

INSTALLING NECESSARY PACKAGES ON PI

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Project Name	GAS LEAKAGE MONITORING AND ALERTING SYSTEM FOR INDUSTRIES

INSTALLING NECESSARY PACKAGES ON PI:

- Now we are going to install necessary packages on your pi.
- Open your terminal in your pi and type the following commands
- `curl -LO https://github.com/ibm-messaging/iot-raspberrypi/releases/download/1.0.2.1/iot_1.0-2_armhf.deb`
- `sudo dpkg -i iot_1.0-2_armhf.deb`
- service IOT status Following are the images as to what appears on your pi's terminal when u type these commands

```
File Edit Tabs Help
root@raspberrypi:~# curl -LO https://github.com/ibm-messaging/iot-raspberrypi/releases/download/1.0.2.1/iot_1.0-2_armhf.deb
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left    Speed
100  104  100  104    0     0    104      0  0:00:01  0:00:01 --:--:--  104
root@raspberrypi:~# dpkg -i iot_1.0-2_armhf.deb
Selecting previously unselected package iot_1.0-2_armhf.deb.
(Reading database ... 125826 files and directories currently installed.)
Preparing to unpack iot_1.0-2_armhf.deb ...
Unpacking iot_1.0-2_armhf.deb (1.0-2_armhf.deb) ...
Setting up iot_1.0-2_armhf.deb (1.0-2_armhf.deb) ...
root@raspberrypi:~# curl -LO https://github.com/ibm-messaging/iot-raspberrypi/releases/download/1.0.2.1/iot_1.0-2_armhf.deb
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left    Speed
100  104  100  104    0     0    104      0  0:00:01  0:00:01 --:--:--  104
root@raspberrypi:~# dpkg -i iot_1.0-2_armhf.deb
(Reading database ... 125826 files and directories currently installed.)
Preparing to unpack iot_1.0-2_armhf.deb ...
Unpacking iot_1.0-2_armhf.deb (1.0-2_armhf.deb) ...
Setting up iot_1.0-2_armhf.deb (1.0-2_armhf.deb) ...
Processing triggers for systemd (232-25+deb10u1) ...
root@raspberrypi:~# service iot status
* iot.service - IBM IoT service
   Loaded: loaded (/etc/systemd/system; generated; vendor preset: enabled)
   Active: active (running) since Mon 2022-10-23 08:56:23 UTC; 17s ago
     Docs: man:systemd.service(8)
           /usr/share/doc/iot.service
           https://www.ibm.com/iot
   Main PID: 2062 (python3)
   CGroup: /systemd/system/iot.service
           └─2062 /usr/bin/python3 /usr/bin/iot

root@raspberrypi:~# systemctl status iot.service
systemctl status iot.service
systemd[1]: Starting IBM IoT service...
systemd[1]: Started IBM IoT service.
root@raspberrypi:~#
```

- Then open your terminal and type pip install ibmiotf

```
File Edit Tabs Help
pi@raspberrypi:~$ pip install ibmiotf
Collecting ibmiotf
  Downloading ibmiotf-0.3.0.tar.gz (50kB)
    100% |#####| 61kB 516kB/s
Collecting dicttool==1.7.4 (from ibmiotf)
  Downloading dicttool-1.7.4.tar.gz
Collecting iso8601==0.1.12 (from ibmiotf)
  Downloading iso8601-0.1.12-py2.py3-none-any.whl
Collecting paho-mqtt==1.2 (from ibmiotf)
  Downloading paho-mqtt-1.2.1.tar.gz (82kB)
    100% |#####| 61kB 516kB/s
Collecting pytz==2014.7 (from ibmiotf)
  Using cached pytz-2017.2-py2.py3-none-any.whl
Collecting requests==2.9.4 (from ibmiotf)
  Downloading requests-2.18.4-py2.py3-none-any.whl (98kB)
    100% |#####| 65kB 1.6MB/s
Collecting requests-toolbelt==0.9.0 (from ibmiotf)
  Downloading requests-toolbelt-0.9.0-py2.py3-none-any.whl (5kB)
    100% |#####| 61kB 1.6MB/s
Collecting smtplib==0.10.2 (from ibmiotf)
  Downloading smtplib-0.11.0-py2.py3-none-any.whl
Collecting urllib3==1.21.1 (from requests==2.9.4->ibmiotf)
  Downloading urllib3-1.22-py2.py3-none-any.whl (122kB)
    100% |#####| 13kB 1.0MB/s
Collecting idna==2.5 (from requests==2.9.4->ibmiotf)
  Downloading idna-2.6-py2.py3-none-any.whl (56kB)
    100% |#####| 61kB 1.7MB/s
Collecting charset==3.1.0 (from requests==2.9.4->ibmiotf)
  Downloading charset-3.5.4-py2.py3-none-any.whl (13kB)
    100% |#####| 14kB 1.0MB/s
Collecting certifi==2017.4.17 (from requests==2.9.4->ibmiotf)
  Using cached certifi-2017.7.27.2-py2.py3-none-any.whl
Building wheels for collected packages: ibmiotf, dicttool, paho-mqtt
Running setup.py bdist_wheel for ibmiotf ... done
Stored in directory: /home/pi/.cache/pip/wheels/7e/f9/45/bbc33ad507e02f7b71ba08e316d05a83d0d735a0d12e0c0410
Running setup.py bdist_wheel for dicttool ... done
Stored in directory: /home/pi/.cache/pip/wheels/45/02/78/06010633ec0a782a00a13785401b500f948824079a12ccc
Running setup.py bdist_wheel for paho-mqtt ... done
Stored in directory: /home/pi/.cache/pip/wheels/20/06/06/acc0cf200011307e7de73de0cf04427b030e031dffff0493
Successfully built ibmiotf dicttool paho-mqtt
Installing collected packages: dicttool, iso8601, paho-mqtt, pytz, urllib3, idna, charset, certifi, requests, requests-toolbelt, smtplib, ibmiotf
Successfully installed certifi-2017.7.27.1 charset-3.0.4 dicttool-1.7.4 ibmiotf-0.3.0 idna-2.6 iso8601-0.1.12 paho-mqtt-1.3.1 pytz-2017.2 requests-2.18.4 requests-toolbelt-0.9.0 urllib3-1.22 smtplib-0.11.0
pi@raspberrypi:~$
```

- It has sent DHT-11 Sensors data to ibm bluemix .To get the code we need to login into IOT GYAN.