# Admin

## Setup the server

Link: https://git-scm.com/book/en/v2/Git-on-the-Server-Setting-Up-the-Server

* Create the git user and the .ssh/authorized\_keys file

sudo adduser git  
su git  
cd  
mkdir .ssh && chmod 700 .ssh  
touch .ssh/authorized\_keys && chmod 600 .ssh/authorized\_keys

* Add someone’s SSH public key to the .ssh/authorized\_keys file

cat /tmp/id\_rsa.john.pub >> ~/.ssh/authorized\_keys

* Create the repo

sudo su # Login a user root  
mkdir /srv/git  
chown git:git /srv/git  
sudo su git # Login as user git  
cd /srv/git  
mkdir project.git  
cd project.git  
git init --bare  
Initialized empty Git repository in /srv/git/project.git/

## Sizing a server for git

Link: https://gitolite.com/server-sizing.html

**TL;DR;**

* Git is not hungry on resources and developpers interact with it 2-6 times a day on average
* any descent dual-core CPU can do the work
* A machine with about 512 MB *free* RAM will probaly work fine for most developement style repositories. this means a total of 1 GB.

## Security

* Prevents authorized users from getting a shell

cat /etc/shells # see if git-shell is already in there. If not...  
which git-shell # make sure git-shell is installed on your system.  
sudo -e /etc/shells # and add the path to git-shell from last command to this  
sudo chsh git -s $(which git-shell) # Set the shell to git-shell for git user

* Prevent them from SSH port forwarding by prepending their entry in the .ssh/authorized\_keys with

no-port-forwarding,no-X11-forwarding,no-agent-forwarding,no-pty ssh-rsa [KEY]

* [Top 20 OpenSSH Server Best Security Practices](https://www.cyberciti.biz/tips/linux-unix-bsd-openssh-server-best-practices.html)

# Developer

## Generate SSH Keys

ssh-keygen

Then share the public key with the Git server administrator to add you to the .ssh/authorized\_keys file

cat .ssh/id\_rsa.pub

Which will give you something like

ssh-rsa  azuread\harounemohammedi@DESKTOP-RR5NSCL

## Access the repo

* project is the directory where the the project files lives
* gitserver is the IP/domain of the Git server

### if the project is not a git repo

cd project  
git init  
git add .  
git commit -m 'Initial commit'  
git remote add origin git@gitserver:/srv/git/project.git  
git push origin main

### if the project is already a git repo with configured remote (Gitlab/Github/AzureDevOps)

cd project  
git remote set-url origin git@gitserver:/srv/git/project.git  
git push origin --all