

Note:

In theory, the solution can run on any computer that supports a Java Virtual Machine (Windows, Linux, Mac OS, etc.). However, the installation was only performed and evaluated on Ubuntu 16.04. In the future, tutorials for other Operating systems will be available.

Installing Locally on Ubuntu 16.04 (The commands should be the same in other Ubuntu distributions)

Installing Oracle JDK 8

Open the terminal

```
sudo apt-get update
sudo add-apt-repository ppa:webupd8team/java
sudo apt-get update
sudo apt-get install oracle-java8-installer
```

Managing Java version

```
sudo update-alternatives --config java
sudo gedit /etc/environment
```

At the end of the File, write:

```
JAVA_HOME="/usr/lib/jvm/java-8-oracle"
```

```
                                /etc/environment
```

```
PATH="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:
/usr/games:/usr/local/games"
JAVA_HOME="/usr/lib/jvm/java-8-oracle"
```

```
source /etc/environment
echo $JAVA_HOME
```

Installing MongoDB (Tested in v4.0.0)

Open the Terminal

```
sudo apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv
EA312927
echo "deb http://repo.mongodb.org/apt/ubuntu xenial/mongodb-org/3.2
multiverse" | sudo tee /etc/apt/sources.list.d/mongodb-org-3.2.list

sudo apt-get update
sudo apt-get install -y mongodb-org
sudo gedit /etc/systemd/system/mongodb.service
```

Insert the following at the text editor:

```
                                /etc/systemd/system/mongodb.service
[Unit]
Description=High-performance, schema-free document-oriented database
After=network.target

[Service]
User=mongodb
ExecStart=/usr/bin/mongod --quiet --config /etc/mongod.conf

[Install]
WantedBy=multi-user.target
```

```
sudo systemctl start mongodb
sudo systemctl status mongodb
sudo systemctl enable mongodb
```

Deploy the REST API

Download the file named "InIoT-REST.jar" at:

<https://bitbucket.org/In-IoT/in.iot-rest/downloads/>

Open the terminal at the directory in which the files were Downloaded.

```
java - jar InIoT-REST.jar
```

The REST API will be running on port 8070

Deploy the MQTT Broker

Download the file named "moquette-InIoT.tar" at:

<https://bitbucket.org/In-IoT/moquette-in.iot/downloads/>

Navigate to the directory in which the file was downloaded and uncompress the file "moquette-InIoT.tar"

Open the terminal at the directory in which the files were Downloaded.

```
cd moquetteInIoT/bin
./moquette.sh
```

The MQTT Broker will be running on port 1883

Deploy the Graphical User Interface

Download the file named "InIoT-Dashboard.jar" at:
<https://bitbucket.org/In-IoT/in.iot-dashboard/downloads/>

Open the terminal at the directory in which the files were Downloaded.

```
java - jar InIoT-Dashboard
```

The Graphical User Interface will be running on port 8090