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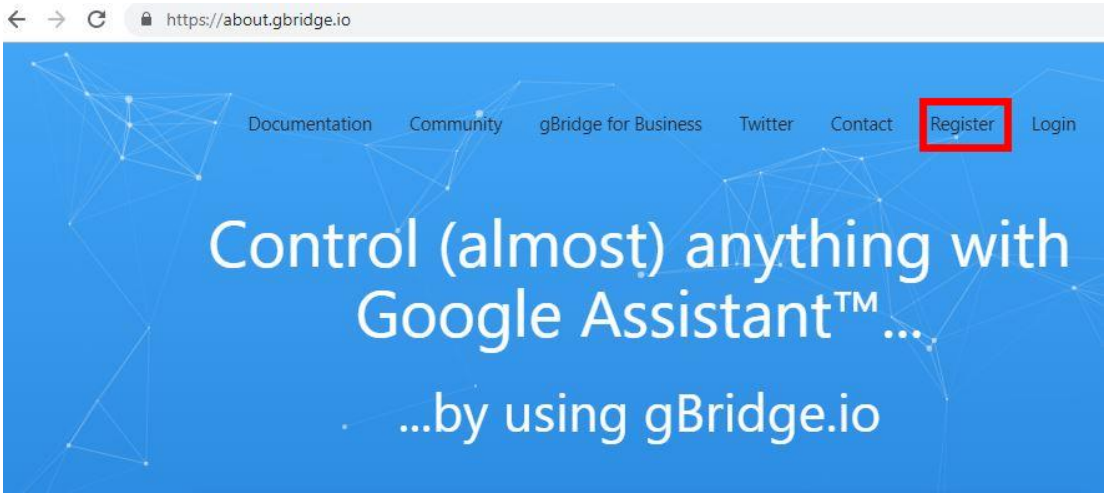
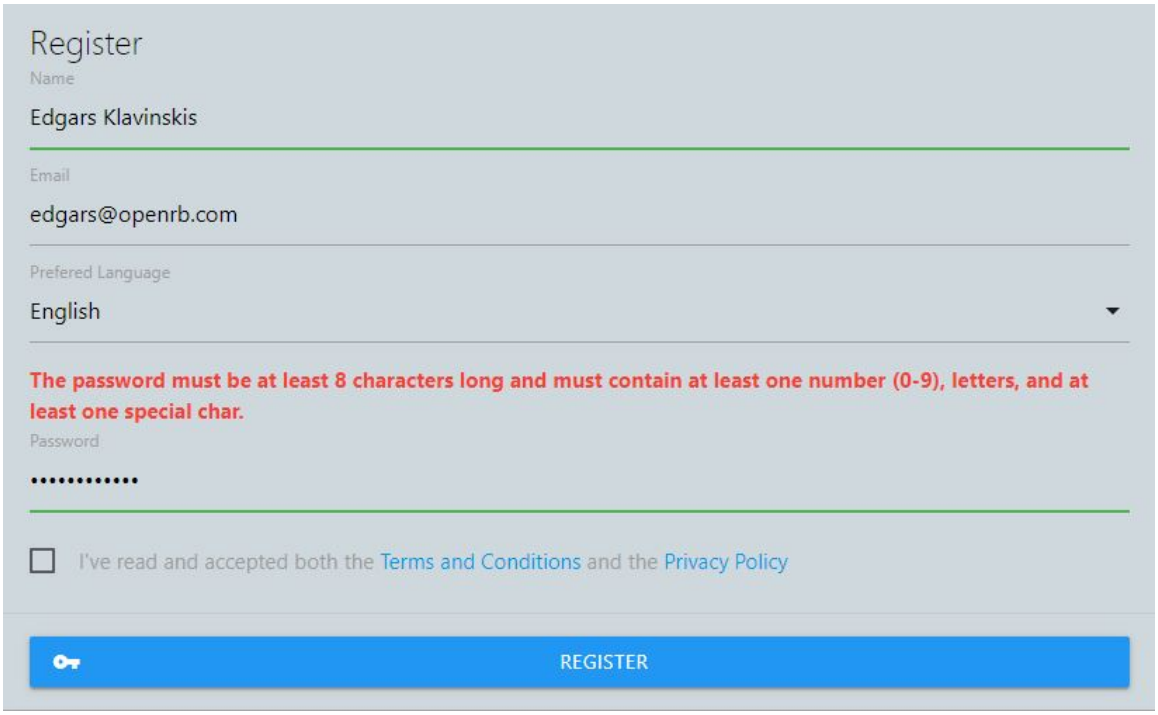
Google Home integration into LogicMachine

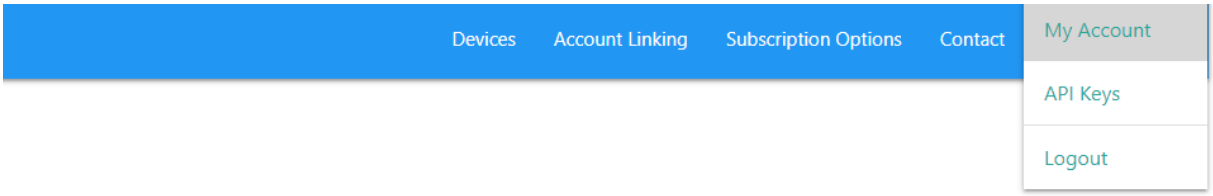
1. Register at gbridge.io website



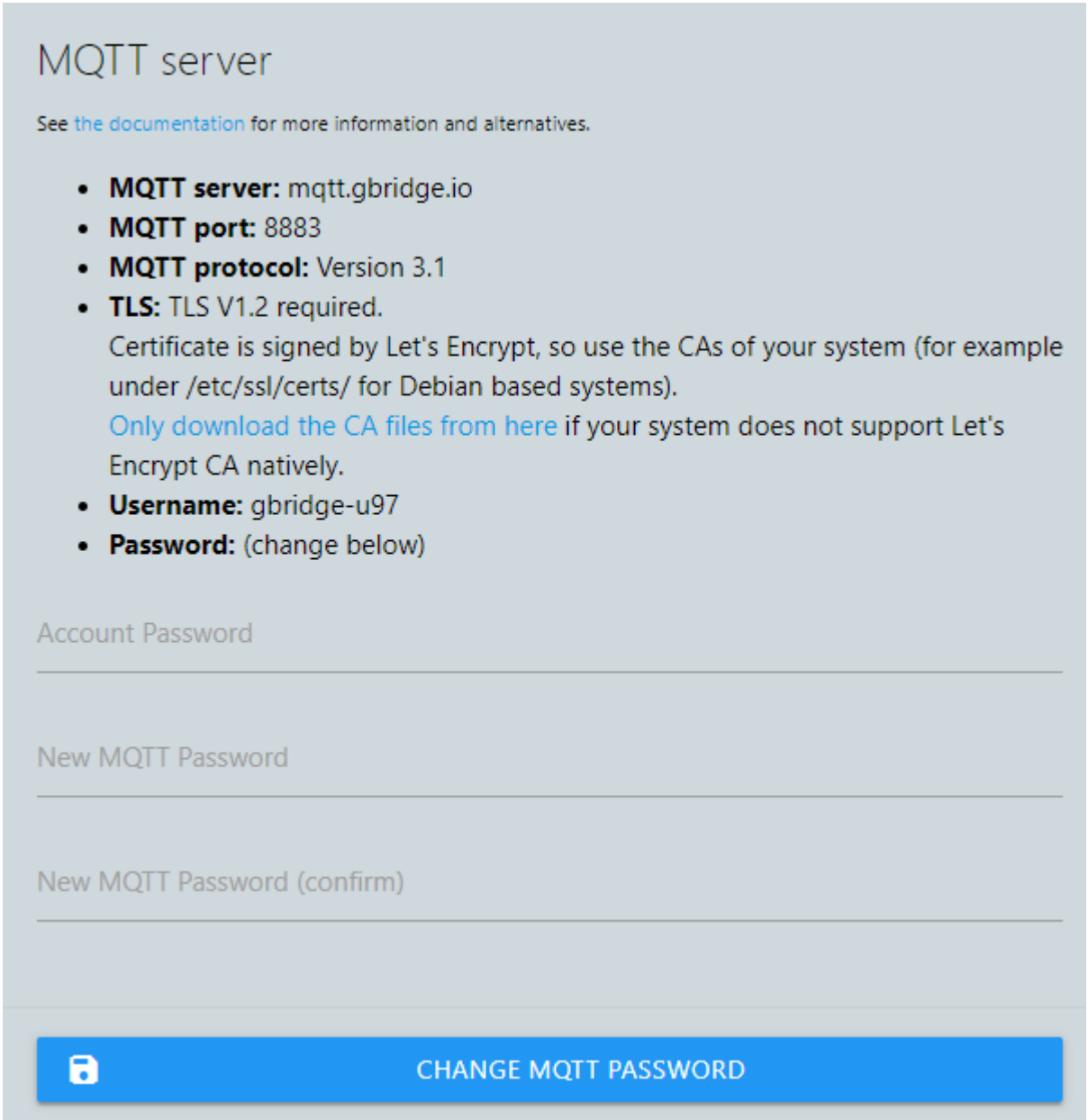
2. Please note to use the correct password when registering – the password must be at least 8 characters long, contain at least one number (0-9), letters, and at least one special character



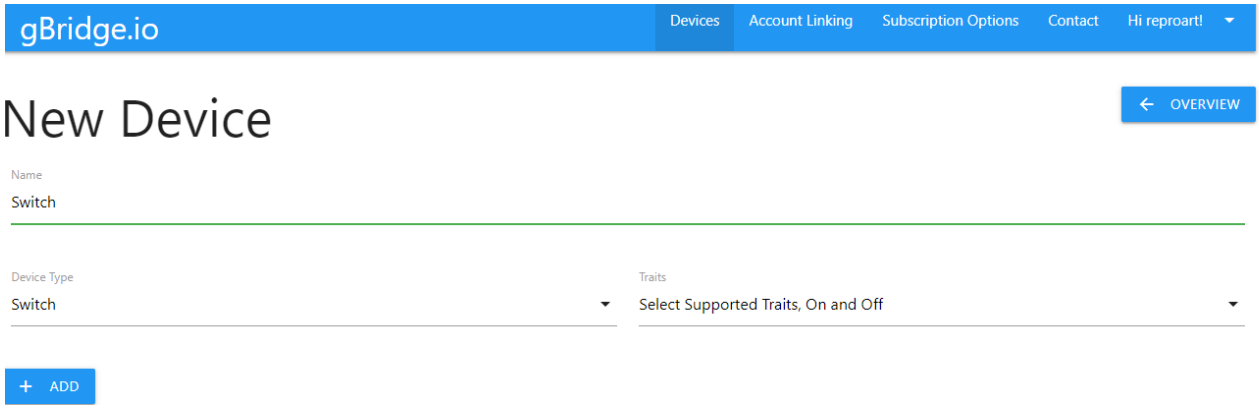
3. In the upper right corner go to **My Account**.



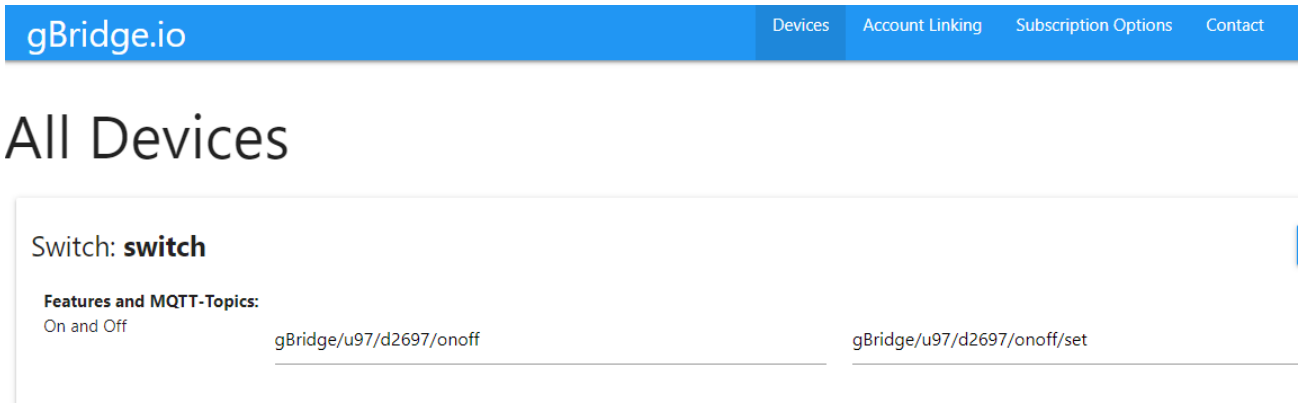
4. Fill the MQTT password fields along with entering your gbridge account password, click the button **Change MQTT password**



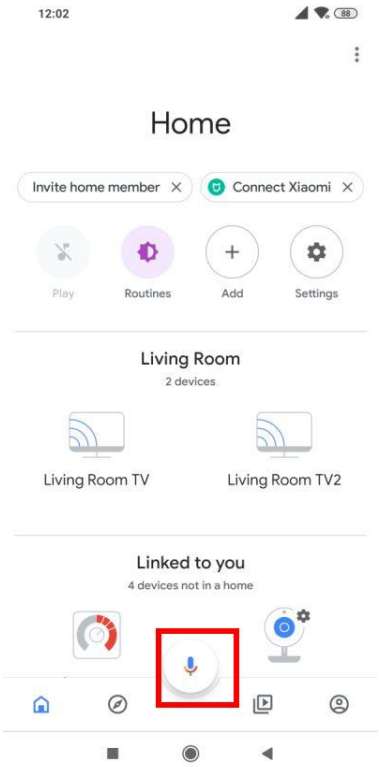
5. In the **Devices** section click **+Device** button and fill the information about object/group address to control. Choose **name** which will be used to control, **device type** (Light, outlet, switch, scene, thermostat, fan, air conditioner, air purifier, sprinkler, door, blinds, shutter, dishwasher, dryer, vacuum, washer, camera) and **traits** (on/off, brightness, scene, temperature setting, fan speed, start/stop, open/close, camera stream, color setting/RGB, colors setting/JSON, color setting/temperature). Click **+Add** button when finished.



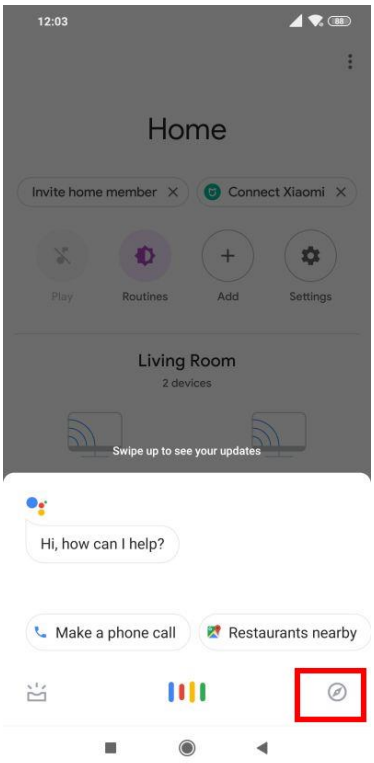
6. You can see now the MQTT topic for this device. You can edit it aswell by clicking edit button 



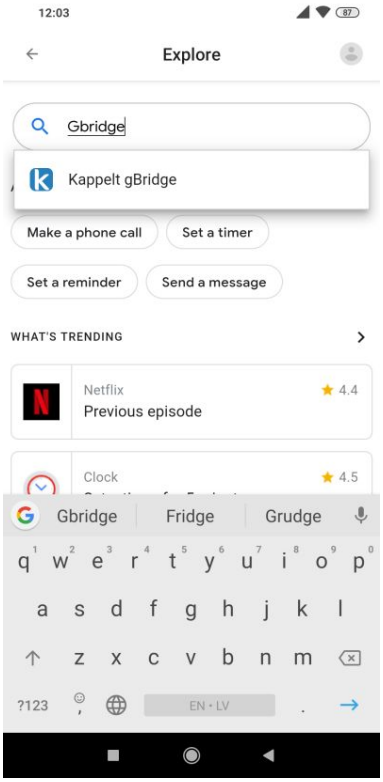
7. In the Google Home app on your phone, click the Mic button.



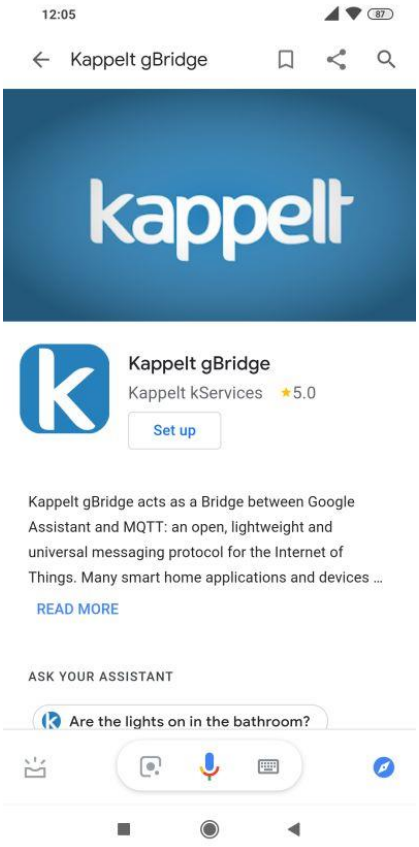
8. Then click Explore button



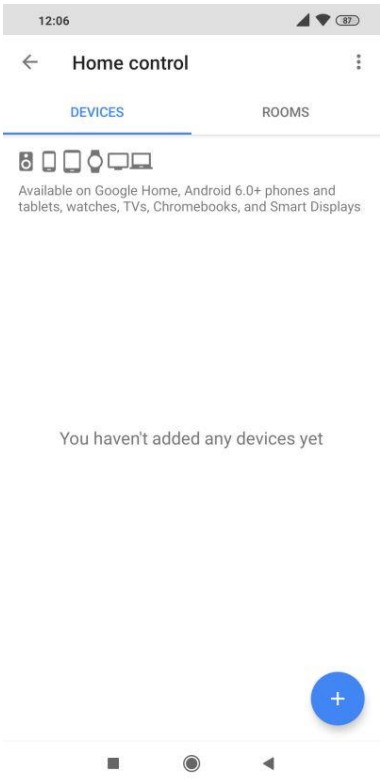
9. In the Search field enter Gbridge



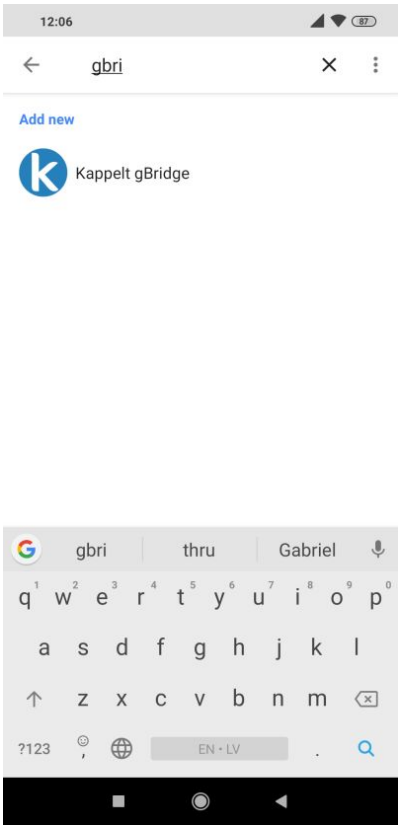
10. Click **Set up** button.



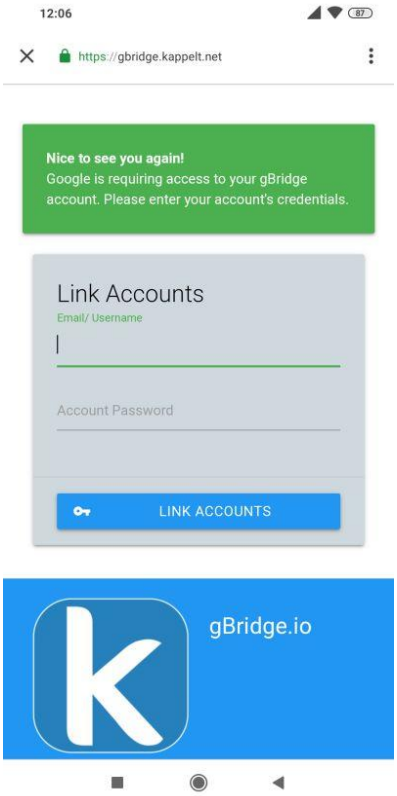
11. Click + button



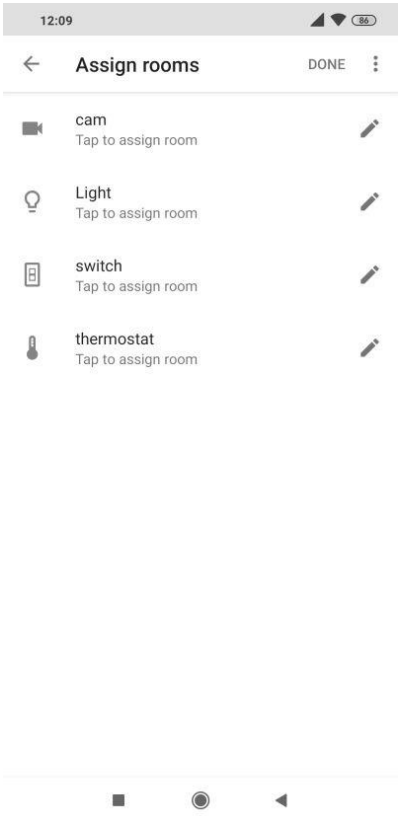
12. Search for Gbridge



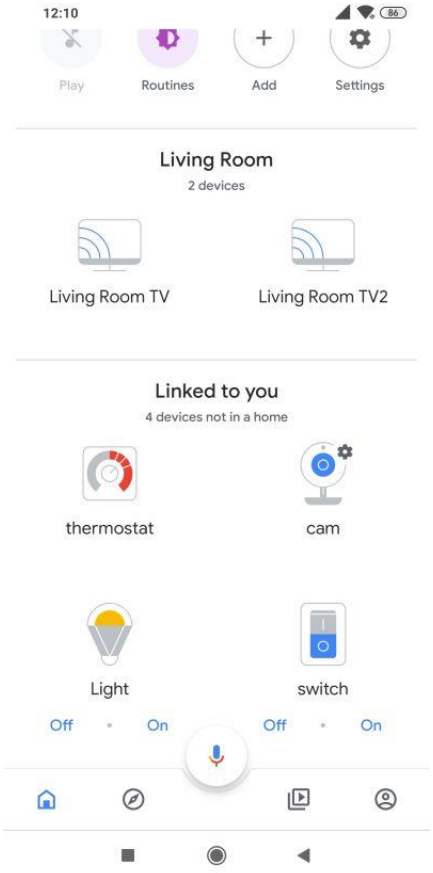
13. Login with your account login name and password (created in 2nd point above)



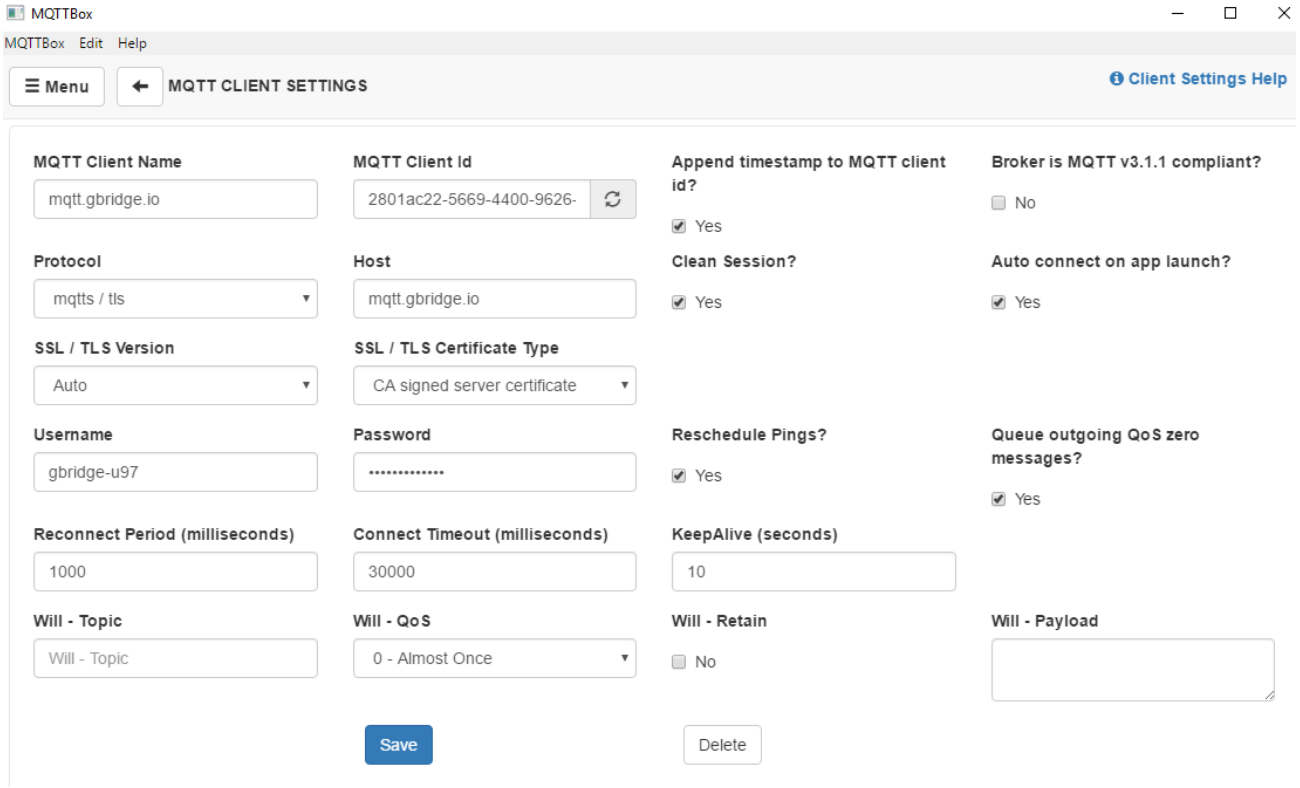
14. You will then see Devices which you have added in the web interface for the gbridge.io



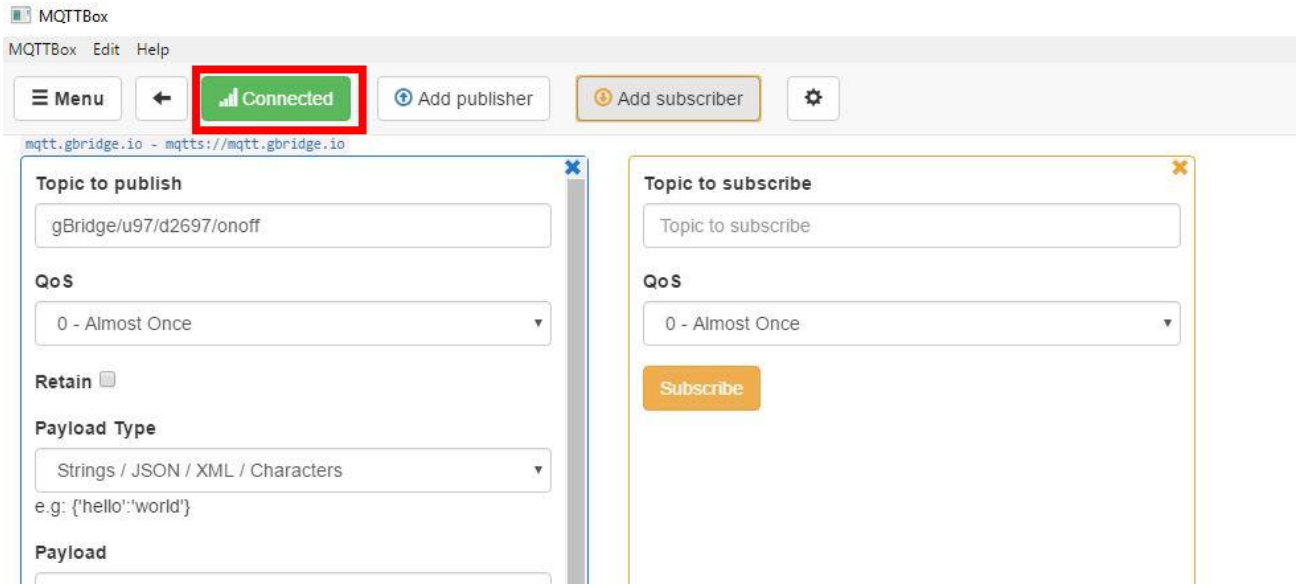
15. Now you can control these Devices from Google Home manually or via voice e.g. “Switch ON”



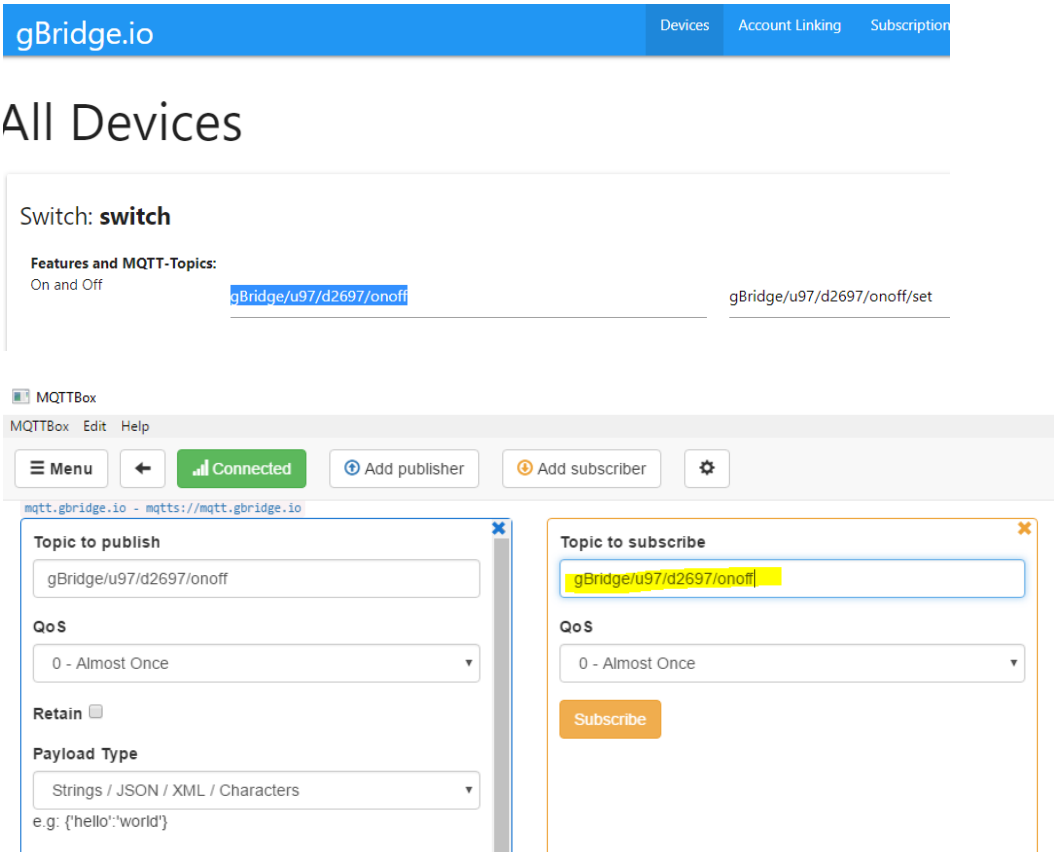
16. You can test that the communication goes well from Windows/Apple computer by using MQTTBox program: http://workswithweb.com/html/mqttbox/installing_apps.html#install_on_windows
Fill the fields like in the below example picture, change mqtt **username** and **password** to the ones you created in the 4th point above. Click **Save**.



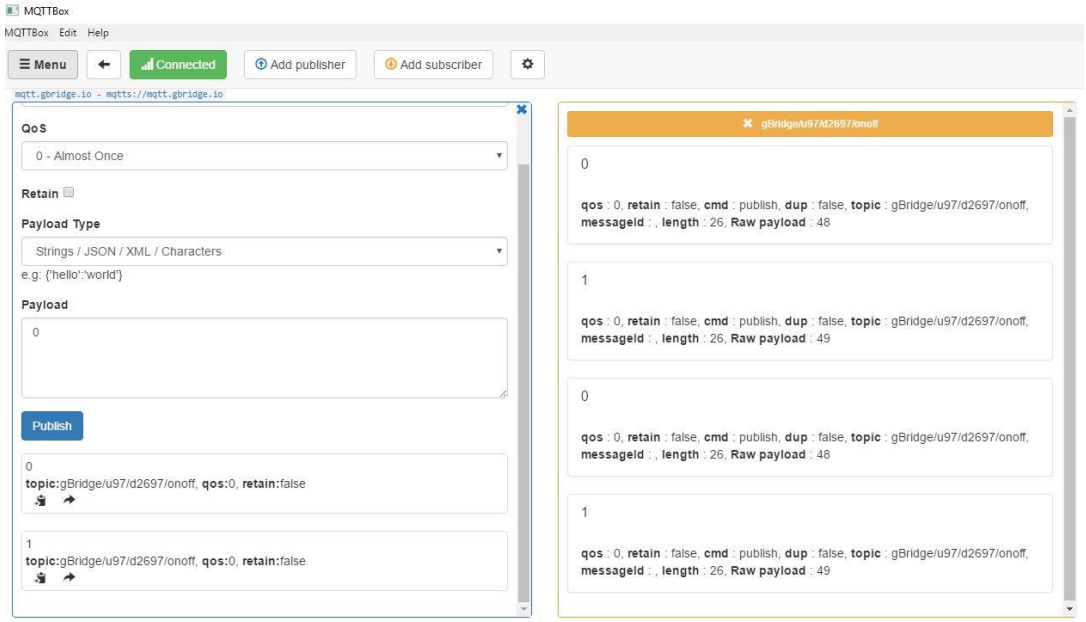
17. Make sure the status for the connection is **Connected**:



18. In the Topic to subscribe enter the topic name from the **Device** section, click **Subscribe**



19. In the Google Home app change this Device status On/Off, you should see communication in the Subscribe window:



20. In the LogicMachine update these two packages (System Config → System → Packages :
New power CPU:
http://dl.openrb.com/pkg/libmosquitto_1.6.3-1_imx6.ipk
http://dl.openrb.com/pkg/luamosquitto_0.3-4_imx6.ipk
http://dl.openrb.com/pkg/luasocket_2.0.2-34_imx6.ipk

Old CPU:

http://dl.openrb.com/pkg/luasocket_2.0.2-35_mxs.ipk
http://dl.openrb.com/pkg/libmosquitto_1.6.3-1_mxs.ipk
http://dl.openrb.com/pkg/luamosquitto_0.3-5_mxs.ipk

21. Resident script, sleep time = 0.

Edit there variables:

username - your gbridge MQTT username
password - your gbridge MQTT password
controlmap - topic -> address map for control (from MQTT)
statusmap - address -> topic map for statuses (to MQTT)

Thermostat mode mapping to/from numeric values:

off = 0
on = 1
heat = 2
cool = 3

auto = 4
fan-only = 5
purifier = 6
eco = 7
dry = 8

```
-- script begins here

if not mclient then
  username = 'gbridge-user'
  password = 'password'

  -- control, topic -> address map
  controlmap = {
    ['gBridge/user/device/onoff'] = '32/1/1',
    ['gBridge/user/device/onoff'] = '32/1/2',
    ['gBridge/user/device/tempset-setpoint'] = '32/1/3',
    ['gBridge/user/device/tempset-mode'] = '32/1/6',
  }

  -- status, address -> topic map
  statusmap = {
    ['32/1/1'] = 'gBridge/user/device/onoff/set',
    ['32/1/2'] = 'gBridge/user/device/onoff/set',
    ['32/1/3'] = 'gBridge/user/device/tempset-setpoint/set',
    ['32/1/4'] = 'gBridge/user/device/tempset-ambient/set',
    ['32/1/5'] = 'gBridge/user/device/tempset-humidity/set',
    ['32/1/6'] = 'gBridge/user/device/tempset-mode/set',
  }

  -- thermostat mode -> number map and vice versa
  modemap = {
    ['off'] = 0,
    ['on'] = 1,
    ['heat'] = 2,
    ['cool'] = 3,
    ['auto'] = 4,
    ['fan-only'] = 5,
    ['purifier'] = 6,
    ['eco'] = 7,
    ['dry'] = 8,
    [0] = 'off',
    [1] = 'on',
    [2] = 'heat',
    [3] = 'cool',
    [4] = 'auto',
    [5] = 'fan-only',
    [6] = 'purifier',
    [7] = 'eco',
    [8] = 'dry',
  }

  socket = require('socket')

  host = 'mqtt.gbridge.io'
  port = 8883

  datatypes = {}
  values = {}

  for addr, _ in pairs(statusmap) do
    obj = grp.find(addr)

    if obj then
      datatypes[ addr ] = obj.datatype
      values[ addr ] = obj.value
    else
      log('object not found ' .. tostring(addr))
```

```
    statusmap[ addr ] = nil
  end
end

function istempset(topic)
  return topic:find('tempset-mode', 1, true)
end

function publish(topic, value)
  local data

  if istempset(topic) then
    data = modemap[ tonumber(value) or 0 ]
  else
    data = tostring(value)
  end

  mclient:publish(topic, data)
end

mclient = require('mosquitto').new()

mclient.ON_CONNECT = function(status, rc, msg)
  connected = status

  if status then
    log('mqtt connected')

    for topic, _ in pairs(controlmap) do
      mclient:subscribe(topic)
    end

    for addr, topic in pairs(statusmap) do
      local value = values[ addr ]
      if value ~= nil then
        publish(topic, value)
      end
    end
  else
    log('mqtt on_connect failed ' .. tostring(msg))

    mclient:disconnect()
  end
end

mclient.ON_MESSAGE = function(mid, topic, data)
  local addr = controlmap[ topic ]

  if addr then
    local value

    if istempset(topic) then
      value = modemap[ data ]
    else
      value = tonumber(data)
    end

    if value ~= nil then
      grp.write(addr, value)
    end
  end
end

mclient.ON_DISCONNECT = function(status, rc, msg)
  if connected then
    connected = false
    log('mqtt disconnected ' .. tostring(msg))
  end

  mclientfd = nil
end
```

```
  function mconnect()
    local status, rc, msg, fd

    status, rc, msg = mclient:connect(host, port)

    if not status then
      log('mqtt connect failed ' .. tostring(msg))
    end

    fd = mclient:socket()
    if fd then
      mclientfd = fd
    end
  end

  function busevent(event)
    local addr = event.dst
    local topic = statusmap[ addr ]

    if topic and connected then
      local value = busdatatype.decode(event.datahex, datatypes[ addr ])
      values[ addr ] = value
      publish(topic, value)
    end
  end

  lb = require('localbus').new(10)

  lb:sethandler('groupwrite', busevent)
  lb:sethandler('groupresponse', busevent)

  busfd = socket.fdmaskset(lb:getfd(), 'r')

  mclient:tls_insecure_set(true)
  mclient:login_set(username, password or '')

  mconnect()

  timer = require('timerfd').new(5)
  timerfd = socket.fdmaskset(timer:getfd(), 'r')
end

-- mqtt connected
if mclientfd then
  mask = mclient:want_write() and 'rw' or 'r'
  mclientfdset = socket.fdmaskset(mclientfd, mask)
  res, busstat, timerstat, mclientstat =
      socket.selectfds(10, busfd, timerfd, mclientfdset)
-- mqtt not connected
else
  res, busstat, timerstat =
    socket.selectfds(10, busfd, timerfd)
end

if mclientstat then
  if socket.fdmaskread(mclientstat) then
    mclient:loop_read()
  end

  if socket.fdmaskwrite(mclientstat) then
    mclient:loop_write()
  end
end

if busstat then
  lb:step()
end

if timerstat then
  timer:read() -- clear armed timer

  if mclientfd then
```

```
    mclient:loop_misc()
  else
    mconnect()
  end
end
```

22. Source: https://github.com/kservices/gBridge
23. To increase device limit in free version, you can use objects like Temperature or Scene which has several sub-objects. Each of these sub-objects can be used to control separate object on LM