Flashing and configuration instructions

How to flash an SD card for raspberry pi with please-open.it and configuration

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1 Introduction

This document exposes how to flash and install please-open.it software for a raspberry pi. This document is only for the public version.

Several links refers to https://download.please-open.it server, refers to this website to get the latest software versions.

2 Raspbian image

The image (https://download.please-open.it/raspbian_modified.zip) we give is based on Raspbian Lite Stretch (https://www.raspberrypi.org/downloads/raspbian/) with an install script for please-open.it software.

You can download a Raspbian lite image and install all software manually. Do not forget to unzip it !

All information about the image are explained here : https://www.mathieupassenaud.fr/cloudinit-rpi/

Flash an SD card (at least 4GB) with the image, using the method explained in the official documentation : https://www.raspberrypi.org/documentation/installation/installing-images/

3 Configuration

We built a simple tool that helps you to generate all configuration files you need. This tool is available at :

https://plublic.please-open.it/wizard

Nothing is stored on our servers.

Put all configuration files directly in “boot” volume on SD.

3.1 Networking

https://www.raspberrypi.org/documentation/configuration/wireless/headless.md

Headless configuration does the job itself. Using your configuration tool, or with your favorite text editor, put a wpa_supplicant.conf file directly to the boot partition on the SD card.

This is how a wpa_wupplicant.conf file looks like :

```
update_config=1
ctrl_interface=/var/run/wpa_supplicant
country=FR
network={
    ssid="mywifi"
    psk="mypassword"
}
```

If you plan to connect your raspberry pi with an ethernet connexion, forget this step.

3.2 Config.json

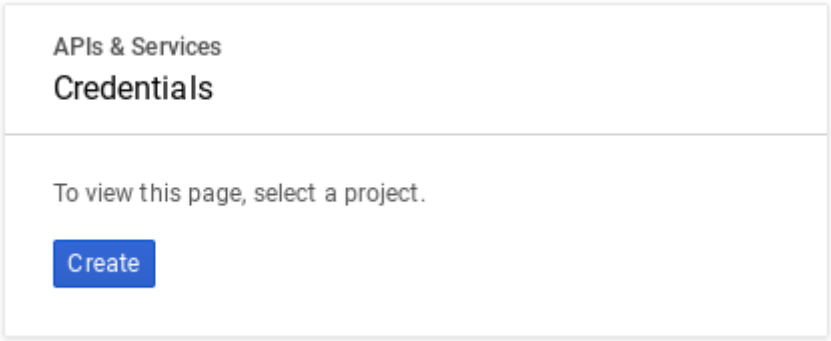
3.2.1 Oauth

For this public version of please-open.it, we do not manage anything about authentication. All is done by Google’s OAuth provider. In the future, we will add others (Facebook, Twitter, Github…). As a client to their authentication system, you need to create a client id and a client secret.

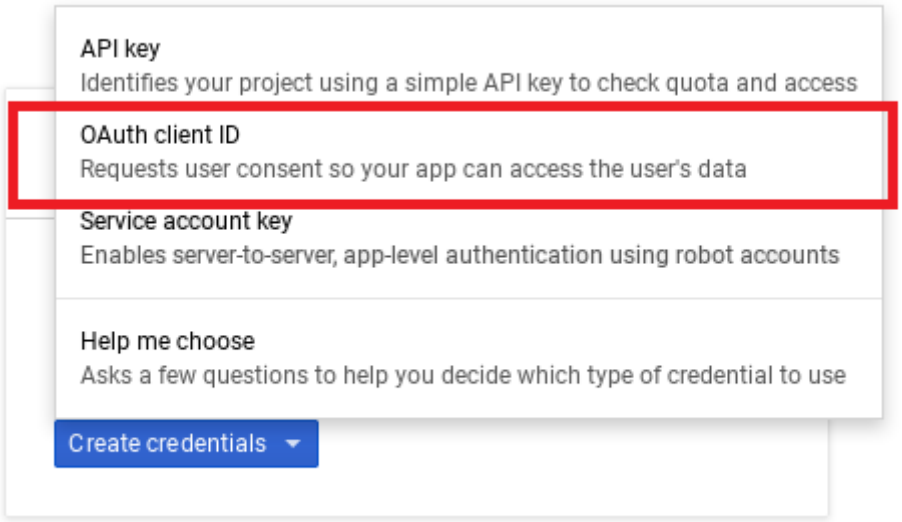
The greatest new about this is : you do not have any dependency with please-open.it. Nothing is stored on our servers, and each time you use the app only Google’s Oauth is use.

Go to : https://console.developers.google.com/apis/credentials

And add a new project :

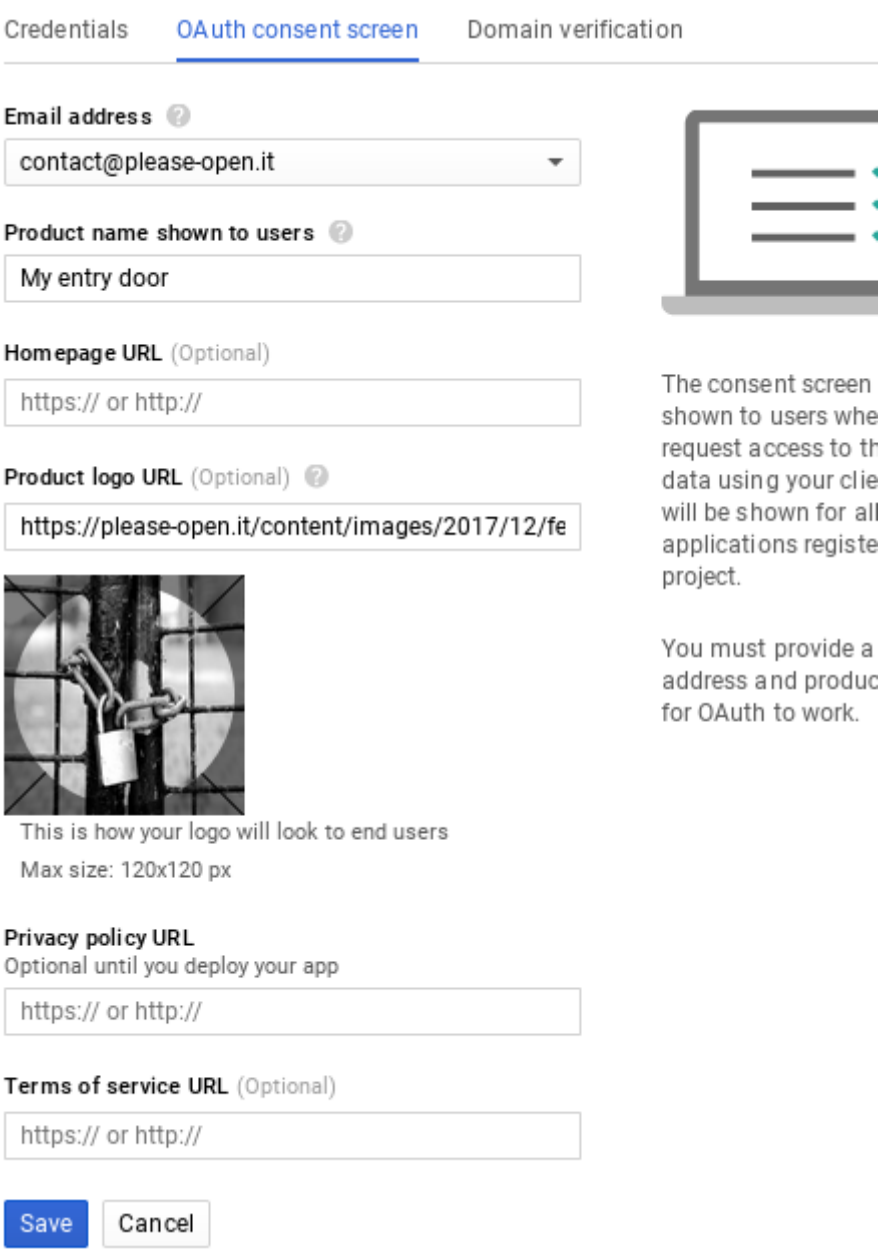


Then, when your project is created you can start creating your credentials. Select the created project from the list on the top left, then click on “Create Credentials”, choose “Oauth client ID” :

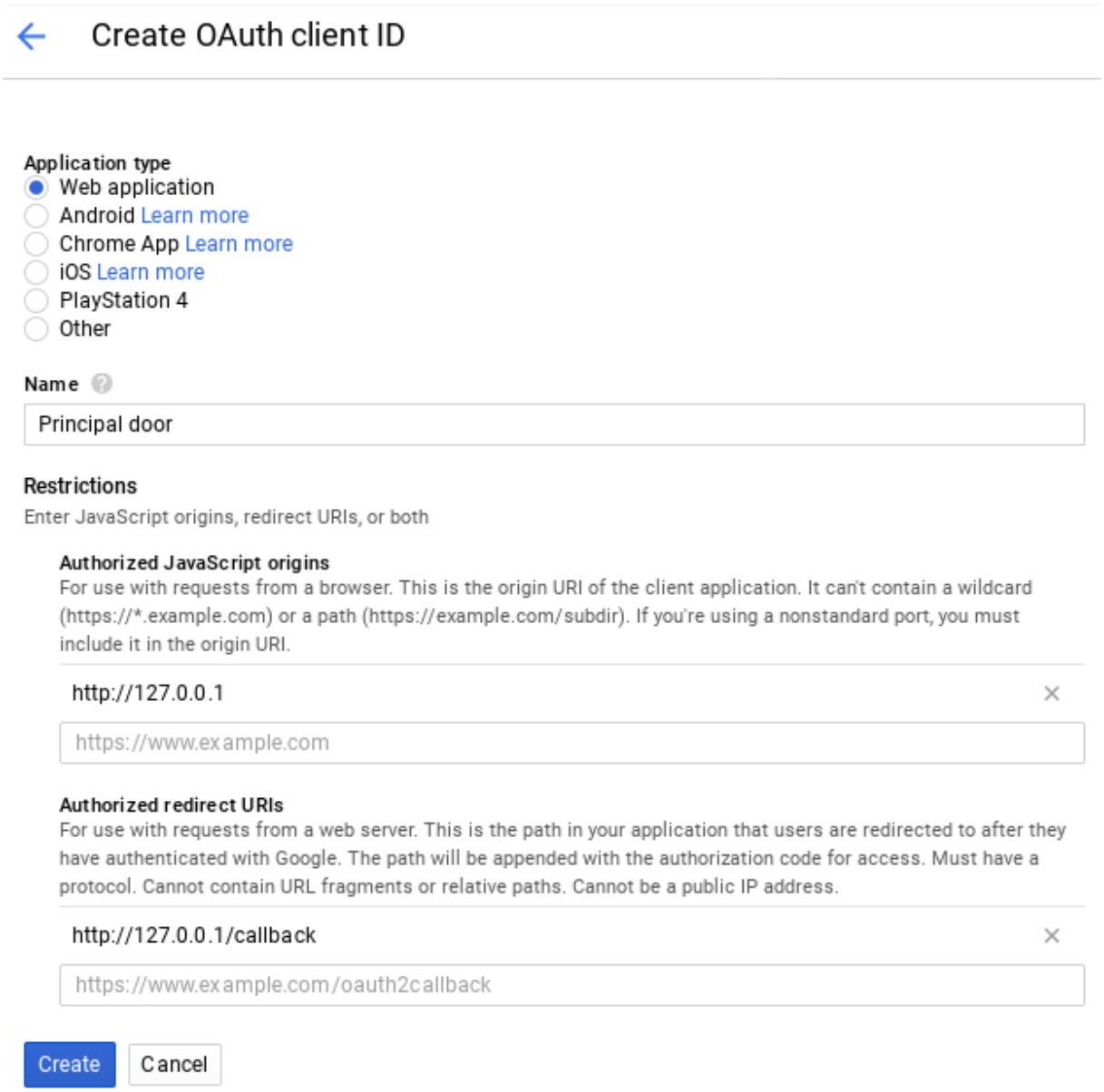


Then, you are invited to configure a consent screen.

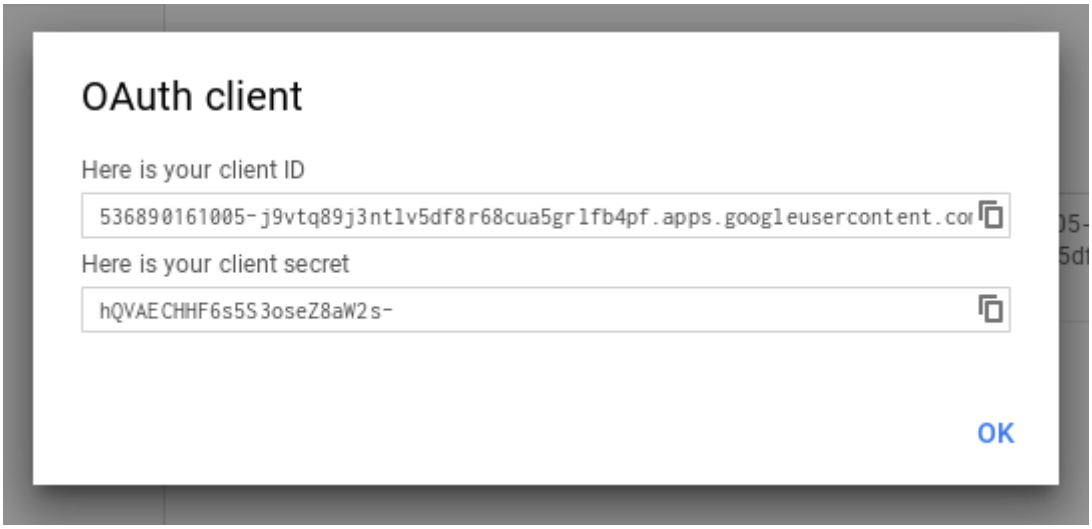
Fill some needed information : your email address, the name of your door/portal and eventually an image.



Now, create a new OAuth Client ID, it is a Web Application so select the first proposition. Give it a name and type in “Authorized Javascript origins” “http://127.0.0.1” and in “Authorized redirect URIs” “http://127.0.0.1/callback”. Then, click on “create” :



The wizard shows OAuth generated client ID and client secret.



From that, you also need Google's Oauth URL :

```
    "issuer":"https://accounts.google.com",
    "authorization_endpoint":"https://accounts.google.com/o/oauth2/v2/auth",
    "token_endpoint":"https://www.googleapis.com/oauth2/v4/token",
    "userinfo_endpoint":"https://www.googleapis.com/oauth2/v3/userinfo",
    "jwks_uri":"https://www.googleapis.com/oauth2/v3/certs",
```

3.2.2 Door name

An entry called "door_name" contains the name shown in the mobile application when the door is detected.

3.2.3 Relay number and timing

@see wiring document

The relay number (relayNumber) is an integer from 1 to 4, corresponding to J2, J3, J4 and J5 on a 4 relays board.

A timer in ms (pause_time) defines how much time the relay keep activated.

3.3 Users (authorized-users.json)

A simple list of users in a json file (authorized-users.json) contains an array of elements. Each element has an "email" entry with a mail address and a flag called "admin" that will be used in the future :

```
[
    {"email":"mathieu.passenaud@please-open.it","admin":true},
    {"email":"contact@please-open.it","admin":false}
]
```

3.4 Update configuration

At anytime, you can stop your raspberry pi, pickup the micro-sd card and put new configuration files directly in the /boot partition.

Configuration will be updated on next boot.