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Activities Terminal
Tue 15:39
gabriel@gabriel-Lenovo-920-13IKB: ~
File Edit View Search Terminal Help
gabriel@gabriel-Lenovo-920-13IKB:~$ sudo apt update
[sudo] password for gabriel:
Hit:1 http://us.archive.ubuntu.com/ubuntu bionic InRelease
Hit:2 http://us.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Hit:3 http://dl.google.com/linux/chrome/deb stable InRelease
Get:4 http://us.archive.ubuntu.com/ubuntu bionic-backports InRelease [74.6 kB]
Get:5 http://security.ubuntu.com/ubuntu bionic-security InRelease [88.7 kB]
Hit:6 http://ppa.launchpad.net/fingerprint/fingerprint-gui/ubuntu bionic InRelease
Hit:7 http://ppa.launchpad.net/fingerprint/fprint/ubuntu bionic InRelease
Get:8 http://us.archive.ubuntu.com/ubuntu bionic-updates/main i386 Packages [1,442 kB]
Get:9 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 Packages [2,489 kB]
Get:10 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 DEP-11 Metadata [297 kB]
Hit:11 http://ppa.launchpad.net/maarten-baert/simplescreenrecorder/ubuntu bionic InRelease
Get:12 http://us.archive.ubuntu.com/ubuntu bionic-updates/universe amd64 DEP-11 Metadata [300 kB]
Get:13 http://us.archive.ubuntu.com/ubuntu bionic-updates/multiverse amd64 Packages [24.9 kB]
Get:14 http://us.archive.ubuntu.com/ubuntu bionic-updates/multiverse amd64 DEP-11 Metadata [2,468 B]
Get:15 http://us.archive.ubuntu.com/ubuntu bionic-backports/universe amd64 DEP-11 Metadata [9,276 B]
Hit:16 http://ppa.launchpad.net/plt/racket/ubuntu bionic InRelease
Get:17 http://security.ubuntu.com/ubuntu bionic-security/main amd64 DEP-11 Metadata [55.1 kB]
Hit:18 http://ppa.launchpad.net/ubuntu16/ppa/ubuntu bionic InRelease
Get:19 http://security.ubuntu.com/ubuntu bionic-security/universe amd64 DEP-11 Metadata [59.4 kB]
Get:20 http://security.ubuntu.com/ubuntu bionic-security/multiverse amd64 DEP-11 Metadata [2,464 B]
Fetched 4,894 kB in 1s (3,725 KB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
201 packages can be upgraded. Run 'apt list --upgradable' to see them.
gabriel@gabriel-Lenovo-920-13IKB:~$ sudo apt install mosquitto mosquitto-clients
Reading package lists... Done
Building dependency tree
Reading state information... Done
mosquitto is already the newest version (1.4.15-2ubuntu0.18.04.3).
mosquitto-clients is already the newest version (1.4.15-2ubuntu0.18.04.3).
The following package was automatically installed and is no longer required:
  linux-modules-extra-5.3-0-20-generic
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 201 not upgraded.
gabriel@gabriel-Lenovo-920-13IKB:~$ mosquitto_sub -h localhost -v -t "$SYS/#"
$SYS/broker/version timestamp Tue, 18 Jun 2019 11:42:22 -0300
$SYS/broker/uptime 600 seconds
$SYS/broker/clients/total 0
$SYS/broker/clients/inactive 0
$SYS/broker/clients/disconnected 0
$SYS/broker/clients/active 0
$SYS/broker/clients/connected 0
$SYS/broker/clients/expired 0
$SYS/broker/clients/maximum 1
$SYS/broker/messages/stored 45
$SYS/broker/messages/received 2
$SYS/broker/messages/sent 62
$SYS/broker/subscriptions/count 0
$SYS/broker/retained messages/count 45
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File Edit View Search Terminal Help
$SYS/broker/clients/expired 0
$SYS/broker/clients/maximum 1
$SYS/broker/messages/stored 45
$SYS/broker/messages/received 2
$SYS/broker/messages/sent 62
$SYS/broker/subscriptions/count 0
$SYS/broker/retained messages/count 45
$SYS/broker/heap/current 23176
$SYS/broker/heap/maximum 28144
$SYS/broker/publish/messages/dropped 0
$SYS/broker/publish/messages/received 0
$SYS/broker/publish/messages/sent 60
$SYS/broker/publish/bytes/received 0
$SYS/broker/publish/bytes/sent 231
$SYS/broker/bytes/received 52
$SYS/broker/bytes/sent 2270
$SYS/broker/load/messages/received/inln 0.06
$SYS/broker/load/messages/received/smln 0.27
$SYS/broker/load/messages/received/15sln 0.13
$SYS/broker/load/messages/sent/inln 1.12
$SYS/broker/load/messages/sent/smln 5.56
$SYS/broker/load/messages/sent/15sln 3.16
$SYS/broker/load/publish/sent/inln 1.09
$SYS/broker/load/publish/sent/smln 5.38
$SYS/broker/load/publish/sent/15sln 3.06
$SYS/broker/load/bytes/received/inln 0.84
$SYS/broker/load/bytes/received/smln 4.56
$SYS/broker/load/bytes/received/15sln 2.63
$SYS/broker/load/bytes/sent/inln 41.42
$SYS/broker/load/bytes/sent/smln 203.07
$SYS/broker/load/bytes/sent/15sln 115.04
$SYS/broker/load/sockets/inln 0.06
$SYS/broker/load/sockets/smln 0.20
$SYS/broker/load/sockets/15sln 0.07
$SYS/broker/load/connections/inln 0.06
$SYS/broker/load/connections/smln 0.20
$SYS/broker/load/connections/15sln 0.07
^C
gabriel@gabriel-Lenovo-920-13IKB:~$ service mosquitto status
● mosquitto.service - LSB: mosquitto MQTT v3.1 message broker
   Loaded: loaded (/etc/init.d/mosquitto; generated)
   Active: active (running) since Tue 2022-03-22 15:27:48 EDT; 11min ago
     Docs: man:systemd-sysv-generator(8)
    Tasks: 1 (limit: 4915)
   CGroup: /system.slice/mosquitto.service
           └─9747 /usr/sbin/mosquitto -c /etc/mosquitto/mosquitto.conf

Mar 22 15:27:48 gabriel-Lenovo-920-13IKB systemd[1]: Starting LSB: mosquitto MQTT
Mar 22 15:27:48 gabriel-Lenovo-920-13IKB mosquitto[9741]: * Starting network da
Mar 22 15:27:48 gabriel-Lenovo-920-13IKB mosquitto[9741]: ...done.
Mar 22 15:27:48 gabriel-Lenovo-920-13IKB systemd[1]: Started LSB: mosquitto MQTT
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Activities Terminal Tue 15:45
gabriel@gabriel-Lenovo-920-13IKB: ~/lot/lessons$
File Edit View Search Terminal Help
gabriel@gabriel-Lenovo-920-13IKB:~$ sudo pip3 install -U paho-mqtt
The directory '/home/gabriel/.cache/pip/http' or its parent directory is not owned by the current user and
the cache has been disabled. Please check the permissions and owner of that directory. If executing pip
with sudo, you may want sudo's -H flag.
The directory '/home/gabriel/.cache/pip' or its parent directory is not owned by the current user and
changing wheels has been disabled. Check the permissions and owner of that directory. If executing pip with s
udo, you may want sudo's -H flag.
Collecting paho-mqtt
  Downloading https://files.pythonhosted.org/packages/f8/dd/4b75dcba025f8647bc9862ac17299e0dd12d3beadb0
26d8c8d74215c12/paho-mqtt-1.6.1.tar.gz (99kB)
    100% |#####| 102kB 3.5MB/s
Installing collected packages: paho-mqtt
  Running setup.py install for paho-mqtt ... done
Successfully installed paho-mqtt-1.6.1
gabriel@gabriel-Lenovo-920-13IKB:~$ git clone https://github.com/eclipse/paho.mqtt.python.git
Cloning into 'paho.mqtt.python'...
remote: Enumerating objects: 4491, done.
remote: Counting objects: 100% (929/929), done.
remote: Compressing objects: 100% (369/369), done.
remote: Total 4491 (delta 547), reused 826 (delta 490), pack-reused 3562
Receiving objects: 100% (4491/4491), 1.37 MiB | 16.45 MiB/s, done.
Resolving deltas: 100% (2395/2395), done.
gabriel@gabriel-Lenovo-920-13IKB:~$ cd ~/lot/lessons
gabriel@gabriel-Lenovo-920-13IKB:~/lot/lessons$ python3 client.py
Connected with result code 0
$SYS/broker/publish/messages/received 633730687
$SYS/broker/publish/messages/sent 191580365
$SYS/broker/publish/bytes/received 7140423481
$SYS/broker/publish/bytes/sent 3609250854
$SYS/broker/publish/messages/received 633731208
$SYS/broker/publish/messages/sent 191580161
$SYS/broker/publish/bytes/received 7140480038
$SYS/broker/publish/bytes/sent 3609334762
^CTraceback (most recent call last):
  File "client.py", line 24, in <module>
    client.loop_forever()
  File "/usr/local/lib/python3.6/dist-packages/paho/mqtt/client.py", line 1756, in loop_forever
    rc = self._loop(timeout)
  File "/usr/local/lib/python3.6/dist-packages/paho/mqtt/client.py", line 1150, in _loop
    socklist = select.select(rlist, wlist, [], timeout)
KeyboardInterrupt
gabriel@gabriel-Lenovo-920-13IKB:~/lot/lessons$ python3 sub.py
Connected with result code 0
paho/test Hello
^CTraceback (most recent call last):
  File "sub.py", line 11, in <module>
    client.loop_forever()
  File "/usr/local/lib/python3.6/dist-packages/paho/mqtt/client.py", line 1756, in loop_forever
    rc = self._loop(timeout)
  File "/usr/local/lib/python3.6/dist-packages/paho/mqtt/client.py", line 1150, in _loop
    socklist = select.select(rlist, wlist, [], timeout)
KeyboardInterrupt
gabriel@gabriel-Lenovo-920-13IKB:~/lot/lessons$
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Activities Terminal Tue 15:46
gabriel@gabriel-Lenovo-920-13IKB: ~/lot/lessons$
File Edit View Search Terminal Help
$SYS/broker/publish/bytes/sent 3609250854
$SYS/broker/publish/messages/received 633731208
$SYS/broker/publish/messages/sent 191580161
$SYS/broker/publish/bytes/received 7140480038
$SYS/broker/publish/bytes/sent 3609334762
^CTraceback (most recent call last):
  File "client.py", line 24, in <module>
    client.loop_forever()
  File "/usr/local/lib/python3.6/dist-packages/paho/mqtt/client.py", line 1756, in loop_forever
    rc = self._loop(timeout)
  File "/usr/local/lib/python3.6/dist-packages/paho/mqtt/client.py", line 1150, in _loop
    socklist = select.select(rlist, wlist, [], timeout)
KeyboardInterrupt
gabriel@gabriel-Lenovo-920-13IKB:~/lot/lessons$ python3 sub.py
Connected with result code 0
paho/test Hello
^CTraceback (most recent call last):
  File "sub.py", line 11, in <module>
    client.loop_forever()
  File "/usr/local/lib/python3.6/dist-packages/paho/mqtt/client.py", line 1756, in loop_forever
    rc = self._loop(timeout)
  File "/usr/local/lib/python3.6/dist-packages/paho/mqtt/client.py", line 1150, in _loop
    socklist = select.select(rlist, wlist, [], timeout)
KeyboardInterrupt
gabriel@gabriel-Lenovo-920-13IKB:~/lot/lessons$ python3 sub-multiple.py
Connected with result code 0
paho/test/multiple multiple 1
paho/test/multiple multiple 2
^CTraceback (most recent call last):
  File "sub-multiple.py", line 11, in <module>
    client.loop_forever()
  File "/usr/local/lib/python3.6/dist-packages/paho/mqtt/client.py", line 1756, in loop_forever
    rc = self._loop(timeout)
  File "/usr/local/lib/python3.6/dist-packages/paho/mqtt/client.py", line 1150, in _loop
    socklist = select.select(rlist, wlist, [], timeout)
KeyboardInterrupt
gabriel@gabriel-Lenovo-920-13IKB:~/lot/lessons$ python3 subcpu.py
Connected with result code 0
MyCPU 2022-03-22 15:45:24
MyCPU CPU Usage: 13.6 %
MyCPU 2022-03-22 15:45:34
MyCPU CPU Usage: 10.4 %
^CTraceback (most recent call last):
  File "subcpu.py", line 11, in <module>
    client.loop_forever()
  File "/usr/local/lib/python3.6/dist-packages/paho/mqtt/client.py", line 1756, in loop_forever
    rc = self._loop(timeout)
  File "/usr/local/lib/python3.6/dist-packages/paho/mqtt/client.py", line 1150, in _loop
    socklist = select.select(rlist, wlist, [], timeout)
KeyboardInterrupt
gabriel@gabriel-Lenovo-920-13IKB:~/lot/lessons$
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Activities Terminal ▾ Tue 15:52 gabriel@gabriel-Lenovo-920-13IKB: ~/demo gabriel@gabriel-Lenovo-920-13IKB: ~/demo
File Edit View Search Terminal Help
gabriel@gabriel-Lenovo-920-13IKB:~/iot/lesson$ cd ~/demo
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ cp ~/iot/lesson/sub
subcpu.py subdata.py sub-multiple.py sub.py subraspi.py
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ cp ~/iot/lesson/subraspi.py .
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ vln subraspi.py
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ python3 subraspi.py
Connected with result code 0
Raspberry Pi 2022-03-22 15:52:19
Raspberry Pi Temperature: 0.0 C
Raspberry Pi CPU Usage: 19.6 %
]

gabriel@gabriel-Lenovo-920-13IKB:~/iot/lesson$ cd ~/demo
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ cp ~/iot/lesson/system_info.py .
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ cp ~/iot/lesson/pubraspi.py .
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ vln pubraspi.py
gabriel@gabriel-Lenovo-920-13IKB:~/demo$ python3 pubraspi.py
Free RAM: 7628 (7705)
Number of processes: 362
Up time: 3:33
Number of connections: 11
Temperature in C: 0
IP-address: 192.168.1.214
/bin/sh: 1: /opt/vc/bin/vcgencmd: not found
CPU speed in MHz:
2022-03-22 15:52:19
Temperature: 0.0 C
CPU Usage: 19.6 %
]
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