

## Assignment 26

*Understood. To follow the provided instructions and create the files/directory using the same name and case as provided in the task steps, please provide me with the specific names and case instructions for the files/directory you want to create.*

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### Jenkins

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## Assignment 2 : SonarQube - Docker installation

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### 1. Edit the system configuration file vi /etc/sysctl.conf

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.02s)
cd /etc/
```

```
lusy@localhost.localdomain /etc (2m 3.22s)
sudo vi sysctl.conf
```

### 2. Insert the following lines at the end of this file

1. m.max map count=262144
2. fs.file-max=65536

```
# sysctl settings are defined through files in
# /usr/lib/sysctl.d/, /run/sysctl.d/, and /etc/sysctl.d/.
#
# Vendors settings live in /usr/lib/sysctl.d/.
# To override a whole file, create a new file with the same in
# /etc/sysctl.d/ and put new settings there. To override
# only specific settings, add a file with a lexically later
# name in /etc/sysctl.d/ and put new settings there.
#
# For more information, see sysctl.conf(5) and sysctl.d(5).i
vm.max_map_count=262144
fs.file-max=65536
~
~
```

### 3. Enable the system configuration.

1.sysctl-p

```
lusy@localhost.localdomain /etc (0.056s)
sudo sysctl -p
vm.max_map_count = 262144
fs.file-max = 65536
```

### 4. Create a configuration file named 99-sonarqube.conf.

vi /etc/security/limits.d/99-sonarqube.conf

```
lusy@localhost.localdomain /etc (25.941s)
sudo vi /etc/security/limits.d/99-sonarqube.conf
```

### 5. Paste the following lines in the vi editor

root- nofile 65536

root- nproc 7610

```
#root soft nofile 65536
#root hard nofile 65536
root soft nproc 7610
root hard nproc 7610
```

~

### 6. Reboot the system

```
lusy@localhost.localdomain /etc (0.073s)
sudo reboot
```

```
Connection to 10.211.55.20 closed by remote host.
Connection to 10.211.55.20 closed.
```

## 7. Start the docker service using systemctl start docker

(Note : you need to have docker installed in your system)

```
base ~ (15.404s)
ssh lusy@10.211.55.20

lusy@localhost.localdomain ~ git:(HEAD) ±11 (2.783s)
sudo systemctl start docker
[sudo] password for lusy:

lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.909s)
sudo systemctl status docker
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset:
   Active: active (running) since Tue 2023-10-10 22:58:25 IST; 18s ago
   TriggeredBy: ● docker.socket
   Process: http://docs.docker.com
```

## 8. Execute the command

docker pull sonarqube

```
lusy@localhost.localdomain ~ git:(HEAD) ±11
docker pull sonarqube
Using default tag: latest
latest: Pulling from library/sonarqube
6ea603f1df5e: Pull complete
5ba2aefbab33: Pull complete
869876930041: Pull complete
481239d57792: Pull complete
0707fa9330d3: Pull complete
e2a21872f107: Downloading [=====] 137.6MB/382MB
0b5f8e022df6: Download complete
```

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (5.259s)
docker pull sonarqube
Using default tag: latest
latest: Pulling from library/sonarqube
Digest: sha256:45c205d63a3341c88618528a0e0245620633f20c98832033712acf6f8536f1a4
Status: Image is up to date for sonarqube:latest
docker.io/library/sonarqube:latest
```

## 9. List the docker images

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.047s)
docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
sonarqube	latest	be5948f93c5d	7 days ago	710MB
httpd_test	latest	834e577d6152	3 weeks ago	195MB
kartik404/mysql	arm	e248da1c6d57	3 weeks ago	507MB
kartik404/mysql	first_dhub	e248da1c6d57	3 weeks ago	507MB
mysql	latest	e248da1c6d57	3 weeks ago	507MB

## 10. Create Docker volumes to store the SonarQube persistent data.

docker volume create sonarqube-conf

docker volume create sonarqube-data

docker volume create sonarqube-logs

docker volume create sonarqube-extensions

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.04s)
```

```
docker volume create sonarqube-conf
```

```
sonarqube-conf
```

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.043s)
```

```
docker volume create sonarqube-data
```

```
sonarqube-data
```

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.04s)
```

```
docker volume create sonarqube-logs
```

```
sonarqube-logs
```

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.043s)
```

```
docker volume create sonarqube-extensions
```

```
sonarqube-extensions
```

## 11. Verify the persistent data directories

docker volume inspect sonarqube-conf

docker volume inspect sonarqube-data

docker volume inspect sonarqube-logs

docker volume inspect sonarqube-extensions

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.037s)
```

```
docker volume inspect sonarqube-conf
```

```
[
  {
    "CreatedAt": "2023-10-10T23:36:29+05:30",
    "Driver": "local",
    "Labels": null,
    "Mountpoint": "/var/lib/docker/volumes/sonarqube-conf/_data",
    "Name": "sonarqube-conf",
    "Options": null,
    "Scope": "local"
  }
]
```

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.036s)
```

```
docker volume inspect sonarqube-data
```

```
[
  {
    "CreatedAt": "2023-10-10T23:36:35+05:30",
    "Driver": "local",
    "Labels": null,
    "Mountpoint": "/var/lib/docker/volumes/sonarqube-data/_data",
    "Name": "sonarqube-data",
    "Options": null,
    "Scope": "local"
  }
]
```

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.036s)
```

```
docker volume inspect sonarqube-logs
```

```
[
  {
    "CreatedAt": "2023-10-10T23:36:41+05:30",
    "Driver": "local",
    "Labels": null,
    "Mountpoint": "/var/lib/docker/volumes/sonarqube-logs/_data",
    "Name": "sonarqube-logs",
    "Options": null,
    "Scope": "local"
  }
]
```

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.039s)
```

```
docker volume inspect sonarqube-extensions
```

```
[
  {
    "CreatedAt": "2023-10-10T23:36:46+05:30",
    "Driver": "local",
    "Labels": null,
    "Mountpoint": "/var/lib/docker/volumes/sonarqube-extensions/_data",
    "Name": "sonarqube-extensions",
    "Options": null,
    "Scope": "local"
  }
]
```

## 12. create symbolic links to an easier access location.

mkdir/sonargube

In -s /var/lib/docker/volumes/sonarqube-conf/\_data /sonarqube/conf

In -s/var/lib/docker/volumes/sonarqube-data/\_data/sonarqube/data

In -s/var/lib/docker/volumes/sonarqube-logs/\_data/sonarqube/logs

In -s /var/lib/docker/volumes/sonarqube-extensions/ data

/sonarqube/extensions

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (4.16s)
sudo mkdir /sonarqube
[sudo] password for lusy:
```

*(verify)*

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.023s)
cd /sonarqube
```

```
lusy@localhost.localdomain /sonarqube (0.02s)
cd
```

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### 13. Start a SonarQube container with persistent data storage.

```
docker run -d -name sonarqube -p 9000:9000 -p 9092:9092 -V  
sonarqube-conf:/opt/sonarqube/conf-vsonarqube-data:/opt/sonarqube/data-V  
sonarqube-logs:/opt/sonarqube/logs-v  
sonarqube-extensions:/opt/sonarqube/extensions sonarqube
```

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.056s)  
sudo ln -s /var/lib/docker/volumes/sonarqube-conf/_data /sonarqube/conf  
  
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.057s)  
sudo ln -s /var/lib/docker/volumes/sonarqube-data/_data /sonarqube/data  
  
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.059s)  
sudo ln -s /var/lib/docker/volumes/sonarqube-logs/_data /sonarqube/logs  
  
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.058s)  
sudo ln -s /var/lib/docker/volumes/sonarqube-extensions/_data /sonarqube/extensions
```

### 14. Open your browser by the url IP address of you server plus:9000

```
lusy@localhost.localdomain ~ git:(HEAD) ±11 (0.392s)  
docker run -d --name sonarqube -p 9000:9000 -p 9092:9092 \  
-v sonarqube-conf:/opt/sonarqube/conf \  
-v sonarqube-data:/opt/sonarqube/data \  
-v sonarqube-logs:/opt/sonarqube/logs \  
-v sonarqube-extensions:/opt/sonarqube/extensions \  
sonarqube  
543d21224c962ea2cd8551b2ea201a3671402510c19203301c1741dacf1639dd
```

### 15. The SonarQube dashboard will be presented.

### 16. Click on the Login button and use the Sonarqube default username and password.

- Default Username: admin
- Default Password: admin

10.211.55.20:9000/sessions/new?return\_to=%2F

Log in to SonarQube

admin

•••••

Log inCancel

the\_test #1 Console [Jenkins] ×How do you want to create your ×

←→↺10.211.55.20:9000/projects/createGetting Started

sonarqubeProjectsIssuesRulesQuality ProfilesQuality GatesAdministrationMoreQ

How do you want to create your project?

Do you want to benefit from all of SonarQube's features (like repository import and Pull Request decoration)?  
Create your project from your favorite DevOps platform.

First, you need to set up a DevOps platform configuration.

Import from Azure DevOps

Setup

Import from Bitbucket Cloud

Setup

Import from GitHub

Setup

Import from GitLab

Setup

Are you just testing or have an advanced use-case? Create a project manually.