

```
MINGW64 /e/code/swarm1 (main)
dhpcsa@DHPCSA9 MINGW64 /e/code/swarm1 (main)
$ vi index.html

dhpcsa@DHPCSA9 MINGW64 /e/code/swarm1 (main)
$ vi Dockerfile

dhpcsa@DHPCSA9 MINGW64 /e/code/swarm1 (main)
$ git add .
warning: in the working copy of 'Dockerfile', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'index.html', LF will be replaced by CRLF the next time Git touches it

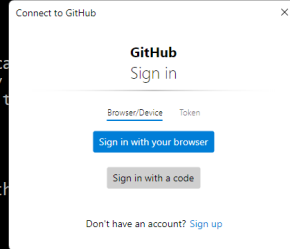
dhpcsa@DHPCSA9 MINGW64 /e/code/swarm1 (main)
$ git commit -m "both file committed"
[main 0d78bf3] both file committed
Committer: HPCSA <dhpcsa@students.acts.in>
Your name and email address were configured automatically based on your username and hostname. Please check that they are accurate. You can suppress this message by setting them explicitly. Suppress this message by running 'git config --global user.name "You Name"'.
git config --global user.name "Your Name"
git config --global user.email you@example.com

After doing this, you may fix the identity used for the commit with 'git commit --amend --reset-author'.

2 files changed, 3 insertions(+)
create mode 100644 Dockerfile
create mode 100644 index.html

dhpcsa@DHPCSA9 MINGW64 /e/code/swarm1 (main)
$ git push
remote: Permission to Pranjali-0928/swarm1.git denied to Suka30nya.
fatal: unable to access 'https://github.com/Pranjali-0928/swarm1.git/': The requested URL returned error: 403

dhpcsa@DHPCSA9 MINGW64 /e/code/swarm1 (main)
$ git push
```



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tom@master:root

[root@master Jenkins]# systemctl status docker
o docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; disabled; preset: disabled)
   Active: inactive (dead)
   TriggeredBy: o docker.socket
   Docs: https://docs.docker.com
[root@master Jenkins]# systemctl start docker
[root@master Jenkins]# systemctl enable docker
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /usr/lib/systemd/system/docker.service.
[root@master Jenkins]# docker swarm init --advertise-addr 192.168.144.144
Swarm initialized: current node (rpd8alsagx7kar8s68tyqamfa) is now a manager.

To add a worker to this swarm, run the following command:

    docker swarm join --token SWMTKN-1-4e41hbz6ekn3f768xngselygtsyonx1kq7foq1212zl8xcry-0yclfn6b49o0gi3lvn2vfdtir 192.168.144.144:2377

To add a manager to this swarm, run 'docker swarm join-token manager' and follow the instructions.

[root@master Jenkins]# docker node ls
ID                HOSTNAME        STATUS        AVAILABILITY    MANAGER STATUS   ENGINE VERSION
rpd8alsagx7kar8s68tyqamfa + master Ready Active Leader 24.0.7
[root@master ~]# docker node ls
ID                HOSTNAME        STATUS        AVAILABILITY    MANAGER STATUS   ENGINE VERSION
rpd8alsagx7kar8s68tyqamfa + master Ready Active Leader 24.0.7
[root@master ~]# vi joinecmd
[root@master ~]# chmod +x joinecmd
[root@master ~]# firewall-cmd --list-all
public (active)
target: default
icmp-block-inversion: no
interfaces: ens160
sources:
services: cockpit dhcpv6-client ssh
ports:
protocols:
forward: yes
masquerade: no
forward-ports:
source-ports:
icmp-blocks:
rich rules:
[root@master ~]# firewall-cmd --add-port=2377/tcp
success
[root@master ~]# firewall-cmd --list-all
public (active)
target: default
icmp-block-inversion: no
interfaces: ens160
sources:
```

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public (active)
target: default
icmp-block-inversion: no
interfaces: ens160
sources:
services: cockpit dhcpv6-client ssh
ports: 2377/tcp
protocols:
forward: yes
masquerade: no
forward-ports:
source-ports:
icmp-blocks:
rich rules:
[root@master ~]# scp -o StrictHostKeyChecking=no worker2@192.168.144.145:/home/worker2
The authenticity of host '192.168.144.145 (192.168.144.145)' can't be established.
ED25519 key fingerprint is SHA256:0gsm/efeq4f17v/3fX21gH52C1LTWtAFDxWZSNEA.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.144.145' (ED25519) to the list of known hosts.
worker2@192.168.144.145's password:
joined
[root@master ~]# docker node ls


| ID                        | HOSTNAME | STATUS | AVAILABILITY | MANAGER STATUS | ENGINE VERSION |
|---------------------------|----------|--------|--------------|----------------|----------------|
| rpdxlsagx7kar568tyqamfa + | master   | Ready  | Active       | Leader         | 24.0.7         |
| ti1y1vj3wv1jurdcoj8esfzb  | worker2  | Ready  | Active       |                | 24.0.7         |


[root@master ~]# mkdir /swarm
[root@master ~]# cd /swarm
[root@master swarm]# vi Dockerfile
[root@master swarm]# vi index.html
[root@master swarm]# git add .
fatal: not a git repository (or any of the parent directories): .git
[root@master swarm]# git add .
fatal: not a git repository (or any of the parent directories): .git
[root@master swarm]# ls
Dockerfile index.html
[root@master swarm]# cd
[root@master ~]# rm -rfv swarm
[root@master ~]# mkdir /cluster
[root@master ~]# cd /cluster
[root@master cluster]# git clone https://github.com/Pranjal1-0928/swarm.git
Cloning into 'swarm'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
[root@master cluster]# ls
swarm
[root@master cluster]# cd swarm
[root@master swarm]# vi index.html
[root@master swarm]# git add .
Dockerfile index.html README.md
[root@master swarm]# git commit -m "Docker file committed"
Author identity unknown
*** Please tell me who you are.

Run

git config --global user.email "you@example.com"
git config --global user.name "Your Name"

to set your account's default identity.
Omit --global to set the identity only in this repository.

fatal: unable to auto-detect email address (got 'root@master.(none)')
[root@master swarm]# git config user.name demol
[root@master swarm]# git config user.email demol@localhost
[root@master swarm]# git commit -m "Docker file committed"
[main 81013f6] Docker file committed
2 files changed, 3 insertions(+)
create mode 100644 Dockerfile
create mode 100644 index.html
[root@master swarm]# git push
Username for 'https://github.com': pranjal1-0928
Password for 'https://pranjal1-0928@github.com':
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 2 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 366 bytes | 366.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
to https://github.com:pranjal1-0928/swarm.git
ec025ea..81013f6 main -> main
[root@master swarm]# pwd
/cluster/swarm
[root@master swarm]# cd
[root@master ~]# cd
[root@master ~]# rm -rfv swarm
[root@master ~]# vi joined
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tom@master:/root
Receiving objects: 100% (3/3), done.
[root@master cluster]# ls
swarm
[root@master cluster]# cd swarm
[root@master swarm]# vi index.html
[root@master swarm]# vi Dockerfile
[root@master swarm]# ls
Dockerfile index.html README.md
[root@master swarm]# git add .
[root@master swarm]# git commit -m "Docker file committed"
> ^C
[root@master swarm]# git commit -m "Docker file committed"
Author identity unknown
*** Please tell me who you are.

Run

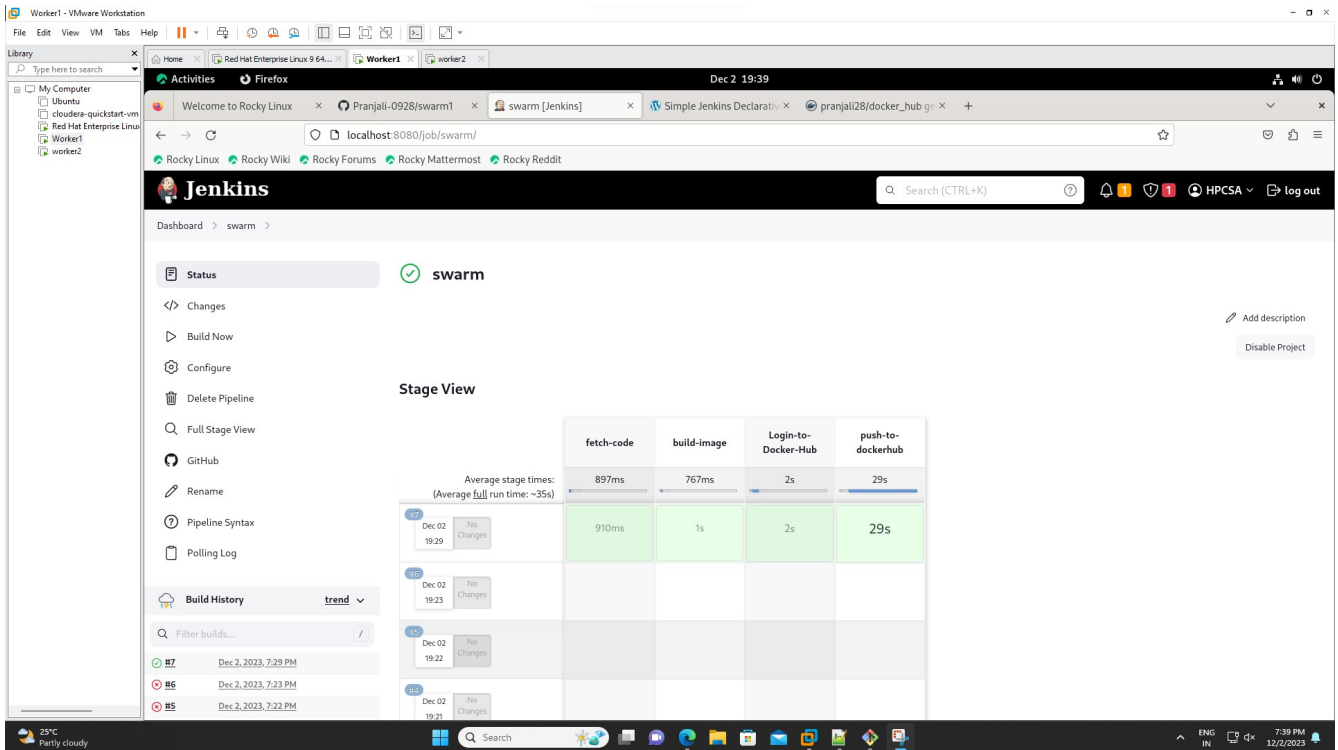
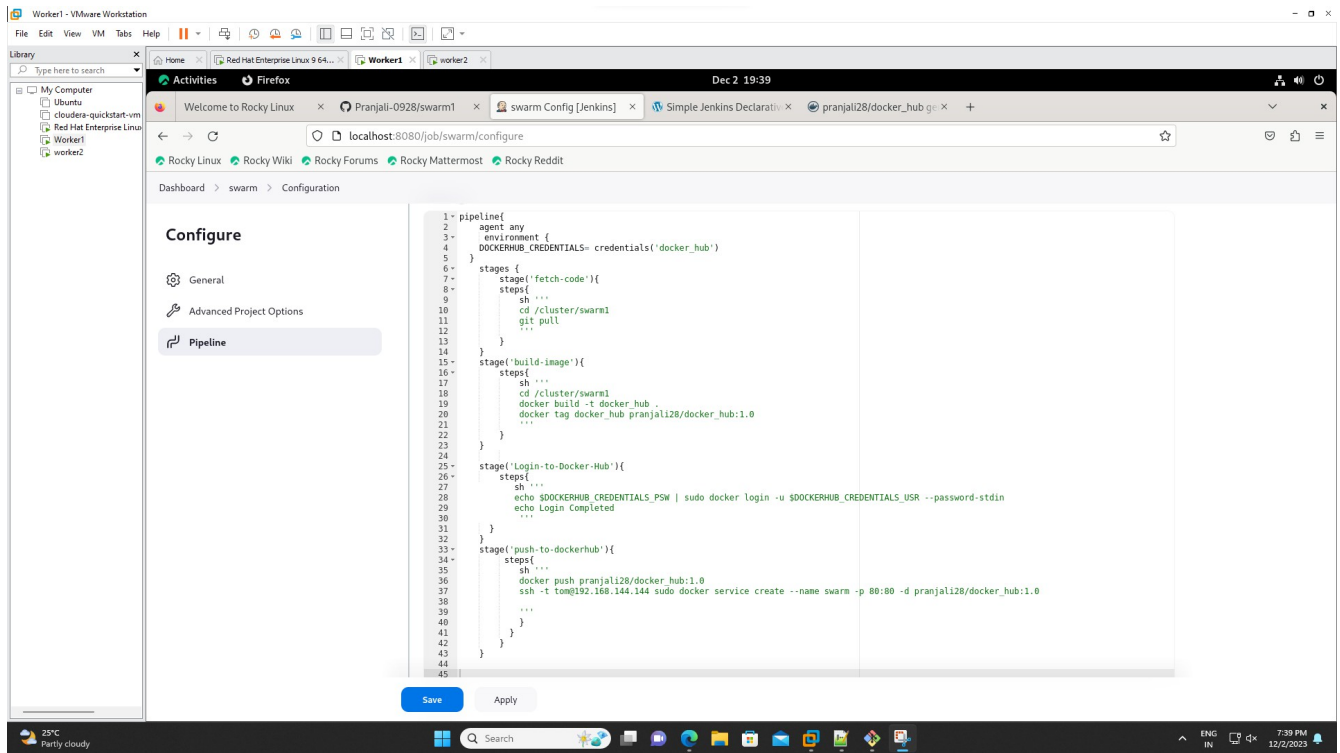
git config --global user.email "you@example.com"
git config --global user.name "Your Name"

to set your account's default identity.
Omit --global to set the identity only in this repository.

fatal: unable to auto-detect email address (got 'root@master.(none)')
[root@master swarm]# git config user.name demol
[root@master swarm]# git config user.email demol@localhost
[root@master swarm]# git commit -m "Docker file committed"
[main 81013f6] Docker file committed
2 files changed, 3 insertions(+)
create mode 100644 Dockerfile
create mode 100644 index.html
[root@master swarm]# git push
Username for 'https://github.com': pranjal1-0928
Password for 'https://pranjal1-0928@github.com':
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 2 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 366 bytes | 366.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
to https://github.com:pranjal1-0928/swarm.git
ec025ea..81013f6 main -> main
[root@master swarm]# pwd
/cluster/swarm
[root@master swarm]# cd
[root@master ~]# cd
[root@master ~]# rm -rfv swarm
[root@master ~]# vi joined
```

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tom@master:/root
Dec 2 19:36
2 files changed, 3 insertions(+)
create mode 100644 Dockerfile
create mode 100644 index.html
[root@master swarm]# git push
Username for 'https://github.com': pranjal1-0928
Password for 'https://pranjal1-0928@github.com':
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 2 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 366 bytes | 366.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com:pranjal1-0928/swarm.git
   ec935ea..81013f6  main -> main
[root@master swarm]# pwd
/custer/swarm
[root@master swarm]# dc
^C
[root@master swarm]# cd
[root@master ~]# rm -rfv swarm
[root@master ~]# vi joinecd
[root@master ~]# exit
logout
[Master@master ~]$ su - root
Password:
[root@master ~]# adduser tom
[root@master ~]# passwd
Changing password for user root.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@master ~]# visudo
[root@master ~]# su tom
[tom@master root]$ passwd
Changing password for user tom.
Current password:
passwd: Authentication token manipulation error
[tom@master root]$ passwd tom
passwd: only root can specify a user name.
[tom@master root]$ su -
Password:
[root@master ~]# passwd tom
Changing password for user tom.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@master ~]# su tom
[tom@master root]$
```

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root@worker2:/home/worker2
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12 docker ps
13 docker run --name webapp1 -d nginx
14 docker ps
15 history
[root@worker2 ~]# hostname
worker2
[root@worker2 ~]# ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
   link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
   inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
   inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: ens160: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP group default qlen 1000
   link/ether 00:0c:29:ac:80:91 brd ff:ff:ff:ff:ff:ff
   altnme enp3s0
   inet 192.168.144.145/24 brd 192.168.144.255 scope global dynamic noprefixroute ens160
       valid_lft 1412sec preferred_lft 1412sec
   inet6 fe80::20c:29ff:feac:8991/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
3: docker0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default
   link/ether 02:42:40:c9:b4:1a brd ff:ff:ff:ff:ff:ff
   inet 172.17.0.1/16 brd 172.17.255.255 scope global docker0
       valid_lft forever preferred_lft forever
   inet6 fe80::42:40ff:fec9:b41a/64 scope link
       valid_lft forever preferred_lft forever
17: veth8fa018d@if16: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue master docker0 state UP group default
   link/ether 3a:9c:17:f0:a1:0a brd ff:ff:ff:ff:ff:ff link-netnsid 0
   inet6 fe80::389c:17ff:fe0:a10a/64 scope link
       valid_lft forever preferred_lft forever
37: veth46078b7@if36: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue master docker0 state UP group default
   link/ether 9e:b7:d6:d2:5b:9f brd ff:ff:ff:ff:ff:ff link-netnsid 1
   inet6 fe80::9cb7:d6ff:fed2:5b9f/64 scope link
       valid_lft forever preferred_lft forever
[root@worker2 ~]# cd /home/worker2
[root@worker2 worker2]# ls
Desktop Documents Downloads joinecd Music Pictures Public Templates Videos
[root@worker2 worker2]# ./joinecd
This node joined a swarm as a worker.
[root@worker2 worker2]#
```



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root@master:~
Delta compression using up to 2 threads
Compressing objects: 100% (1/2), done.
Writing objects: 100% (4/4), 366 bytes | 366.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/pranjal1-0928/swarm.git
    ecd35ea..81033fc  main -> main
[root@master swarm]# pwd
/custer/swarm
[root@master swarm]# dc
^C
[root@master swarm]# cd
[root@master ~]# rm -rfv swam
[root@master ~]# vi joincmd
[root@master ~]# exit
logout
[Master@master ~]$ su - root
Password:
[root@master ~]# adduser tom
[root@master ~]# passwd
Changing password for user root.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@master ~]# visudo
[root@master ~]# su tom
[tom@master root]$ passwd
Changing password for user tom.
Current password:
passwd: Authentication token manipulation error
[tom@master root]$ passwd tom
passwd: only root can specify a user name.
[tom@master root]$ su -
Password:
[root@master ~]# passwd tom
Changing password for user tom.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@master ~]# su tom
[tom@master root]$ docker ps
permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get "http://fd2Fvarh2Frunh2Fdocker.sock/v1.24/containers/json": dial unix /var/run/docker.sock: connect: permis
sion denied
[tom@master root]$ exit
exit
[root@master ~]# docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS      NAMES
9aac5c8615f7   pranjal128/docker_hub:1.0   "/docker-entrypoint..."   7 minutes ago   Up 7 minutes   80/tcp     swarm-1.myl7u8jtyshfoindjtzks0v4m
[root@master ~]#
```

```
MINGW64 /e/code/swarm1
dhpcsa@DHPCSA9 MINGW64 /e/code/swarm1 (main)
$ vi index.html

dhpcsa@DHPCSA9 MINGW64 /e/code/swarm1 (main)
$ git add .
warning: in the working copy of 'index.html', LF will be replaced by CRLF the next time Git touches it

dhpcsa@DHPCSA9 MINGW64 /e/code/swarm1 (main)
$ git commit -m "committed second time"
[main e3190bc] committed second time
Committer: HPCSA <dhpcsa@students.acts.in>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly:

    git config --global user.name "Your Name"
    git config --global user.email you@example.com

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

1 file changed, 1 insertion(+)

dhpcsa@DHPCSA9 MINGW64 /e/code/swarm1 (main)
$ git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 16 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 305 bytes | 305.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Pranjal1-0928/swarm1.git
    0d78bf3..e3190bc  main -> main

dhpcsa@DHPCSA9 MINGW64 /e/code/swarm1 (main)
$
```

