

# Lab 4 Report: Gitea Installation with Docker

**Course:** Cloud Computing

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## 1. Components and Tools

**Platform:** Docker Desktop with WSL2 backend

**Tools:**

Docker Desktop

Windows Terminal

Web Browser (for Gitea access)

**Configuration Files:**

`docker-compose.yml` (Gitea deployment configuration)

Gitea configuration files (auto-generated)

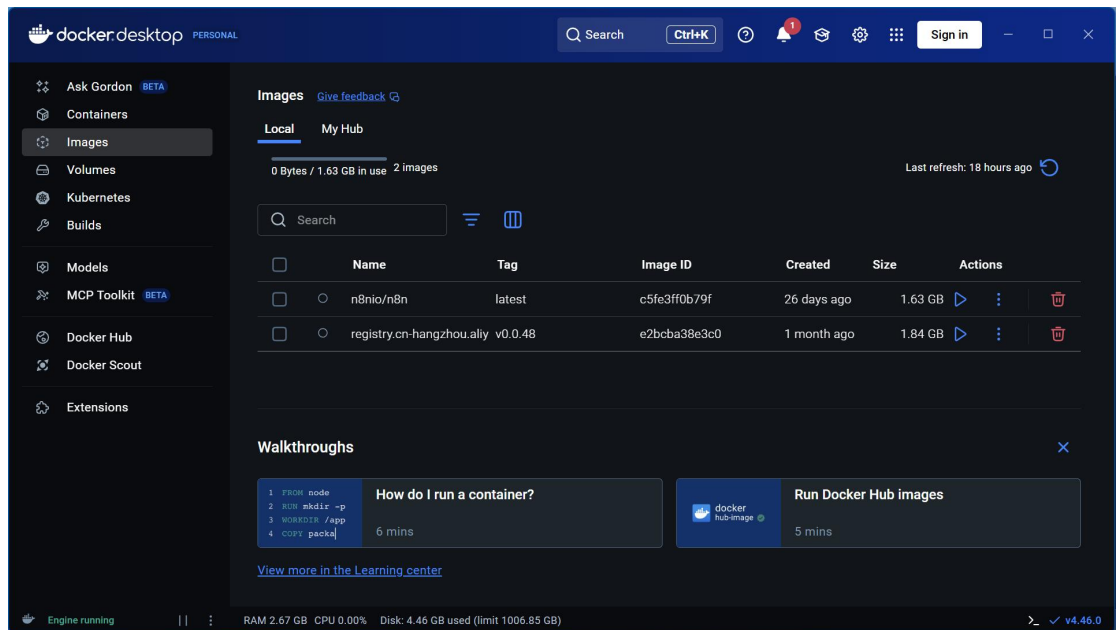
## 2. Procedures

### Step 1: Install WSL and Docker Desktop

Enabled WSL feature: `wsl --install`

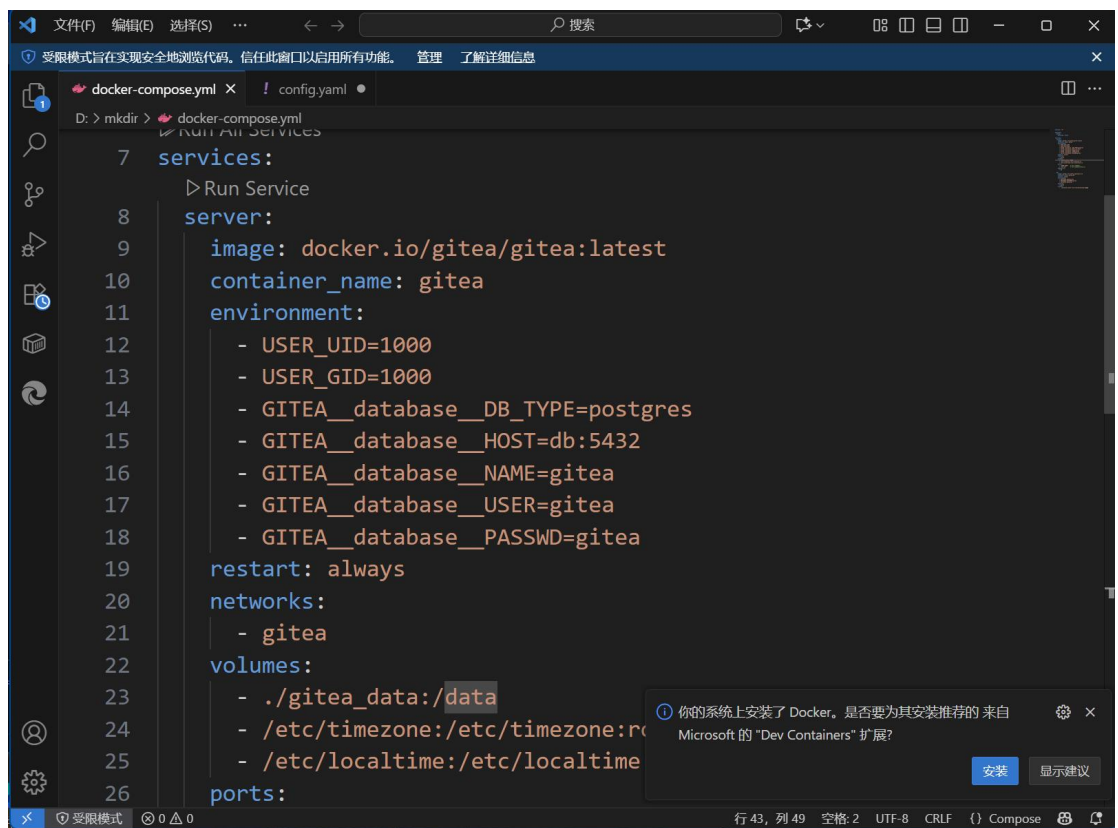
```
C:\Users\zy>wsl --version
WSL 版本: 2.6.1.0
内核版本: 6.6.87.2-1
WSLg 版本: 1.0.66
MSRDC 版本: 1.2.6353
Direct3D 版本: 1.611.1-81528511
DXCore 版本: 10.0.26100.1-240331-1435.ge-release
Windows: 10.0.22631.5624
```

Downloaded and installed Docker Desktop



## Step 2: Deploy Gitea with Docker Compose

Created `docker-compose.yml` file with Gitea configuration



Executed deployment command: `docker-compose up -d`

```
C:\Windows\System32\cmd.e  X  +  -  □  X

it will be ignored, please remove it to avoid potential confusion"
[+] Running 22/22
✓server Pulled 60.1s
  ✓3b7dba00267e Pull complete 44.5s
  ✓e7ea2b7110b2 Pull complete 41.7s
  ✓307c463a9ebe Pull complete 49.0s
  ✓89986d54bad9 Pull complete 53.5s
  ✓a4ebd224fde1 Pull complete 59.0s
  ✓dc71ac9fe925 Pull complete 58.9s
✓db Pulled 44.8s
  ✓2b13ccf77323 Pull complete 2.6s
  ✓d5d1559014a5 Pull complete 39.7s
  ✓f6a82cec6433 Pull complete 39.8s
  ✓ce1f028def8f Pull complete 0.2s
  ✓473e1ee5061d Pull complete 20.6s
  ✓d7801dc02505 Pull complete 43.8s
  ✓a01a15d7a85c Pull complete 14.6s
  ✓8c7716127147 Pull complete 38.7s
  ✓46d49622db8c Pull complete 26.7s
  ✓c43b7c8d28ae Pull complete 43.9s
  ✓be8c3c303f61 Pull complete 23.6s
  ✓1ed9605b075e Pull complete 39.1s
  ✓ba692dbf22b7 Pull complete 39.2s
  ✓de7816569160 Pull complete 38.8s
[+] Running 3/3
✓Network mkdir_gitea Created 0.1s
✓Container gitea_db Started 1.6s
✓Container gitea Started 1.3s

D:\mkdir>
```

Verified container status: `docker-compose ps`

```
C:\Windows\System32\cmd.e  X  +  -  □  X

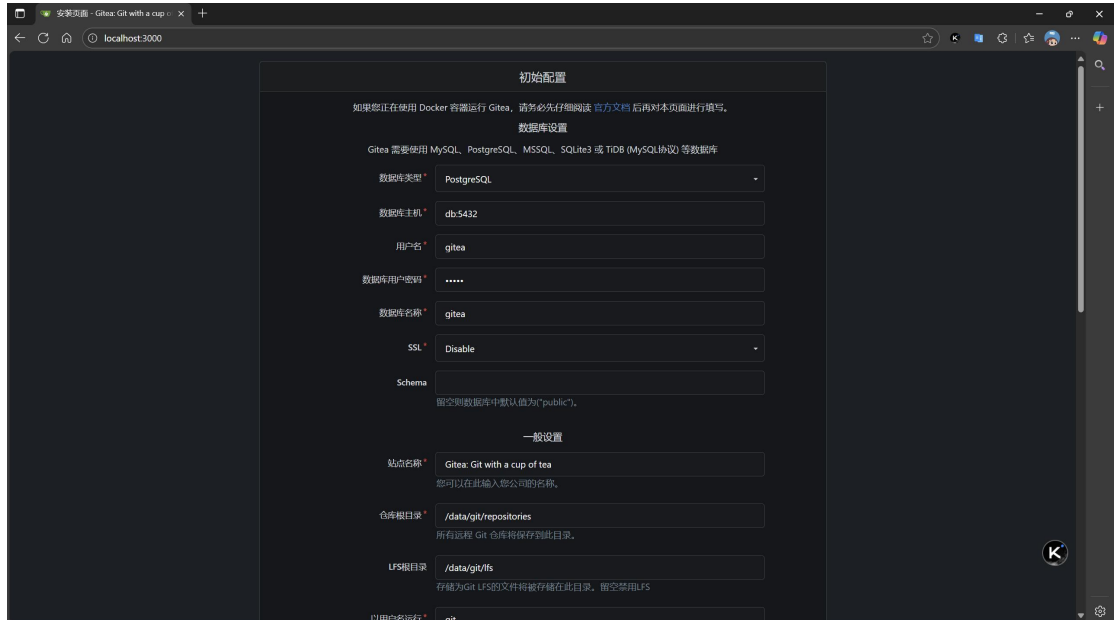
  ✓2b13ccf77323 Pull complete 2.6s
  ✓d5d1559014a5 Pull complete 39.7s
  ✓f6a82cec6433 Pull complete 39.8s
  ✓ce1f028def8f Pull complete 0.2s
  ✓473e1ee5061d Pull complete 20.6s
  ✓d7801dc02505 Pull complete 43.8s
  ✓a01a15d7a85c Pull complete 14.6s
  ✓8c7716127147 Pull complete 38.7s
  ✓46d49622db8c Pull complete 26.7s
  ✓c43b7c8d28ae Pull complete 43.9s
  ✓be8c3c303f61 Pull complete 23.6s
  ✓1ed9605b075e Pull complete 39.1s
  ✓ba692dbf22b7 Pull complete 39.2s
  ✓de7816569160 Pull complete 38.8s
[+] Running 3/3
✓Network mkdir_gitea Created 0.1s
✓Container gitea_db Started 1.6s
✓Container gitea Started 1.3s

D:\mkdir>docker-compose ps
time="2025-10-15T08:20:12+08:00" level=warning msg="D:\\mkdir\\docker-compose.yml: the attribute 'version' is obsolete,
it will be ignored, please remove it to avoid potential confusion"
NAME      PORTS        IMAGE                COMMAND                SERVICE    CREATED        STATUS
gitea     0.0.0.0:3000->3000/tcp, [::]:3000->3000/tcp, 0.0.0.0:222->22/tcp, [::]:222->22/tcp  server      Less than a second ago    Up About a minute
gitea_db  5432/tcp     docker.io/library/postgres:14 "docker-entrypoint.s..." db           Less than a second ago    Up About a minute

D:\mkdir>
```

## Step 3: Initial Gitea Setup

Accessed Gitea web interface at <http://localhost:3000>



The screenshot shows the 'Initial Configuration' (初始配置) page of the Gitea web interface. The page is divided into two main sections: 'Database Settings' (数据库设置) and 'General Settings' (一般设置).

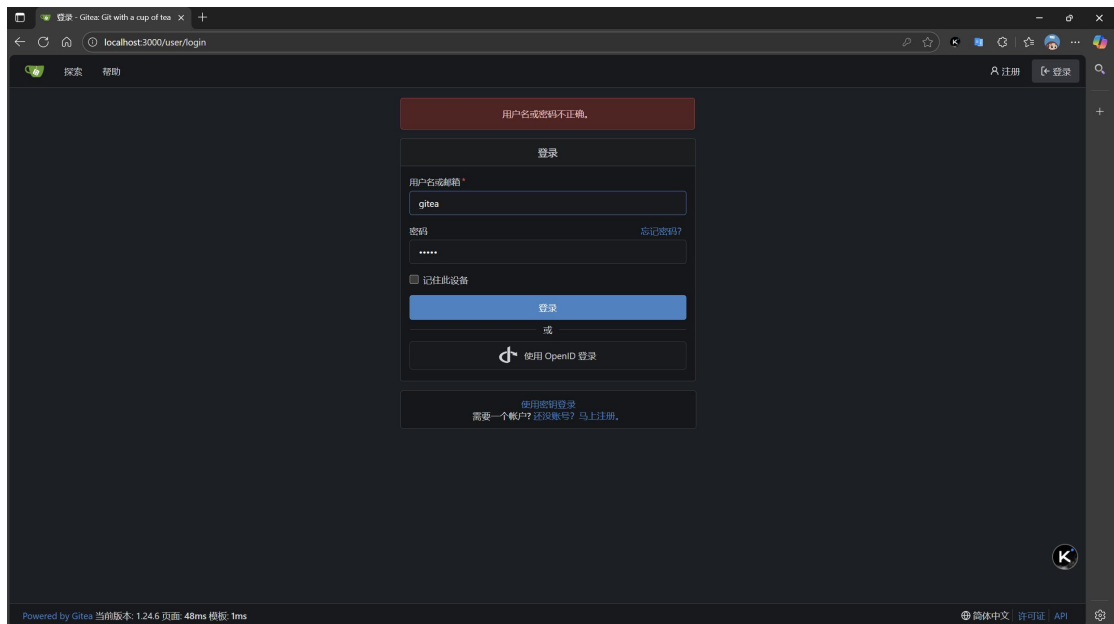
**Database Settings:**

- Database Type (数据库类型): PostgreSQL
- Database Host (数据库主机): db.5432
- Username (用户名): gitea
- Database Username (数据库用户名): .....
- Database Name (数据库名称): gitea
- SSL (SSL): Disable
- Schema: (empty field, with a note: 留空则数据库中默认为("public").)

**General Settings:**

- Site Name (站点名称): Gitea: Git with a cup of tea (Note: 您可以在这里输入您公司的名称。)
- Repository Path (仓库根目录): /data/git/repositories (Note: 所有远程 Git 仓库将保存到此目录。)
- LFS Root Path (LFS根目录): /data/git/lfs (Note: 存储为Git LFS的文件将保存在此目录。留空禁用LFS)
- Run as user (以用户名运行): git

Completed installation wizard with SQLite database

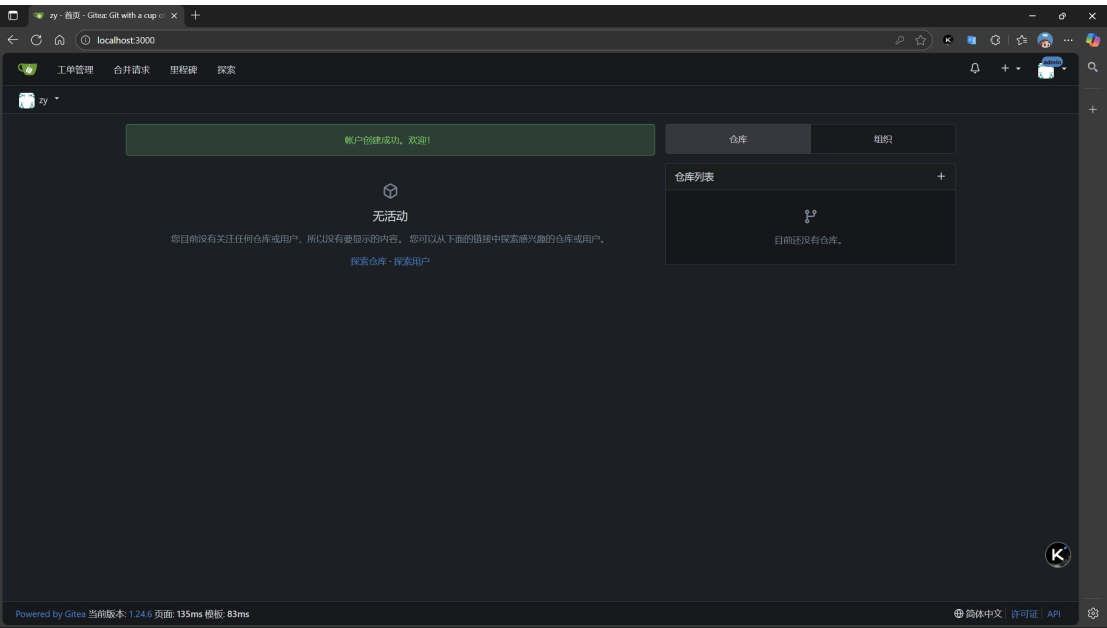


The screenshot shows the login page of the Gitea web interface. The page has a dark theme and includes a login form with the following elements:

- A red error message at the top: 用户名或密码不正确。
- A 'Login' (登录) button.
- Input fields for 'Username or Email' (用户名或邮箱) and 'Password' (密码).
- A 'Remember this device' (记住此设备) checkbox.
- A 'Forgot Password?' (忘记密码?) link.
- A 'Login' (登录) button.
- A 'or' (或) separator.
- A button for 'Use OpenID to login' (使用 OpenID 登录).
- A footer message: 需要一个帐户? 还没账号? 马上注册。

The footer of the page indicates it is 'Powered by Gitea' with version 1.24.6, running on a 48ms template and 1ms page load time. It also includes links for '简体中文' (Simplified Chinese), '许可证' (License), and 'API'.

Configured admin account and basic settings



Step 4: LFS Support Verification

Verified LFS support in Gitea administration panel

Created test repository with LFS functionality

Proof of LFS support:

LFS 配置	
启用	✓
LFS 内容存放目录	{ "Type": "local", "Path": "/data/git/lfs", "TemporaryPath": "/data/git/lfs/tmp", "MinioConfig": { "UseSSL": false, "InsecureSkipVerify": false, "ServeDirect": false }, "AzureBlobConfig": { "ServeDirect": false } }
LFS HTTP 身份验证过期时间	24h0m0s

Step 5: Large File Repository Creation

Created new repository for large file testing

Pushed file exceeding 1GB size using LFS

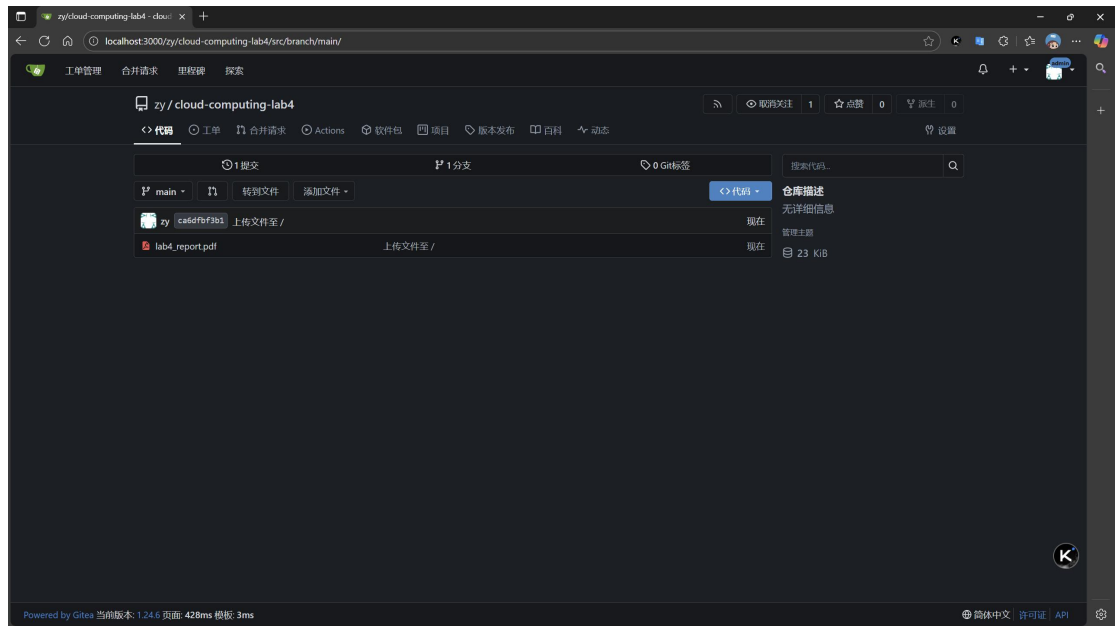
zhengyang	b29e1d0fde	添加 LFS 测试文件 (1.5GB)	3分钟前
.gitattributes		添加 LFS 测试文件 (1.5GB)	3分钟前
test-large-file-1.iso		添加 LFS 测试文件 (1.5GB)	3分钟前

## Step 6: Course Module Repository

Created repository: cloud-computing-lab4

Committed all lab work and documentation

**Repository URL:** [zy/cloud-computing-lab4 - cloud-computing-lab4 - Gitea: Git with a cup of tea](https://zy/cloud-computing-lab4 - cloud-computing-lab4 - Gitea: Git with a cup of tea)



## 4. Conclusion

This lab demonstrated containerized deployment of self-hosted Git services using Docker. Key achievements:

**Containerization Proficiency:** Successfully deployed Gitea using Docker Compose

**LFS Capability:** Verified Gitea's large file support with practical testing

**Self-Hosted Git Management:** Established private Git server for academic work

**DevOps Skills:** Gained hands-on experience with container orchestration