

# Guide to installing a network service



GitLab

## **Steps of the tutorial**

- **Virtual machine setup**
- **Git setup**
- **Gitea setup**
- **System configuration**
- **Virtual machine configuration**

## **Step 1 : Virtual machine setup**

Today we are going to learn how to setup a network service.  
Firstly, we are going to require a Virtual Machine.

To do so, you can see our previous guide on "How to install and setup a Virtual Machine", otherwise you can download our files for an auto installation.

The said files needed are the preseed and the .viso, the viso file needs to go into the blue disk area of the Configuration tab.

Then simply launch the virtual machine and your computer should do the rest.

## Step 2 : Git setup

You are now going to install a Git software.  
Before you do anything, verify that Git is installed by open a terminal (ctrl+alt+t) and typing the following command: `git --version`

```
git@serveur:/home/user$ git --version
git version 2.39.5
git@serveur:/home/user$
```

If this command then outputs "Command not found", simply install the Git commands with : `sudo apt install git-all`

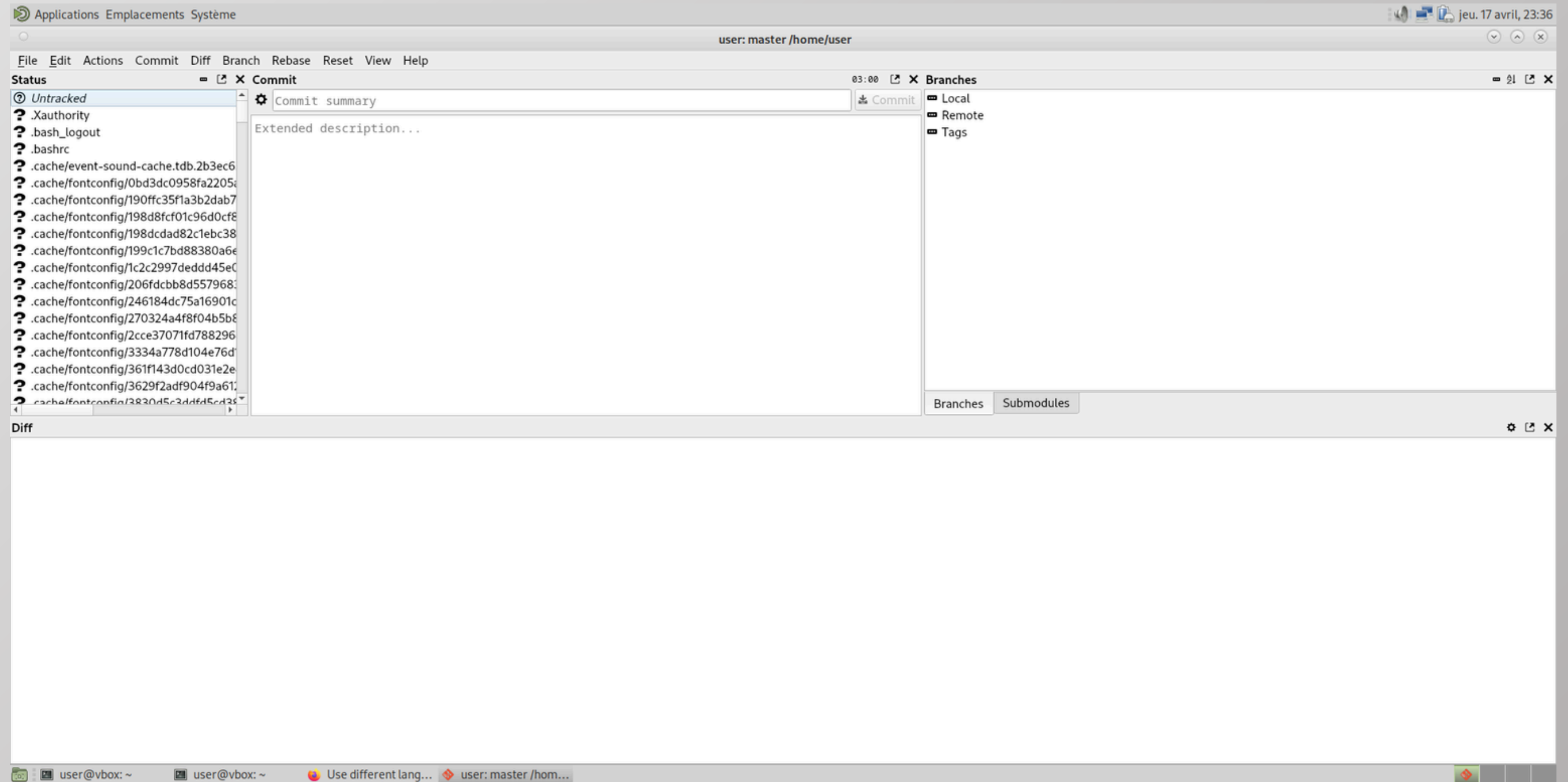
## Step 2 : Git setup

Now we are going to install a Git software, in our case Git Cola, but note that there are other Git softwares available such as GitK or Git-Gui that is basically Git Cola in 2 separate softwares and each of them has a unique installation so please read their documentation !

Back to Git Cola, it is a software with many functionalities such as :  
Visualisation of versions or the ability to easily send files to a distant Git repository.

## Step 2 : Git setup

To install Git Cola you just have to use the following command :  
`sudo apt install git-cola`



## Step 3 : Gitea setup

We are now going to see how to setup Gitea which is a Git forge, you can follow with us or with the official binary guide.

To begin, we must recover the package and make it executable with this commands :

- `wget -O gitea https://dl.gitea.com/gitea/1.23.5/gitea-1.23.5-linux-amd64`
- `chmod +x gitea`

Make sure to check that your Git version is after 2.0 and the correctness of your binary with a GPG key with :

```
gpg --keyserver keys.openpgp.org --recv 7C9E68152594688862D62AF62D9AE806EC1592E2
```



## Step 4 : System configuration

Now that that's done, we have to create a Git user to use Gitea :

```
adduser \  
--system \  
--shell /bin/bash \  
--comment 'Git Version Control' \  
--gid git \  
--home-dir /home/git \  
--create-home git
```

In case you don't have Systemd, you have to add a password to your git user with : `sudo passwd git`



## Step 4 : System configuration

Now that we have our user, we need to create the local Gitea directories' structures by doing these next commands one by one :

```
sudo mkdir -p /var/lib/gitea/{custom,data,log}  
sudo chown -R git:git /var/lib/gitea/  
sudo chmod -R 750 /var/lib/gitea/  
sudo mkdir /etc/gitea  
sudo chown root:git /etc/gitea  
sudo chmod 770 /etc/gitea
```

## Step 4 : System configuration

Then we configure our Gitea repository with :

```
export GITEA_WORK_DIR=/var/lib/gitea/  
cp gitea /usr/local/bin/gitea
```

Now we can launch our Gitea and configure it even further, as the Git user created previously (use the command : `su git`, and enter your password) use this command : `GITEA_WORK_DIR=/var/lib/gitea/  
/usr/local/bin/gitea web -c /etc/gitea/app.ini`

## Step 4 : System configuration

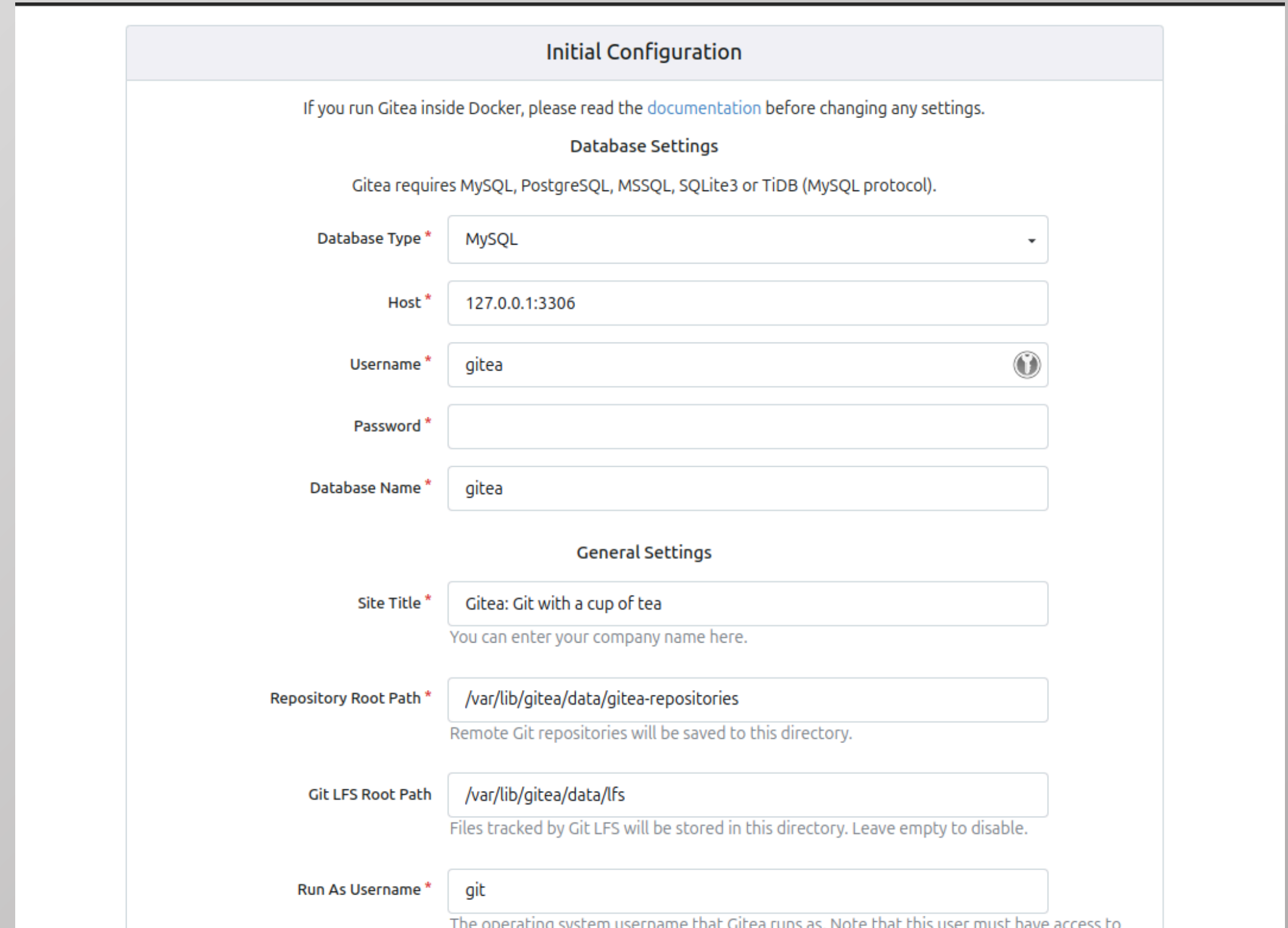
In your terminal you should have line that looks somewhat like this :  
AppURL(ROOT\_URL) : http://localhost:3000/

```
2025/04/17 14:34:38 .../indexer/issues/indexer.go:154:InitIssueIndexer.2() [I] Issue Indexer Initialization took 868.136µs
2025/04/17 14:34:38 cmd/web.go:319:listen() [I] Listen: http://0.0.0.0:3000
2025/04/17 14:34:38 cmd/web.go:323:listen() [I] AppURL(ROOT_URL): http://sae203:3000/
2025/04/17 14:34:38 cmd/web.go:326:listen() [I] LFS server enabled
2025/04/17 14:34:38 modules/graceful/server.go:50:NewServer() [I] Starting new Web server: tcp:0.0.0.0:3000 on PID: 2376
2025/04/17 14:34:43 HTTPRequest [I] router: polling GET /user/events for 127.0.0.1:54844, elapsed 3748.9ms @ events/events.go:18(events.Events)
```

## Step 4 : System configuration

If you click on the URL link, you will end up on the real Gitea configuration page where you will put the following (or you can change if you want) :

- Database Type : SQLite 3
- In the administrator part :
- Name : gitea
  - Mail : git@localhost
  - Password : gitea



The screenshot shows the 'Initial Configuration' page of Gitea. It is divided into two main sections: 'Database Settings' and 'General Settings'. The 'Database Settings' section includes fields for 'Database Type' (MySQL), 'Host' (127.0.0.1:3306), 'Username' (gitea), 'Password' (empty), and 'Database Name' (gitea). The 'General Settings' section includes fields for 'Site Title' (Gitea: Git with a cup of tea), 'Repository Root Path' (/var/lib/gitea/data/gitea-repositories), 'Git LFS Root Path' (/var/lib/gitea/data/lfs), and 'Run As Username' (git). Each field has a red asterisk indicating it is required. There are also informational text blocks and help icons.

**Initial Configuration**

If you run Gitea inside Docker, please read the [documentation](#) before changing any settings.

**Database Settings**

Gitea requires MySQL, PostgreSQL, MSSQL, SQLite3 or TiDB (MySQL protocol).

Database Type \* MySQL

Host \* 127.0.0.1:3306

Username \* gitea

Password \*

Database Name \* gitea

**General Settings**

Site Title \* Gitea: Git with a cup of tea  
You can enter your company name here.

Repository Root Path \* /var/lib/gitea/data/gitea-repositories  
Remote Git repositories will be saved to this directory.

Git LFS Root Path /var/lib/gitea/data/lfs  
Files tracked by Git LFS will be stored in this directory. Leave empty to disable.

Run As Username \* git  
The operating system username that Gitea runs as. Note that this user must have access to

## **Step 4 : System configuration**

You can then launch the installation.

Once it is done, you will have your Gitea repository where you are able to add repositories and organizations

You can add users that will have different rights and permissions as well, you can find it in the Website Administration on the top right.

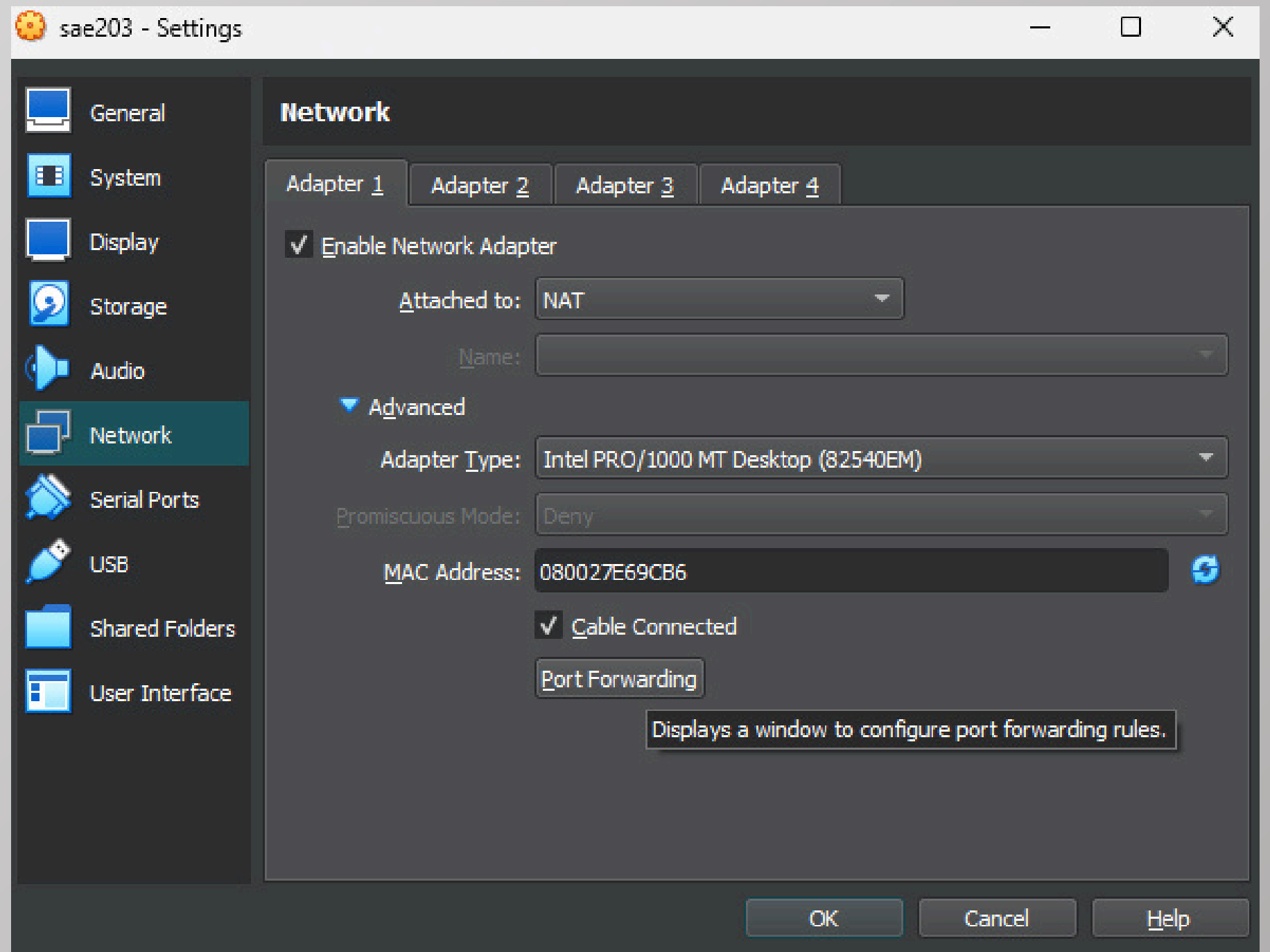
You can configure another administrator, restrict some users and more.

You can now use the same commands as a regular Git (git add, git commit, git push....) and make sure to configure your local directory and its access to Gitea that can look similar to : git remote add origin

`http://localhost:3000/gitea/SAE203.git`

## Step 5 : Virtual machine configuration

To access our Gitea repository outside of our Virtual Machine, we need a port forwarding, in order to do so go in VirtualBox and in Configuration, then Network :





## Step 5 : Virtual machine configuration

Go in Port Forwarding and add a forwarding with the + icon and enter the required information (in our case the 3000 port in source and destination).

You are now finally able to access your Gitea repository from another device on the network !

