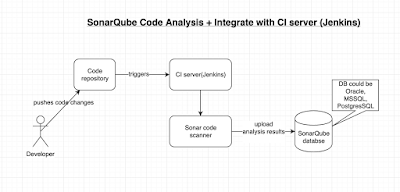
### Install Sonarqube on Ubuntu - How to install SonarQube on Ubuntu 18.0.4?

SonarQube is one of the popular static code analysis tools. SonarQube is open-source, Java based tool It also needs database as well - Database can be MS SQL, Oracle or PostgreSQL.  We will use PostgreSQL as it is open source as well.

Make sure port 9000 is opened in Firewall rules.

**Pre-requistes:**  
Instance should have at least 2 GB RAM. For AWS, instance should new and type should be t2.small. For Azure it should be standard B1ms which is 2 GB RAM.

[](https://1.bp.blogspot.com/-RSwlxgdvxQ0/XZFR8hOsA_I/AAAAAAAABPc/H5jk3U-4tkke9gTJy99jmzZYAGgv2cLcACLcBGAsYHQ/s1600/Screen%2BShot%2B2019-09-29%2Bat%2B7.52.29%2BPM.png)

Let us start with java install (skip java install if you already have it installed)

**Java 11 installation steps**

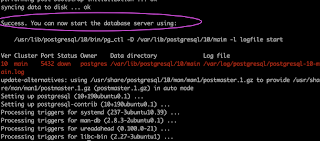
sudo apt-get update && sudo apt-get install default-jdk -y

**2. Postgres Installation**

sudo sh -c 'echo "deb <http://apt.postgresql.org/pub/repos/apt/> `lsb\_release -cs`-pgdg main" >> /etc/apt/sources.list.d/pgdg.list'

[https://2.bp.blogspot.com/-reyBs7nWmTU/W53UHfXDjtI/AAAAAAAAAaI/ggauiY4yAvolhAxtnp5N-YBPZsw6EOJBwCLcBGAs/s320/Screen%2BShot%2B2018-09-15%2Bat%2B10.52.40%2BPM.png](https://2.bp.blogspot.com/-reyBs7nWmTU/W53UHfXDjtI/AAAAAAAAAaI/ggauiY4yAvolhAxtnp5N-YBPZsw6EOJBwCLcBGAs/s1600/Screen%2BShot%2B2018-09-15%2Bat%2B10.52.40%2BPM.png)

sudo wget -q <https://www.postgresql.org/media/keys/ACCC4CF8.asc> -O - | sudo apt-key add -  
[https://3.bp.blogspot.com/--dt6QOobsoI/W53UHafpNaI/AAAAAAAAAaM/VcWMrVAOb3cOVmRKvAfGRDPUTXEzdwpqACLcBGAs/s320/Screen%2BShot%2B2018-09-15%2Bat%2B10.53.09%2BPM.png](https://3.bp.blogspot.com/--dt6QOobsoI/W53UHafpNaI/AAAAAAAAAaM/VcWMrVAOb3cOVmRKvAfGRDPUTXEzdwpqACLcBGAs/s1600/Screen%2BShot%2B2018-09-15%2Bat%2B10.53.09%2BPM.png)  
  
  
sudo apt-get -y install postgresql postgresql-contrib  
  
Ignore the message in red color below:

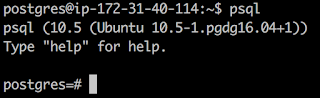
[](https://1.bp.blogspot.com/-5o3JxoNhy9M/XrGcmQhinWI/AAAAAAAACIY/cx1_n4P0I9Q-33YSwjQg37UrK2NzlWIRACLcBGAsYHQ/s1600/success.png)

sudo systemctl start postgresql  
sudo systemctl enable postgresql

**Login as postgres user**  
sudo su - postgres

**Now create a user below by executing below command**

createuser sonar  
  
**9. Switch to sql shell by entering**  
psql

[](https://4.bp.blogspot.com/-k2ck3bikoTY/W53VeG8kuwI/AAAAAAAAAa4/zj8MzQxgEe0ccCubLibbuORbTWnXNoeSwCLcBGAs/s1600/Screen%2BShot%2B2018-09-15%2Bat%2B11.00.38%2BPM.png)

**Execute the below three lines (one by one)**  
  
ALTER USER sonar WITH ENCRYPTED password 'password';  
  
CREATE DATABASE sonarqube OWNER sonar;  
  
\q

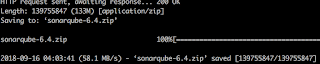
[https://2.bp.blogspot.com/-52tMNHgfuD0/W53Vu1GmDBI/AAAAAAAAAbA/TUClUMZLEE8djEpstjkV2Op8g7TXvJpRgCLcBGAs/s200/Screen%2BShot%2B2018-09-15%2Bat%2B11.01.43%2BPM.png](https://2.bp.blogspot.com/-52tMNHgfuD0/W53Vu1GmDBI/AAAAAAAAAbA/TUClUMZLEE8djEpstjkV2Op8g7TXvJpRgCLcBGAs/s1600/Screen%2BShot%2B2018-09-15%2Bat%2B11.01.43%2BPM.png)

type exit to come out of postgres user.

[https://3.bp.blogspot.com/-_Y3_tZQ-ACs/W53V72gTtKI/AAAAAAAAAbE/gR65bNcoalIXyzKA_2P7gJiH8YI63uinwCLcBGAs/s200/Screen%2BShot%2B2018-09-15%2Bat%2B11.02.38%2BPM.png](https://3.bp.blogspot.com/-_Y3_tZQ-ACs/W53V72gTtKI/AAAAAAAAAbE/gR65bNcoalIXyzKA_2P7gJiH8YI63uinwCLcBGAs/s1600/Screen%2BShot%2B2018-09-15%2Bat%2B11.02.38%2BPM.png)

**3. Now install SonarQube Web App**

**sudo wget https://binaries.sonarsource.com/Distribution/sonarqube/sonarqube-7.7.zip**

[](https://1.bp.blogspot.com/-nwo6XGGDAPY/W53WNqYJUwI/AAAAAAAAAbQ/dfR8frK-jFEp8-OxjA9FeLdEG-0MJDsPgCLcBGAs/s1600/Screen%2BShot%2B2018-09-15%2Bat%2B11.03.44%2BPM.png)

sudo apt-get -y install unzip  
sudo unzip sonarqube-7.7.zip -d /opt

[https://2.bp.blogspot.com/-u1ih14Rc7UQ/W53WaqAOg0I/AAAAAAAAAbU/MD8ts1OtlWQAhOULv3s2SCV1UEHG0Vx0wCLcBGAs/s320/Screen%2BShot%2B2018-09-15%2Bat%2B11.04.38%2BPM.png](https://2.bp.blogspot.com/-u1ih14Rc7UQ/W53WaqAOg0I/AAAAAAAAAbU/MD8ts1OtlWQAhOULv3s2SCV1UEHG0Vx0wCLcBGAs/s1600/Screen%2BShot%2B2018-09-15%2Bat%2B11.04.38%2BPM.png)

sudo mv /opt/sonarqube-7.7 /opt/sonarqube -v

[https://1.bp.blogspot.com/-p7NEQuXV_ck/W53Wn-G4pWI/AAAAAAAAAbc/o3n81nD-adcQEqrFnDwJUv3l5sjKtMkVwCLcBGAs/s200/Screen%2BShot%2B2018-09-15%2Bat%2B11.05.28%2BPM.png](https://1.bp.blogspot.com/-p7NEQuXV_ck/W53Wn-G4pWI/AAAAAAAAAbc/o3n81nD-adcQEqrFnDwJUv3l5sjKtMkVwCLcBGAs/s1600/Screen%2BShot%2B2018-09-15%2Bat%2B11.05.28%2BPM.png)

**Create Group and User:**

sudo groupadd sonar

**Now add the user with directory access**

sudo useradd -c "user to run SonarQube" -d /opt/sonarqube -g sonar sonar

sudo chown sonar:sonar /opt/sonarqube -R

**Modify sonar.properties file**  
sudo vi /opt/sonarqube/conf/sonar.properties  
uncomment the below lines by removing # and add values highlighted yellow  
sonar.jdbc.username=sonar  
sonar.jdbc.password=password

[https://1.bp.blogspot.com/-1C3EYljJscc/W53W3J6jssI/AAAAAAAAAbk/wnL67BIe2fkn546B_o5C9TwmAyLot3_aQCLcBGAs/s200/Screen%2BShot%2B2018-09-15%2Bat%2B11.06.24%2BPM.png](https://1.bp.blogspot.com/-1C3EYljJscc/W53W3J6jssI/AAAAAAAAAbk/wnL67BIe2fkn546B_o5C9TwmAyLot3_aQCLcBGAs/s1600/Screen%2BShot%2B2018-09-15%2Bat%2B11.06.24%2BPM.png)

Next, uncomment the below line, removing #  
sonar.jdbc.url=jdbc:postgresql://localhost/sonarqube

[https://1.bp.blogspot.com/-5quyxLgWAb0/XqWw9NREuqI/AAAAAAAACAI/ZqmkaTixd4YI4LwrEhv3qCxtwl6x5HvjwCLcBGAsYHQ/s320/sq.png](https://1.bp.blogspot.com/-5quyxLgWAb0/XqWw9NREuqI/AAAAAAAACAI/ZqmkaTixd4YI4LwrEhv3qCxtwl6x5HvjwCLcBGAsYHQ/s1600/sq.png)

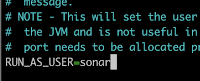
Press escape, and enter :wq! to come out of the above screen.

**Edit the sonar script file and set RUN\_AS\_USER**

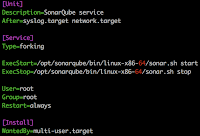
sudo vi /opt/sonarqube/bin/linux-x86-64/sonar.sh

Add enable the below line

RUN\_AS\_USER=sonar

[](https://1.bp.blogspot.com/-sIM2KKjb7u8/XpKa-Xq9p7I/AAAAAAAABzs/Oq9Vu-EGwK8C-eqy0Gmsl5sV4FPG4oELwCLcBGAsYHQ/s1600/run%2Bas%2Bsonar.png)

**Create Sonar as a service(this will enable to start automatically when you restart the server)**  
Execute the below command:  
sudo vi /etc/systemd/system/sonar.service

[](https://2.bp.blogspot.com/-LWRno1Q6flQ/W53XlR201eI/AAAAAAAAAb4/Ry2GQ-w_Nj0-07R_xt2OsBQUsFaUT9_GgCLcBGAs/s1600/Screen%2BShot%2B2018-09-15%2Bat%2B11.09.20%2BPM.png)

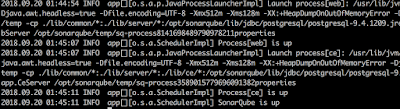
add the below code in green color:  
[Unit]  
Description=SonarQube service  
After=syslog.target network.target  
  
[Service]  
Type=forking  
  
ExecStart=/opt/sonarqube/bin/linux-x86-64/sonar.sh start  
ExecStop=/opt/sonarqube/bin/linux-x86-64/sonar.sh stop  
  
User=sonar  
Group=sonar  
Restart=always  
  
[Install]  
WantedBy=multi-user.target

sudo systemctl start sonar

sudo systemctl enable sonar  
  
sudo systemctl status sonar

[https://3.bp.blogspot.com/-ZOSIqPpqRD4/W53Xz4ZQCzI/AAAAAAAAAb8/nAEAqTXIkiIIYQHr0IZ4oL7YbCemgz9HACLcBGAs/s320/Screen%2BShot%2B2018-09-15%2Bat%2B11.10.35%2BPM.png](https://3.bp.blogspot.com/-ZOSIqPpqRD4/W53Xz4ZQCzI/AAAAAAAAAb8/nAEAqTXIkiIIYQHr0IZ4oL7YbCemgz9HACLcBGAs/s1600/Screen%2BShot%2B2018-09-15%2Bat%2B11.10.35%2BPM.png)

type q now to come out of this mode.  
Now execute the below command to see if Sonarqube is up and running. This may take a few minutes.  
  
(Now Restart EC2 instance by going to AWS console and stop/start the EC2 instance)  
Once restarted EC2 instance, login again and check the Sonar logs:  
  
tail -f /opt/sonarqube/logs/sonar.log  
  
Make sure you get the below message that says sonarqube is up..

[](https://1.bp.blogspot.com/-fw6zhjOq4zE/W6L74YVT_zI/AAAAAAAAAc8/ohJ3BuzGIkwOrzoqb-Ilb8_XslnhtsdxgCLcBGAs/s1600/Screen%2BShot%2B2018-09-19%2Bat%2B9.45.32%2BPM.png)

Now access sonarQube UI by going to browser and enter public dns name with port 9000

Now to go to browser --> [http://your\_SonarQube\_publicdns\_name:9000/](http://publicdns_name:9000/)

**Please follow steps for integrating SonarQube with Jenkins**  
<https://www.coachdevops.com/2020/04/how-to-integrate-sonarqube-with-jenkins.html>