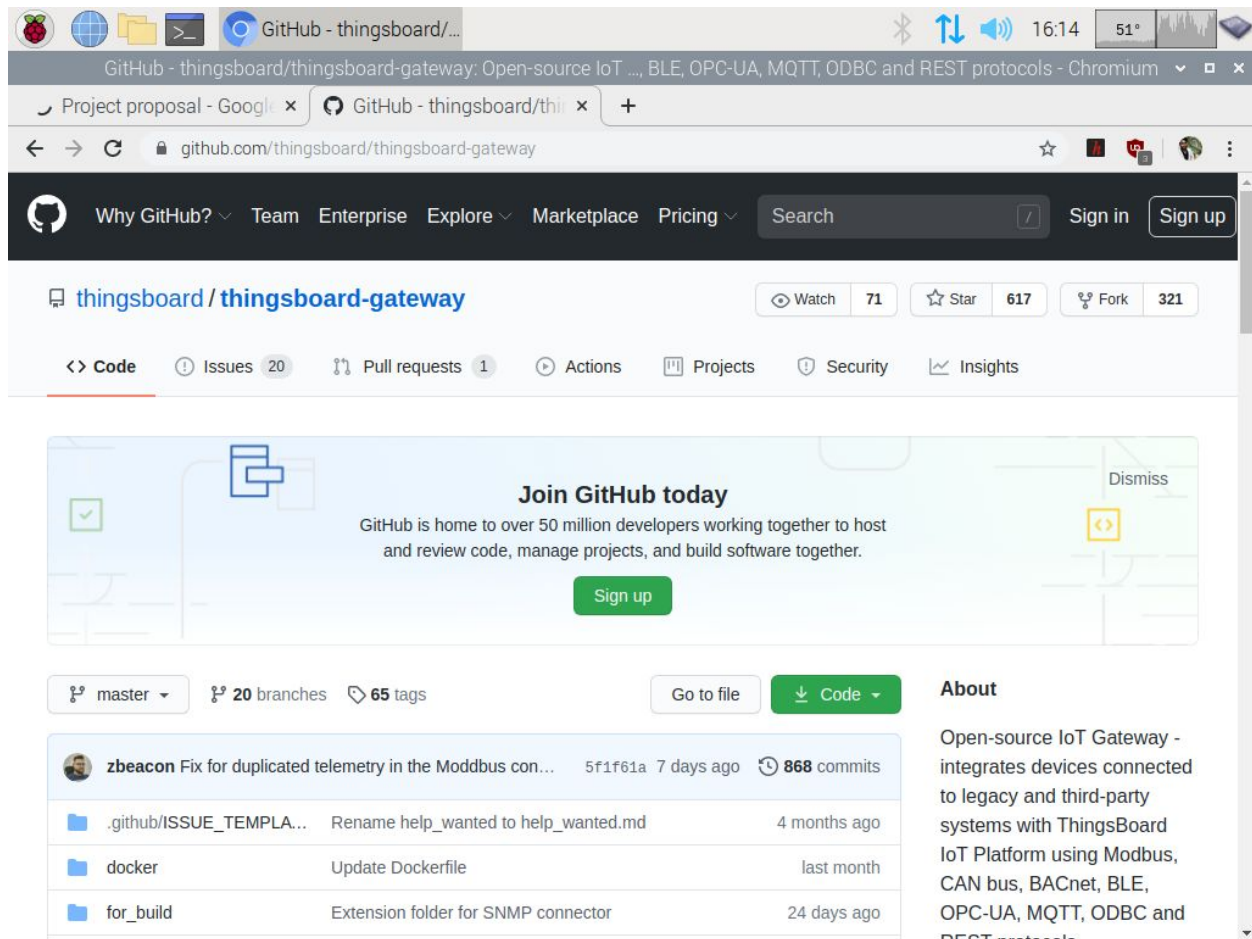


thingsboard-gateway

Script installation

Go to the github page of [Thingsboard-gateway](https://github.com/thingsboard/thingsboard-gateway)



The screenshot shows the GitHub repository page for `thingsboard/thingsboard-gateway`. The page includes a navigation bar with links for Why GitHub?, Team, Enterprise, Explore, Marketplace, and Pricing. The repository name is `thingsboard/thingsboard-gateway`, with 71 watches, 617 stars, and 321 forks. The repository is in the `master` branch, with 20 branches and 65 tags. The repository description is: "Open-source IoT Gateway - integrates devices connected to legacy and third-party systems with ThingsBoard IoT Platform using Modbus, CAN bus, BACnet, BLE, OPC-UA, MQTT, ODBC and REST protocols". The repository was created by `zbeacon` and has 868 commits. The repository structure is as follows:

File/Folder	Description	Last Commit
<code>.github/ISSUE_TEMPLA...</code>	Rename help_wanted to help_wanted.md	4 months ago
<code>docker</code>	Update Dockerfile	last month
<code>for_build</code>	Extension folder for SNMP connector	24 days ago

Copy the link to clipboard

Join GitHub today

GitHub is home to over 50 million developers working together to host and review code, manage projects, and build software together.

Sign up

master 20 branches 65 tags Go to file Code

zbeacon Fix for duplicated telemetry in the Modbus connector

File/Folder	Description	Time
.github/ISSUE_TEMPLATE	Rename help_wanted	
docker	Update Dockerfile	
for_build	Extension folder for	
tests	Improvements	2 months ago
thingsboard_gateway	Fix for duplicated telemetry in the Modbus connector	7 days ago
.gitignore	Added OPC-UA Connector features:	6 months ago
LICENSE	Initial commit	4 years ago
README.md	Update README.md	2 months ago
generate_deb_package.sh	Packages generation scripts improvements	last month

Clone with HTTPS ⓘ
Use Git or checkout with SVN using the web URL.

Download ZIP

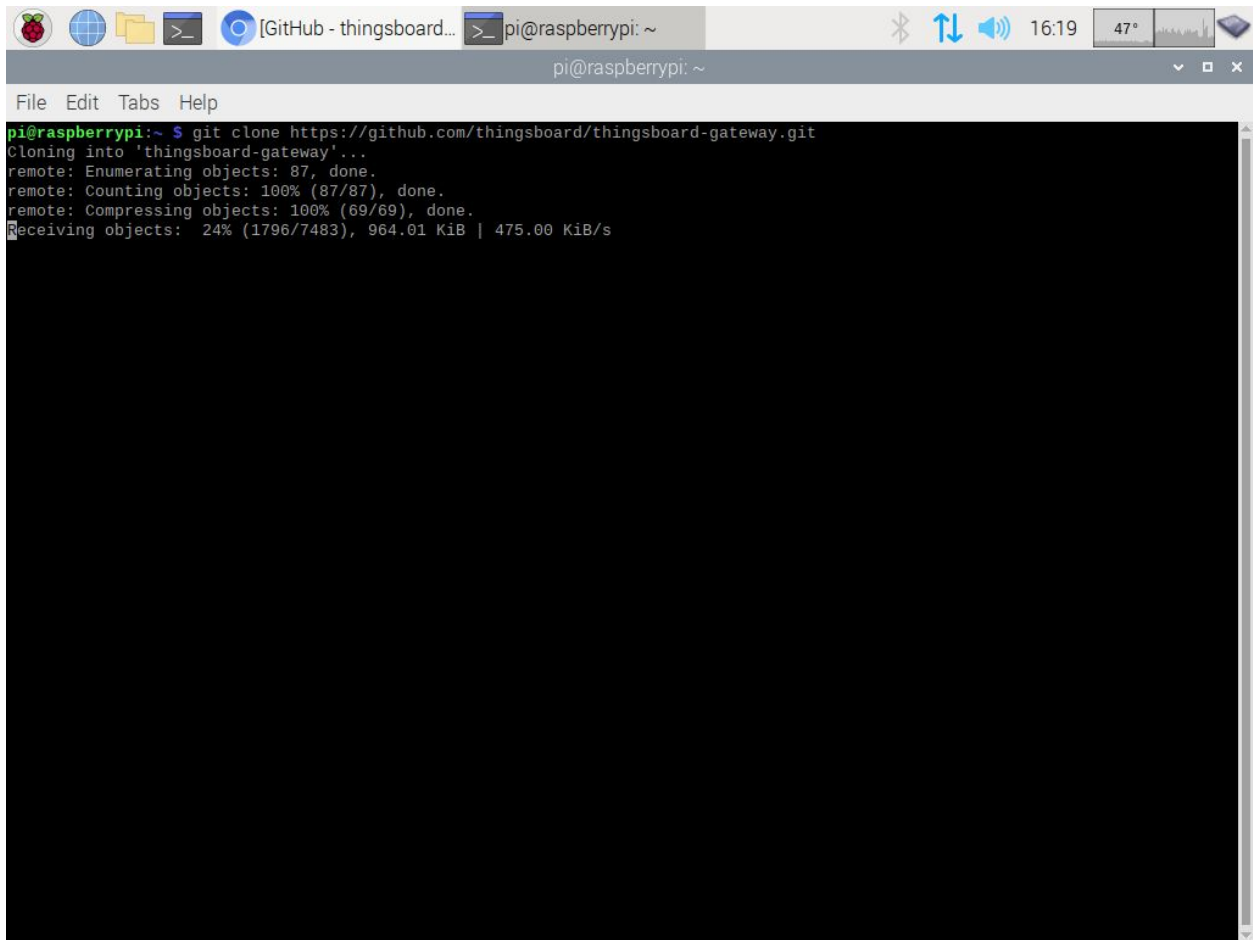
About

Open-source IoT Gateway - integrates devices connected to legacy and third-party systems with ThingsBoard IoT Platform using Modbus, CAN bus, BACnet, BLE, OPC-UA, MQTT, ODBC and REST protocols

[thingsboard.io/docs/iot-g...](https://thingsboard.io/docs/iot-gateway/)

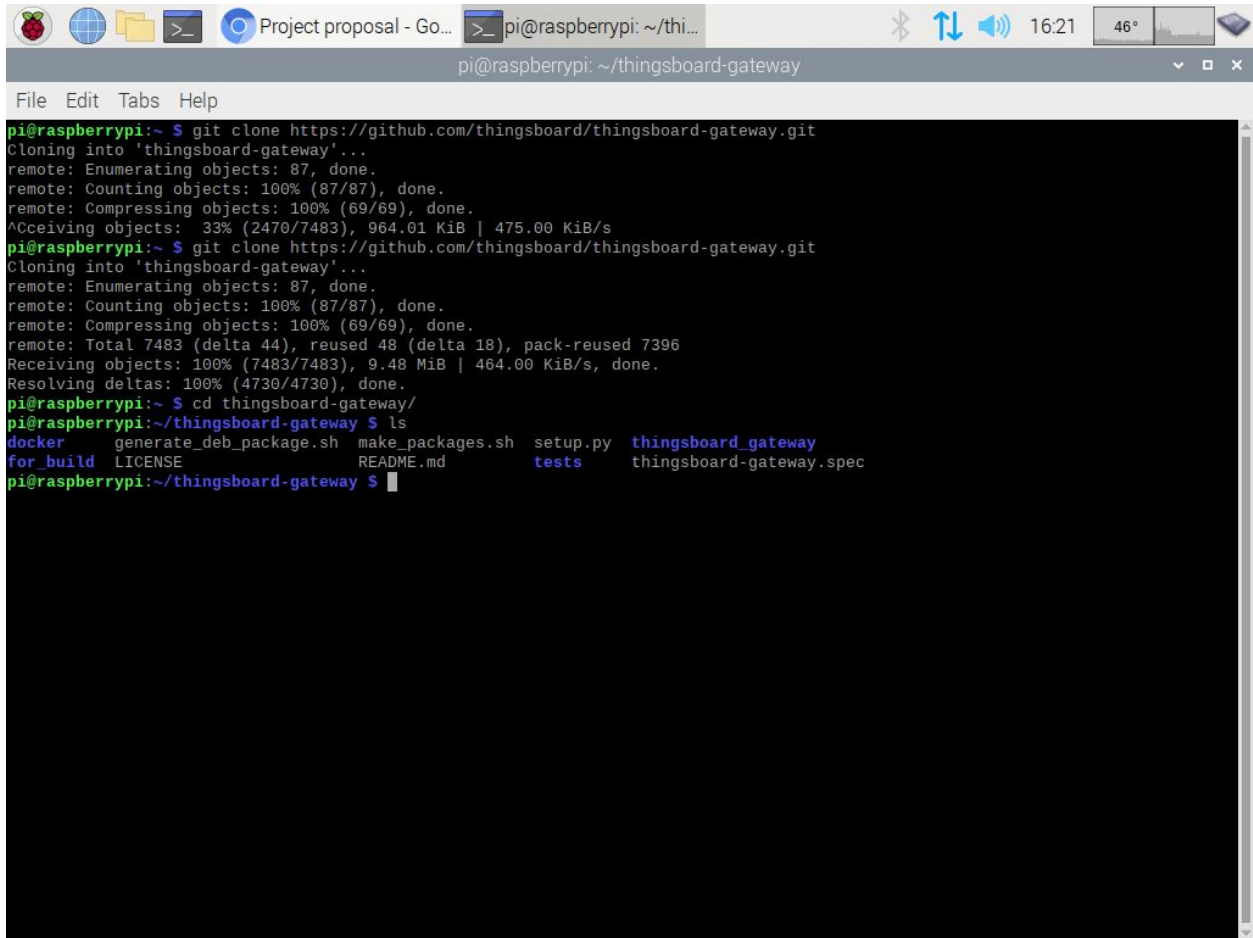
iot, iot-gateway, gateway, mqtt, opc-ua, thingsboard, sigfox, aws-iot, mqtt-broker, aws, bacnet, ble, odbc, can-bus, can

Open terminal and clone the git link with command `git clone <git link follows>`

A terminal window on a Raspberry Pi. The window title is "pi@raspberrypi: ~". The terminal shows the command "git clone https://github.com/thingsboard/thingsboard-gateway.git" being executed. The output shows the cloning progress: "Cloning into 'thingsboard-gateway'...", "remote: Enumerating objects: 87, done.", "remote: Counting objects: 100% (87/87), done.", "remote: Compressing objects: 100% (69/69), done.", and "Receiving objects: 24% (1796/7483), 964.01 KiB | 475.00 KiB/s". The terminal window has a menu bar with "File", "Edit", "Tabs", and "Help". The window also shows a taskbar at the top with various icons and system status information like "16:19" and "47°".

```
pi@raspberrypi:~ $ git clone https://github.com/thingsboard/thingsboard-gateway.git
Cloning into 'thingsboard-gateway'...
remote: Enumerating objects: 87, done.
remote: Counting objects: 100% (87/87), done.
remote: Compressing objects: 100% (69/69), done.
Receiving objects: 24% (1796/7483), 964.01 KiB | 475.00 KiB/s
```

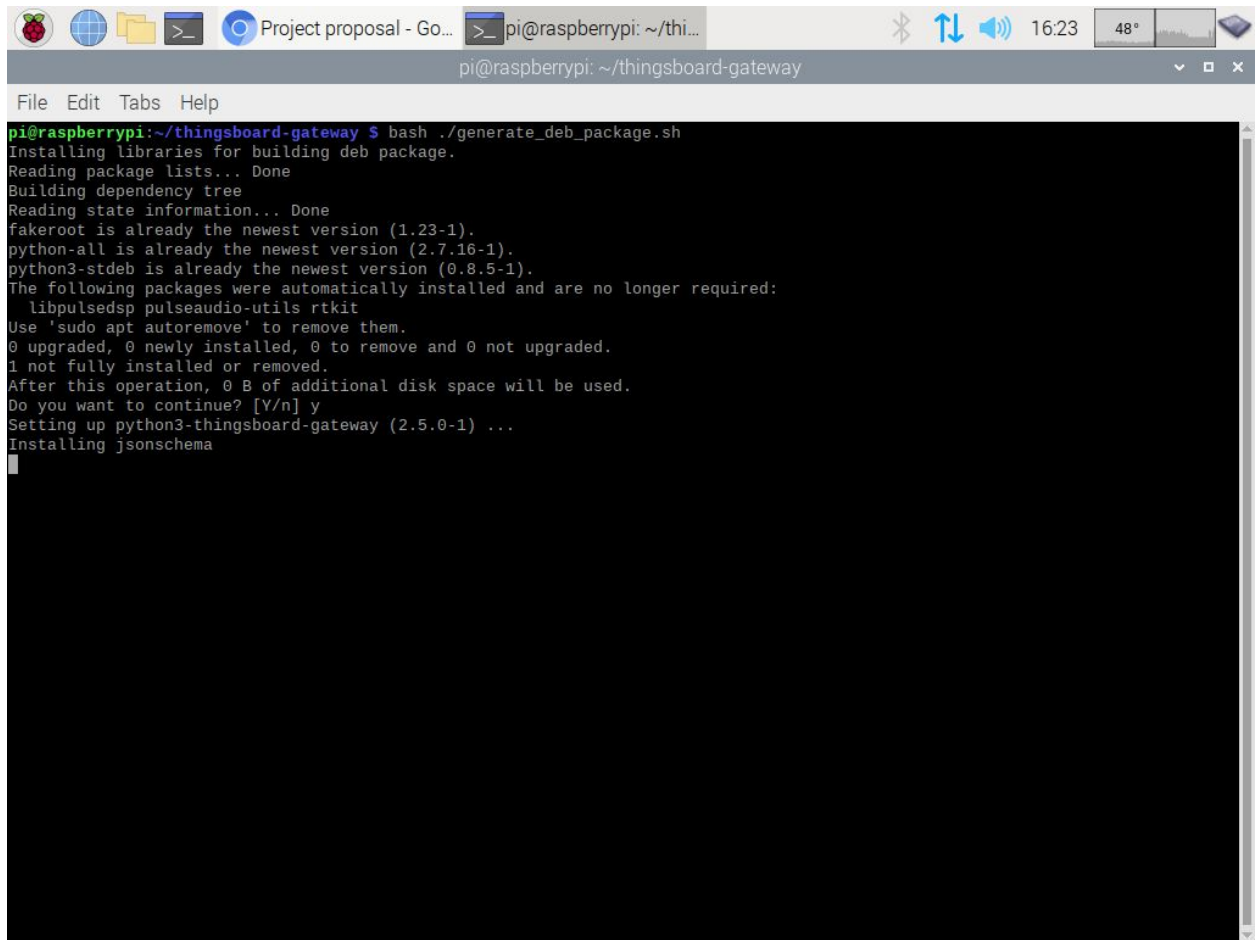
Switch to the directory Thingsboard-gateway



```
pi@raspberrypi: ~/thingsboard-gateway
File Edit Tabs Help
pi@raspberrypi:~$ git clone https://github.com/thingsboard/thingsboard-gateway.git
Cloning into 'thingsboard-gateway'...
remote: Enumerating objects: 87, done.
remote: Counting objects: 100% (87/87), done.
remote: Compressing objects: 100% (69/69), done.
remote: Total 7483 (delta 44), reused 48 (delta 18), pack-reused 7396
Receiving objects: 100% (7483/7483), 9.48 MiB | 475.00 KiB/s, done.
pi@raspberrypi:~$ git clone https://github.com/thingsboard/thingsboard-gateway.git
Cloning into 'thingsboard-gateway'...
remote: Enumerating objects: 87, done.
remote: Counting objects: 100% (87/87), done.
remote: Compressing objects: 100% (69/69), done.
remote: Total 7483 (delta 44), reused 48 (delta 18), pack-reused 7396
Receiving objects: 100% (7483/7483), 9.48 MiB | 464.00 KiB/s, done.
Resolving deltas: 100% (4730/4730), done.
pi@raspberrypi:~$ cd thingsboard-gateway/
pi@raspberrypi:~/thingsboard-gateway$ ls
docker      generate_deb_package.sh  make_packages.sh  setup.py  thingsboard_gateway
for_build  LICENSE                 README.md         tests     thingsboard-gateway.spec
pi@raspberrypi:~/thingsboard-gateway$
```

Now generate the packages for installation thingsboard-gateway with the command

Bash `./generate_deb_packages.sh`

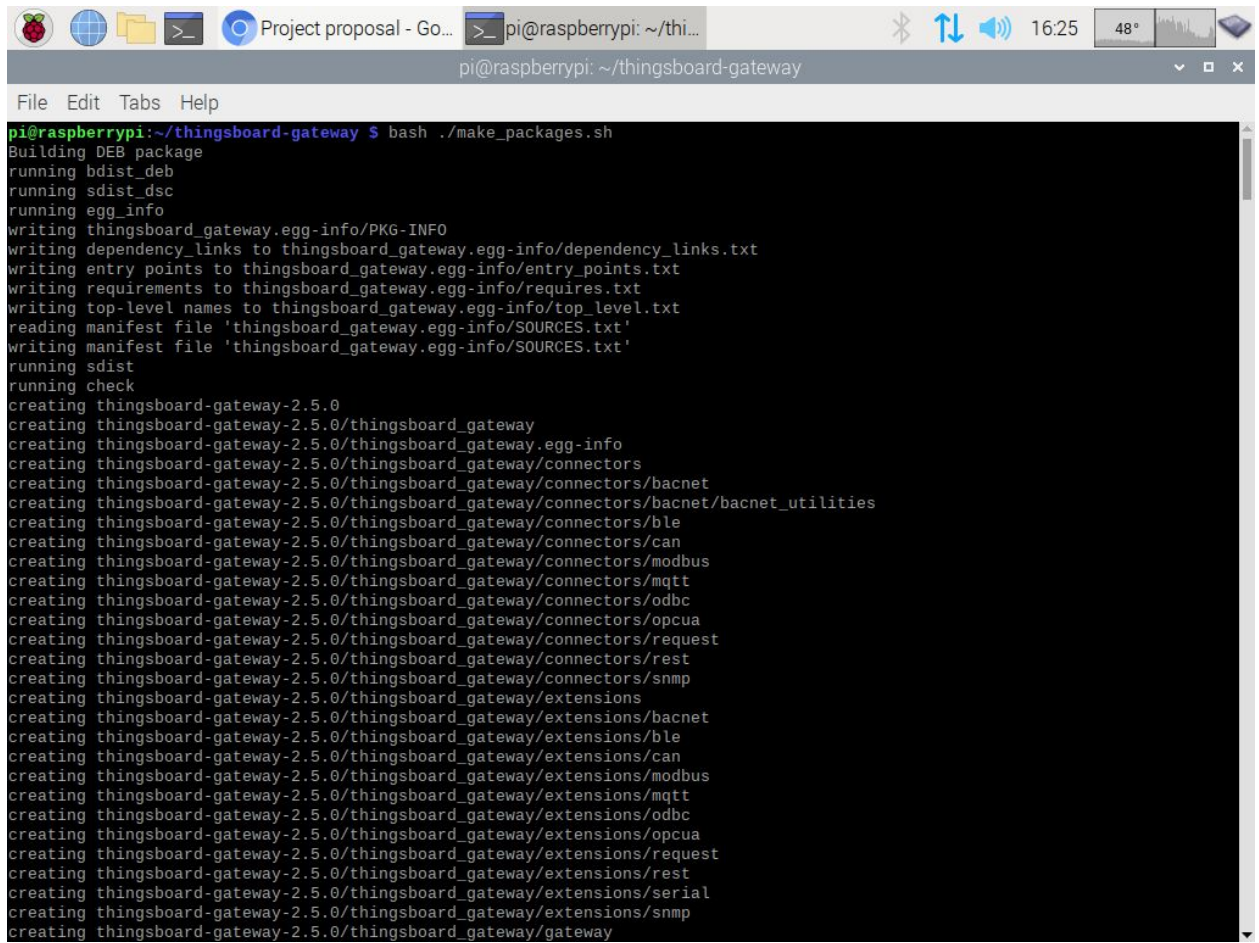


The screenshot shows a terminal window on a Raspberry Pi. The window title is "pi@raspberrypi: ~/thingsboard-gateway". The terminal output shows the execution of the script `./generate_deb_package.sh`. The script installs libraries for building a deb package, reads package lists, builds a dependency tree, and reads state information. It reports that `fakeroot`, `python-all`, and `python3-stdeb` are already the newest versions. It lists packages that were automatically installed and are no longer required: `libpulsedsp`, `pulseaudio-utils`, and `rtkit`. It suggests using `'sudo apt autoremove'` to remove them. It reports that 0 packages were upgraded, 0 were newly installed, 0 were removed, and 0 were not upgraded. It reports that 1 package was not fully installed or removed. It reports that 0 B of additional disk space will be used. It asks if the user wants to continue, and the user responds with 'y'. It then sets up `python3-thingsboard-gateway (2.5.0-1)` and installs `jsonschema`.

```
pi@raspberrypi:~/thingsboard-gateway $ bash ./generate_deb_package.sh
Installing libraries for building deb package.
Reading package lists... Done
Building dependency tree
Reading state information... Done
fakeroot is already the newest version (1.23-1).
python-all is already the newest version (2.7.16-1).
python3-stdeb is already the newest version (0.8.5-1).
The following packages were automatically installed and are no longer required:
  libpulsedsp pulseaudio-utils rtkit
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
1 not fully installed or removed.
After this operation, 0 B of additional disk space will be used.
Do you want to continue? [Y/n] y
Setting up python3-thingsboard-gateway (2.5.0-1) ...
Installing jsonschema
```

After completion of generating , make the packages using

Bash `./make_deb.sh`



```
pi@raspberrypi: ~/thingsboard-gateway
File Edit Tabs Help
pi@raspberrypi:~/thingsboard-gateway $ bash ./make_packages.sh
Building DEB package
running bdist_deb
running sdist_dsc
running egg_info
writing thingsboard_gateway.egg-info/PKG-INFO
writing dependency_links to thingsboard_gateway.egg-info/dependency_links.txt
writing entry points to thingsboard_gateway.egg-info/entry_points.txt
writing requirements to thingsboard_gateway.egg-info/requirements.txt
writing top-level names to thingsboard_gateway.egg-info/top_level.txt
reading manifest file 'thingsboard_gateway.egg-info/SOURCES.txt'
writing manifest file 'thingsboard_gateway.egg-info/SOURCES.txt'
running sdist
running check
creating thingsboard-gateway-2.5.0
creating thingsboard-gateway-2.5.0/thingsboard_gateway
creating thingsboard-gateway-2.5.0/thingsboard_gateway.egg-info
creating thingsboard-gateway-2.5.0/thingsboard_gateway/connectors
creating thingsboard-gateway-2.5.0/thingsboard_gateway/connectors/bacnet
creating thingsboard-gateway-2.5.0/thingsboard_gateway/connectors/bacnet/bacnet_utilities
creating thingsboard-gateway-2.5.0/thingsboard_gateway/connectors/ble
creating thingsboard-gateway-2.5.0/thingsboard_gateway/connectors/can
creating thingsboard-gateway-2.5.0/thingsboard_gateway/connectors/modbus
creating thingsboard-gateway-2.5.0/thingsboard_gateway/connectors/mqtt
creating thingsboard-gateway-2.5.0/thingsboard_gateway/connectors/odbc
creating thingsboard-gateway-2.5.0/thingsboard_gateway/connectors/opcua
creating thingsboard-gateway-2.5.0/thingsboard_gateway/connectors/request
creating thingsboard-gateway-2.5.0/thingsboard_gateway/connectors/rest
creating thingsboard-gateway-2.5.0/thingsboard_gateway/connectors/snmp
creating thingsboard-gateway-2.5.0/thingsboard_gateway/extensions
creating thingsboard-gateway-2.5.0/thingsboard_gateway/extensions/bacnet
creating thingsboard-gateway-2.5.0/thingsboard_gateway/extensions/ble
creating thingsboard-gateway-2.5.0/thingsboard_gateway/extensions/can
creating thingsboard-gateway-2.5.0/thingsboard_gateway/extensions/modbus
creating thingsboard-gateway-2.5.0/thingsboard_gateway/extensions/mqtt
creating thingsboard-gateway-2.5.0/thingsboard_gateway/extensions/odbc
creating thingsboard-gateway-2.5.0/thingsboard_gateway/extensions/opcua
creating thingsboard-gateway-2.5.0/thingsboard_gateway/extensions/request
creating thingsboard-gateway-2.5.0/thingsboard_gateway/extensions/rest
creating thingsboard-gateway-2.5.0/thingsboard_gateway/extensions/serial
creating thingsboard-gateway-2.5.0/thingsboard_gateway/extensions/snmp
creating thingsboard-gateway-2.5.0/thingsboard_gateway/gateway
```

Next step is not install thingsboard-gateway

Python3 setup.py install


```

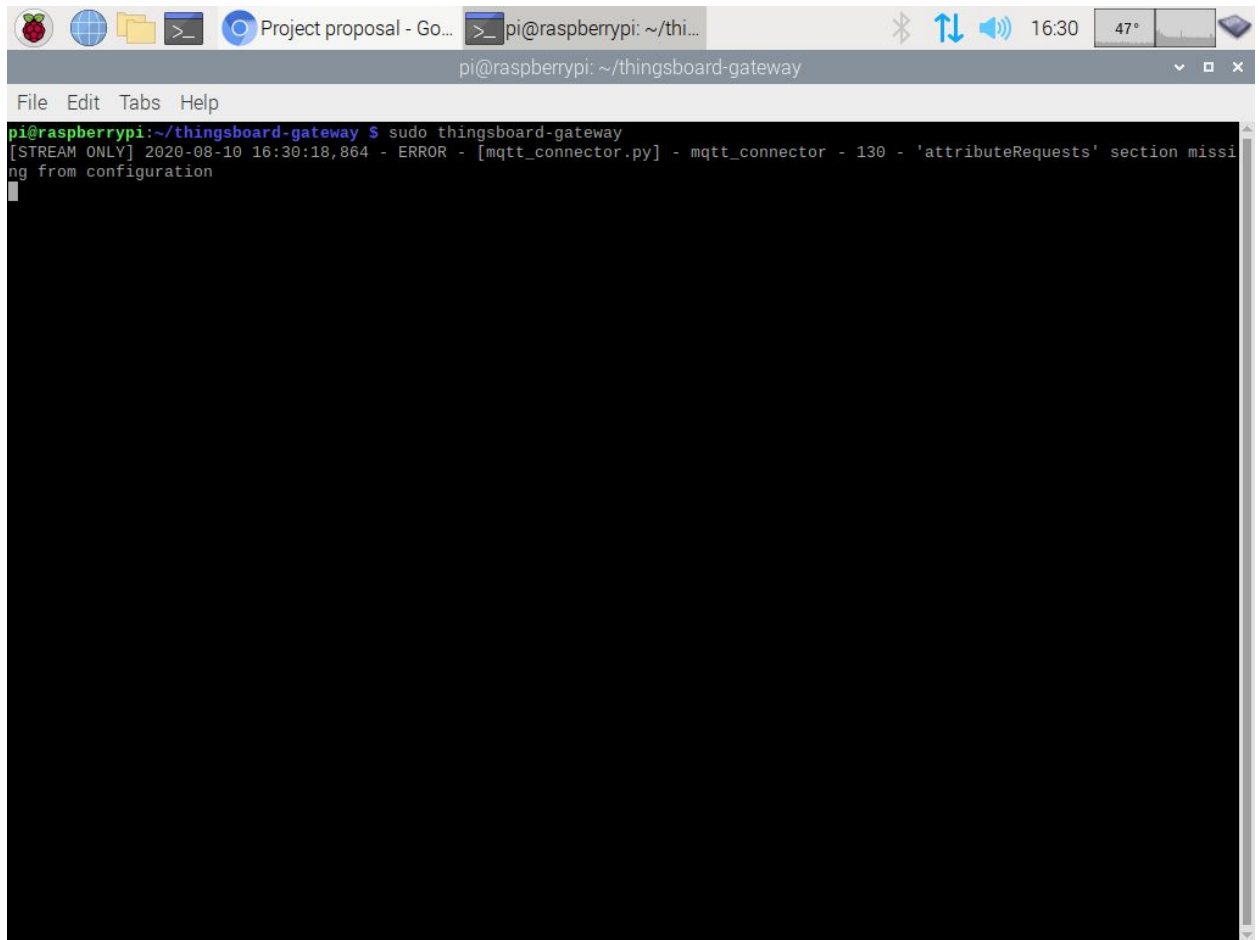
https://setuptools.readthedocs.io/en/latest/easy_install.html
Please make the appropriate changes for your system and try again.

pi@raspberrypi:~/thingsboard-gateway $ sudo python3 setup.py install
running install
running bdist_egg
running egg_info
writing thingsboard_gateway.egg-info/PKG-INFO
writing dependency links to thingsboard_gateway.egg-info/dependency_links.txt
writing entry points to thingsboard_gateway.egg-info/entry_points.txt
writing requirements to thingsboard_gateway.egg-info/requirements.txt
writing top-level names to thingsboard_gateway.egg-info/top_level.txt
reading manifest file 'thingsboard_gateway.egg-info/SOURCES.txt'
writing manifest file 'thingsboard_gateway.egg-info/SOURCES.txt'
installing library code to build/bdist.linux-armv7l/egg
running install_lib
running build_py
creating build/lib
creating build/lib/thingsboard_gateway
copying thingsboard_gateway/__init__.py -> build/lib/thingsboard_gateway
copying thingsboard_gateway/tb_gateway.py -> build/lib/thingsboard_gateway
creating build/lib/thingsboard_gateway/gateway
copying thingsboard_gateway/gateway/tb_updater.py -> build/lib/thingsboard_gateway/gateway
copying thingsboard_gateway/gateway/tb_logger.py -> build/lib/thingsboard_gateway/gateway
copying thingsboard_gateway/gateway/__init__.py -> build/lib/thingsboard_gateway/gateway
copying thingsboard_gateway/gateway/tb_gateway_service.py -> build/lib/thingsboard_gateway/gateway
copying thingsboard_gateway/gateway/tb_remote_shell.py -> build/lib/thingsboard_gateway/gateway
copying thingsboard_gateway/gateway/tb_gateway_remote_configurator.py -> build/lib/thingsboard_gateway/gateway
copying thingsboard_gateway/gateway/tb_client.py -> build/lib/thingsboard_gateway/gateway
creating build/lib/thingsboard_gateway/storage
copying thingsboard_gateway/storage/event_storage_reader.py -> build/lib/thingsboard_gateway/storage
copying thingsboard_gateway/storage/file_event_storage.py -> build/lib/thingsboard_gateway/storage
copying thingsboard_gateway/storage/file_event_storage_settings.py -> build/lib/thingsboard_gateway/storage
copying thingsboard_gateway/storage/event_storage_reader_pointer.py -> build/lib/thingsboard_gateway/storage
copying thingsboard_gateway/storage/__init__.py -> build/lib/thingsboard_gateway/storage
copying thingsboard_gateway/storage/memory_event_storage.py -> build/lib/thingsboard_gateway/storage
copying thingsboard_gateway/storage/event_storage.py -> build/lib/thingsboard_gateway/storage
copying thingsboard_gateway/storage/event_storage_files.py -> build/lib/thingsboard_gateway/storage
copying thingsboard_gateway/storage/event_storage_writer.py -> build/lib/thingsboard_gateway/storage
creating build/lib/thingsboard_gateway/tb_client

```

Now we are good to go

Run thingsboard-gateway



```
pi@raspberrypi: ~/thingsboard-gateway
File Edit Tabs Help
pi@raspberrypi:~/thingsboard-gateway $ sudo thingsboard-gateway
[STREAM ONLY] 2020-08-10 16:30:18,864 - ERROR - [mqtt_connector.py] - mqtt_connector - 130 - 'attributeRequests' section missing from configuration
```

Thingsboard-gateway will fireup

But will get some errors cuz we have to configure connectors

In my case connector is mqtt

And configure tb_gateway.yaml

And place the access token and change the domain


```

pi@raspberrypi: ~/thingsboard-gateway/config
File Edit Tabs Help
GNU nano 3.2 tb_gateway.yaml
thingsboard:
  host: demo.thingsboard.io
  port: 1883
  remoteShell: false
  remoteConfiguration: false
  security:
    accessToken: PUT_YOUR_GW_ACCESS_TOKEN_HERE
storage:
  type: memory
  read_records_count: 100
  max_records_count: 100000
# type: file
# data_folder_path: ./data/
# max_file_count: 10
# max_read_records_count: 10
# max_records_per_file: 10000
connectors:
-
  name: MQTT Broker Connector
  type: mqtt
  configuration: mqtt.json
# -
# name: Modbus Connector
# type: modbus
# configuration: modbus.json
# -
# name: Modbus Connector
# type: modbus
# configuration: modbus_serial.json
# -
# name: OPC-UA Connector
# type: opcua
# configuration: opcua.json
[ Spell checking failed: Error invoking "spell" ]
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify   ^G Cur Pos   M-U Undo     M-A Mark Text
^X Exit      ^R Read File  ^\ Replace   ^U Uncut Text ^T To Spell  ^_ Go To Line M-E Redo     M-G Copy Text

```

Now restart the thingsboard-gateway

Check the thingsboard dashboard

The screenshot shows the ThingsBoard dashboard in a web browser. The left sidebar contains navigation links: HOME, RULE CHAINS, CUSTOMERS, ASSETS, DEVICES (selected), ENTITY VIEWS, WIDGETS LIBRARY, DASHBOARDS, and AUDIT LOGS. The main content area displays a list of devices under the 'DEVICES' tab. A 'Device details' modal is open, showing the 'LATEST TELEMETRY' tab. The telemetry table lists the following data:

Last update time	Key	Value
2020-08-06 23:36:55	LOGS	Logging loading logs.conf is wrong such file or directory: /etc/thingsboard-gateway/config/
2020-08-06 23:37:25	mqttbrokerconnectorEventsProduced	0
2020-08-06 23:37:25	mqttbrokerconnectorEventsSent	0

The modal also includes a search bar, a table with checkboxes, and a pagination bar at the bottom showing 'Items per page: 10' and '1 - 5 of 5'.

The screenshot shows the ThingsBoard Demo interface in a Chromium browser. The browser's address bar displays 'demo.thingsboard.io/devices'. The interface has a dark blue sidebar on the left with navigation links: HOME, RULE CHAINS, CUSTOMERS, ASSETS, DEVICES (highlighted), ENTITY VIEWS, WIDGETS LIBRARY, DASHBOARDS, and AUDIT LOGS. The main content area is titled 'Devices' and shows a list of devices with columns for 'Created time' and 'Device details'. A modal window titled 'Device details' is open, showing tabs for DETAILS, ATTRIBUTES, LATEST TELEMETRY (selected), and ALARMS. The 'Latest telemetry' tab displays a table with columns for 'Last update time', 'Key', and 'Value'. The table contains three rows of data:

Last update time	Key	Value
2020-08-06 23:37:35	eventsProduced	0
2020-08-06 23:37:35	eventsSent	0
2020-08-06 23:36:55	LOGS	

Below the table, there is a pagination control showing 'Items per page: 10' and '1 - 5 of 5'. A red circular icon with a white pencil is visible in the top right corner of the modal window. A small error message is visible in the bottom right corner of the modal: 'Logging loading logs.conf is wrong such file or directory: /etc/thingsboard-gateway/config/'.

The screenshot shows a Raspberry Pi terminal window and the ThingsBoard web interface. The terminal displays a series of MQTT messages between a client and a server. The web interface shows the 'AUDIT LOGS' section with a table of events.

Terminal Output:

```
pi@raspberrypi: ~  
1596737236: Received SUBSCRIBE from wluseeuyynfuusreikoct  
1596737236: /custom/sensors/+ (QoS 0)  
1596737236: wluseeuyynfuusreikoct 0 /custom/sensors/+  
1596737236: Sending SUBACK to wluseeuyynfuusreikoct  
1596737236: Received SUBSCRIBE from wluseeuyynfuusreikoct  
1596737236: sensor/connect (QoS 0)  
1596737236: wluseeuyynfuusreikoct 0 sensor/connect  
1596737236: Sending SUBACK to wluseeuyynfuusreikoct  
1596737236: Received SUBSCRIBE from wluseeuyynfuusreikoct  
1596737236: sensor/+/connect (QoS 0)  
1596737236: wluseeuyynfuusreikoct 0 sensor/+/connect  
1596737236: Sending SUBACK to wluseeuyynfuusreikoct  
1596737236: Received SUBSCRIBE from wluseeuyynfuusreikoct  
1596737236: sensor/disconnect (QoS 0)  
1596737236: wluseeuyynfuusreikoct 0 sensor/disconnect  
1596737236: Sending SUBACK to wluseeuyynfuusreikoct  
1596737236: Received SUBSCRIBE from wluseeuyynfuusreikoct  
1596737236: sensor/+/disconnect (QoS 0)  
1596737236: wluseeuyynfuusreikoct 0 sensor/+/disconnect  
1596737236: Sending SUBACK to wluseeuyynfuusreikoct
```

ThingsBoard Web Interface:

The web interface shows the 'AUDIT LOGS' section. A table displays the following data:

Key	Value
2020-08-06 23:37:42	eventsProduced 0
2020-08-06 23:37:42	eventsSent 0
2020-08-06 23:36:55	LOGS

Logging loading logs.conf is wrong such file or directory: /etc/thingsboard-gateway/config/

Items per page: 10 1 - 5 of 5

The screenshot shows a Raspberry Pi terminal window with a terminal window and a web browser window. The terminal window displays the following output:

```
mqtt - 124 - Disconnected client: <paho.mqtt.client.Client object at 0xb57445f0>, user data: None, result code: 1  
[STREAM ONLY] 2020-08-06 23:37:30,324 - DEBUG - [tb_device_mqtt.py] - tb_device_mqtt - 124 - Disconnected client: <paho.mqtt.client.Client object at 0xb57445f0>, user data: None, result code: 1  
[STREAM ONLY] 2020-08-06 23:37:33,675 - DEBUG - [tb_device_mqtt.py] - tb_device_mqtt - 124 - Disconnected client: <paho.mqtt.client.Client object at 0xb57445f0>, user data: None, result code: 1  
[STREAM ONLY] 2020-08-06 23:37:37,077 - DEBUG - [tb_device_mqtt.py] - tb_device_mqtt - 124 - Disconnected client: <paho.mqtt.client.Client object at 0xb57445f0>, user data: None, result code: 1  
[STREAM ONLY] 2020-08-06 23:37:40,583 - DEBUG - [tb_device_mqtt.py] - tb_device_mqtt - 124 - Disconnected client: <paho.mqtt.client.Client object at 0xb57445f0>, user data: None, result code: 1  
[STREAM ONLY] 2020-08-06 23:37:47,187 - DEBUG - [tb_device_mqtt.py] - tb_device_mqtt - 124 - Disconnected client: <paho.mqtt.client.Client object at 0xb57445f0>, user data: None, result code: 1
```

The web browser window shows the ThingsBoard interface. The left sidebar contains the following menu items:

- DASHBOARDS
- AUDIT LOGS

The main content area displays a table of events. The table has the following columns: Key, Value, and a checkbox column. The data is as follows:

Key	Value	Checkbox
2020-08-06 23:37:45	eventsProduced	<input type="checkbox"/>
2020-08-06 23:37:45	eventsSent	<input type="checkbox"/>
2020-08-06 23:36:55	LOGS	<input type="checkbox"/>

Below the table, there is a message: "Logging loading logs.conf is wrong such file or directory: /etc/thingsboard/gateway/config/". At the bottom of the page, there is a pagination bar showing "Items per page: 10" and "1 - 5 of 5".