Setup Connection between Sonar and Postgresql database

1. build sonar database in Postgresql

   a. create user sonar: `postgres=# create user sonar with password 'sonar';` , notice you must ";" at end of command,
   b. verify: `postgres=# \du` ;
   c. create database:
      `postgres-# create database sonar with owner sonar encoding 'UTF8';`
   d. verify: `postgres=# \l` ;
2. modify sonar jdbc url: modify "sonar.jdbc.url" as "jdbc:postgresql://localhost/sonar" in file $SONAR_HOME/conf/sonar.properties (remember comment out default h2 jdbc url);

3. start sonar server: `$SONAR_HOME/bin/sonar.sh console` ;

4. verify: `psql -h localhost -d sonar -U sonar` , then
   ```
   sonar=> select table_name from information_schema.tables where
   table_schema='public';
   ```
   , you can see "49 rows" at the bottom of the output;

Note 2: When upgrade or reinstall SonarQube, and after modifying configuration file, you have to goto http://10.0.2.74:9000/setup to upgrade database manually, or you will see "sonar is under maintenance. please check back later".