Implementing Source Control for Templates

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Module Overview

Benefits of version control

Introduction to GIT

Popular repositories

Source control with VS Code

Benefits of Version Control

Many of us have long used our own time-tested source control

- Somefile_v1.bat
- Somefile_v2_withextrabit.bat
- Etc

Using a standardized source control solution offers numerous benefits

- Strong versioning of artifacts
- Integration with editing and DevOps solutions
- Collaboration with colleagues and beyond
- Local clone of repository and simple synchronization provides offsite storage
- Encourages CI/CD with constant validation
- Branches

Git 101

Git is the industry standard in version control today

It is an open-source solution that is available for most platforms

Can be used with local and remote hosted repositories

Clones can be created which are a complete copy of the remote origin

Most major online repositories support Git including GitHub and Azure Repos

Demo

Git Initial Setup

Integrating with VS Code

Using Git

Repository

A repository must be created (local or hosted remote)

Changes

Changes are staged with a comment from the workspace to the index

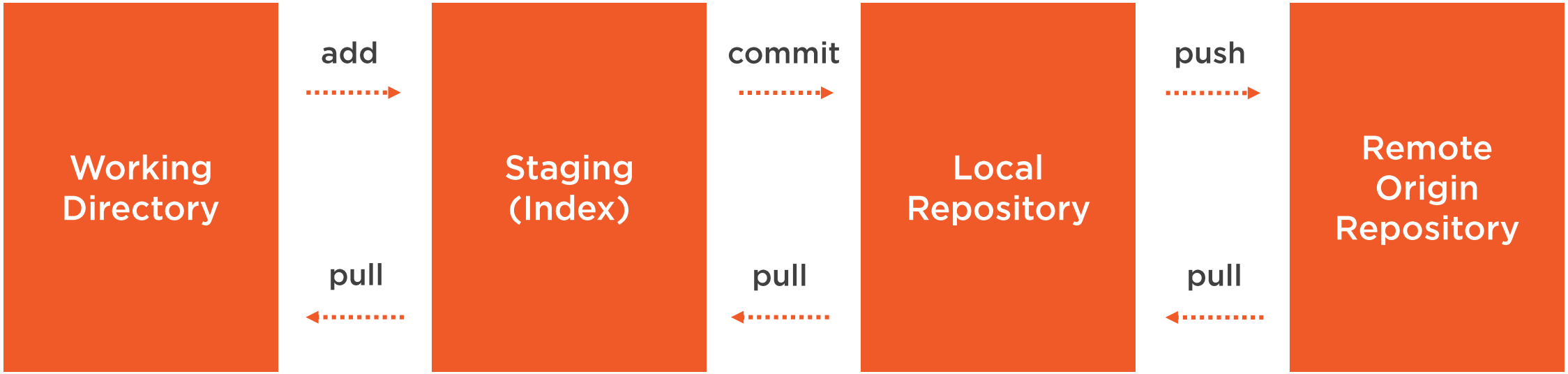
Local Repository

The staged changes are committed to the local repository (commonly a clone)

Remote Origin

Once committed to local repository the changes can be pushed to the remote origin

Add, Commit, Push and Pull



Types of Repository

A local repository is easily created using `git init` which creates the `.git` subfolder

Host repositories typically provide private and public repositories

Use private where the content should not be publicly visible, and you wish to control who can view and contribute

Using Branches

A repository has at least one primary branch, typically master

Additional branches can be created, often as part of development efforts which can later me merged back into the master when complete

Using branches keeps the master clean and enables development streams to be kept separate

Once branches are merged into master the branch is often deleted

What is a Pull Request?

You may hear people talk about "pull requests"

Why is this needed since you can pull whenever you want?

A pull *request* is asking the base/master branch of a repository to pull changes from your branch, i.e. take your changes and pull into theirs

Summary

- Benefits of version control
- Introduction to GIT
- Popular repositories
- Source control with VS Code

Thank you!