



WorkshopPLUS: Azure DevOps Essentials – Git

Developing and Collaborating in Visual Studio

Microsoft Services



Module: Azure Repos and VS

- Overview
- Git client support
- Work in the browser
- Branch Policies
- Pull Request
- Web Hooks

Azure Repos

Unlimited private Git repo hosting and support for TFVC that scales from a hobby project to the world's largest Git repositories



Works with your Git client

Securely connect with and push code into your Git repos from any IDE, editor, or Git client.



Web hooks and API integration

Add validations and extensions from the marketplace or build your own using web hooks and REST APIs.

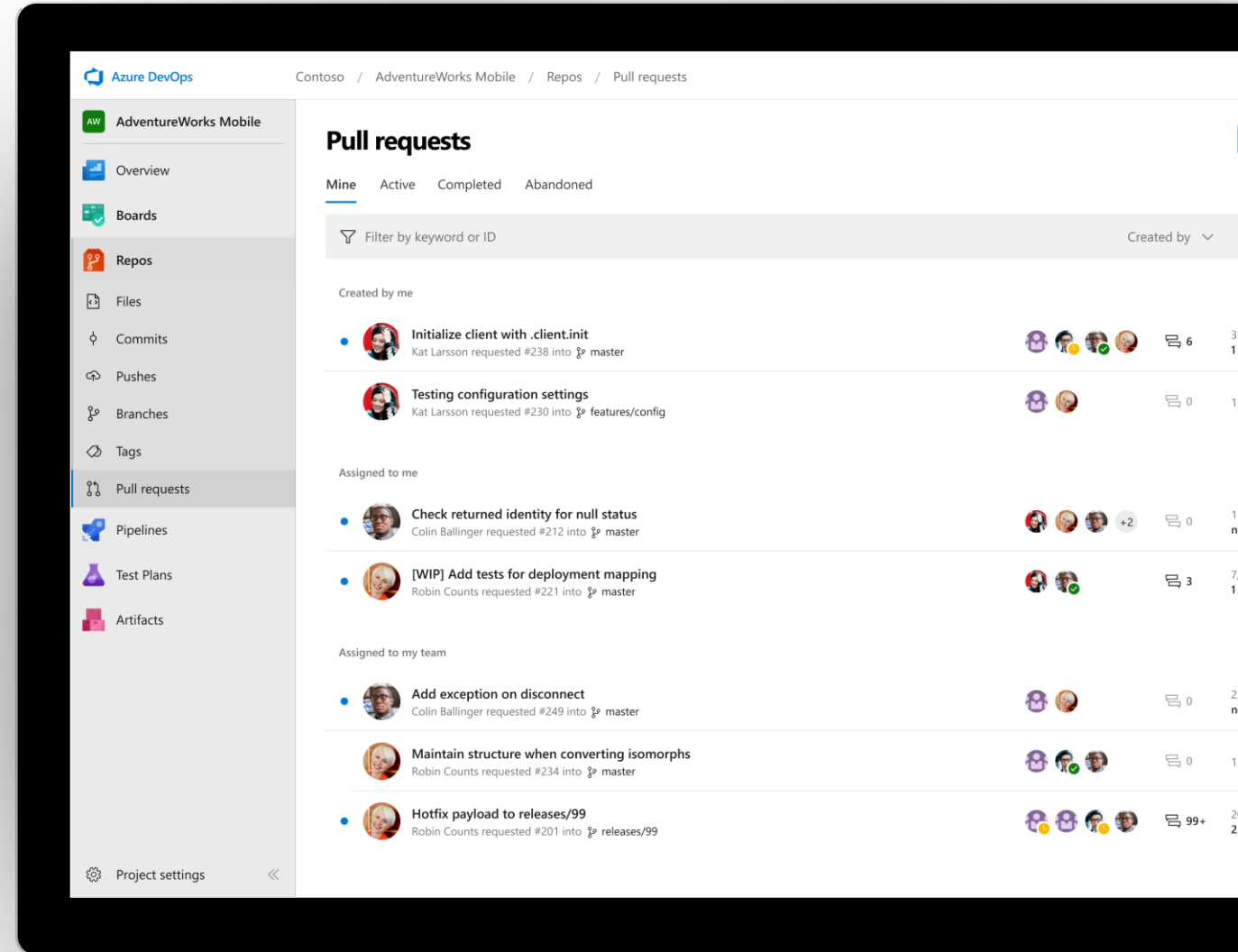


Semantic code search

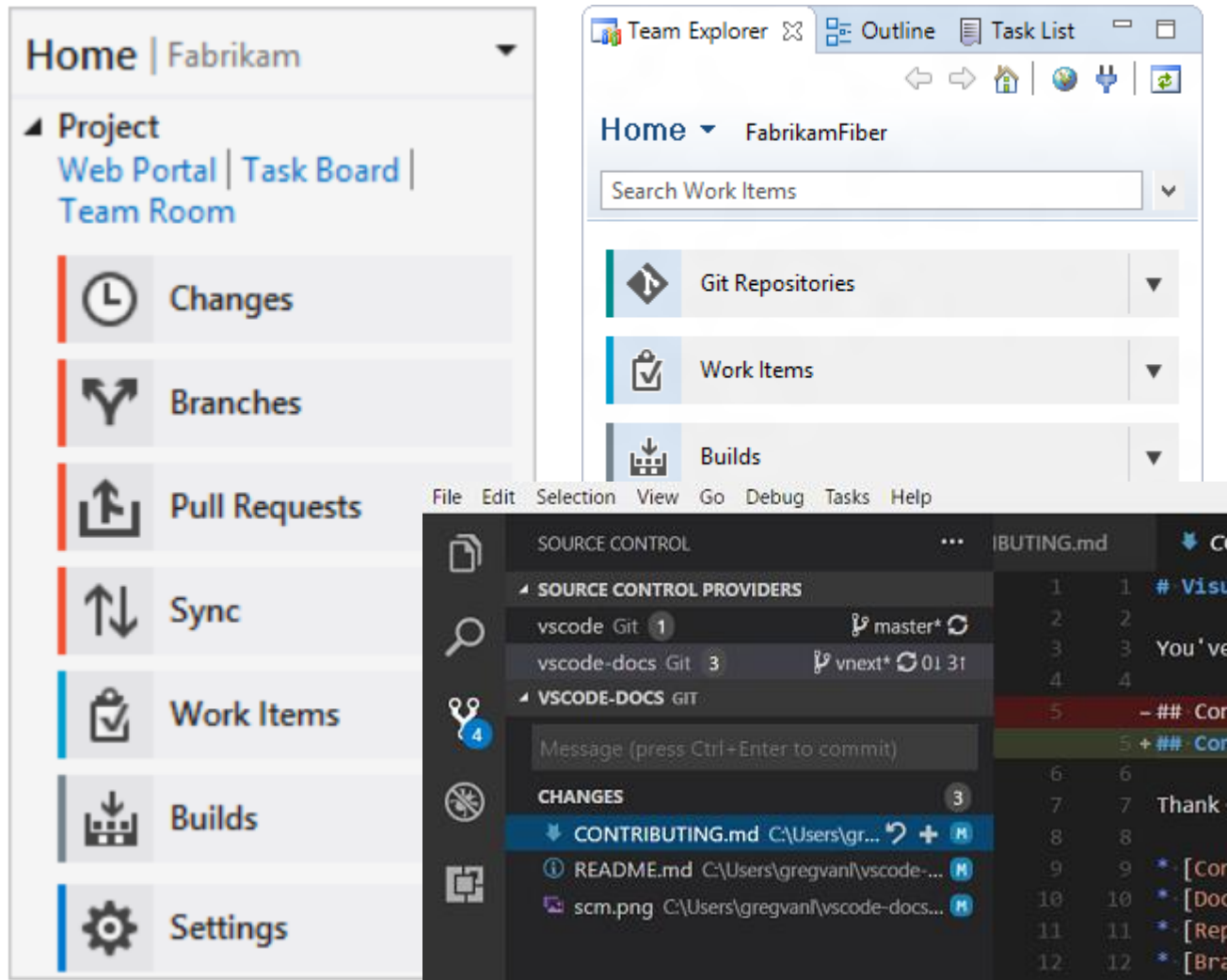
Quickly find what you're looking for with code-aware search that understands classes and variables.



<https://azure.com/devops>



Support any Git Client



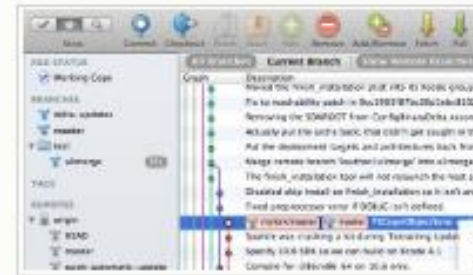
GUI Clients

Git comes with built-in GUI tools for committing ([git-gui](#)) and browsing ([gitk](#)), but there are several third-party tools for users looking for platform-specific experience.

If you want to add another GUI tool to this list, just follow the instructions.

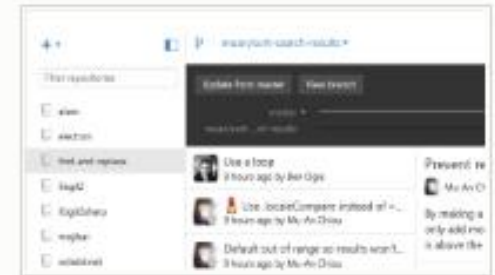


Windows GUIs are shown below ↓



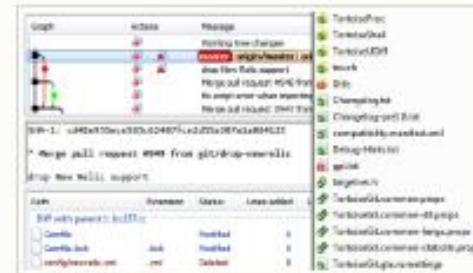
SourceTree

Platforms: Mac, Windows
Price: Free
License: Proprietary



GitHub Desktop

Platforms: Mac, Windows
Price: Free
License: MIT



TortoiseGit

Platforms: Windows
Price: Free
License: GNU GPL



Git Extensions

Platforms: Linux, Mac, Windows
Price: Free
License: GNU GPL

Work Directly from the Browser

The screenshot displays the GitHub web interface for the repository 'GitScrumDemo'. The left sidebar contains navigation links: Overview, Boards, Repos, Files, Commits, Pushes, Branches, Tags, Pull requests, and Release Note Generator. The 'Files' section is active, showing a file tree for the path 'master > GitScrumDemo > Dev > FabrikamFiber.CallCenter > FabrikamFiber.Web'. The file 'Web.config' is selected and highlighted. The right pane shows the 'Contents' tab of the 'Web.config' file, with the 'Edit' button highlighted by a red rectangle. The file content is XML configuration for an ASP.NET application, including connection strings and app settings.

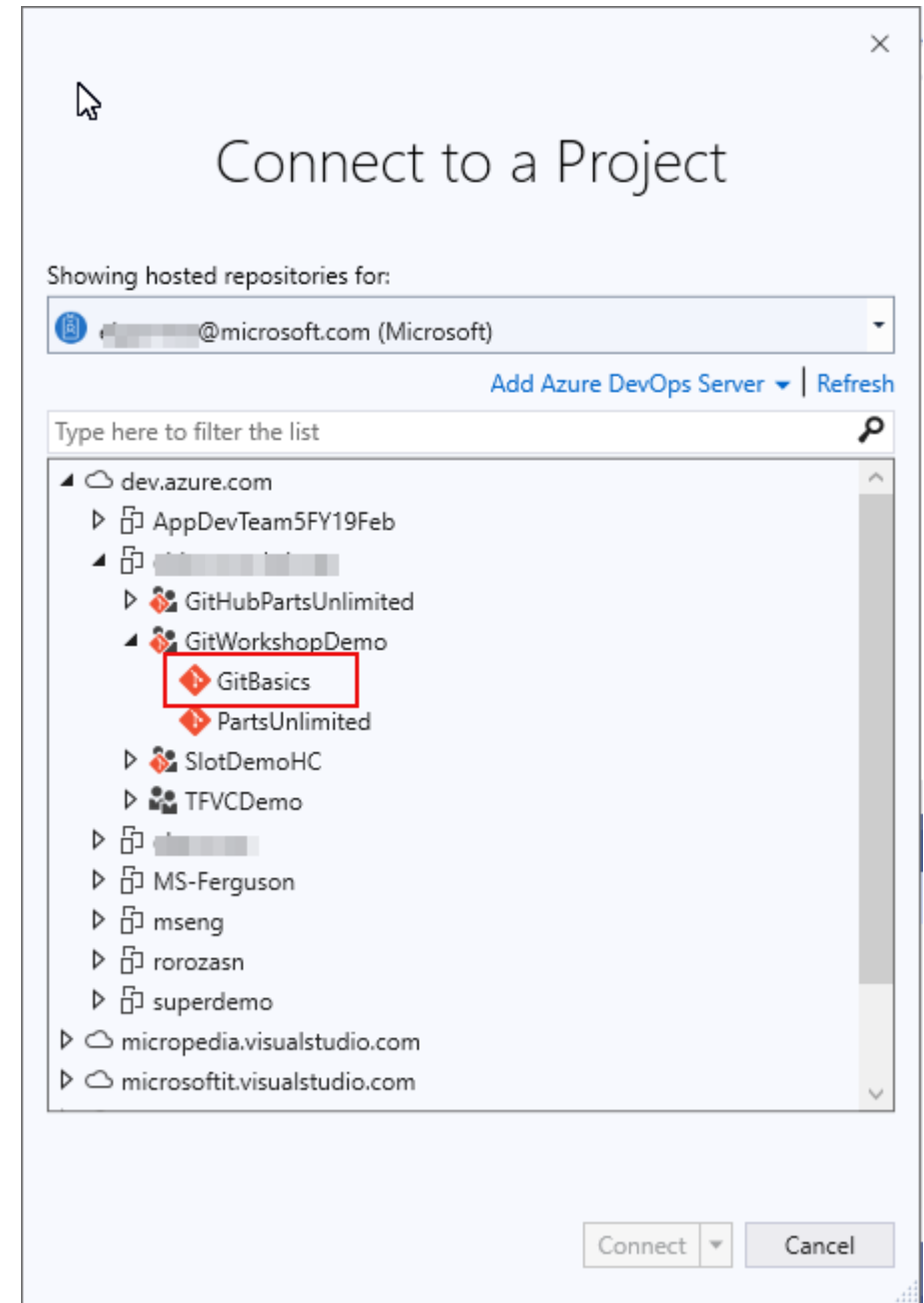
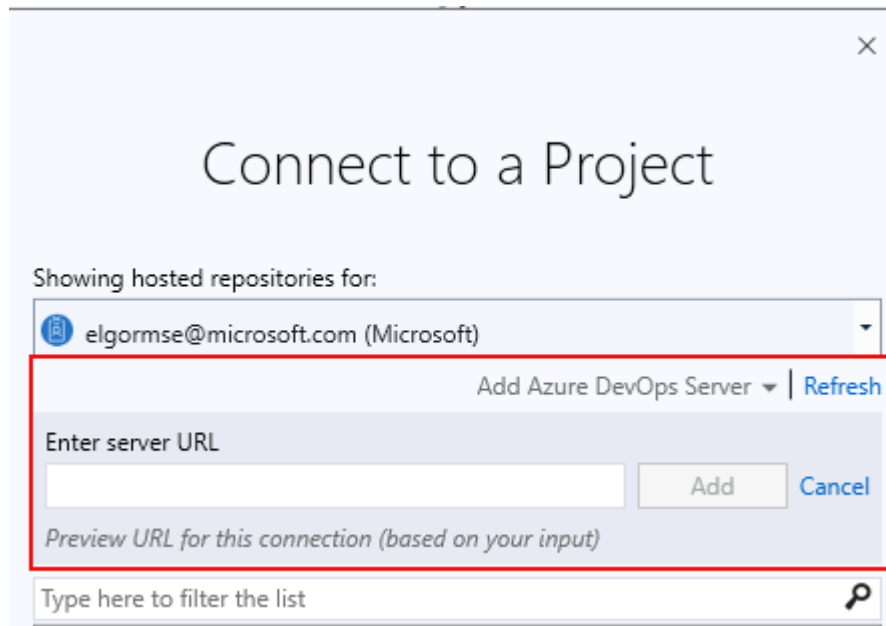
master > GitScrumDemo / Dev / FabrikamFiber.CallCenter / FabrikamFiber.Web / **Web.config**

Contents History Compare Blame **Edit** Rename Delete

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <!--
3 For more information on how to configure your ASP.NET application, please
4 http://go.microsoft.com/fwlink/?LinkId=152368
5 -->
6 <configuration>
7   <connectionStrings>
8     <!--<add name="ApplicationServices" connectionString="data source=localh
9     <add name="FabrikamFiber-Express" connectionString="data source=.;Integr
10    <add name="FabrikamFiber-DataWarehouse" connectionString="data source=.;
11  </connectionStrings>
12  <appSettings>
13    <add key="webpages:Version" value="2.0.0.0" />
14    <add key="PreserveLoginUrl" value="true" />
15    <add key="ClientValidationEnabled" value="true" />
16    <add key="UnobtrusiveJavaScriptEnabled" value="true" />
17  </appSettings>
18  <system.web>
19    <httpRuntime requestValidationMode="2.0" />
20    <compilation debug="true" targetFramework="4.0">
21      <assemblies>
22        <add assembly="System.Web.Abstractions, Version=4.0.0.0, Culture=neu
23        <add assembly="System.Web.Helpers, Version=2.0.0.0, Culture=neutral,
```

Cloning a Remote Repo

1. From Azure DevOps Server (TFS)
2. Azure DevOps



Continuous Integration



Azure Pipelines

 GitIntroduction

☒ Enable continuous integration

☐ Batch changes while a build is in progress

Branch filters

Type

Branch specification

Include 

 master 

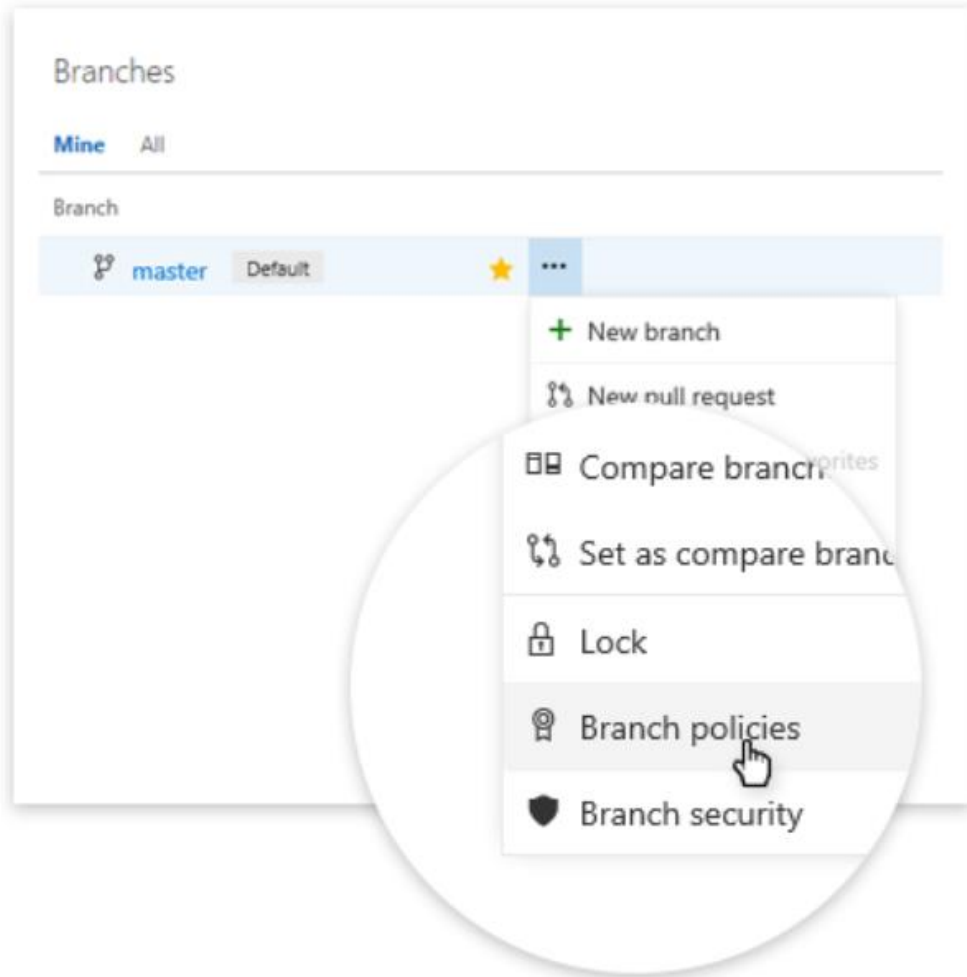


 Add

Path filters

 Add

Branch Policies



Policies for: GitIntroduction > GitIntroduction > master

 Save changes  Discard changes

Protect this branch

- Setting a Required policy will enforce the use of pull requests when updating the branch
- Setting a Required policy will prevent branch deletion
- Manage permissions for this branch on the [Security page](#)

☐

Require a minimum number of reviewers

Require approval from a specified number of reviewers on pull requests.

☐

Check for linked work items

Encourage traceability by checking for linked work items on pull requests.

☐

Check for comment resolution

Check to see that all comments have been resolved on pull requests.

☐

Enforce a merge strategy

Require a specific type of merge when pull requests are completed.


Build validation


Validate code by pre-merging and building pull request changes


Pull Requests


- Enables your team to provide feedback on changes in topic branches before merging the code into the master branch
- Create a Pull Request to review and merge code in a Git team project
- Reviewers can step through the proposed changes, leave comments, and vote to approve or reject the code.


Pull Requests


 **GitScrumDemo** +


 Overview


 Boards


 **Repos**


 Files


 Commits


 Pushes


 Branches

 Tags

 **Pull requests**

 Release Note Generator

 Custom Code Hub

 Pipelines

 Project settings <<

New Pull Request

🔗 master ▾ into 🔗 Sunderland ▾ ↔

Title *

Aligning the branches

Add label

Description

for Demo Purposes

Markdown supported.

Aa ▾ **B** *I* 🔗 </> ☰ ☷ ☹ @ # 🔗

Add commit messages

for Demo Purposes

Reviewers

Search users and groups to add as reviewers

Work Items

Search work items by ID or title ▾

Create

Azure DevOps Services Web Hooks

Build and release

- Build completed
- Release created
- Release abandoned
- Release deployment approval completed
- Release deployment approval pending
- Release deployment completed
- Release deployment started

Code

- Code checked in
- Code pushed
- Pull request created
- Pull request merge commit created
- Pull request updated

Work item

- Work item commented on
- Work item created
- Work item deleted
- Work item restored
- Work item updated

NEW SERVICE HOOKS SUBSCRIPTION

Trigger

Select an event to trigger on and configure any filters.

Trigger on this type of event

Code pushed

FILTERS

Repository optional
GitIntroduction

Branch optional
[Any]

Pushed by a member of group: optional
[Any]

Previous Next Test Finish Cancel

<https://docs.microsoft.com/en-us/azure/devops/service-hooks/events?view=azure-devops>

Demo: Azure Repos

Azure DevOps Project
Set Branch Policy
Pull request
History



Lab: Developing and Collaborating with Git

Clone
Edit and Commit
Push
Create pull request
Merge changes

