

Static Code Analysis Setup

For this exercise, you will be setting up SonarQube to analyze your Java project code and SonarScanner to analyze your TypeScript code.

Install SonarQube

We will be using the Docker image to run SonarQube. To install, you must first have Docker running on your computer. You can install **Docker Desktop** here:

- Windows - <https://hub.docker.com/editions/community/docker-ce-desktop-windows>
- Mac - <https://docs.docker.com/desktop/mac/install/>

Make sure you Docker Desktop running. Open a terminal window and type:

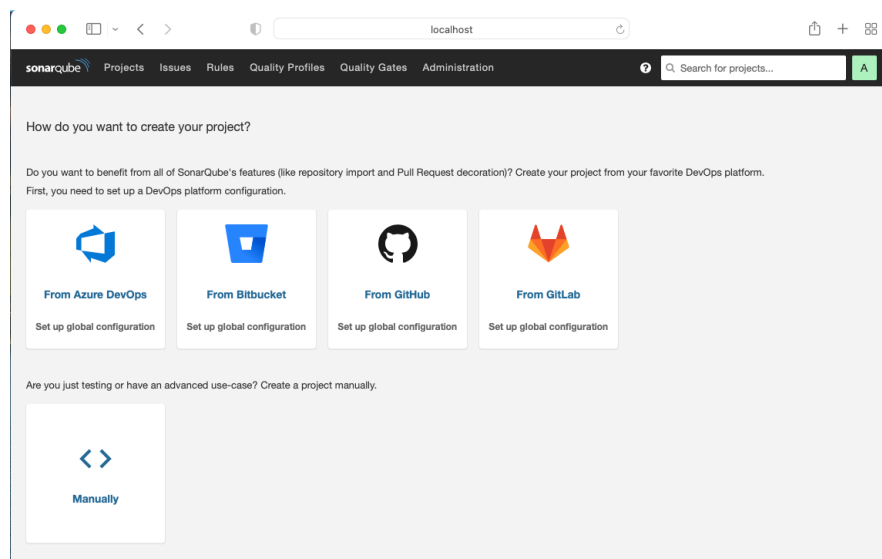
```
docker run -d --name sonarqube -e SONAR_ES_BOOTSTRAP_CHECKS_DISABLE=true -p 9000:9000 sonarqube:latest
```

Accessing SonarQube

Once you have SonarQube installed and running, log in to <http://localhost:9000> with System Administrator credentials (admin/admin) and update your password.

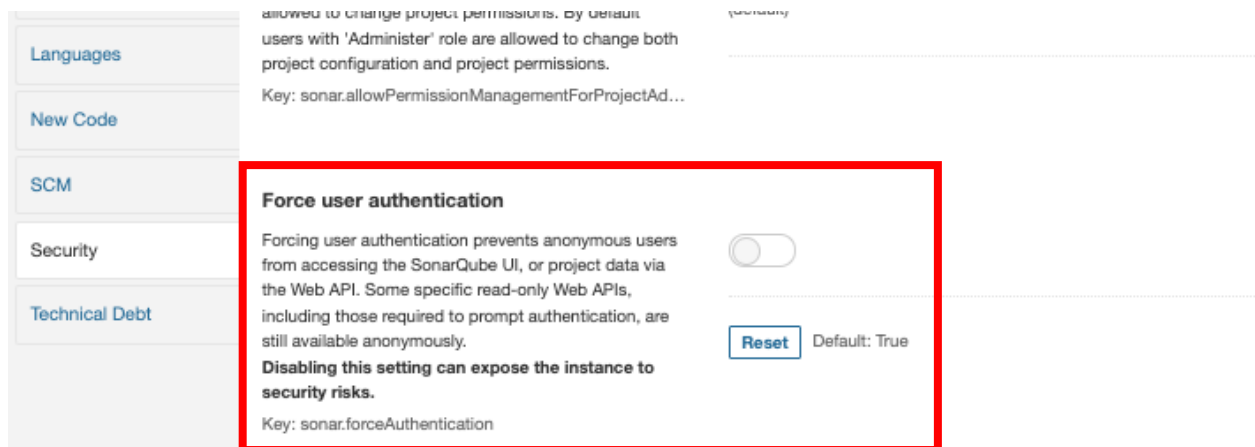
Remember your **username** and **password** as this will be needed later for the exercise.

You should see something like this:



Click **Administration** from the top menu and then click **Security** on the left.

Scroll to the bottom and make sure **Force user authentication** is unchecked. This will allow you to freely run SonarQube without requiring any credentials.



At this point, you are done with installing SonarQube.

Install SonarScanner

1. Go to <https://docs.sonarqube.org/latest/analysis/scan/sonarscanner/> and download SonarScanner.
2. Expand the downloaded file into the directory of your choice. We'll refer to it as `$install_directory` in the next steps.
3. Add the `$install_directory/bin` directory to your path.
4. Verify your installation by opening a new shell and executing the command `sonar-scanner -h` (`sonar-scanner.bat -h` on Windows). You should get output like this:

```
usage: sonar-scanner [options]

Options:
  -D,--define <arg>    Define property
  -h,--help             Display help information
  -v,--version         Display version information
  -X,--debug           Produce execution debug output
```

At this point, you are done with installing SonarScanner.

Stopping SonarQube

Option 1: Zip File Installation

To stop SonarQube, follow the instructions here:

<https://docs.sonarqube.org/latest/setup/operate-server/>

Option 2: Docker Image

To stop SonarQube on Docker, you must first find the container id by typing: `docker ps`

```
mikez@Mikes-MacBook-Pro-2 SWEN261 % docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                    NAMES
aba13f6baa38   sonarqube:latest  "/opt/sonarqube/bin/..."  5 minutes ago  Up 5 minutes  0.0.0.0:9000->9000/tcp    sonarqube
```

Next, stop the container by typing: `docker stop [container id]`

```
mikez@Mikes-MacBook-Pro-2 SWEN261 % docker stop aba13f6baa38
aba13f6baa38
```

Lastly, remove the docker container by typing: `docker rm [container id]`

```
mikez@Mikes-MacBook-Pro-2 SWEN261 % docker rm aba13f6baa38
aba13f6baa38
```