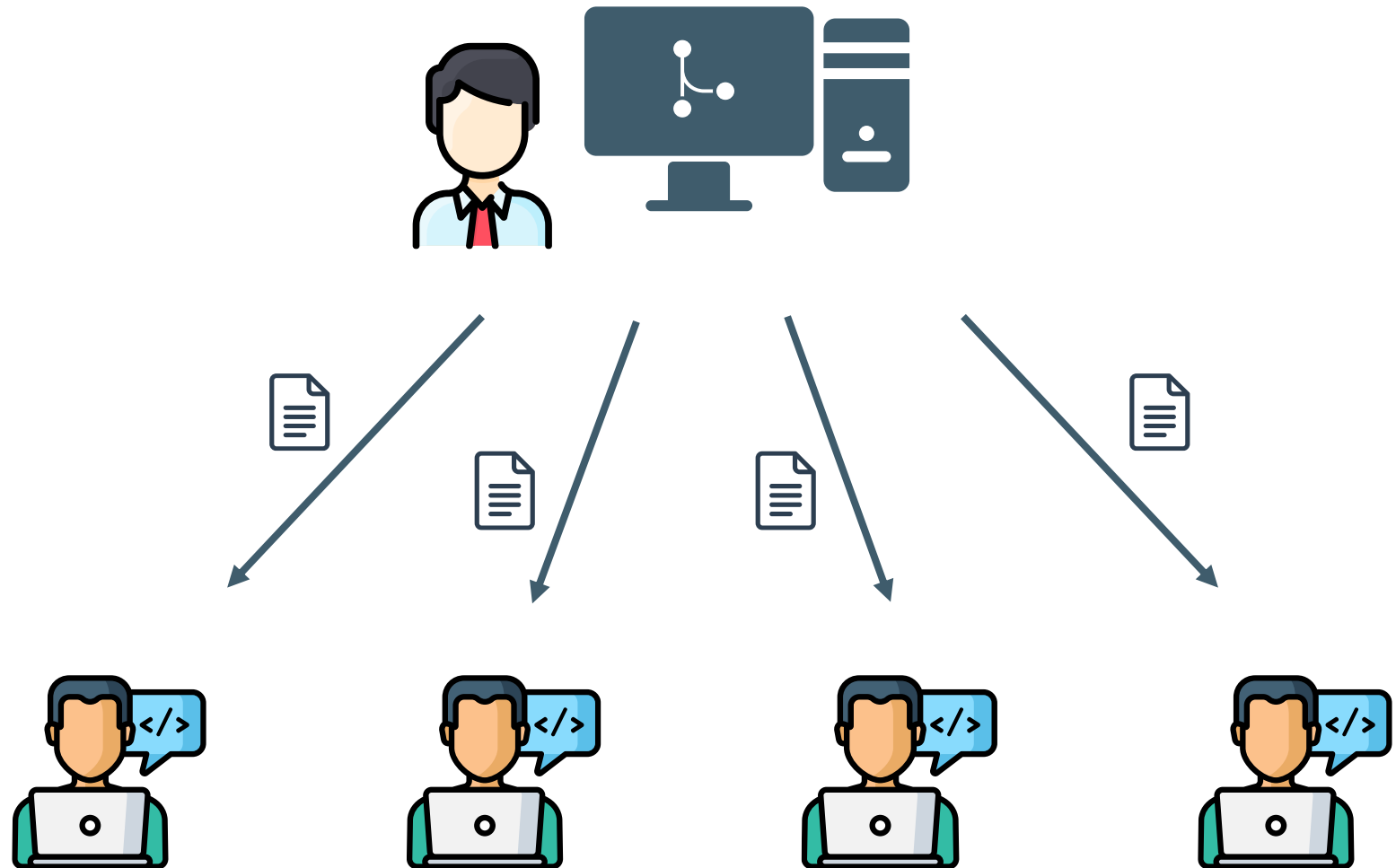
Source Code Management (SCM)

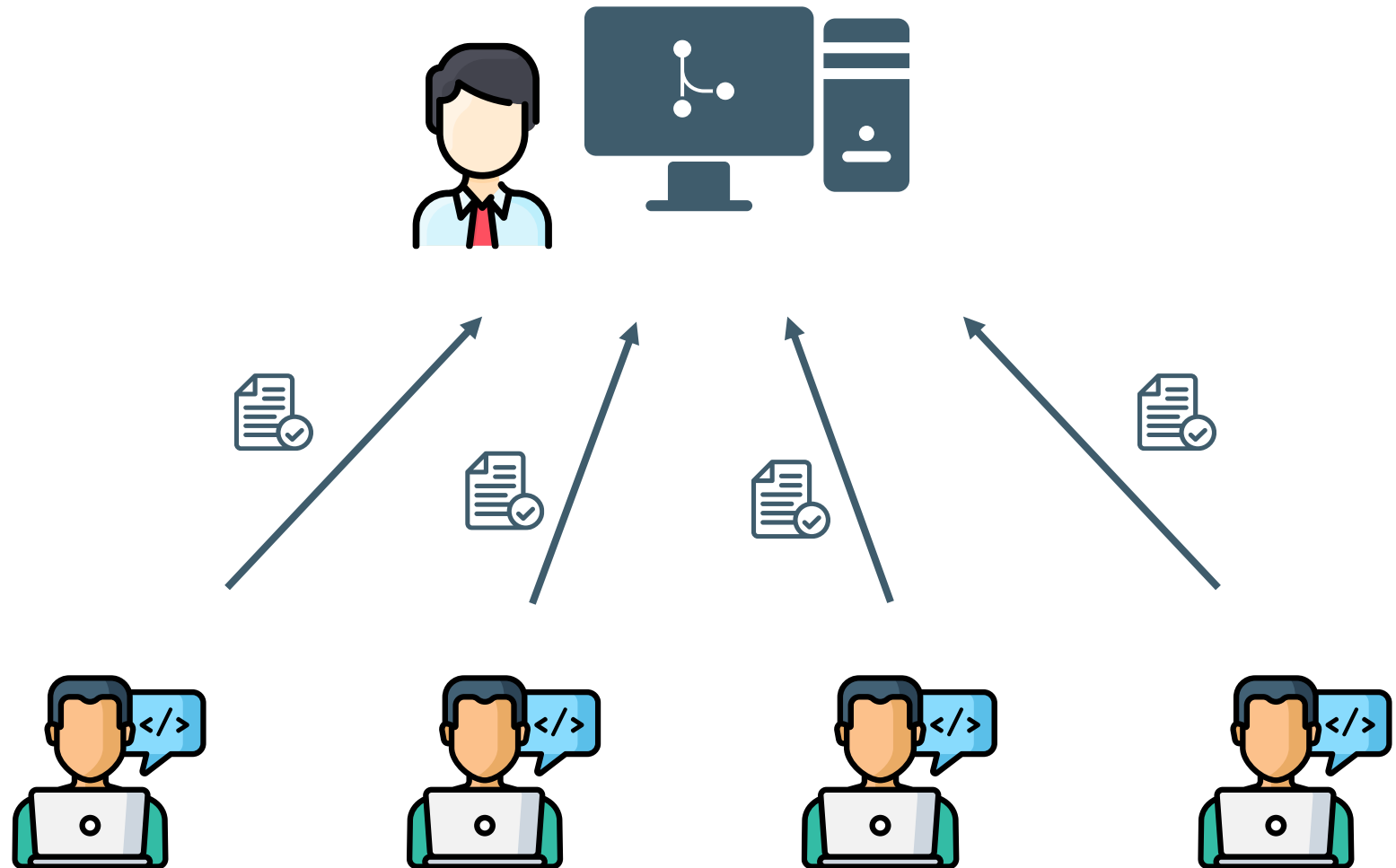
Source code management (SCM) is a system that help developer to manage the source code and help developer to collaborate in a project more effective an efficient. SCM is used to track any modification in source code. It will help developer to identified a bug in the present by tracking in a history changes and helps resolve conflicts when merging updates from multiple contributors, etc.



SCM ?







Benefit of using SCM ?

- Backup & Restore
- Short- & Long-Term Undo
- Track Changes
- Synchronization
- Ownership
- Branching & Merging

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Version Control System (VCS) / Resource Control System (RCS)

What is Version Control System (VCS) ?

- Version control, also known as source control or resource control, is the practice of tracking and managing changes to software code.
- Version control systems (VCS) are software tools that help software teams manage changes to source code over time.
- Version control system is a part of source code management.

Working without VSC



Assets



Resources



Main



new-feature.js



new-feature_rev1.js



new-feature_rev1_final.js

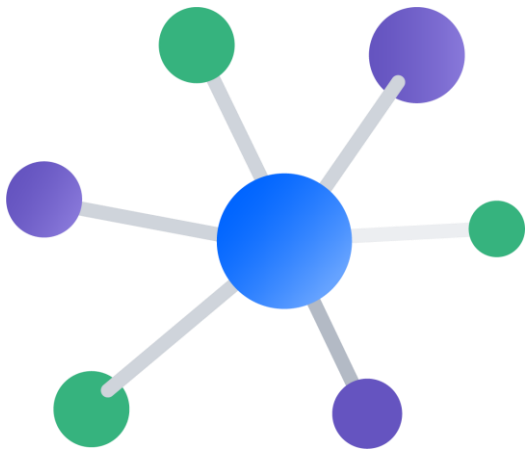


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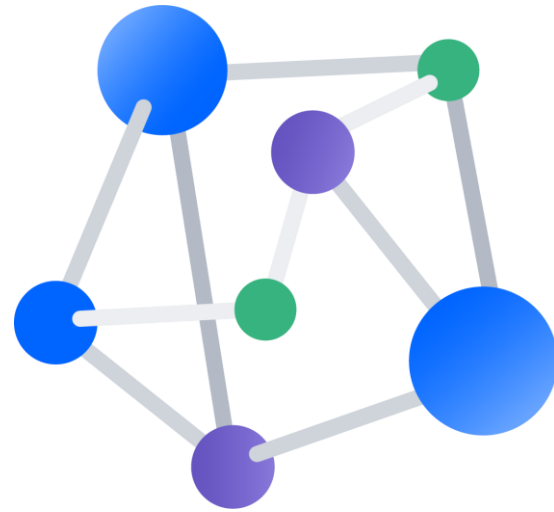
Why do we need VCS?

- Make backup
- Keep a history
- View changes
- Experiment
- Collaborate

Types of Version Control System

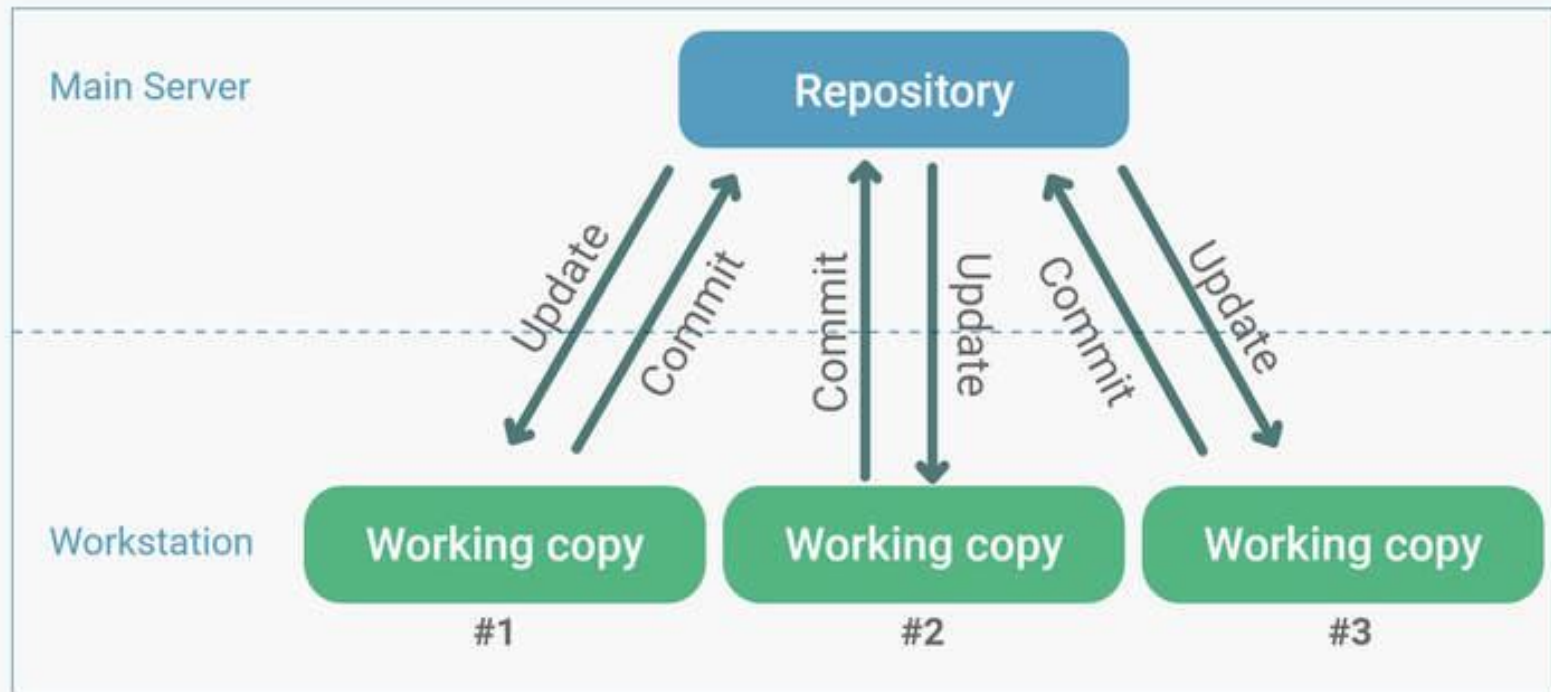


Central Version Control System

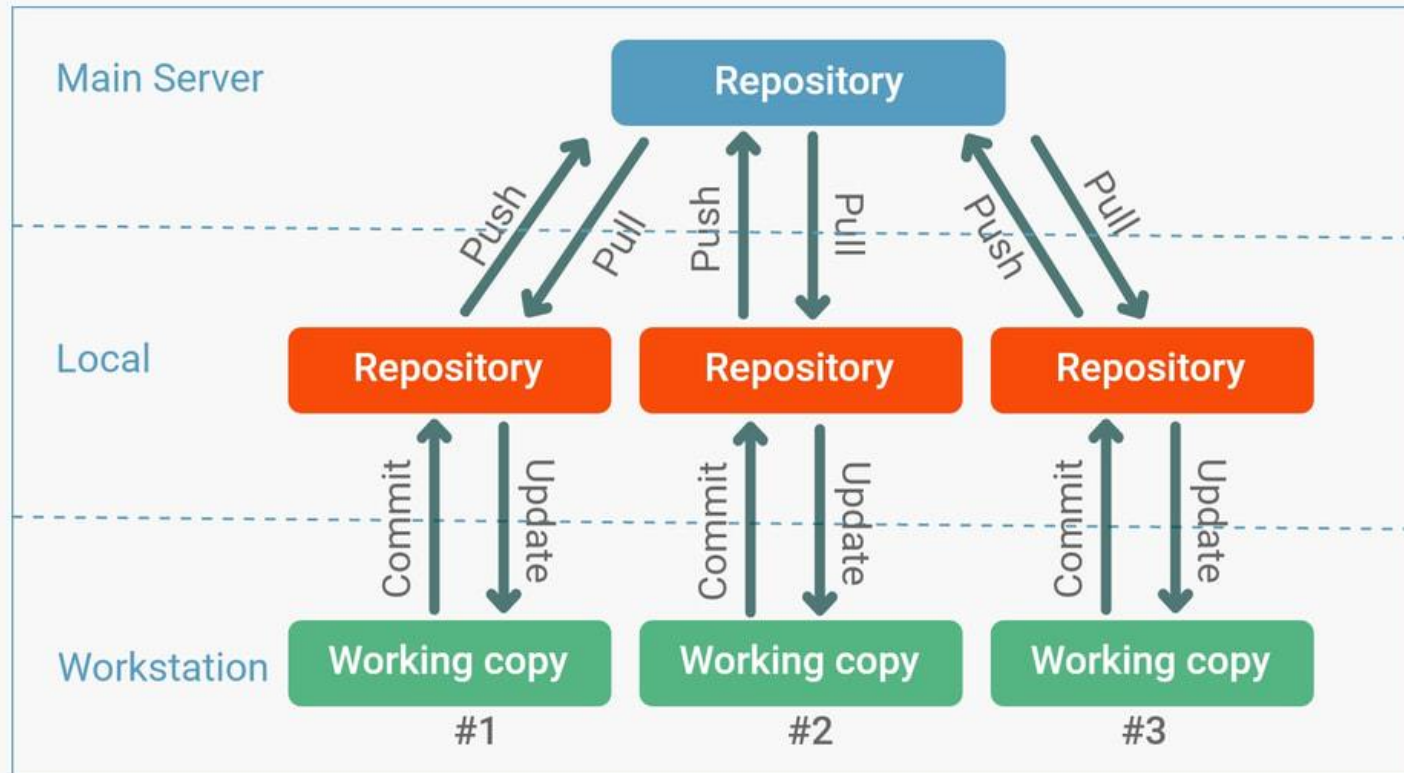


Distributed Version Control System

Central Version Control System



Distributed Version Control System



Popular VSC Software



Why use DVCS over CVCS?



Speed



Work offline



Offline / Local Backup

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Best Practices

SCM Best Practices

- Commit often
- Ensure you're working on the last version
- Make detailed notes
- Review changes before committing
- Use branches
- Agree of a workflow