PROJECT – USING DOCKER-COMPOSE TO CREATE SONARQUBE

Install SonarQube using Docker | Install SonarQube using Docker on Ubuntu 18.0.4 | Install SonarQube using Docker-Compose

How to setup SonarQube using Docker compose?

SonarQube is static code analysis tool. It is open source and Java based tool. It can be installed quickly using Docker Compose with less manual steps.

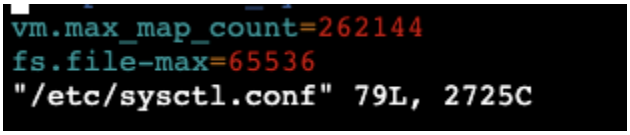
What is Docker Compose?

Compose is a tool for defining and running multi-container Docker applications. With Compose, you use a YAML file to configure your application's services. Then, with a single command, you create and start all the services from your configuration.

The purpose of **docker-compose** is to function as **docker** cli but to issue multiple commands much more quickly. To make use of **docker-compose**, you **need** to encode the commands you were running before into a **docker-compose.yml** file

Pre-requisites:

- Ubuntu EC2 up and running with at least t2.small
- Port 9000 is opened in security firewall rule
- Make sure maximum number of



Login to instance where you will be installing SonarQube, perform below command:
sudo vi /etc/sysctl.conf

Add the following lines to the bottom of that file:

vm.max_map_count=262144
fs.file-max=65536

To make sure changes are getting into effect:
sudo sysctl -p

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Perform System update
sudo apt-get update

Install Docker
sudo apt-get install docker.io -y

Install Docker-Compose
sudo apt-get install docker-compose -y

Add current user to docker group
sudo usermod -aG docker $USER

Create docker-compose.yml
this yml has all configuration for installing both SonarQube and Postgresql:
touch docker-compose.yml

nano docker-compose.yml

ctrl + X

y

sudo vi docker-compose.yml

wq!

(Copy the below code highlighted in yellow color)

```
version: "3"

services:
  sonarqube:
    image: sonarqube:lts-community
    container_name: sonarqube
    restart: unless-stopped
    environment:
      - SONARQUBE_JDBC_USERNAME=sonar
      - SONARQUBE_JDBC_PASSWORD=password123
      - SONARQUBE_JDBC_URL=jdbc:postgresql://db:5432/sonarqube
```

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```
    ports:
      - "9000:9000"
      - "9092:9092"
    volumes:
      - sonarqube_conf:/opt/sonarqube/conf
      - sonarqube_data:/opt/sonarqube/data
      - sonarqube_extensions:/opt/sonarqube/extensions
      - sonarqube_bundled-plugins:/opt/sonarqube/lib/bundled-plugins

  db:
    image: postgres:12
    container_name: db
    restart: unless-stopped
    environment:
      - POSTGRES_USER=sonar
      - POSTGRES_PASSWORD=password123
      - POSTGRES_DB=sonarqube
    volumes:
      - sonarqube_db:/var/lib/postgresql10
      - postgresql_data:/var/lib/postgresql10/data

volumes:
  postgresql_data:
  sonarqube_bundled-plugins:
  sonarqube_conf:
  sonarqube_data:
  sonarqube_db:
  sonarqube_extensions:
```

Save the file by entering: wq! If USING VI EDITOR

Save the file by entering: wq! If USING NANO EDITOR - MOST RECOMMENDED

Now execute the compose file using Docker compose command:

```
sudo docker-compose up -d
```

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```
ubuntu@ip-172-31-20-94:~$ sudo docker-compose up -d
Starting sonarqube ...
Starting sonarqube
Starting db ...
Starting sonarqube ... done
ubuntu@ip-172-31-20-94:~$
```

Make sure SonarQube is up and running

sudo docker-compose logs –follow

```
sonarqube    | 2022.02.03 16:23:40 INFO  ce[][o.s.s.e.EsClientProvider] Connected to local Elas
ticsearch: [http://localhost:9001]
sonarqube    | 2022.02.03 16:23:41 INFO  ce[][o.sonar.db.Database] Create JDBC data source for
jdbc:postgresql://db:5432/sonarqube
sonarqube    | 2022.02.03 16:23:44 INFO  ce[][o.s.s.p.ServerFileSystemImpl] SonarQube home: /op
t/sonarqube
sonarqube    | 2022.02.03 16:23:44 INFO  ce[][o.s.c.c.CePluginRepository] Load plugins
sonarqube    | 2022.02.03 16:23:47 INFO  ce[][o.s.c.c.ComputeEngineContainerImpl] Running Commu
nity edition
sonarqube    | 2022.02.03 16:23:47 INFO  ce[][o.s.ce.app.CeServer] Compute Engine is operationa
l
sonarqube    | 2022.02.03 16:23:47 INFO  app[][o.s.a.SchedulerImpl] Process[ce] is up
sonarqube    | 2022.02.03 16:23:47 INFO  app[][o.s.a.SchedulerImpl] SonarQube is up
```