INSTALLATION ON UBUNTU

1. **Getting the .deb package:**
   After building the source using maven, the Debian package file will be created into the **application/target** directory as thingsboard.deb

   Build command: $ sudo mvn clean install -Dlicense.skip=true

2. **Uploading .deb file to Ubuntu server:**
   Use SFTP or SCP to transfer the deb package to server.

   Example: Navigate to target directory.
   (localmachine) $ sudo sftp -i your.pem server-ip-address
      ↳ (server) $ put thingsboard.deb
         (server) $ exit

   Now the thingsboard.deb is in the server home directory.

3. **Installation:**
   SSH to the server via terminal.

   Dependencies to be installed:
   1. Java 8 (OpenJDK):
      (server) $ sudo apt update
      (server) $ sudo apt install openjdk-8-jdk

      Note: If not using a Wisense pre-owned server or a fresh server, please don't forget to configure your operating system to use OpenJDK 8 by default.

   2. PostgreSQL (v 12+):
      (server) $ sudo apt install -y wget

(server) $ wget --quiet -O -
https://www.postgresql.org/media/keys/ACCC4CF8.asc | sudo
apt-key add -

**(server) $** RELEASE=$(lsb_release -cs)
(server) $ echo "deb http://apt.postgresql.org/pub/repos/apt/
${RELEASE}"-pgdg main | sudo tee /etc/apt/sources.list.d/pgdg.list

(server) $ sudo apt update
(server) $ sudo apt -y install postgresql-12
(server) $ sudo service postgresql start

Thingsboard installation:
Navigate to home or the directory to which thingsboard.deb was
uploaded.
(server) $ sudo dpkg -i thingsboard.deb

4. **Configuration:**
   4.1 PostgreSQL database configuration:

   ↳ Set up a password for postgres:
      (server) $ sudo su - postgres
      (server) $ psql
      (server) # \password
      >> Input your password here and hit enter.
      (server) # \q

   ↳ Create thingsboard database:
      (server) $ psql -U postgres -d postgres -h 127.0.0.1 -W
      (server) # CREATE DATABASE thingsboard;
      (server) # \q

4.2 ThingsBoard Configuration

(server) $ sudo nano /etc/thingsboard/conf/thingsboard.conf

Add the following lines to the configuration file. Don't forget to replace "PUT_YOUR_POSTGRESQL_PASSWORD_HERE" with your real postgres user password:

```
# DB Configuration
export DATABASE_ENTITIES_TYPE=sql
export DATABASE_TS_TYPE=sql
export SPRING_JPA_DATABASE_PLATFORM=org.hibernate.dialect.PostgreSQLDialect
export SPRING_DRIVER_CLASS_NAME=org.postgresql.Driver
export SPRING_DATASOURCE_URL=jdbc:postgresql://localhost:5432/thingsboard
export SPRING_DATASOURCE_USERNAME=postgres
export SPRING_DATASOURCE_PASSWORD=PUT_YOUR_POSTGRESQL_PASSWORD
export SPRING_DATASOURCE_MAXIMUM_POOL_SIZE=5
# Specify partitioning size for timestamp key-value storage. Allowed values: DAYS, MONTHS, YEARS, INDEFINITE.
export SQL_POSTGRES_TS_KV_PARTITIONING=MONTHS
```

5. **Starting the service daemon:**
   Run:
   (server) $ sudo /usr/share/thingsboard/bin/install/install.sh
   (server) $ sudo service thingsboard start

   It will take 2 to 3 minutes for the service to start.
   Once started, you will be able to open Web UI using the following link:
   http://server-ip:8080/

6. Add swap: Create a 1GiB swap and turn it off.

(Use at critical RAM situations)

https://www.digitalocean.com/community/tutorials/how-to-add-swap-space-on-ubuntu-18-04

And keep swap off:

(server) $ sudo swapoff -a

To turn on when necessary (running out of ram):

(server) $ sudo swapon -a

7. Change the time zone :

https://linuxize.com/post/how-to-set-or-change-timezone-on-ubuntu-18-04/

(server) $ sudo timedatectl set-timezone Asia/Kolkata

(server) $ sudo systemctl restart thingsboard

8. System administrator login:

Email: sysadmin@wisense.in

Password: sysadmin

Immediately after the first login, go to the top right corner account settings and change username to an active email ID and change the password. Re-login with new credentials.

9. Account mail settings:

Open mail server settings from the system settings:

Fill in as follows:
↳Mail from: WiSense Alerts <alerts-noreply@wisense.in>
(can be any wisense.in ending mail id, otherwise, the sender will not be authenticated and mails will go into receiver's junk)
↳ SMTP Protocol: SMTP
↳ SMTP Host: smtp.sendgrid.net
↳ SMTP Port: 587
↳ TLS: Enable
↳ TLS version: 1.2
↳ Username: apikey
↳ Password: SendGrid API key
            (associated with apps@wisense.in account.)

Try sending a test mail. Mail will be sent to the administrator login email.