

# DevOps基础工具培训

--Gitlab的使用

Automatic  
Driving  
System

# 内容提要

- Gitlab介绍
- Gitlab管理
- Gitlab使用
- 实际操作-Git 与Gitlab互动

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# Gitlab介绍

- Git诞生于2005年，因“穷”页生，Bitkeeper收回了Linux社区免费使用的权利，因此linux社区（主要是Linus）自息开发了Git.
- 特点：速度快、设计简单、分布式、有能力高效管理超复杂的项目
- 主要功能包括Git仓库管理、Code Review、问题追踪、wiki
- 丰富的插件：可以同时与jira、jenkins等集成

# Gitlab介绍

- 代码托管服务
- 访问权限控制
- 问题跟踪、bug记录、跟踪与讨论
- Wiki项目的一些说明和文档
- 代码审查 可以查看、评论代码

# Gitlab使用

## Gitlab能作什么

- 申请并分配帐号
- 安装本地的Git工具
- 生成ssh-key, GitLab服务器对接
- 配置本地属性
- 与GitLab服务器交互

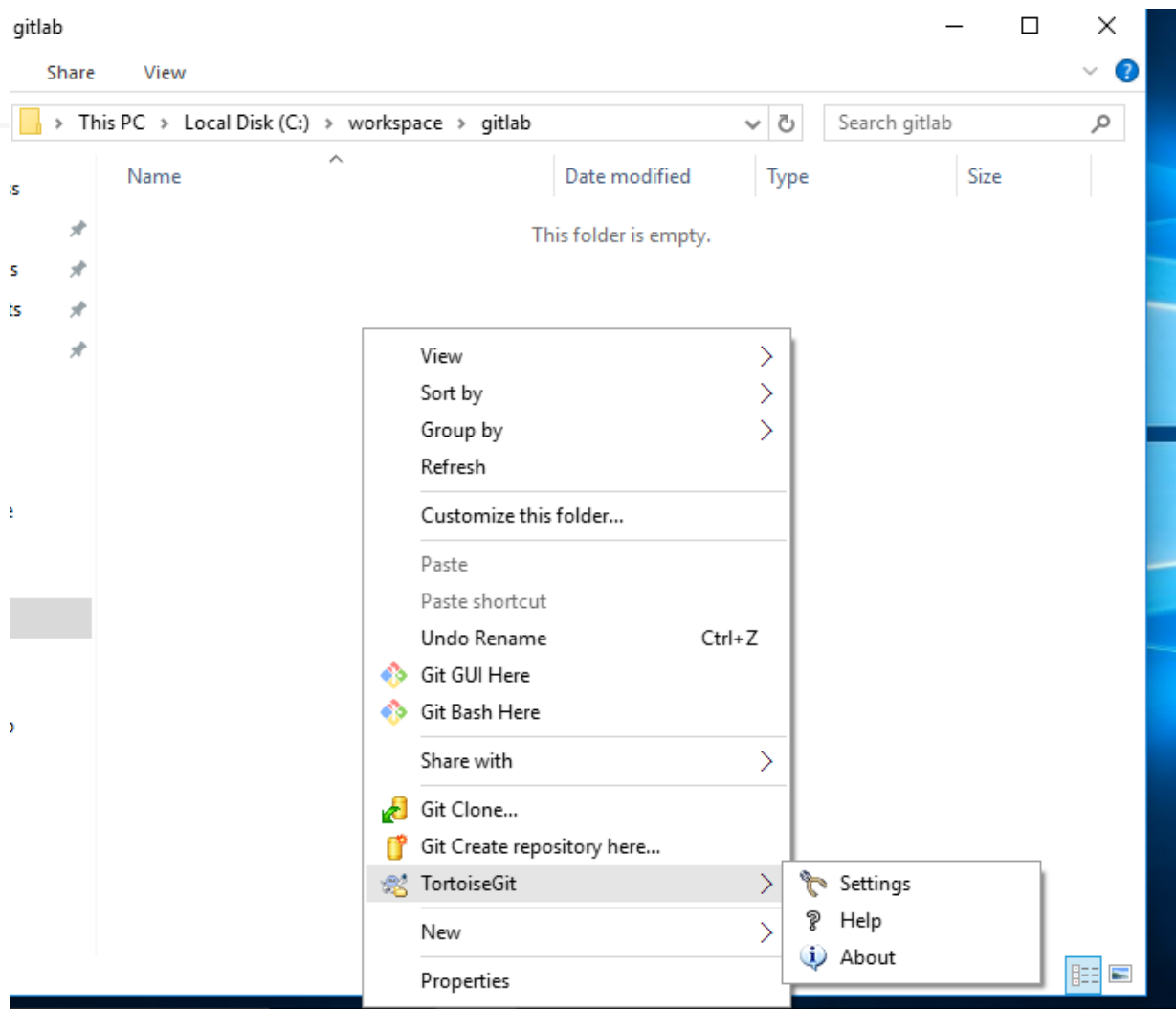
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# Gitlab管理

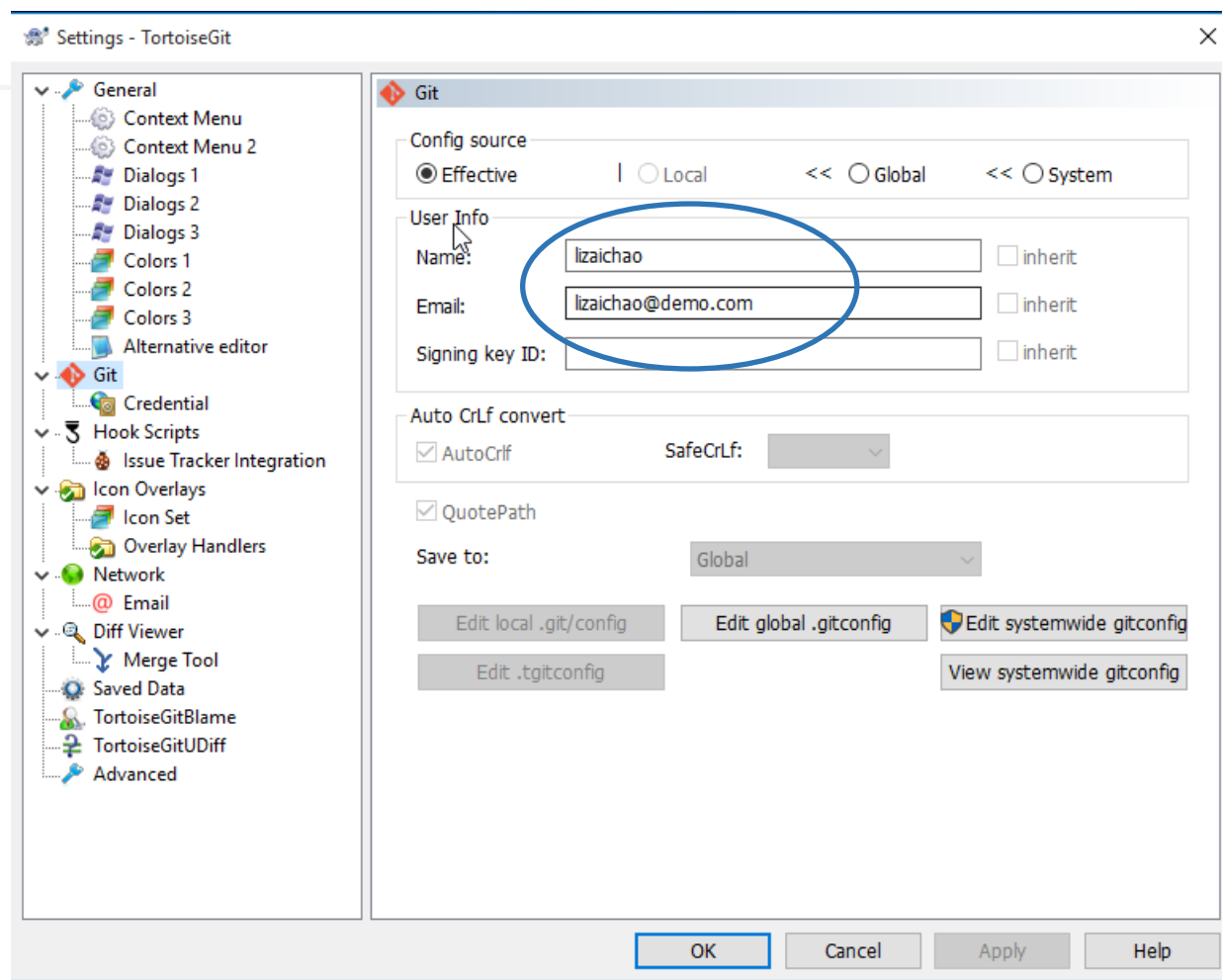
## 设置 TortoiseGit





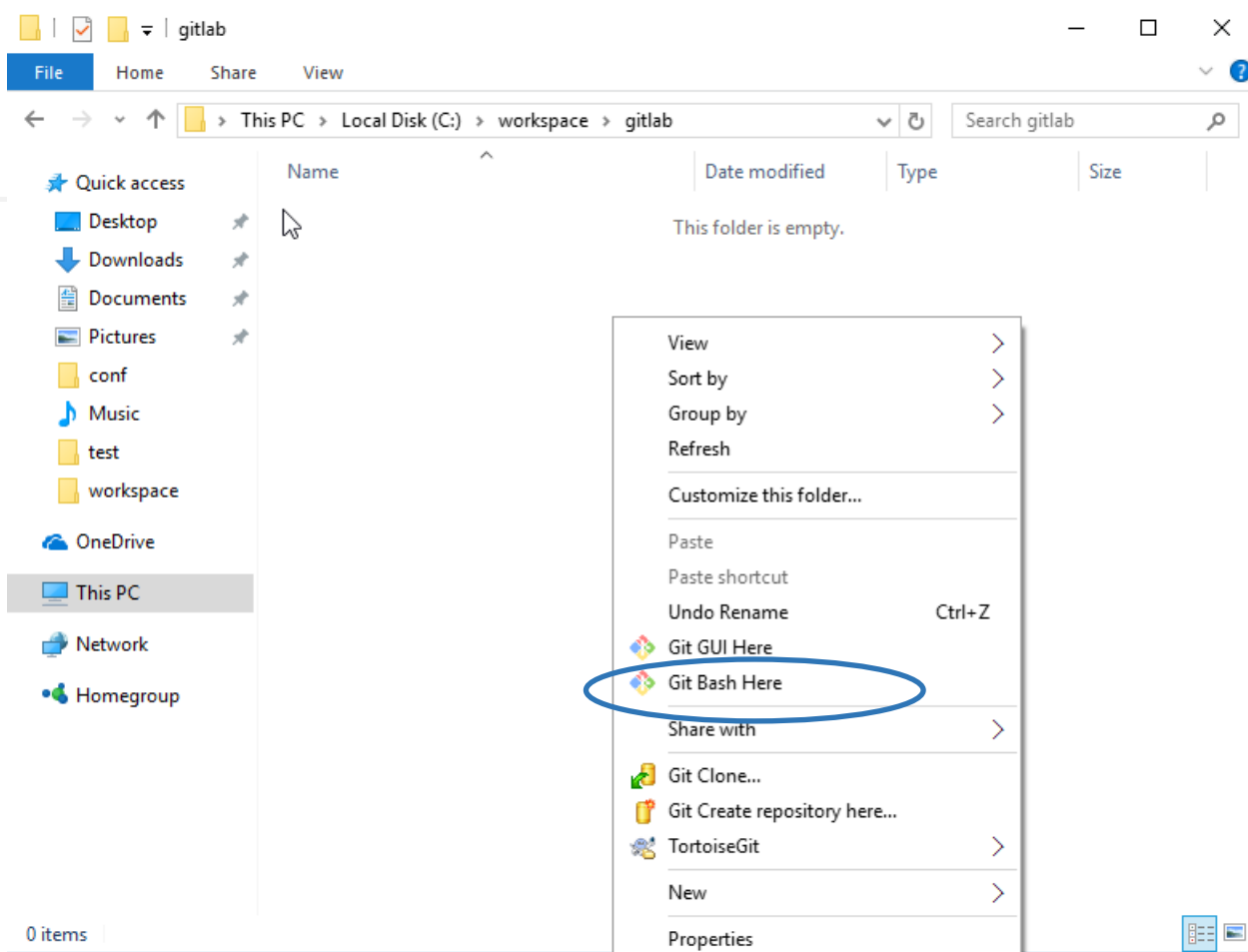
# Gitlab管理

## 设置 TortoiseGit



# Gitlab管理

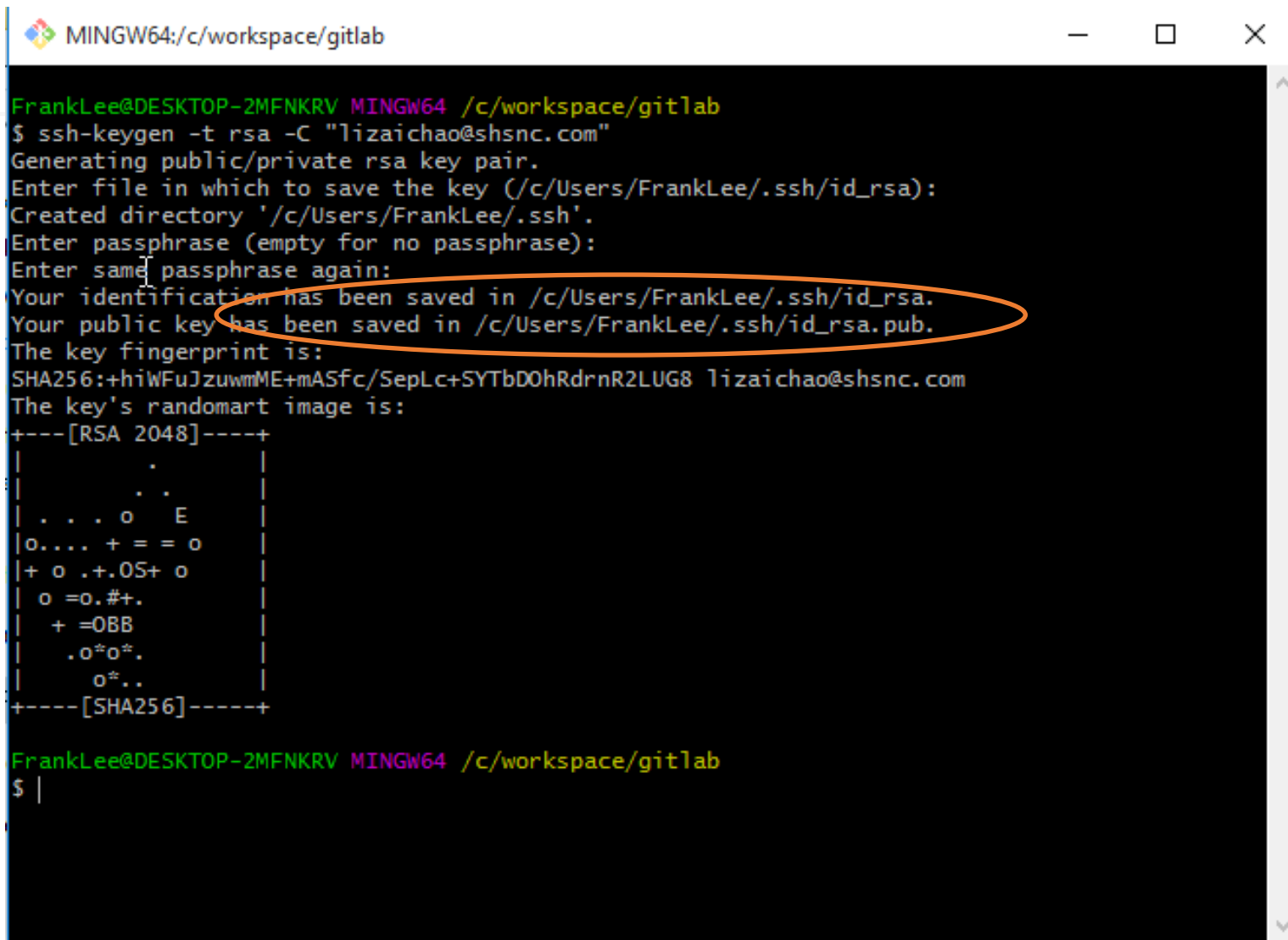
## 生成 SSH Key



# Gitlab管理

## 生成 SSH Key

```
ssh-keygen -t rsa -C "username@domain.com"
```



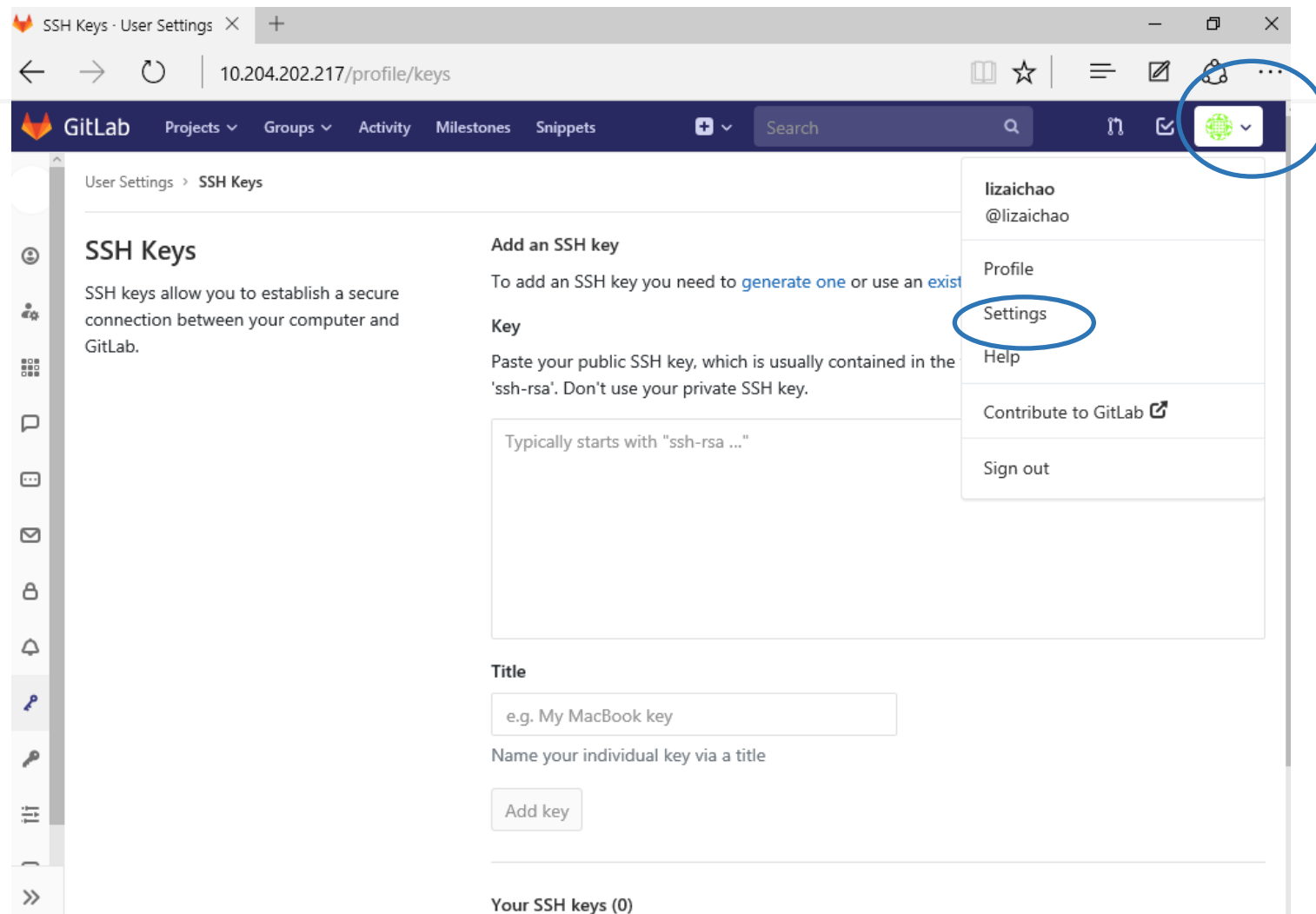
```
MINGW64:/c/workspace/gitlab

FrankLee@DESKTOP-2MFNKRK MINGW64 /c/workspace/gitlab
$ ssh-keygen -t rsa -C "lizaichao@shsnc.com"
Generating public/private rsa key pair.
Enter file in which to save the key (/c/Users/FrankLee/.ssh/id_rsa):
Created directory '/c/Users/FrankLee/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /c/Users/FrankLee/.ssh/id_rsa.
Your public key has been saved in /c/Users/FrankLee/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:+hiWfuJzuwmME+mASfc/SepLc+SYTbD0hRdrnR2LUG8 lizaichao@shsnc.com
The key's randomart image is:
+---[RSA 2048]---+
|           .           |
|        . .           |
|     . . . o   E      |
|o.... + = = o         |
|+ o .+.OS+ o          |
| o =o.#+.             |
|  + =OBB              |
|  .o*o*.              |
|   o*..               |
+-----[SHA256]-----+

FrankLee@DESKTOP-2MFNKRK MINGW64 /c/workspace/gitlab
$ |
```

# Gitlab管理

## 在 Gitlab 上配置 SSH Key



## 在 Gitlab 上配置 SSH Key

User Settings > SSH Keys

### SSH Keys

SSH keys allow you to establish a secure connection between your computer and GitLab.

#### Add an SSH key

To add an SSH key you need to [generate one](#) or use an [existing key](#).

#### Key

Paste your public SSH key, which is usually contained in the file '~/.ssh/id\_rsa.pub' and begins with 'ssh-rsa'. Don't use your private SSH key.

```
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAQCA4DeuEqoRbVj3VS/lxjEHS4Fi7ITyBXEmm3fvCZPMzO9
ThArcCbDuZ1FNAR+5x3mpuaG962gadNo8RVNk7ZvYU20WNCE3alFNpr5nd22mXQHtsBKq4AH
zmdjQrw9U36zSO2VPIWmFzu4wflx29zfC4mbpl2vgGtZ/4fS9VutlJKkqoQ+VUaeVsDi+IYEMx7oe
K9WdopWxr4Kc4WcP0/HrXaDONurj7GwHp6Qc1W/8i+dtcK0DPuJvQ979ZRLpXPtcHkWTIf5t+fl
Y4xbzbC1HOGzxUW90jW1lxUKjUUxttpZL9kO3I/OVPclR1LSyF/sQobRXjYhRMrt32A2AVDm8T
lizaichao@ ' '
|
```

#### Title

lizaichao@ ' '

Name your individual key via a title

Add key

# Gitlab管理

## 在 Gitlab 上配置 SSH Key - 完成

GitLab

Projects ▾

Groups ▾

Activity

Milestones

Snippets

+ ▾

Search

🔍

🔖

📧

🌐 ▾

User Settings ▸ SSH Keys ▸ lizaichao@shsnc.com

SSH Key

Title: **lizaichao@** ...

Created on: **Oct 26, 2018 2:41am**

Last used on: **N/A**

Fingerprint: 39:9a:4d:61:48:6e:bf:2f:05:33:45:9a:bc:32:ff:e2

ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQAC4DeuEqoRbVj3VS/1xjEHS4Fi7lTyBXEmm3fvCZPMzO9ThArcCbDuZ1FNAR+5x3mpuaG962gadNo8RVNk7ZvYU20WNCE3a1FNpr5nd22mXQhtsBKq4AHzmdjQrw9U36zS02VP1WmFzu4wflx29zfc4mbpl2vgGtZ/4fS9VutIJKkqoQ+VUaeVsDi+IYEMx7oeK9WdopWxr4Kc4WcP0/HrXaDONurj7GwHp6Qc1W/8i+dtcK0DPuJvQ979ZRLpXPtcHkWT1f5t+fIY4xbzbC1H0GzxUW90jW1lxUKjUUxttpZL9k03I/OVPcIR1LSyF/sQobRXjYhRMrt32A2AVDm8T lizaichao@ ...

Remove

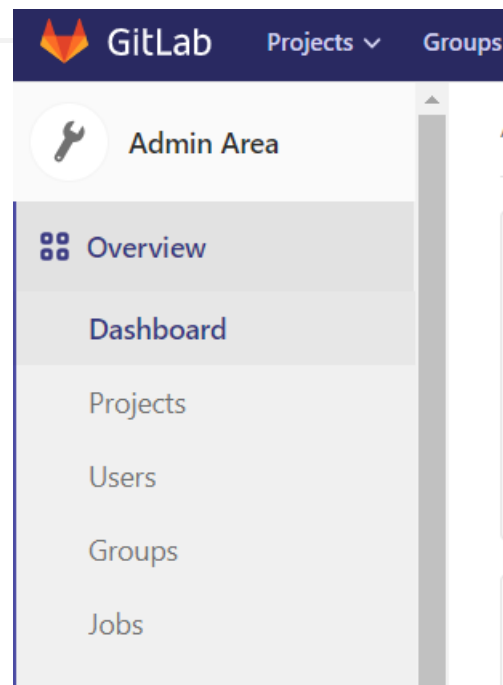
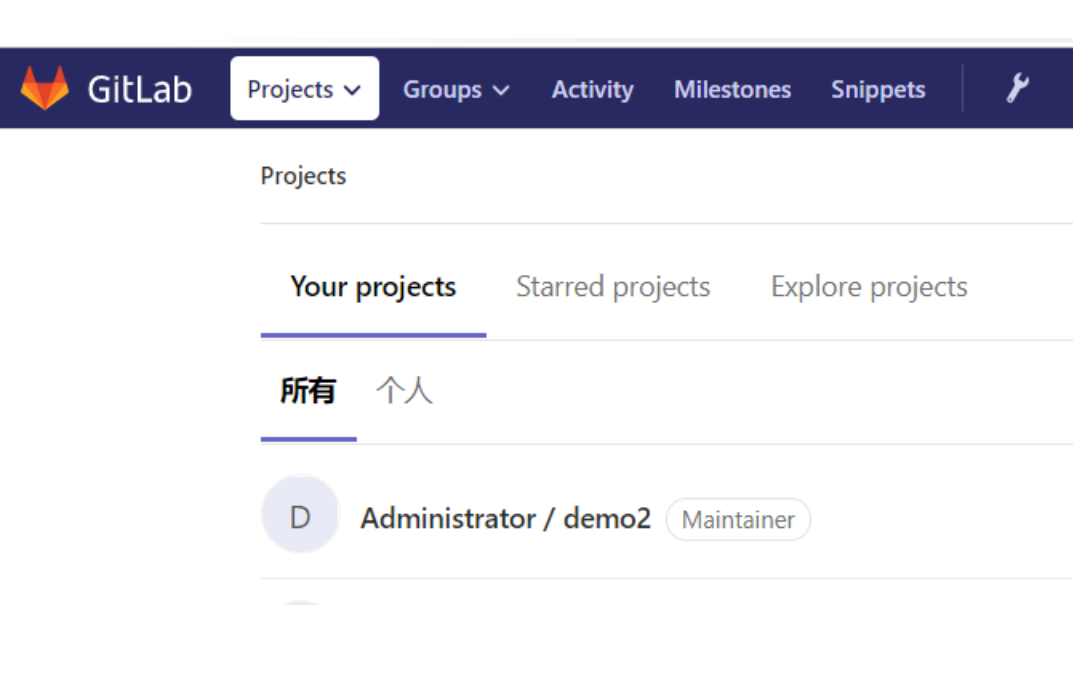
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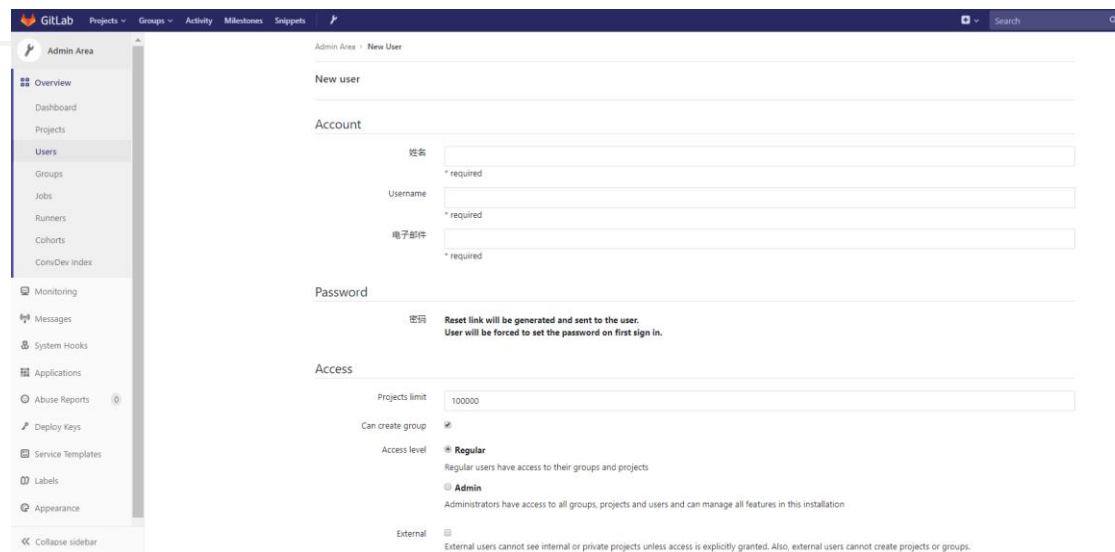
# Gitlab使用

## 建立帐号




# Gitlab使用


## 建立帐号



# Gitlab使用

## Edit->设置密码

 Admin Area

 Overview

Dashboard

Projects

**Users**


Groups


Jobs


Runners


Cohorts

ConvDev Index

 Monitoring

 Messages

 System Hooks

 Applications

Admin Area > Users

Edit user: lizaichao

Account

姓名

\* required

Username

\* required

电子邮件

\* required

Password

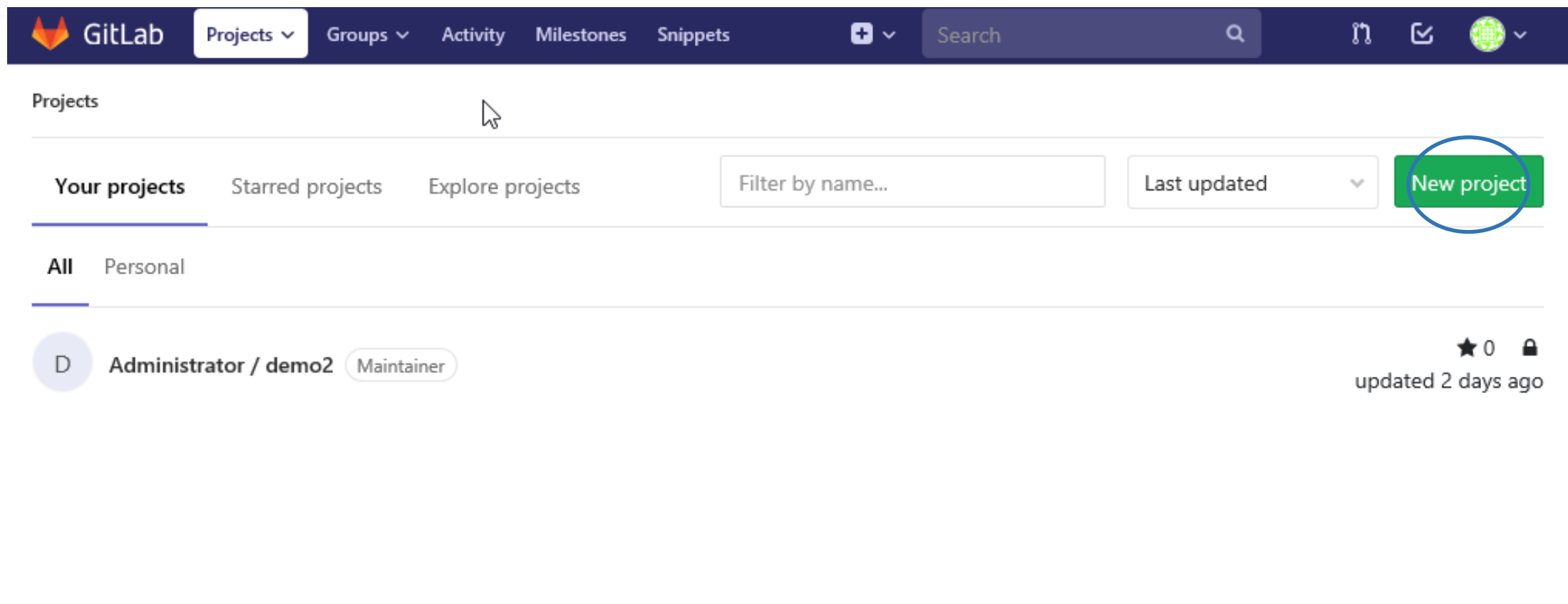
密码

Password confirmation

Account






# Gitlab使用

## 创建项目



# Gitlab使用

## 创建项目


 **GitLab** Projects Groups Activity Milestones Snippets  Search   

files (repository), plan your work (issues), and publish your documentation (wiki), [among other things](#).

All features are enabled for blank projects, from templates, or when importing, but you can disable them afterward in the project settings.

**Tip:** You can also create a project from the command line. [Show command](#)

Private projects can be created in your personal namespace with:

`git push --set-upstre` 

[What does this command do?](#)

**Project path**

`http://10.204.202.217/lizaichao/`


**Project name**


`learn`


Want to house several dependent projects under the same namespace? [Create a group](#)


**Project description (optional)**

Description format

**Visibility Level** 

☒  **Private**  
Project access must be granted explicitly to each user.

☐  **Internal**  
The project can be accessed by any logged in user.

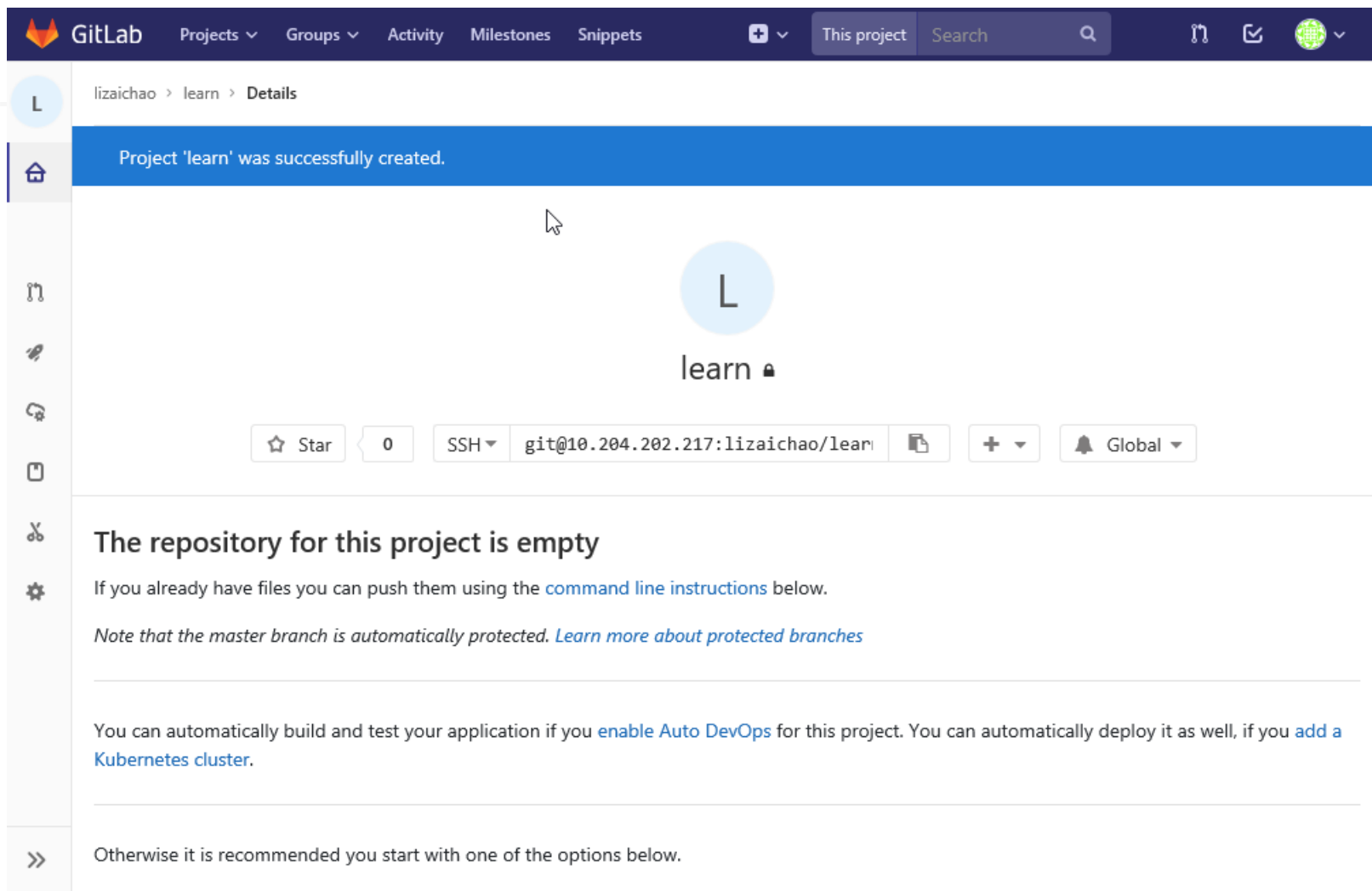
☐  **Public**  
The project can be accessed without any authentication.

☐ **Initialize repository with a README**  
Allows you to immediately clone this project's repository. Skip this if you plan to push up an existing repository.

Create project Cancel

# Gitlab使用

## 创建项目



# Gitlab使用

## 创建项目

The screenshot shows the GitLab interface for creating a new project. The top navigation bar includes links for Projects, Groups, Activity, Milestones, and Snippets. The left sidebar shows the project 'learn' with various options like Project, Details, Activity, Cycle Analytics, Issues, Merge Requests, CI / CD, Operations, Wiki, Snippets, and Settings. The main content area provides instructions on how to create a new repository, including command line instructions for global setup, creating a new repository, and existing folder/repository setups. A 'New file' button is prominently displayed at the top of the main content area. A 'Remove project' button is located at the bottom right of the page.

GitLab Projects Groups Activity Milestones Snippets

learn

Project

Details

Activity

Cycle Analytics

Issues 0

Merge Requests 0

CI / CD

Operations

Wiki

Snippets

Settings

Otherwise it is recommended you start with one of the options below.

New file Add Readme Add License Enable Auto DevOps Add Kubernetes cluster

Command line instructions

Git global setup

```
git config --global user.name "lizaichao"
git config --global user.email "lizaichao@shsnc.com"
```

Create a new repository

```
git clone git@10.204.202.217:lizaichao/learn.git
cd learn
touch README.md
git add README.md
git commit -m "add README"
git push -u origin master
```

Existing folder

```
cd existing_folder
git init
git remote add origin git@10.204.202.217:lizaichao/learn.git
git add .
git commit -m "Initial commit"
git push -u origin master
```

Existing Git repository

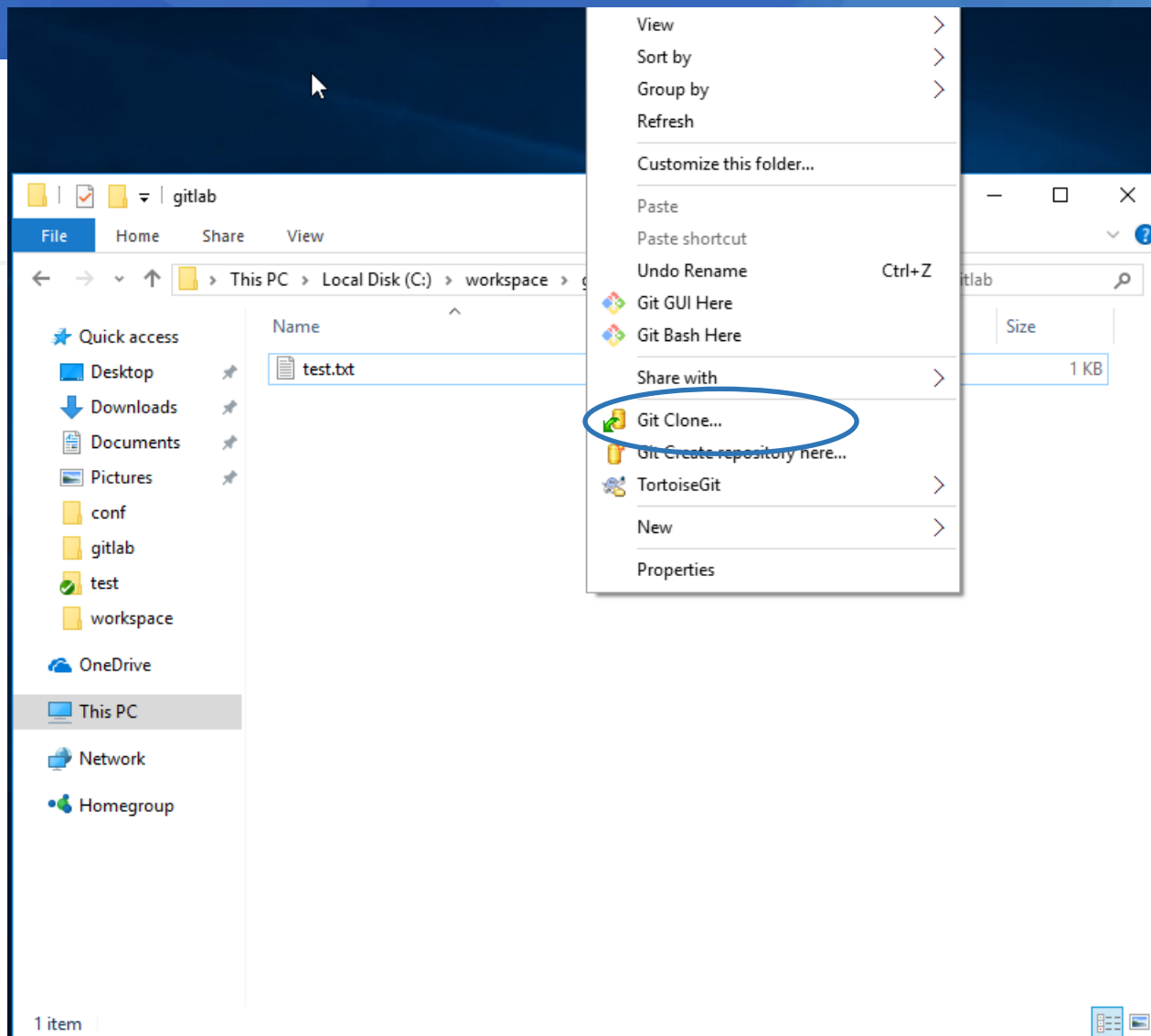
```
cd existing_repo
git remote rename origin old-origin
git remote add origin git@10.204.202.217:lizaichao/learn.git
git push -u origin --all
git push -u origin --tags
```

Remove project



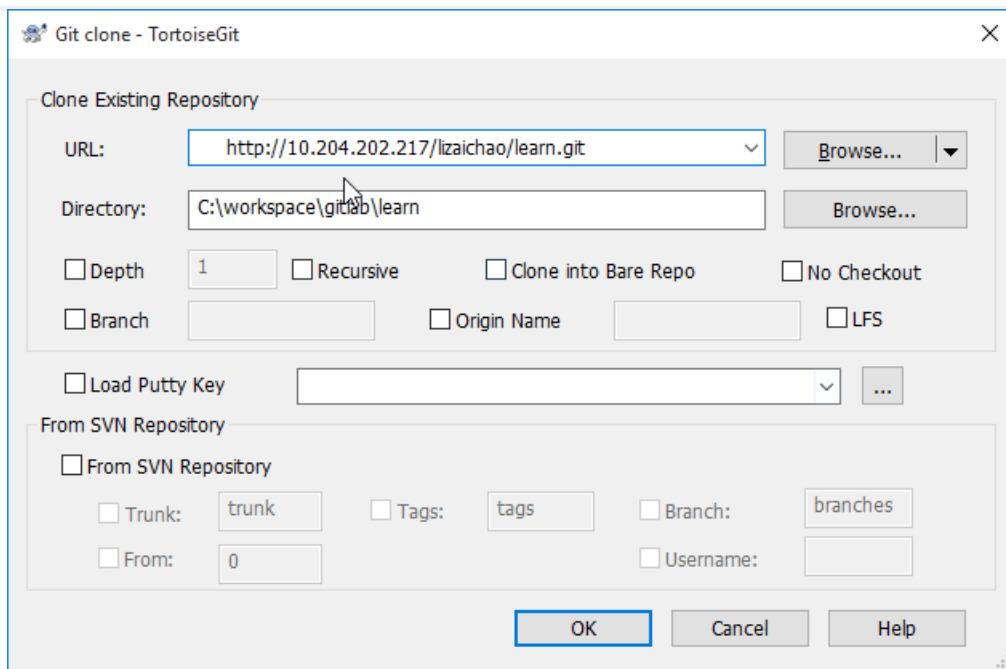
# Gitlab使用

把项目拉取到本地



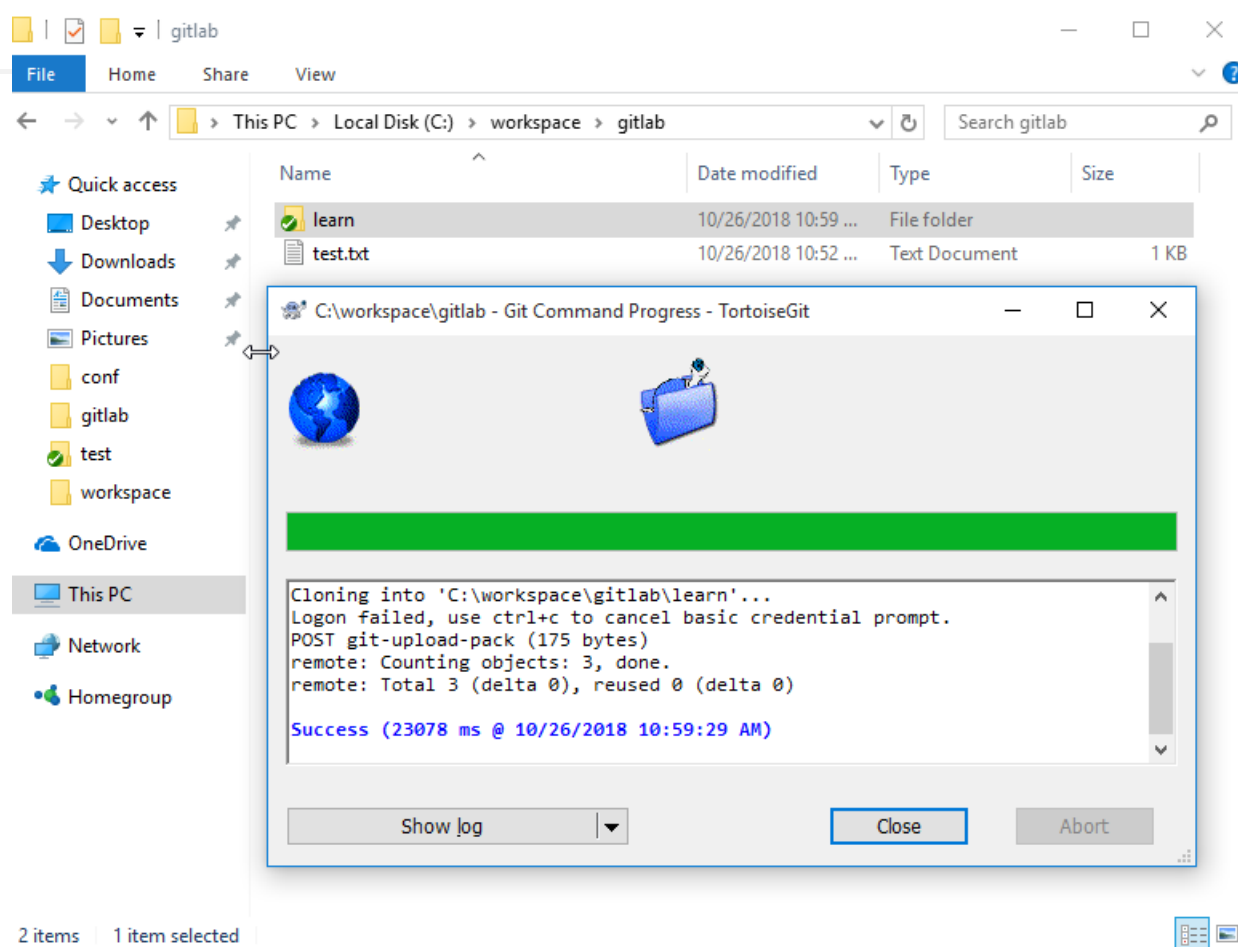
# Gitlab使用

把项目拉取到本地



# Gitlab使用

## 把项目拉取到本地



# 内容提要

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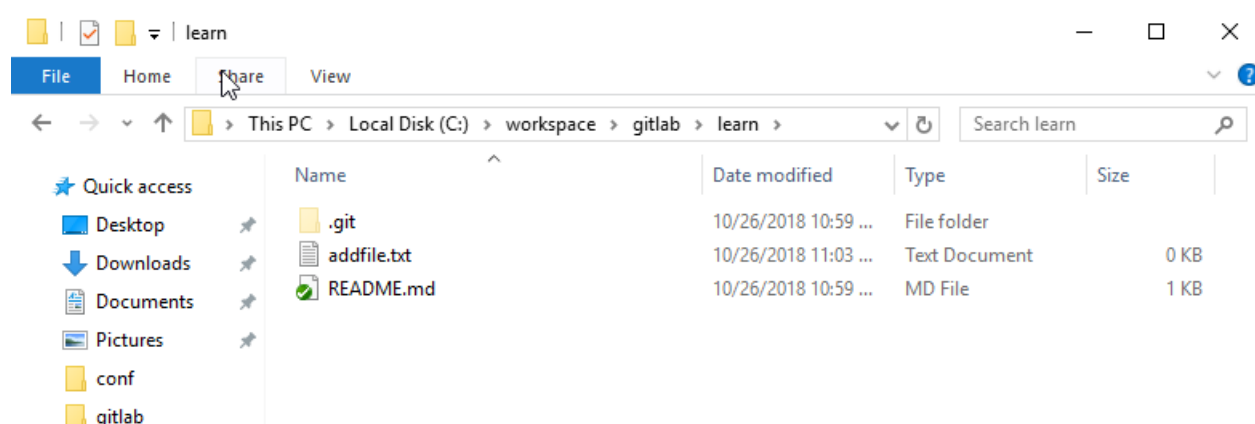
# 实际操作-Git 与Gitlab互动

## 增加和修改文件并提交到中心库

- 增加或修改文件
- 本地提交
- 推送到中心库
- 创建开发分支
- 分支切换

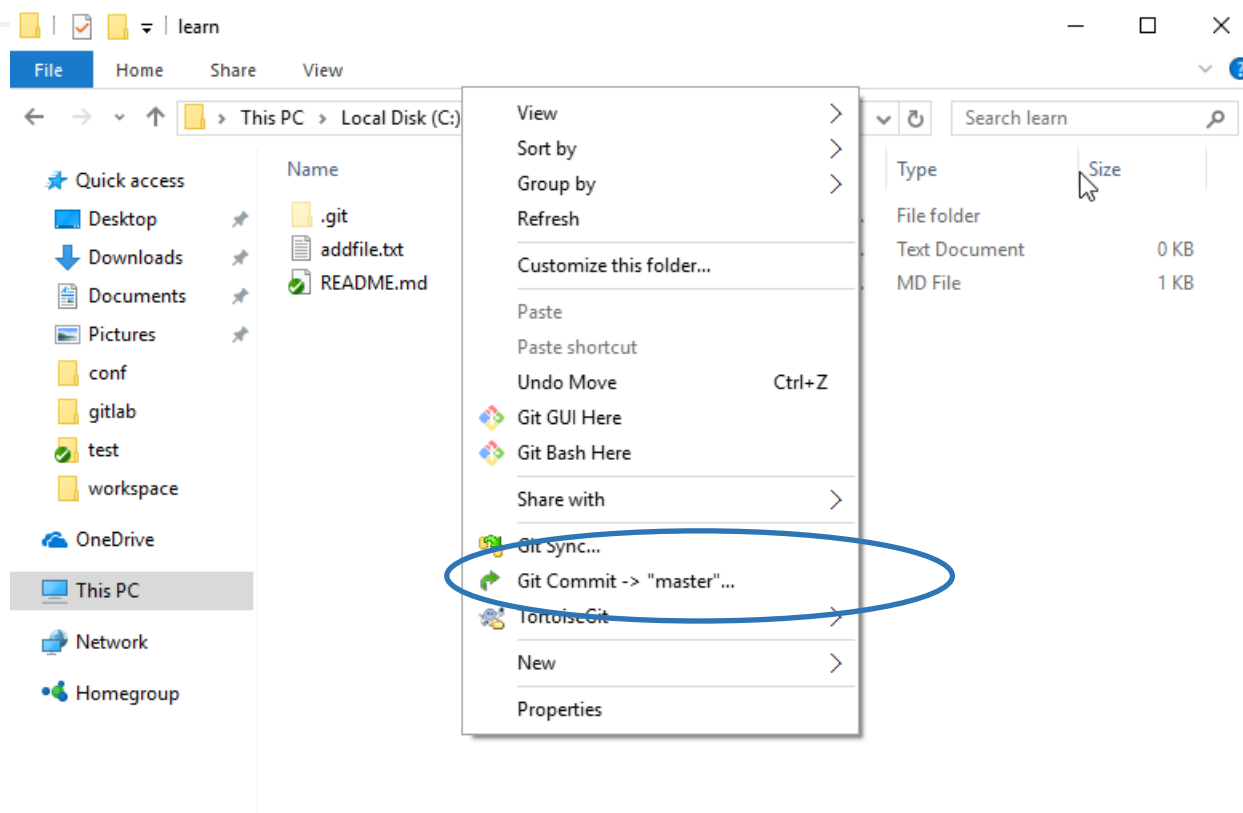
# 实际操作-Git 与Gitlab互动

增加和修改文件并提交到中心库



# 实际操作-Git 与Gitlab互动

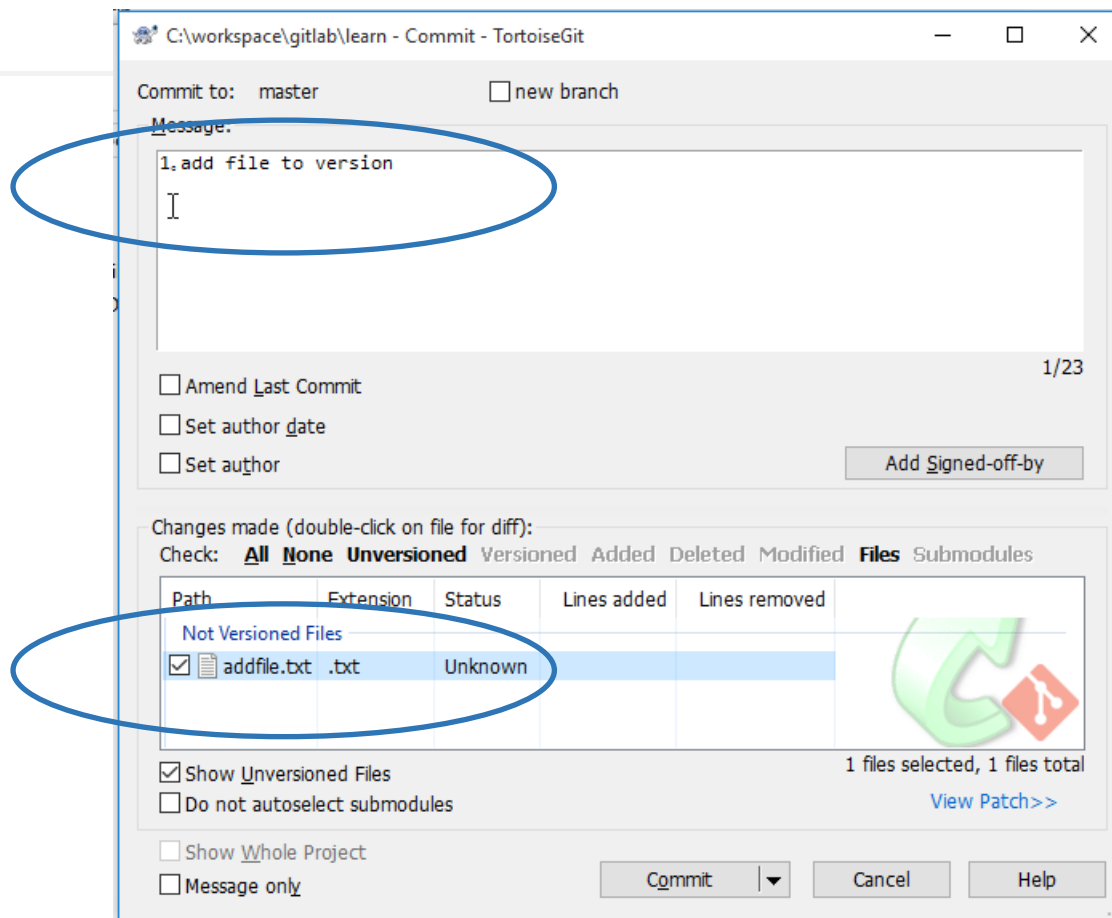
增加和修改文件并提交到中心库





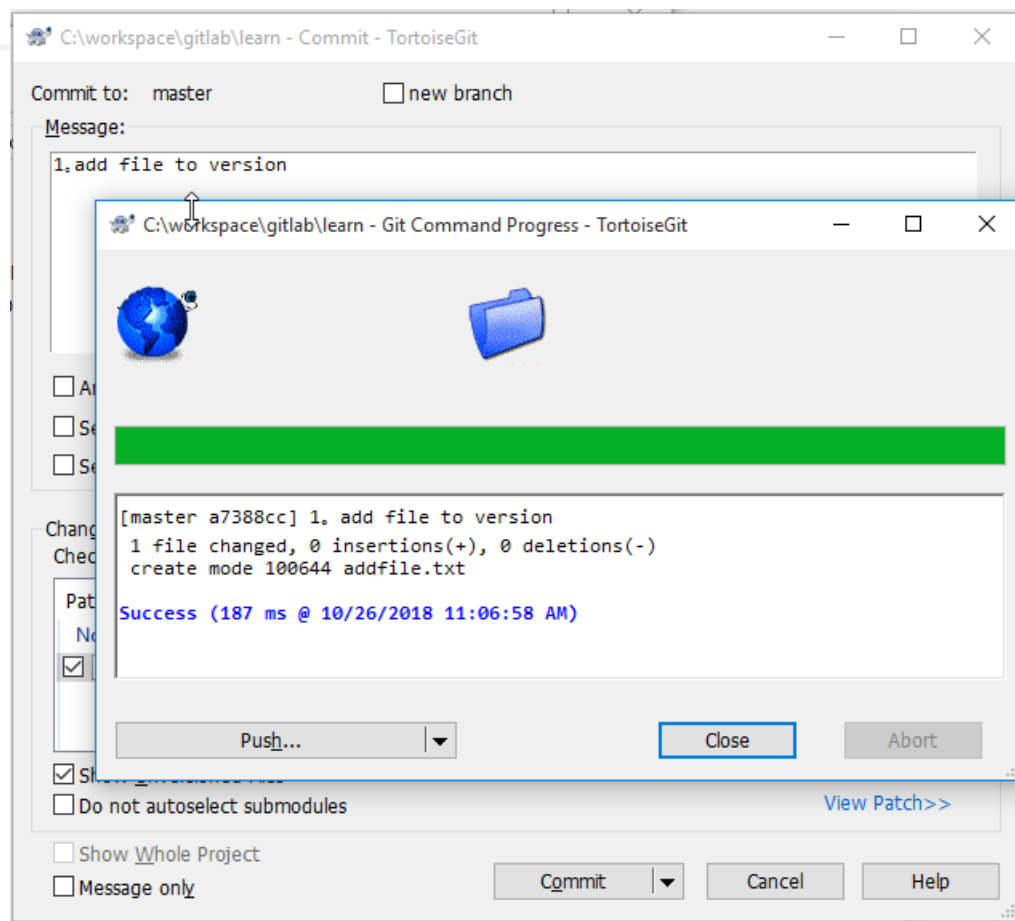
# 实际操作-Git 与Gitlab互动

增加和修改文件并提交到中心库



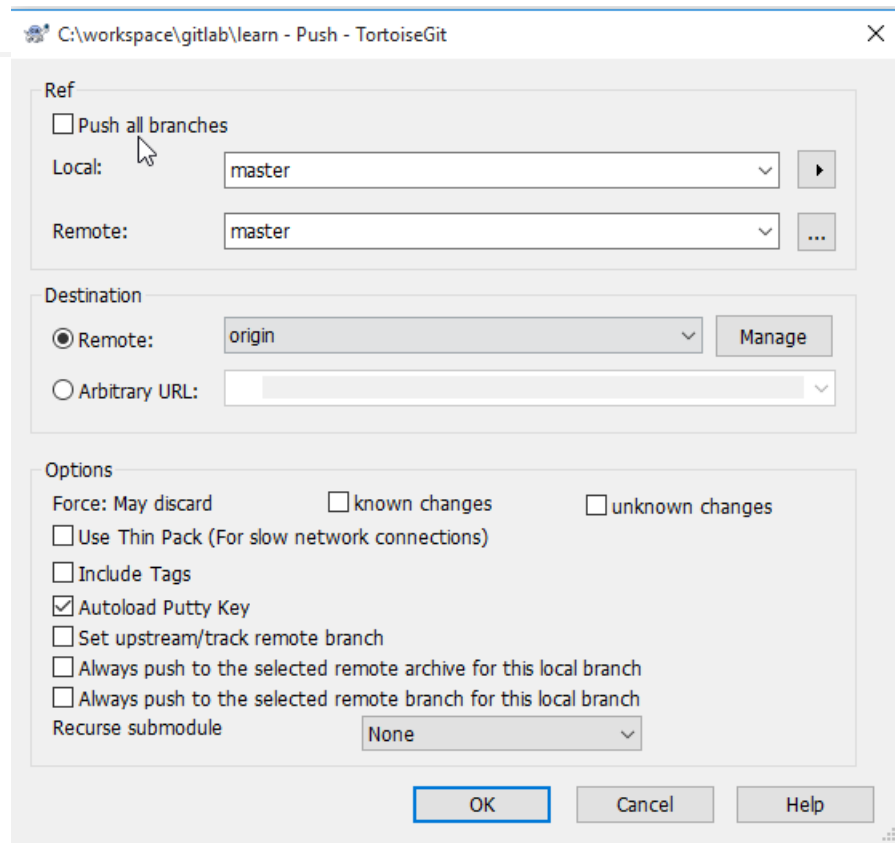
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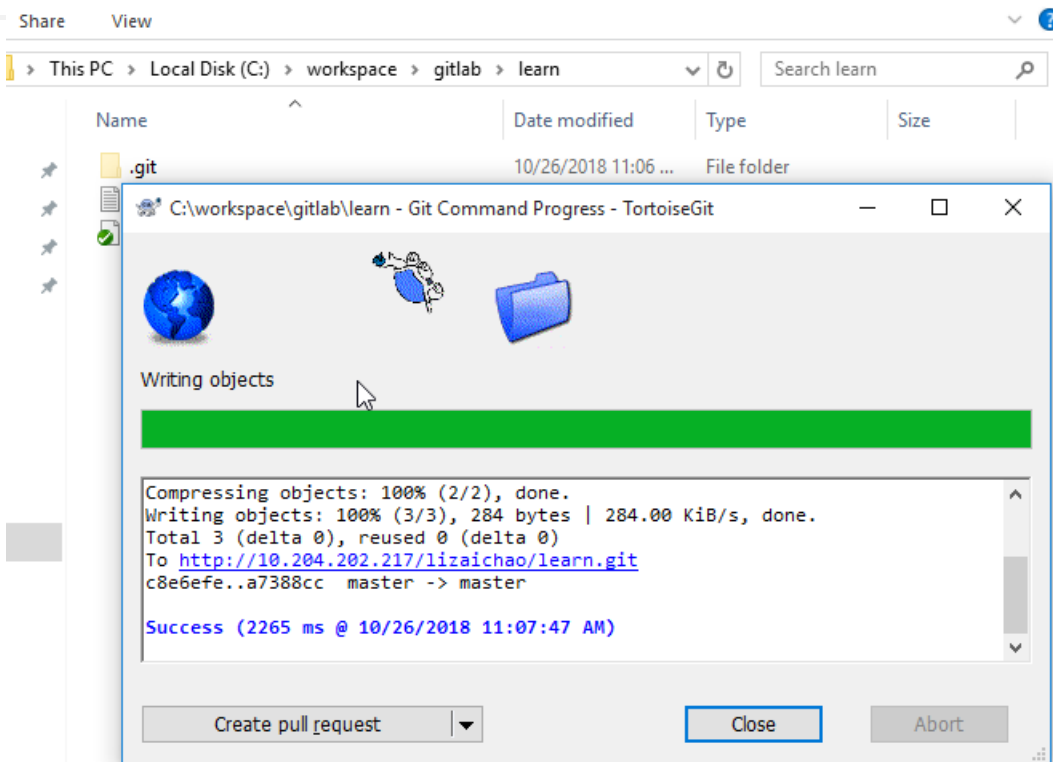
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# 实际操作-Git 与Gitlab互动

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## 增加和修改文件并提交到中心库

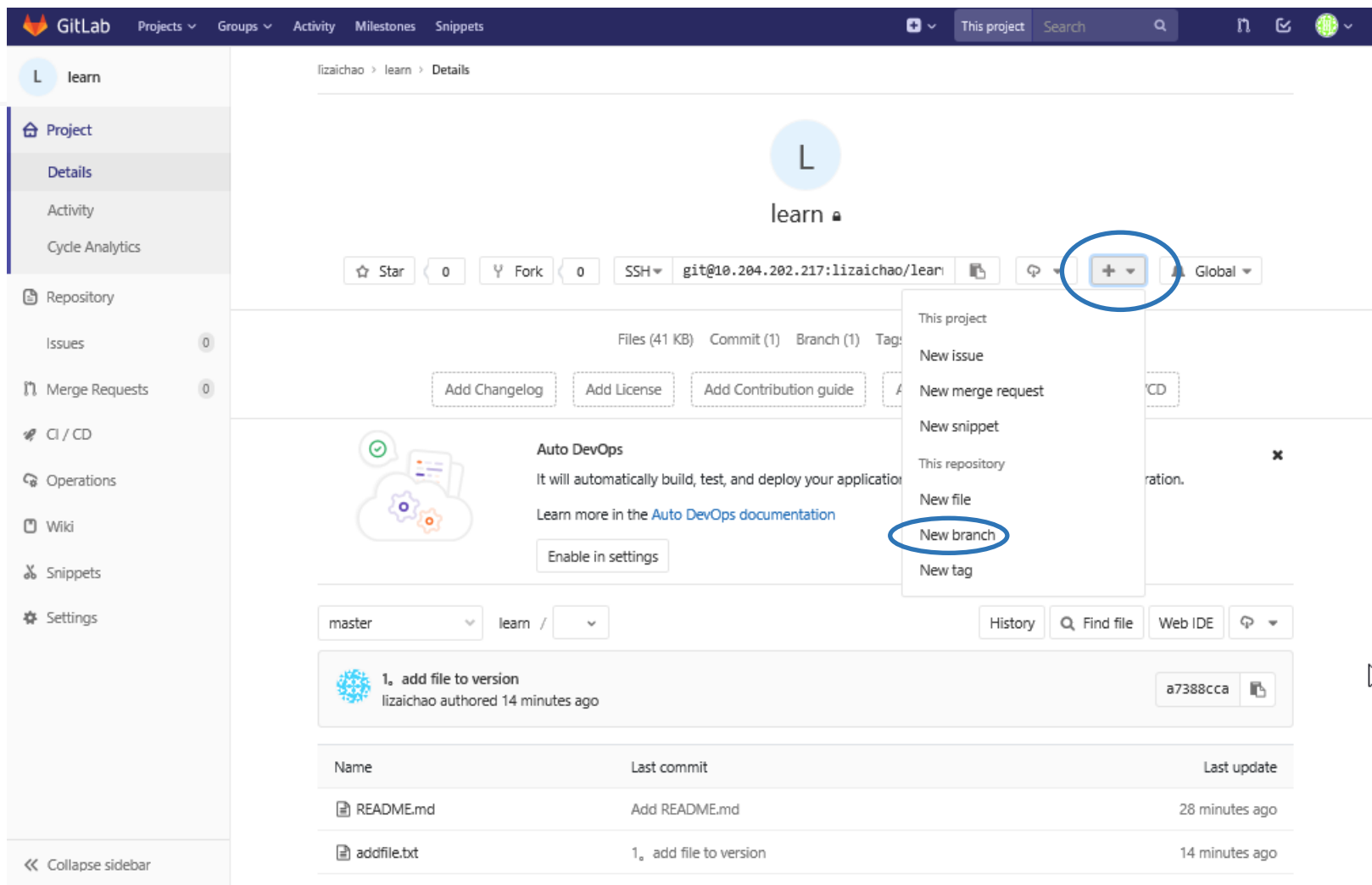
The screenshot shows the GitLab web interface for a project named 'learn'. The left sidebar contains navigation links: Project, Details, Activity, Cycle Analytics, Repository, Issues (0), Merge Requests (0), CI / CD, Operations, Wiki, Snippets, and Settings. The main content area displays the project's star and fork counts (0 each), the SSH URL (git@10.204.202.217:lizaichao/learn), and buttons for adding a changelog, license, contribution guide, Kubernetes cluster, and CI/CD. Below this is an 'Auto DevOps' section with a description and an 'Enable in settings' button. The commit history section shows a single commit '1. add file to version' by lizaichao, authored 3 minutes ago. Below the commit history is a table of files in the repository.

Name	Last commit	Last update
README.md	Add README.md	17 minutes ago
addfile.txt	1. add file to version	3 minutes ago

Below the table, the content of the selected file 'README.md' is shown, starting with 'this learn project'.

# 实际操作-Git 与Gitlab互动

## 创建开发分支

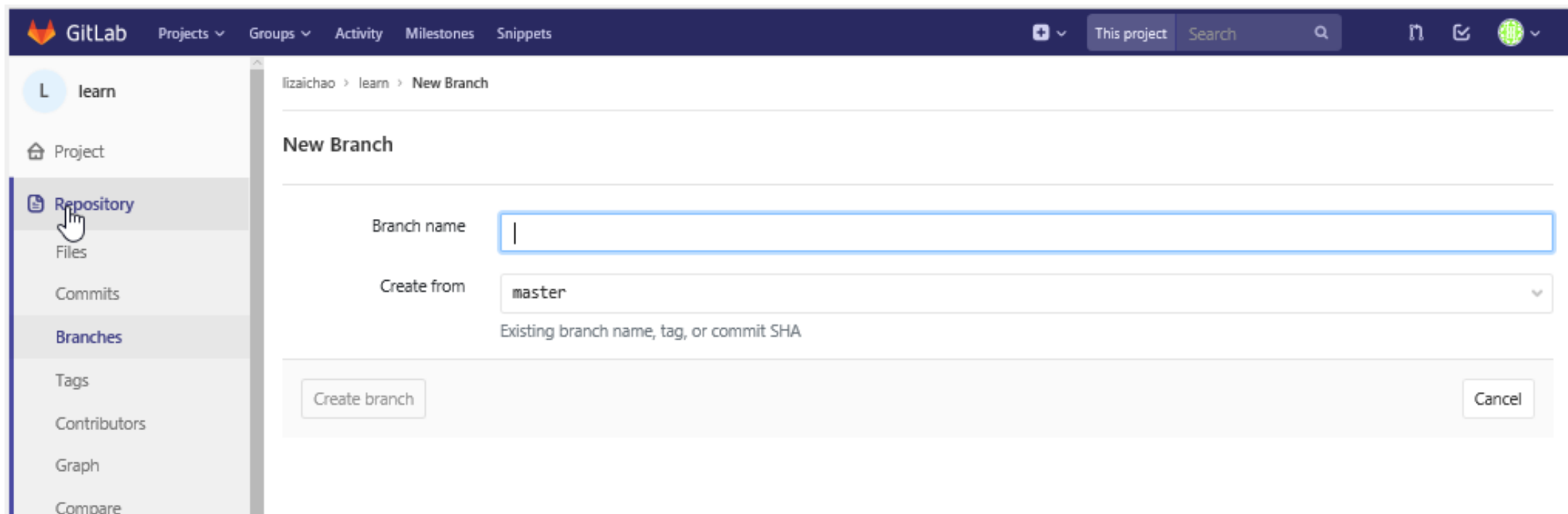


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Name	Last commit	Last update
README.md	Add README.md	28 minutes ago
addfile.txt	1. add file to version	14 minutes ago

# 实际操作-Git 与Gitlab互动

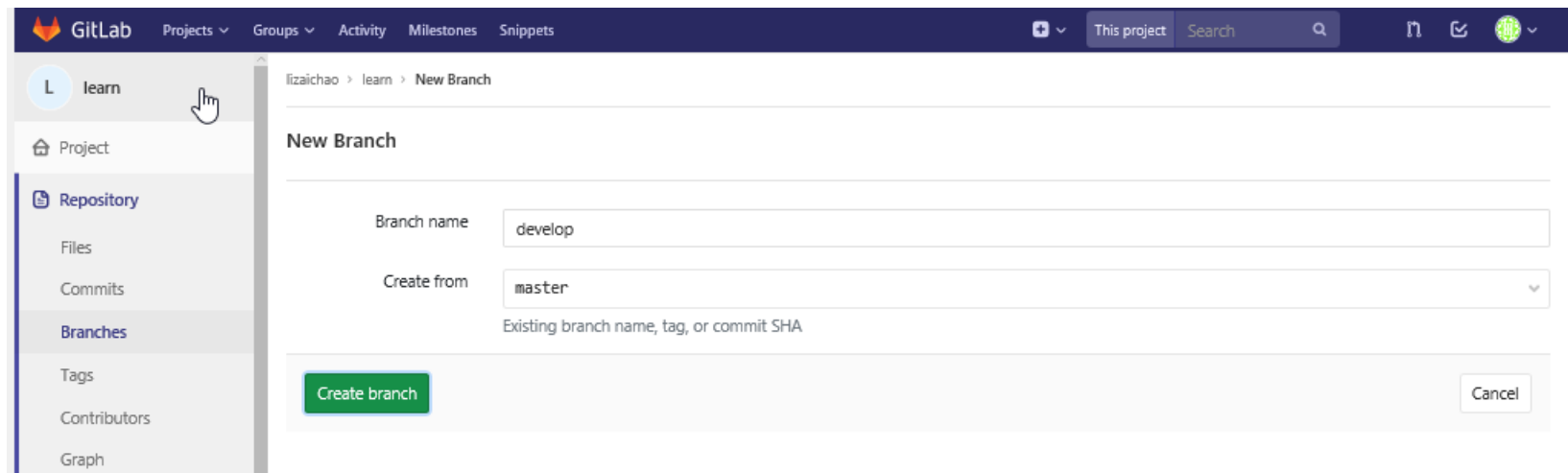
## 创建开发分支





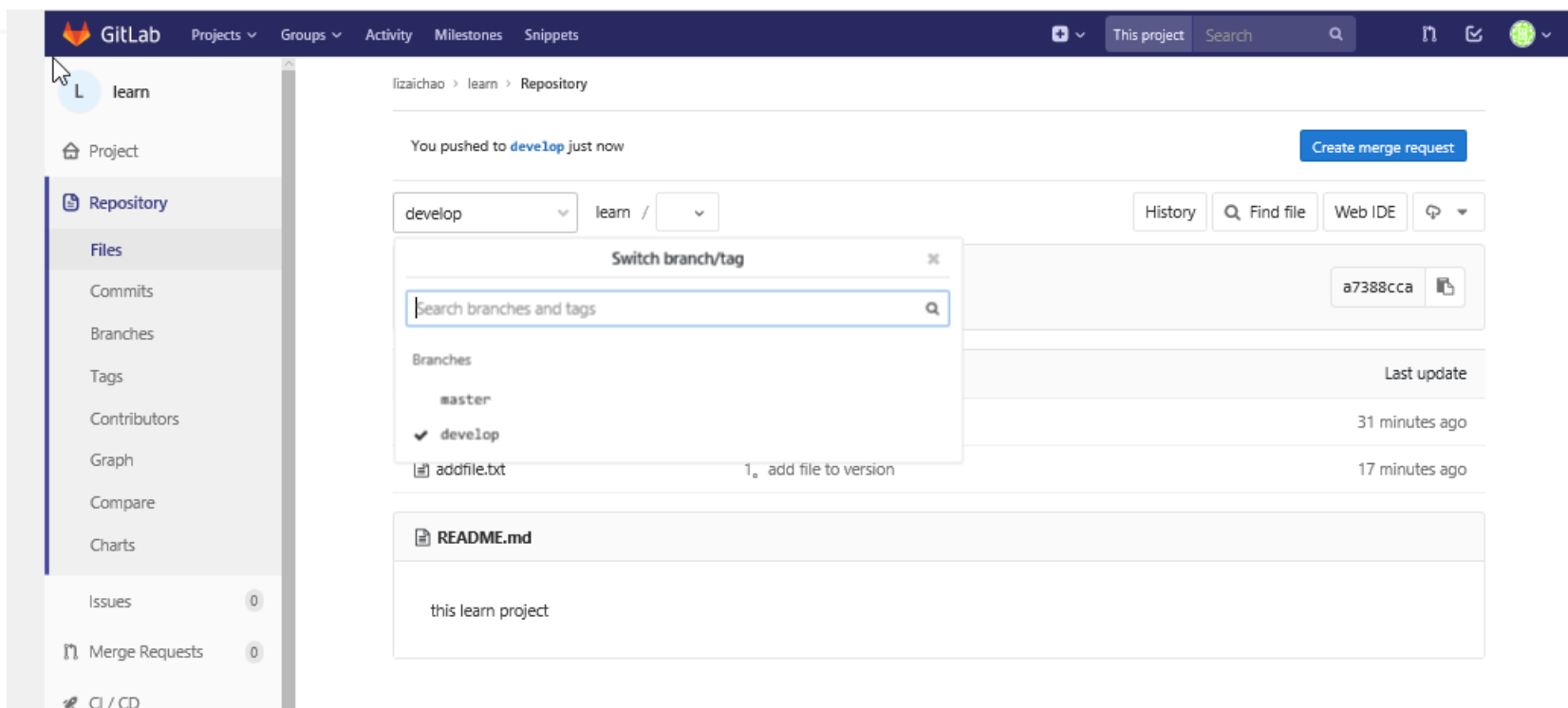
# 实际操作-Git 与Gitlab互动

## 创建开发分支



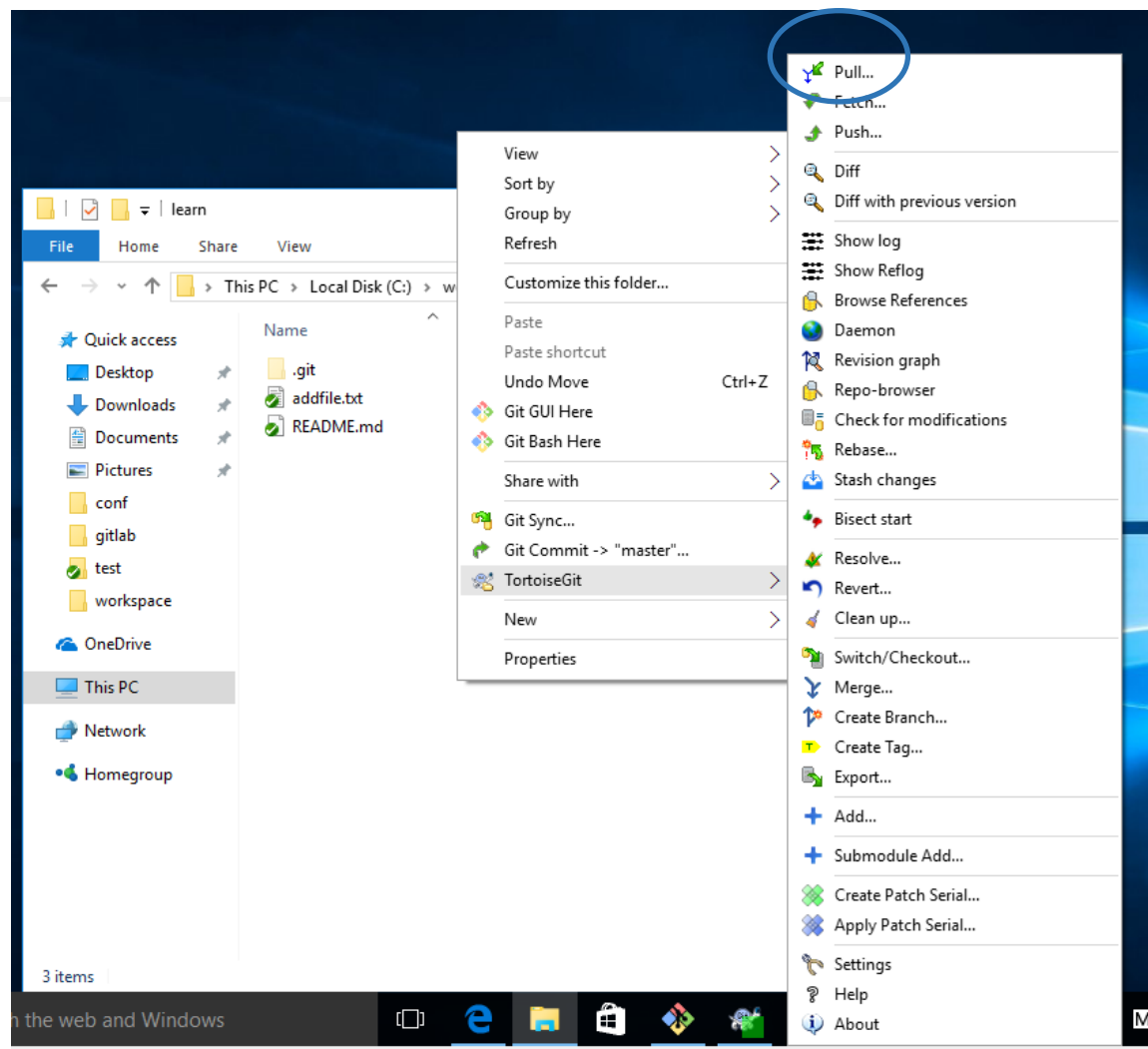
# 实际操作-Git 与Gitlab互动

## 创建开发分支



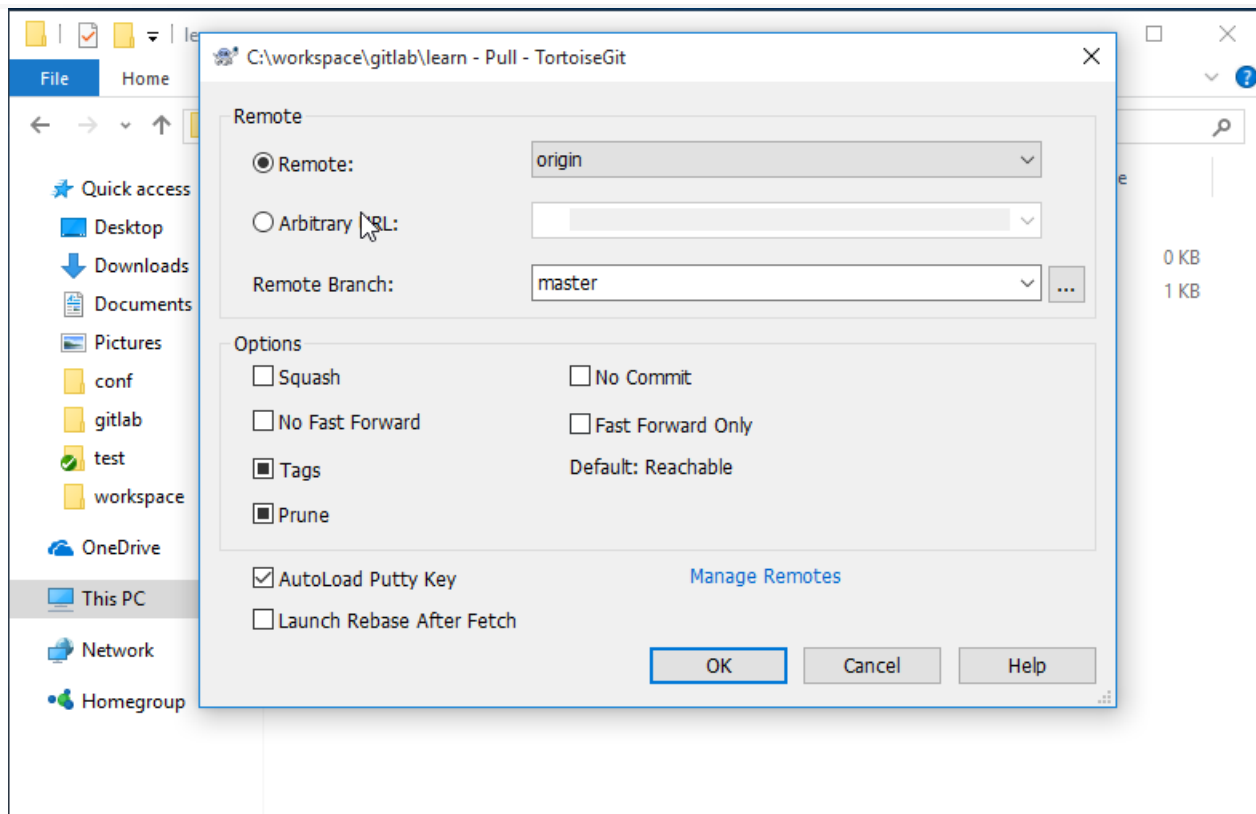
# 实际操作-Git 与Gitlab互动

本地仓库与中心仓库进行同步，即拉取最新



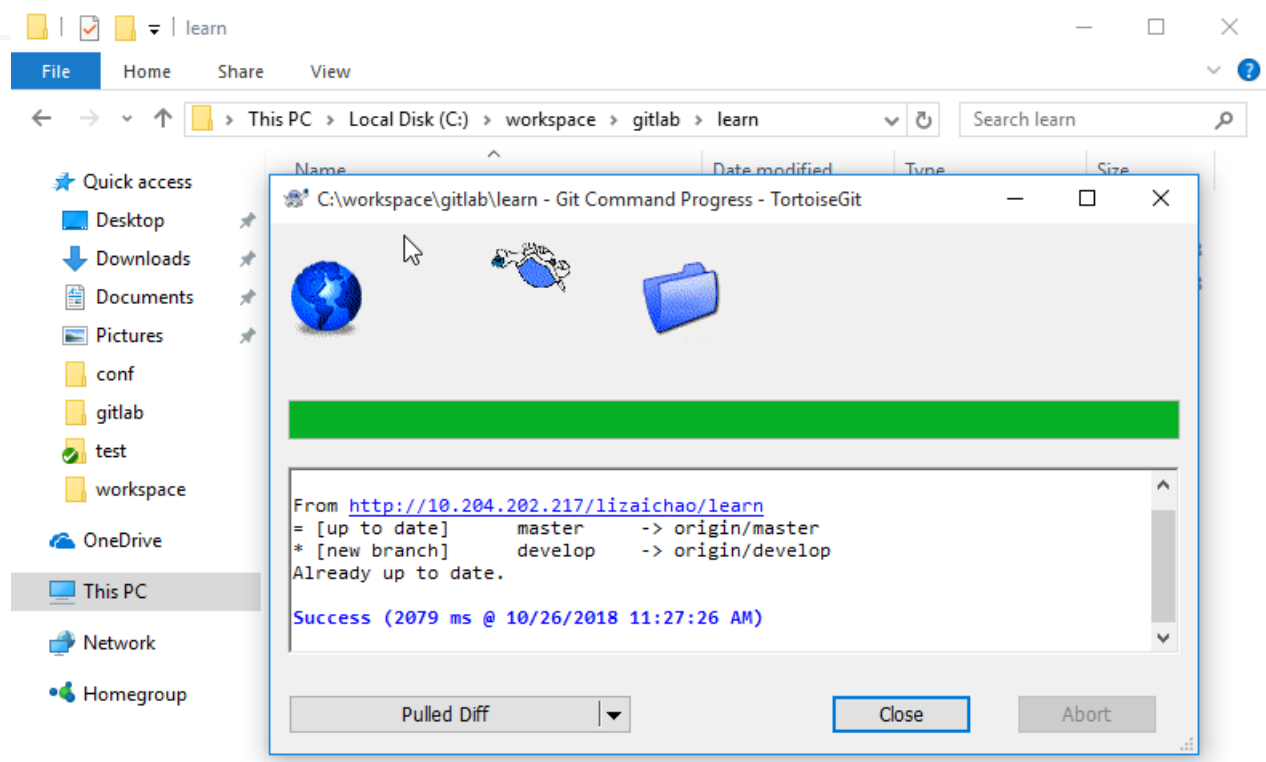
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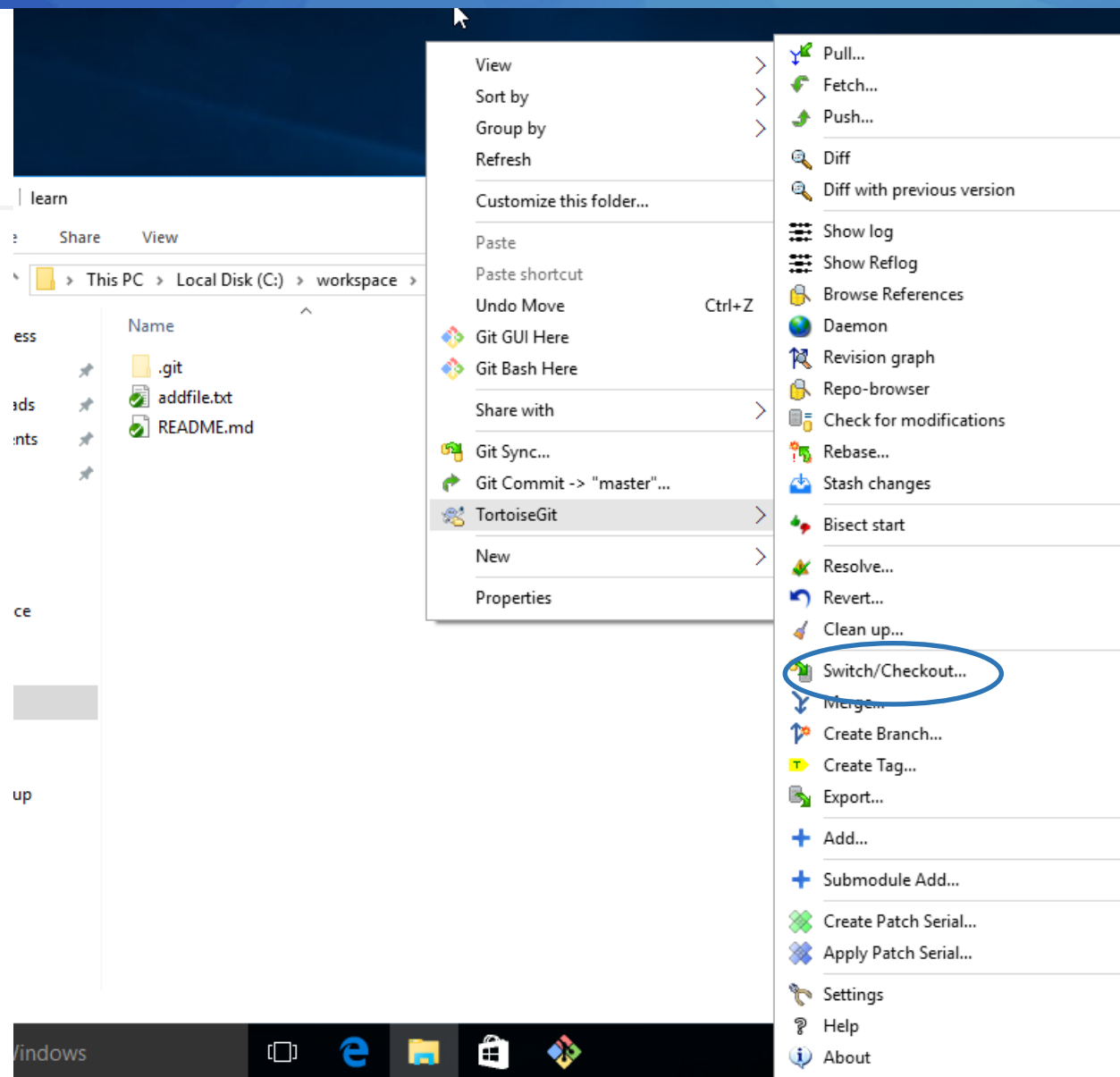
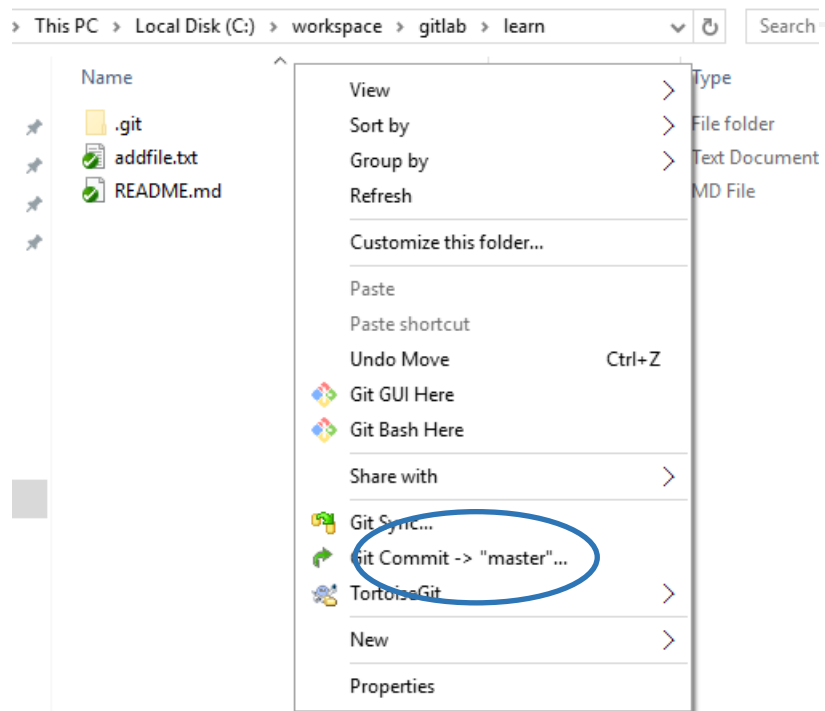
# 实际操作-Git 与Gitlab互动

拉取成功



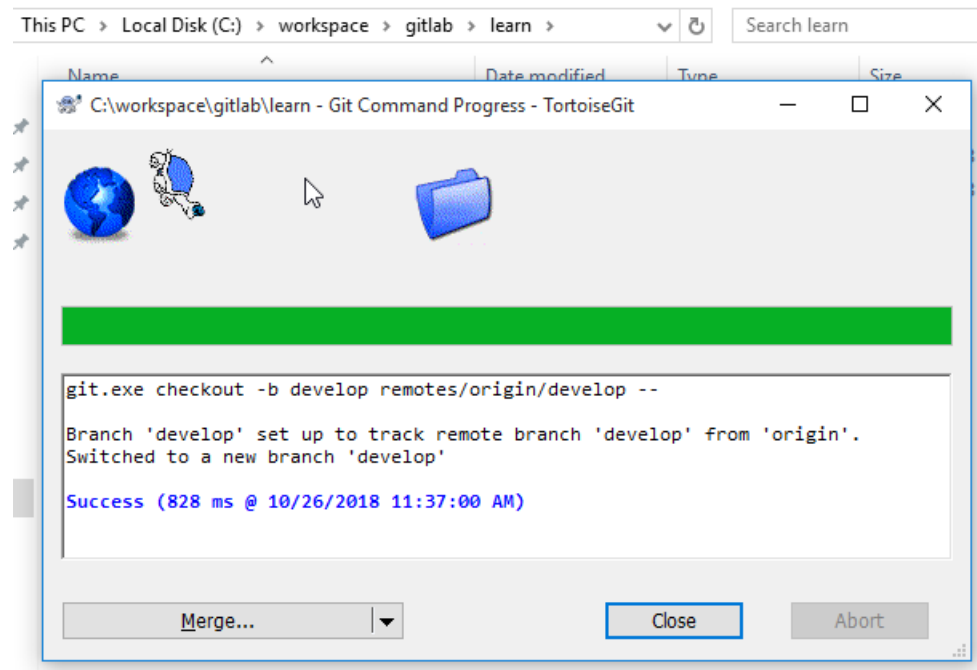
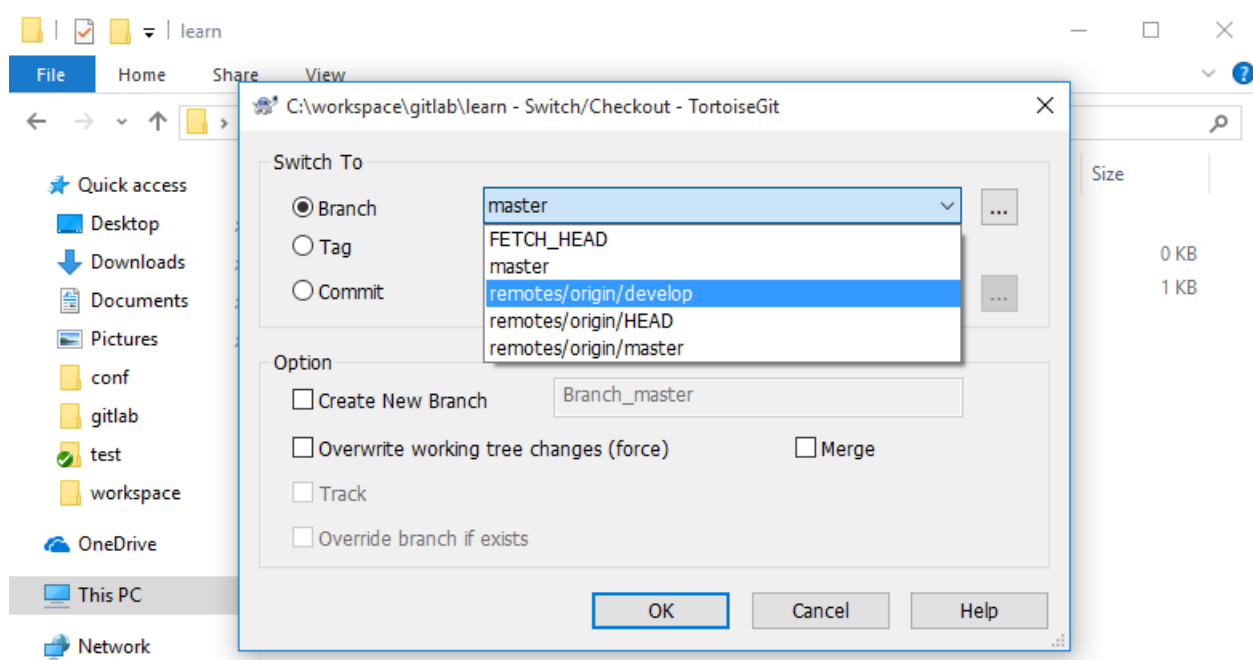
# 实际操作-Git 与Gitlab互动

把本地工作区切换到新的分支



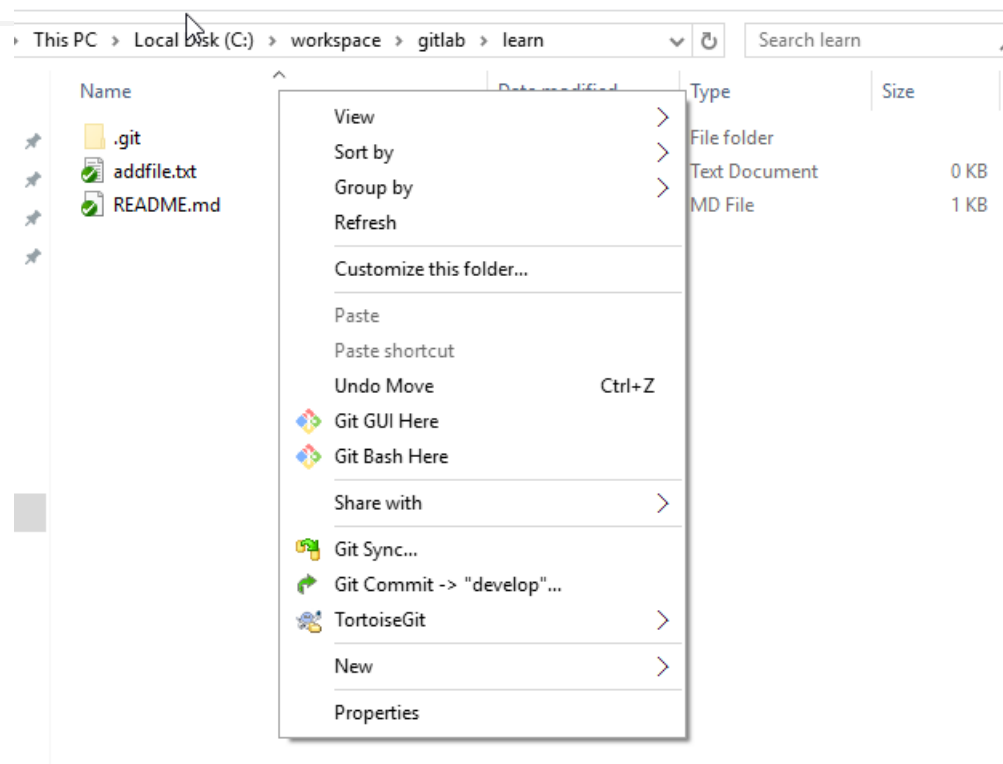
# 实际操作-Git 与Gitlab互动

把本地工作区切换到新的分支



# 实际操作-Git 与Gitlab互动

切换后的结果





# 实际操作-Git 与Gitlab互动

## 练习

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- 添加本地分支
- 本地分支与远程分支区别
- 两个分支Merge操作

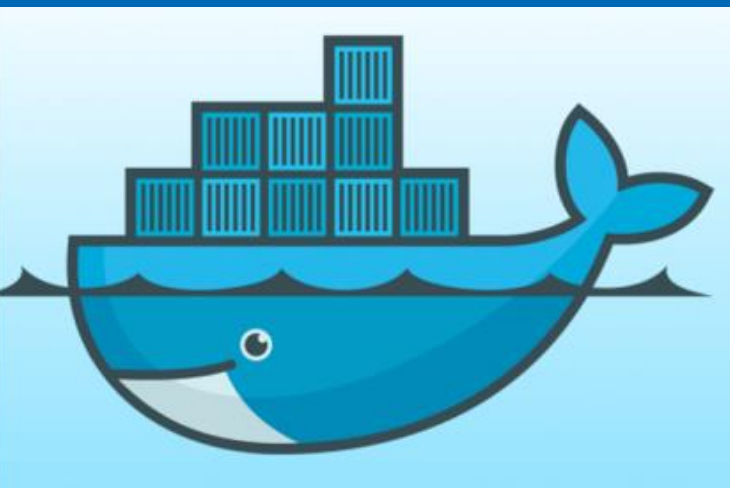
# 谢谢



surpass\_li@aliyun.com



<https://www.easyolap.cn/>



作者：李在超  
擅长：Java程序员, 了解Devops,  
捣鼓 linux和Go

