



Annex TFG ASIX

SMART MIRROR

Blázquez Ruiz, Alex
SAPALOMERA, BLANES

Índex

Introducció.....	2
Python.....	3
Sensor de Temperatura	4
Apache2	7
Phpmyadmin.....	8
Configuració i instal·lació del mirall.....	10
Mòduls externs	11
Mòdul Spotify	11
Mòdul Monitoratge	15
Mòdul Alexa.....	16
Mòdul d'administració remota.....	21
Pi Hole.....	22
Construcció de la estructura.....	30

Introducció

En aquest document trobareu els processos d'instal·lació de cada apartat, és recomanable mirar el procés d'instal·lació oficial si deixo el link, ja que pot contindre actualitzacions i correccions.

He intentat treure el màxim possible de captures en tots els processos, espero aclarir tots els dubtes que podrien haver existit amb el document inicial.

Python

Preparació de les llibreries per python i la implementació de la càmera

Necessitarem totes aquestes utilitats per que el codi funcioni correctament i amb aquest ordre:

```
sudo apt-get install build-essential cmake pkg-config python-dev
libgtk2.0-dev libgtk2.0 zlib1g-dev libpng-dev libjpeg-dev libtiff-dev
libjasper-dev libavcodec-dev swig
```

```

5 instal·laran els paquets NOUS següents:
autocconf automake autopoint autotools-dev binfmt-support ca-certificates-mono cli-common cmake cmake-data
debhelper dh-autoreconf dh-strip-nondeterminism dwz gettext glibc2.29-gtk-2.0 glibc2.29-harfbuzz-0.0 icu-devtools
intltool-debian libarchive-cpio-perl libarchive-zip-perl libatk1.0-dev libatk1.0-doc libavcodec-dev libavutil-dev
libbidi-dev libcairo-script-interpretor2 libcairo2-dev libdebhelper-perl libffi-dev
libfile-stripnondeterminism-perl libfontconfig1-dev libfribidi-dev libgdplus libgdk-pixbuf2.0-bin
libgdk-pixbuf2.0-dev libglib2.0-cil libglib2.0-cil-dev libglib2.0-dev libglib2.0-dev-bin libglib2.0-doc
libgraphite2-dev libgtk2.0.0-dbg libgtk2.0-cil libgtk2.0-cil-dev libgtk2.0-dev libgtk2.0-doc libharfbuzz-dev
libharfbuzz-gobject0 libicu-dev libjasper-dev libjasper1 libjbig-dev libjpeg-dev libjpeg62-turbo-dev libjsoncpp1
libltdl-dev liblzma-dev liblzot2-2 libmail-sendmail-perl libmono-btls-interface4.0-cil libmono-cairo4.0-cil
libmono-corlib4.5-cil libmono-il8n-west4.0-cil libmono-il8n4.0-cil libmono-system4.0-cil
libmono-system-configuration4.0-cil libmono-system-core4.0-cil libmono-system-drawing4.0-cil
libmono-system-numerics4.0-cil libmono-system-security4.0-cil libmono-system-xml4.0-cil libmono-system4.0-cil
libmount-dev libpangol.0-dev libpangol.0-doc libpcre16-3 libpcre3-dev libpcre32-3 libpcrecpp0v5 libpixman-1-dev
librhash0 libselinux1-dev libsepol-dev libsigsegv2 libswresample-dev libsys-hostname-long-perl libtiff-dev
libtiffxx5 libtool libxcb-render0-dev libxcb-shm0-dev libxcomposite-dev libxcursor-dev libxdamage-dev libxext-dev
libxfixes-dev libxft-dev libxi-dev libxinerama-dev libxml2-utils libxrandr-dev libxrender-dev m4 mono-4.0-gac
mono-gac mono-runtime mono-runtime-common mono-runtime-sgen pangol.0-tools po-debconf swig swig3.0 uuid-dev vim
vim-protolite xlibproto-composite-dev xlibproto-damage-dev xlibproto-fixes-dev xlibproto-input-dev xlibproto-randr-dev
xlibproto-xext-dev xlibproto-xinerama-dev

0 actualitzats, 122 nous a instal·lar, 0 a suprimir i 0 no actualitzats.
S'ha d'obtenir 72,1 MB d'arxius.
Després d'aquesta operació s'empraran 284 MB d'espai en disc addicional.
Voleu continuar? [S/n] ☐

```

```
sudo apt install python-numpy python-opencv
```

[illegible]

```
sudo apt install python3-opencv
```

```
Looking in indexes: https://pypi.org/simple, https://www.piwheels.org/simple
Collecting opencv-contrib-python
  Downloading https://files.pythonhosted.org/packages/42/02/7b2f1b0b91266aa3243d8f192d480b1a206cc81956a14228e75c515616e/opencv-contrib-python-4.5.1.48.tar.gz (148.8MB)
3% | 5.7MB/s et al 0:02:29
```

```
sudo apt install python3-numpy
```

```
pi@raspberrypi:~$ sudo apt install python3-numpy
S'està llegint la llista de paquets... Fet
S'està construint l'arbre de dependències
S'està llegint la informació de l'estat... Fet
python3-numpy ja està en la versió més recent (1:1.16.2-1).
0 actualitzats, 0 nous a instal·lar, 0 a suprimir i 0 no actualitzats.
pi@raspberrypi:~$
```

```
sudo apt install python3-matplotlib
```

```
pi@raspberrypi:~$ sudo apt install python3-matplotlib
S'està lligint la llista de paquets... Fet
S'està construint l'arbre de dependències
S'està lligint la informació de l'estat... Fet
python3-matplotlib ja està en la versió més recent (3.0.2-2).
S'ha marcat python3-matplotlib com instal·lat manualment.
0 actualitzats, 0 nous a instal·lar, 0 a suprimir i 0 no actualitzats.
```

```
Sudo pip3 install face_recognition
```

```

pi@raspberrypi:~ $ sudo pip3 install face_recognition
Looking in indexes: https://pypi.org/simple, https://www.piwheels.org/simple
Requirement already satisfied: face_recognition in /usr/local/lib/python3.7/dist-packages (1.3.0)
Requirement already satisfied: Click>=6.0 in /usr/lib/python3/dist-packages (from face_recognition) (7.0)
Requirement already satisfied: dlib>=19.7 in /usr/local/lib/python3.7/dist-packages (from face_recognition) (19.21.1)
Requirement already satisfied: Pillow in /usr/lib/python3/dist-packages (from face_recognition) (5.4.1)
Requirement already satisfied: face-recognition-models>=0.3.0 in /usr/local/lib/python3.7/dist-packages (from face_recognition) (0.3.0)
Requirement already satisfied: numpy in /usr/lib/python3/dist-packages (from face_recognition) (1.16.2)
pi@raspberrypi:~ $

```

Necessitarem que l'script del python tingui la llibreria per carregar les dades i poder fer l'insert

```

pi@raspberrypi:~ $ sudo pip3 install mysqlclient
Looking in indexes: https://pypi.org/simple, https://www.piwheels.org/simple
Collecting mysqlclient
  Downloading https://www.piwheels.org/simple/mysqlclient/mysqlclient-2.0.3-cp37-cp37m-linux_armv7l.whl (107kB)
    100% |#####| 112kB 932kB/s
Installing collected packages: mysqlclient
Successfully installed mysqlclient-2.0.3
pi@raspberrypi:~ $

```

```

pi@raspberrypi:~ $ pip3 install mysql-connector
Looking in indexes: https://pypi.org/simple, https://www.piwheels.org/simple
Collecting mysql-connector
  Downloading https://www.piwheels.org/simple/mysql-connector/mysql_connector-2.2.9-cp37-cp37m-linux_armv7l.whl (247kB)
    100% |#####| 256kB 637kB/s
Installing collected packages: mysql-connector
Successfully installed mysql-connector-2.2.9
pi@raspberrypi:~ $ python3 provaSQL.py
1 record inserted.

```

Una vegada tinguem totes les llibreries podrem accedir a baixar-nos el codi de git fet per mi, crear el directori /Fotos/ posar allà l'script amb fotos en jpg.

Sensor de Temperatura

Ens baixem la llibreria del sensor

<https://pypi.org/project/PyMLX90614/#files>

```

pi@raspberrypi:~ $ wget https://files.pythonhosted.org/packages/67/8a/443af31ff99cca1e30304dba28a60d3f07d247c8d410822
411054e170c9c/PyMLX90614-0.0.3.tar.gz
--2021-04-20 18:46:00-- https://files.pythonhosted.org/packages/67/8a/443af31ff99cca1e30304dba28a60d3f07d247c8d41082
2411054e170c9c/PyMLX90614-0.0.3.tar.gz
S'està resolent files.pythonhosted.org (files.pythonhosted.org)... 151.101.1.63, 151.101.65.63, 151.101.129.63, ...
S'està connectant a files.pythonhosted.org (files.pythonhosted.org)[151.101.1.63]:443... connectat.
HTTP: s'ha enviat la petició, s'està esperant una resposta... 200 OK
Mida: 2620 (2,6K) [binary/octet-stream]
S'està desant a: «PyMLX90614-0.0.3.tar.gz»

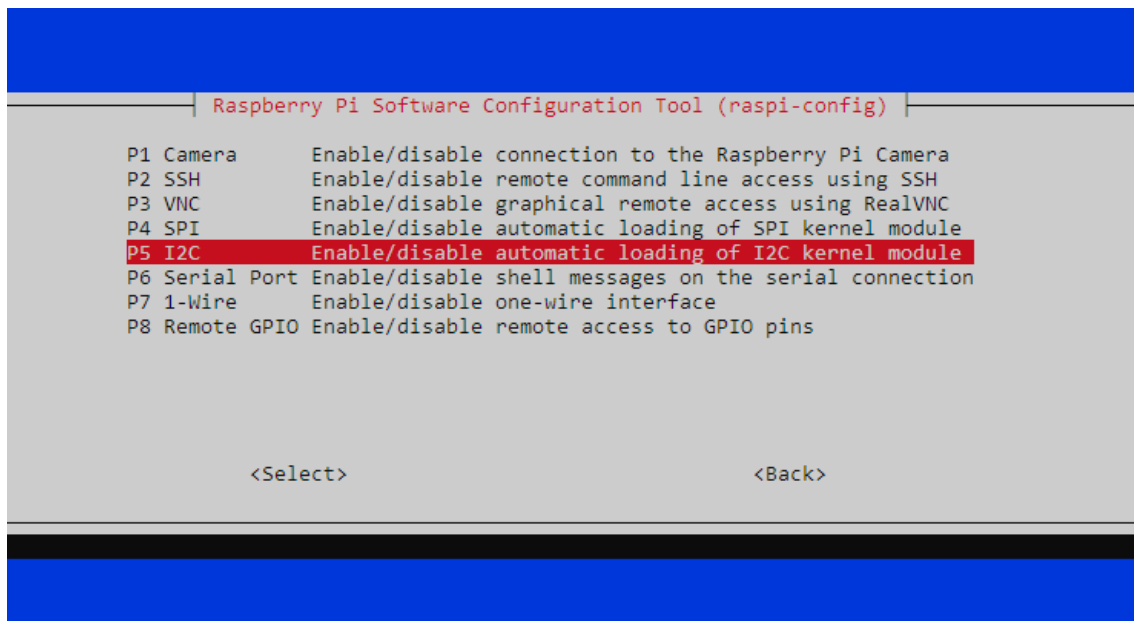
PyMLX90614-0.0.3.tar.gz      100%[=====] 2,56K  --.-KB/s  in 0,002s

2021-04-20 18:46:05 (1,66 MB/s) - s'ha desat «PyMLX90614-0.0.3.tar.gz» [2620/2620]

pi@raspberrypi:~ $

```

Activem el mode I2C dels pins GPIO ja que aquest protocol s'utilitza per comunicar-se amb el sensor.



Ens baixem la eina per poder llegir els valors

```
pi@raspberrypi:~/PyMLX90614-0.0.3 $ sudo apt install -y i2c-tools
S'està llegint la llista de paquets... Fet
S'està construint l'arbre de dependències
S'està llegint la informació de l'estat... Fet
i2c-tools ja està en la versió més recent (4.1-1).
S'ha marcat i2c-tools com instal·lat manualment.
El paquets següents s'han instal·lat automàticament i ja no serà necessaris:
 gyp libc-ares2 libjs-inherits libjs-is-typedarray libssl-dev libuv1-dev node-abbrev node-ajv node-ansi
 node-ansi-align node-ansi-regex node-ansi-styles node-ansistyles node-aproba node-archy node-are-we-there-yet
 node-asn1 node-assert-plus node-asynckit node-aws-sign2 node-aws4 node-balanced-match node-bcrypt-pbkdf
 node-bluebird node-boxen node-brace-expansion node-builtin-modules node-builtins node-cacache node-call-limit
 node-camelcase node-caseless node-chalk node-chownr node-cli-boxes node-cliui node-clone node-co
 node-color-convert node-color-name node-combined-stream node-concat-map node-concat-stream node-config-chain
 node-console-control-strings node-copy-concurrently node-core-util-is node-cross-spawn node-cyclist node-dashdash
 node-decamelize node-decompress-response node-deep-extend node-defaults node-delayed-stream node-delegates
 node-detect-indent node-detect-newline node-duplexer3 node-duplexify node-ecc-jsbn node-editor node-encoding
 node-end-of-stream node-errno node-escape-string-regexp node-execa node-extend node-extend-node-exports node-find-up
 node-flush-write-stream node-forever-agent node-form-data node-from2 node-fs-vacuum node-fs-write-stream-atomic
 node-fs.realpath node-gauge node-get-caller-file node-get-stream node-getpass node-glob node-got node-graceful-fs
 node-har-schema node-har-validator node-has-flag node-has-symbol-support-x node-has-to-string-tag-x
 node-has-unicode node-hosted-git-info node-http-signature node-iconv-lite node-iferr node-import-lazy
 node-imurmurhash node-inflight node-inherits node-ini node-invert-kv node-is-builtin-module node-is-npm
 node-is-object node-is-plain-obj node-is-retry-allowed node-is-stream node-is-typedarray node-isarray node-isexe
 node-isstream node-isurl node-jsbn node-json-parse-better-errors node-json-schema node-json-stable-stringify
 node-json-stringify-safe node-jsonify node-jsonparse node-jsonstream node-jsprim node-latest-version
 node-lazy-property node-lcid node-libnpn node-locate-path node-lockfile node-lowercase-keys node-lru-cache
 node-mem node-mime-types node-mimic-fn node-mimic-response node-minimatch node-minimist node-mississippi
 node-mkdirp node-move-concurrently node-mute-stream node-node-uuid node-nopt node-normalize-package-data
 node-npm-package-arg node-npm-run-path node-npmlog node-oauth-sign node-object-assign node-once node-opener
 node-os-locale node-osenv node-p-cancelable node-p-finally node-p-limit node-p-locate node-p-timeout
 node-package-json node-parallel-transform node-path-exists node-path-is-absolute node-path-is-inside
 node-performance-now node-prepend-http node-process-nexttick-args node-promise-inflight node-promzard
 node-protocol-list node-prr node-pump node-pumpify node-punycode node-qs node-qw node-rc node-read
 node-read-package-json node-readable-stream node-registry-auth-token node-registry-url node-request
 node-require-directory node-require-main-filename node-resolve-from node-retry node-rimraf node-run-queue
 node-safe-buffer node-semver node-semver-diff node-set-blocking node-sha node-shebang-command node-shebang-regex
 node-signal-exit node-slash node-slide node-sorted-object node-spx-correct node-spx-expression-parse
 node-spx-license-ids node-sshpk node-ssri node-stream-each node-stream-iterate node-stream-shift
 node-string-decoder node-string-width node-strip-ansi node-strip-eof node-strip-json-comments node-supports-color
 node-tar node-term-size node-text-table node-through node-through2 node-timed-out node-tough-cookie
 node-tunnel-agent node-tweetnacl node-typedarray node-uid-number node-unique-filename node-unpipe
 node-url-parse-lax node-url-to-options node-util-deprecate node-uuid node-validate-npm-package-license
 node-validate-npm-package-name node-verror node-wcwidth.js node-which node-which-module node-wide-align
 node-widest-line node-wrap-ansi node-wrapappy node-write-file-atomic node-xdg-basedir node-xtend node-y18n
 node-yallist node-yargs node-yargs-parser nodejs-doc
Empreu «sudo apt autoremove» per a suprimir-los.
0 actualitzats, 0 nous a instal·lar, 0 a suprimir i 0 no actualitzats.
pi@raspberrypi:~/PyMLX90614-0.0.3 $
```

Fem la instal·lació de les llibreries de python


```

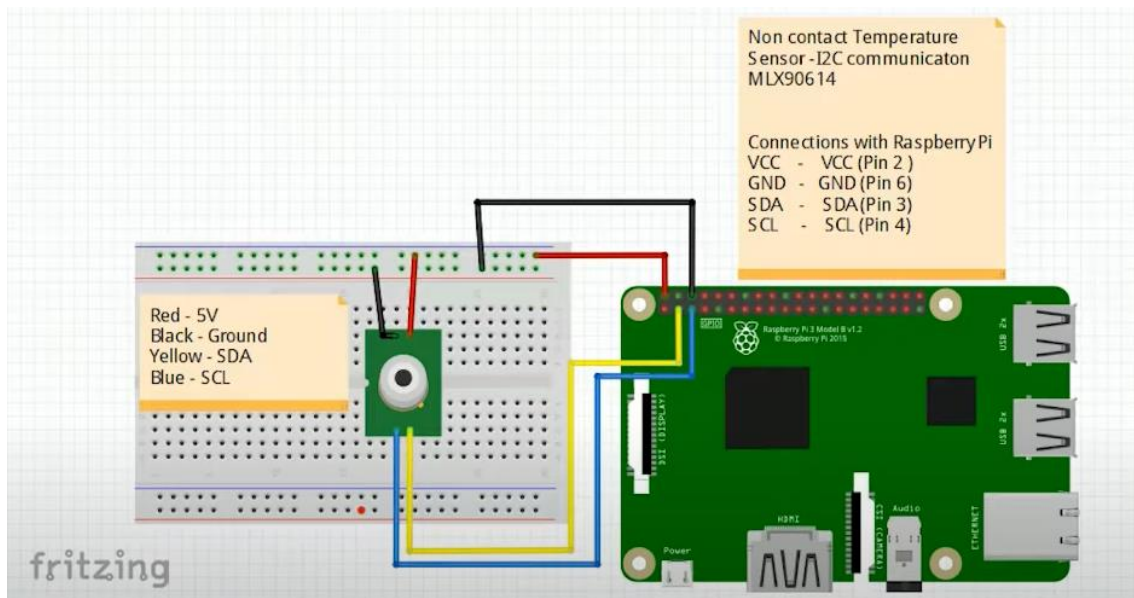
pi@raspberrypi:~/PyMLX90614-0.0.3 $ sudo python setup.py install
running install
running bdist_egg
running egg_info
writing requirements to PyMLX90614.egg-info/requirements.txt
writing PyMLX90614.egg-info/PKG-INFO
writing top-level names to PyMLX90614.egg-info/top_level.txt
writing dependency links to PyMLX90614.egg-info/dependency_links.txt
reading manifest file 'PyMLX90614.egg-info/SOURCES.txt'
writing manifest file 'PyMLX90614.egg-info/SOURCES.txt'
installing library code to build/bdist.linux-armv7l/egg
running install_lib
running build_py
creating build
creating build/lib.linux-armv7l-2.7
creating build/lib.linux-armv7l-2.7/mlx90614
copying mlx90614/__init__.py -> build/lib.linux-armv7l-2.7/mlx90614
copying mlx90614/mlx90614.py -> build/lib.linux-armv7l-2.7/mlx90614
creating build/bdist.linux-armv7l
creating build/bdist.linux-armv7l/egg
creating build/bdist.linux-armv7l/egg/mlx90614
copying build/lib.linux-armv7l-2.7/mlx90614/__init__.py -> build/bdist.linux-armv7l/egg/mlx90614
copying build/lib.linux-armv7l-2.7/mlx90614/mlx90614.py -> build/bdist.linux-armv7l/egg/mlx90614
byte-compiling build/bdist.linux-armv7l/egg/mlx90614/__init__.py to __init__.pyc
byte-compiling build/bdist.linux-armv7l/egg/mlx90614/mlx90614.py to mlx90614.pyc
creating build/bdist.linux-armv7l/egg/EGG-INFO
copying PyMLX90614.egg-info/PKG-INFO -> build/bdist.linux-armv7l/egg/EGG-INFO
copying PyMLX90614.egg-info/SOURCES.txt -> build/bdist.linux-armv7l/egg/EGG-INFO
copying PyMLX90614.egg-info/dependency_links.txt -> build/bdist.linux-armv7l/egg/EGG-INFO
copying PyMLX90614.egg-info/requirements.txt -> build/bdist.linux-armv7l/egg/EGG-INFO
copying PyMLX90614.egg-info/top_level.txt -> build/bdist.linux-armv7l/egg/EGG-INFO
zip_safe flag not set; analyzing archive contents...
creating dist
creating 'dist/PyMLX90614-0.0.3-py2.7.egg' and adding 'build/bdist.linux-armv7l/egg' to it
removing 'build/bdist.linux-armv7l/egg' (and everything under it)
Processing PyMLX90614-0.0.3-py2.7.egg
Copying PyMLX90614-0.0.3-py2.7.egg to /usr/local/lib/python2.7/dist-packages
Adding PyMLX90614 0.0.3 to easy-install.pth file

Installed /usr/local/lib/python2.7/dist-packages/PyMLX90614-0.0.3-py2.7.egg
Processing dependencies for PyMLX90614==0.0.3
Searching for smbus2
Reading https://pypi.org/simple/smbus2/
Downloading https://files.pythonhosted.org/packages/c8/bf/62ef029fb7077fc87c3539f7365859bcc6cedb2bb20796b737b788c8d09/smbus2-0.4.1-py2.py3-none-any.whl#sha256=8b1e70cda011b6fb3caf8377a1084f73a5aa99392b78529f140b0a3f06468f6c
Best match: smbus2 0.4.1
Processing smbus2-0.4.1-py2.py3-none-any.whl
Installing smbus2-0.4.1-py2.py3-none-any.whl to /usr/local/lib/python2.7/dist-packages
writing requirements to /usr/local/lib/python2.7/dist-packages/smbus2-0.4.1-py2.7.egg/EGG-INFO/requirements.txt
Adding smbus2 0.4.1 to easy-install.pth file

Installed /usr/local/lib/python2.7/dist-packages/smbus2-0.4.1-py2.7.egg
Finished processing dependencies for PyMLX90614==0.0.3
pi@raspberrypi:~/PyMLX90614-0.0.3 $

```

Posem el sensor (deixo el esquema)



Fem una lectura per veure si pot llegir correctament el sensor amb aquest protocol

```

pi@raspberrypi:~/PyMLX90614-0.0.3 $ ls /dev/*i2c*
/dev/i2c-1
pi@raspberrypi:~/PyMLX90614-0.0.3 $ i2cdetect -y 1
    0  1  2  3  4  5  6  7  8  9  a  b  c  d  e  f
00:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
10:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
20:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
30:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
40:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
50:  --  --  --  --  --  --  --  --  --  5a  --  --  --  --  --
60:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
70:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
pi@raspberrypi:~/PyMLX90614-0.0.3 $

```

Per fer una prova podeu utilitzar aquest petit script

Apache2

El apache2 ho necessitarem pel codi php que hostejare

```

pi@raspberrypi:~ $ sudo apt install apache2
S'està llegint la llista de paquets... Fet
S'està construint l'arbre de dependències
S'està llegint la informació de l'estat... Fet
S'instal·laran els següents paquets extres:
 apache2-bin apache2-data apache2-utils libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap
Paquets suggerits:
 apache2-doc apache2-suexec-pristine | apache2-suexec-custom
S'instal·laran els paquets NOUS següents:
 apache2 apache2-bin apache2-data apache2-utils libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap
0 actualitzats, 8 nous a instal·lar, 0 a suprimir i 0 no actualitzats.
S'ha d'obtenir 1969 kB d'arxius.
Després d'aquesta operació s'empraran 6164 kB d'espai en disc addicional.
Voleu continuar? [S/n] S

```

```

pi@raspberrypi:~ $ sudo systemctl enable apache2
Synchronizing state of apache2.service with SysV service script with /lib/systemd/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable apache2
pi@raspberrypi:~ $

```

El PHP ho hem d'implementar


```

pi@raspberrypi:/var/www/html $ sudo apt-get install apache2 php libapache2-mod-php
S'està llegint la llista de paquets... Fet
S'està construint l'arbre de dependències
S'està llegint la informació de l'estat... Fet
apache2 ja està en la versió més recent (2.4.38-3+deb10u4).
S'instal·laran els següents paquets extres:
  libapache2-mod-php7.3 php-common php7.3 php7.3-cli php7.3-common php7.3-json php7.3-opcache php7.3-readline
Paquets suggerits:
  php-pear
S'instal·laran els paquets NOUS següents:
  libapache2-mod-php libapache2-mod-php7.3 php php-common php7.3 php7.3-cli php7.3-common php7.3-json
  php7.3-opcache php7.3-readline
0 actualitzats, 10 nous a instal·lar, 0 a suprimir i 0 no actualitzats.
S'ha d'obtenir 2987 kB d'arxius.
Després d'aquesta operació s'empraran 14,1 MB d'espai en disc addicional.
Voleu continuar? [S/n] S
Bai:1 http://archive.raspbian.org/raspbian buster/main armhf php-common all 2:69 [15,0 kB]
Bai:2 http://archive.raspbian.org/raspbian buster/main armhf php7.3-common armhf 7.3.27-1~deb10u1 [527 kB]
Bai:3 http://archive.raspbian.org/raspbian buster/main armhf php7.3-json armhf 7.3.27-1~deb10u1 [16,2 kB]
Bai:4 http://archive.raspbian.org/raspbian buster/main armhf php7.3-opcache armhf 7.3.27-1~deb10u1 [154 kB]
Bai:5 http://archive.raspbian.org/raspbian buster/main armhf php7.3-readline armhf 7.3.27-1~deb10u1 [10,7 kB]
Bai:6 http://archive.raspbian.org/raspbian buster/main armhf php7.3-cli armhf 7.3.27-1~deb10u1 [1124 kB]
Bai:7 http://archive.raspbian.org/raspbian buster/main armhf libapache2-mod-php7.3 armhf 7.3.27-1~deb10u1 [1082 kB]
Bai:8 http://archive.raspbian.org/raspbian buster/main armhf libapache2-mod-php all 2:7.3+69 [6120 B]
Bai:9 http://archive.raspbian.org/raspbian buster/main armhf php7.3 all 7.3.27-1~deb10u1 [46,8 kB]
Bai:10 http://archive.raspbian.org/raspbian buster/main armhf php all 2:7.3+69 [5964 B]
S'ha baixat 2987 kB en 4s (848 kB/s)
S'està seleccionant el paquet php-common prèviament no seleccionat.
(S'està llegint la base de dades... hi ha 178915 fitxers i directoris instal·lats actualment.)
S'està preparant per a desempaquetar ../0-php-common_2%3a69_all.deb...
S'està desempaquetant php-common (2:69)...
S'està seleccionant el paquet php7.3-common prèviament no seleccionat.
S'està preparant per a desempaquetar ../1-php7.3-common_7.3.27-1~deb10u1_armhf.deb...
S'està desempaquetant php7.3-common (7.3.27-1~deb10u1)...
S'està seleccionant el paquet php7.3-json prèviament no seleccionat.
S'està preparant per a desempaquetar ../2-php7.3-json_7.3.27-1~deb10u1_armhf.deb...
S'està desempaquetant php7.3-json (7.3.27-1~deb10u1)...
S'està seleccionant el paquet php7.3-opcache prèviament no seleccionat.
S'està preparant per a desempaquetar ../3-php7.3-opcache_7.3.27-1~deb10u1_armhf.deb...
S'està desempaquetant php7.3-opcache (7.3.27-1~deb10u1)...
S'està seleccionant el paquet php7.3-readline prèviament no seleccionat.
S'està preparant per a desempaquetar ../4-php7.3-readline_7.3.27-1~deb10u1_armhf.deb...
S'està desempaquetant php7.3-readline (7.3.27-1~deb10u1)...
S'està seleccionant el paquet php7.3-cli prèviament no seleccionat.

```

Ens assegurem

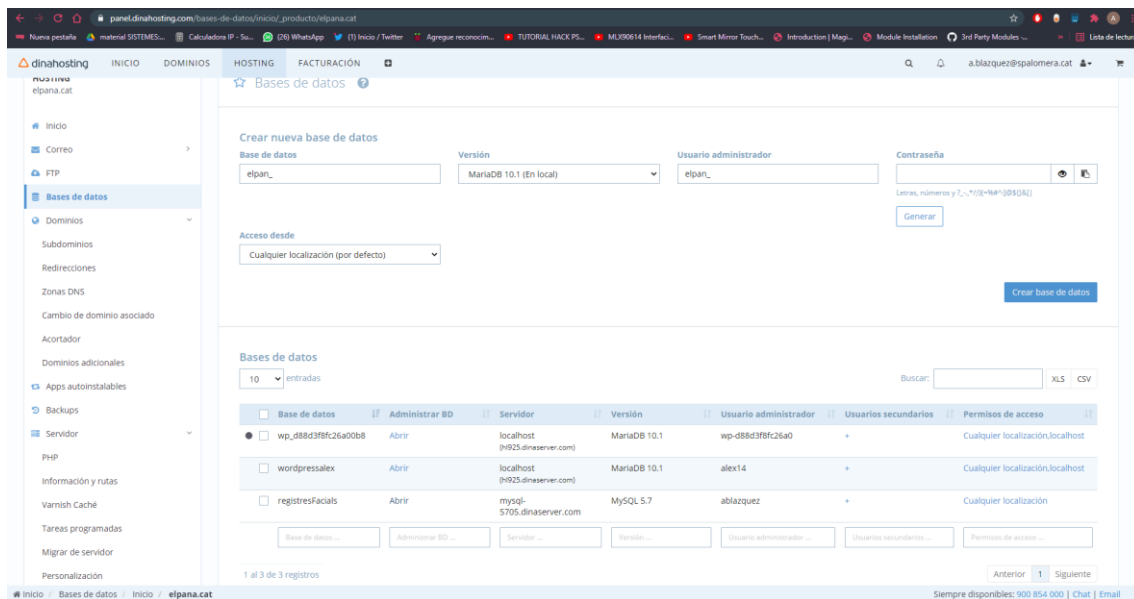
```

pi@raspberrypi:/var/www/html $ sudo a2enmod php7.3
Considering dependency mpm_prefork for php7.3:
Considering conflict mpm_event for mpm_prefork:
Considering conflict mpm_worker for mpm_prefork:
Module mpm_prefork already enabled
Considering conflict php5 for php7.3:
Module php7.3 already enabled
pi@raspberrypi:/var/www/html $ a2query -m php7.3
php7.3 (enabled by maintainer script)
pi@raspberrypi:/var/www/html $

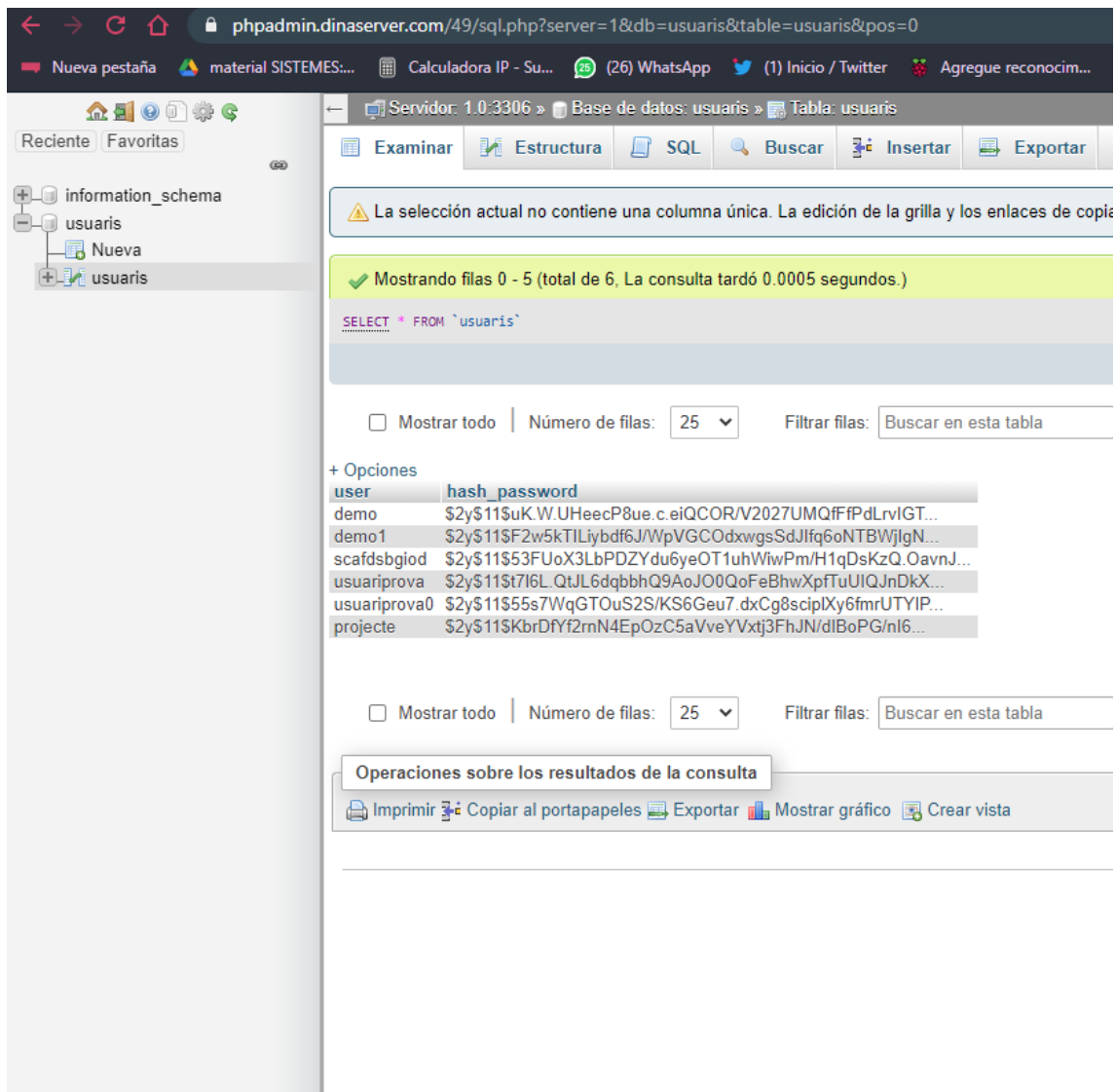
```

Phpmyadmin

Necessitem el phpmyadmin per la base de dades que farem (dintre del nostre hosting)



Creem la base de dades amb les seves taules




```
pi@raspberrypi:~ $ git clone https://github.com/MichMich/MagicMirror
S'està clonant a «MagicMirror»...
remote: Enumerating objects: 372, done.
remote: Counting objects: 100% (372/372), done.
remote: Compressing objects: 100% (187/187), done.
S'estan rebent objectes: 22% (4166/18934), 908.01 KiB | 840.00 KiB/s
```

I fem la instal·lació

```
pi@raspberrypi:~/MagicMirror $ npm install
[.....] \ loadDep:yauzl: sill install loadAllDepsIntoIdealTree
```

```
MagicMirror installation finished successfully!

npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@2.3.2 (node_modules/fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.3.2: wanted {"os":"darwin","arch":"any"} (current: {"os":"linux","arch":"arm"})

added 857 packages from 1023 contributors and audited 860 packages in 235.225s

101 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities

pi@raspberrypi:~/MagicMirror $
```

Mòduls externs

Els passos d'instal·lació estan encara més detallats dintre del repositori oficial de GitHub de tots els mòduls. Hi ha mòduls no documentats, ja que venen per defecte amb d'instal·lació de l'anterior pas. En aquell mateix link podeu veure com poder configurar els mòduls que venen per defecte.

Mòdul Spotify

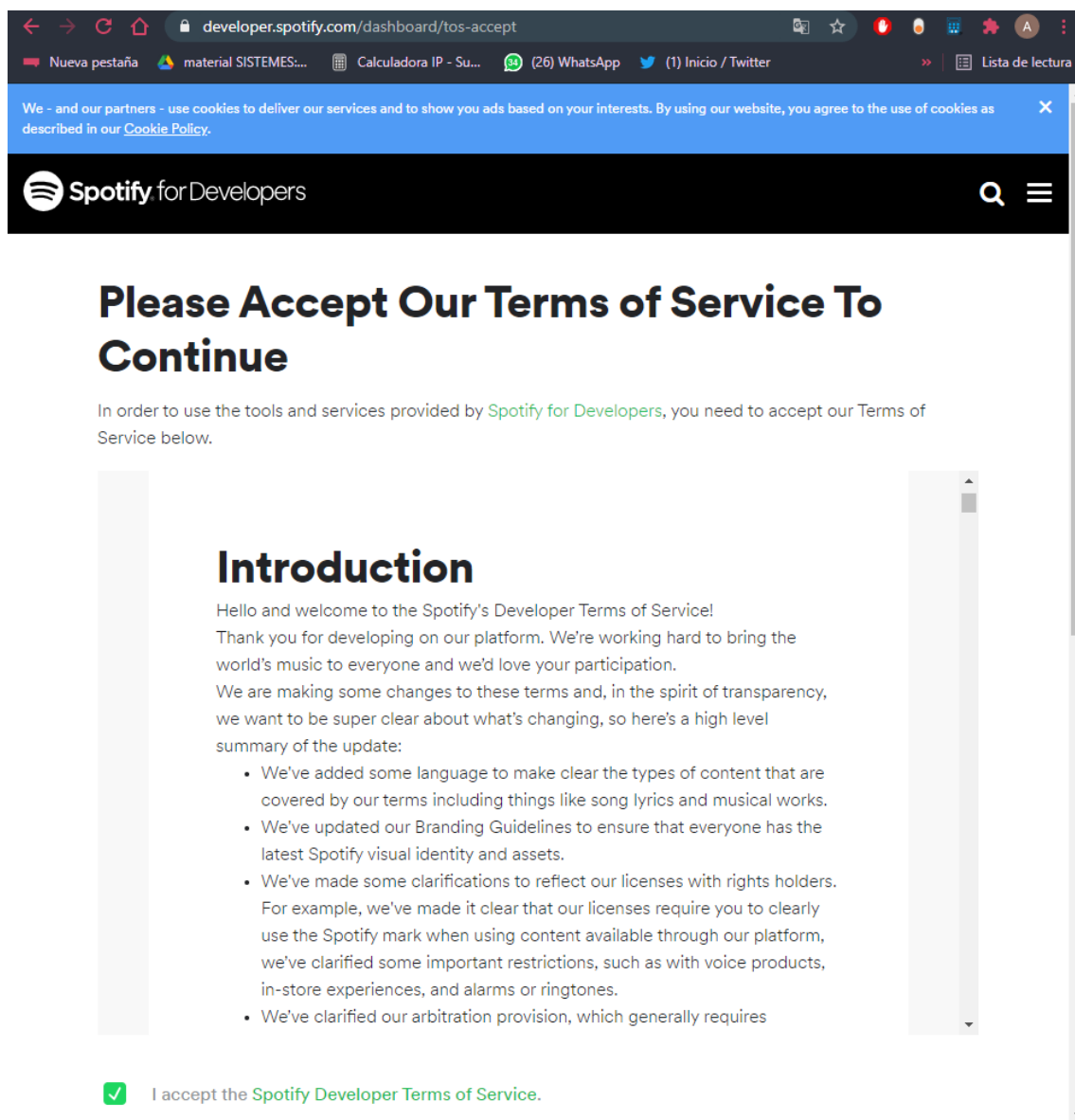
<https://github.com/raywo/MMM-NowPlayingOnSpotify>

```

pi@raspberrypi:~/Fotos $ cd ~
pi@raspberrypi:~ $ cd modules
-bash: cd: modules: El fitxer o directori no existeix
pi@raspberrypi:~ $ cd MagicMirror/
pi@raspberrypi:~/MagicMirror $ cd modules
pi@raspberrypi:~/MagicMirror/modules $ git clone https://github.com/raywo/MMM-NowPlayingOnSpotify.git
S'està clonant a «MMM-NowPlayingOnSpotify»...
remote: Enumerating objects: 11, done.
remote: Counting objects: 100% (11/11), done.
remote: Compressing objects: 100% (11/11), done.
remote: Total 384 (delta 4), reused 0 (delta 0), pack-reused 373
S'estan rebent objectes: 100% (384/384), 670.84 KiB | 768.00 KiB/s, fet.
S'estan resolent les diferències: 100% (237/237), fet.
pi@raspberrypi:~/MagicMirror/modules $ cd MMM-NowPlayingOnSpotify
pi@raspberrypi:~/MagicMirror/modules/MMM-NowPlayingOnSpotify $ npm install
npm WARN deprecated request-promise-native@1.0.9: request-promise-native has been deprecated because it extends the now deprecated request package, see https://github.com/request/request/issues/3142
npm WARN deprecated request@2.88.2: request has been deprecated, see https://github.com/request/request/issues/3142
npm WARN deprecated har-validator@5.1.5: this library is no longer supported
npm WARN deprecated socks@1.1.10: If using 2.x branch, please upgrade to at least 2.1.6 to avoid a serious bug with socket data flow and an import issue introduced in 2.1.0
[.....] | install:MMM-NowPlayingOnSpotify: sill linkStuff MMM-NowPlayingOnSpotify@1.0.0 has /home/pi/Ma

```

Ens hem de fer desenvolupadors de la plataforma d'Spotify



The screenshot shows a web browser window with the URL `developer.spotify.com/dashboard/tos-accept`. The page has a blue header with the Spotify logo and the text "Spotify for Developers". Below the header, there is a large heading "Please Accept Our Terms of Service To Continue". Underneath, a paragraph states: "In order to use the tools and services provided by Spotify for Developers, you need to accept our Terms of Service below." The main content area is titled "Introduction" and contains a welcome message followed by a list of updates to the terms of service. At the bottom, there is a green checkmark icon and the text "I accept the Spotify Developer Terms of Service."

Please Accept Our Terms of Service To Continue

In order to use the tools and services provided by Spotify for Developers, you need to accept our Terms of Service below.

Introduction

Hello and welcome to the Spotify's Developer Terms of Service!

Thank you for developing on our platform. We're working hard to bring the world's music to everyone and we'd love your participation.

We are making some changes to these terms and, in the spirit of transparency, we want to be super clear about what's changing, so here's a high level summary of the update:


- We've added some language to make clear the types of content that are covered by our terms including things like song lyrics and musical works.
- We've updated our Branding Guidelines to ensure that everyone has the latest Spotify visual identity and assets.
- We've made some clarifications to reflect our licenses with rights holders. For example, we've made it clear that our licenses require you to clearly use the Spotify mark when using content available through our platform, we've clarified some important restrictions, such as with voice products, in-store experiences, and alarms or ringtones.
- We've clarified our arbitration provision, which generally requires

☒ I accept the Spotify Developer Terms of Service.

Agafem les nostres dades de l'api per consultar-la

← → ↻ 🏠 🔒 developer.spotify.com/dashboard/applications/4e87e1b0af6c4297adaced0566fc... ☆ 🔥 📱 🌐 (26) WhatsApp 🐦 (1) Inicio / Twitter >> 📖 Lista de lectura

We - and our partners - use cookies to deliver our services and to show you ads based on your interests. By using our website, you agree to the use of cookies as described in our [Cookie Policy](#). ✕

 Spotify for Developers 🔍 ☰

← BACK TO DASHBOARD

MagicMirror [EDIT SETTINGS](#) [LOGOUT](#)

ASIX project

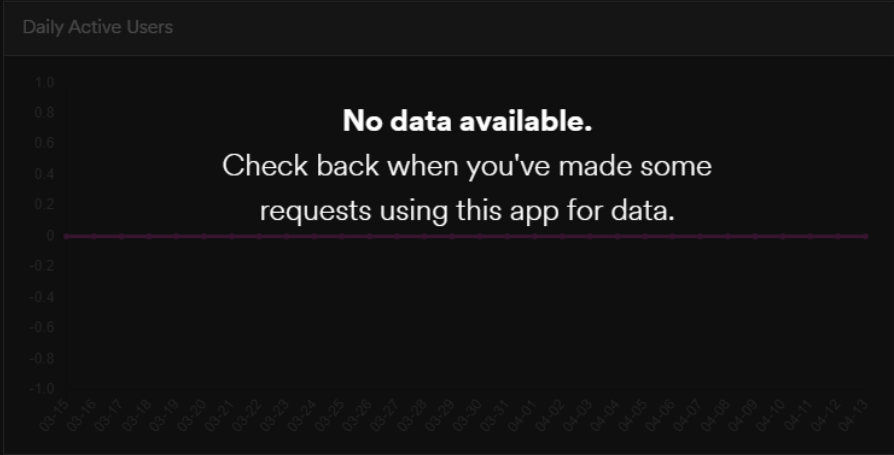
Client ID 4e87e1b0af6c4297adaced0566fc4983

Client Secret 646629ac39f644febe39b2d2fb1509eb **RESET**

HIDE CLIENT SECRET

Daily Active Users

No data available.
Check back when you've made some requests using this app for data.



Fem un projecte nou dintre d'aquesta plataforma

Application name

MagicMirror

Application description

ASIX project

//

Website

Add a website

Where the user may obtain more information about this application (e.g. <http://mysite.com>).

Redirect URIs

<http://10.93.255.9:8888/callback> Remove

<https://example.com/callback/>

ADD

White-listed addresses to redirect to after authentication success OR failure (e.g. <http://mysite.com/callback/>)

Bundle IDs

[com.example.myapp](#)

ADD

Apple iOS App Store Bundle Identifier (e.g. com.mysite.myapp)

Android Packages

[com.example.myapp](#)

Ara hem de copiar i enganxar el codi proporcionat al config.js

Step 2: Authorize your new app with your Spotify account



Alex Blazquez Ruiz

ID: vomitodebuho

Your app is now authorized. You can start using it with your MagicMirror.

Step 3: Configure your mirror

Now copy the following snippet into your `config.js` file and your good to go.

```
{
  module: "MMM-NowPlayingOnSpotify",
  position: "top_left",

  config: {
    clientID: "4e87e1b0af6c4297adaced0566fc4983",
    clientSecret: "646629ac39f644febe39b2d2fb1509eb",
    accessToken: "BQB2duF-yV0nm-1_4Dxe4l8y0kp2ZlgCJsA4orMIF7tLAMr-Tey40WMUPPIuWNQb91HjsuLe",
    refreshToken: "AQA2r3c1JNbJbaLQy5EA27aWPqX6v3v0tnmWw-fw-kusDm5uPoL6QrMtZM1gLu-mGdeK-0u"
  }
},
```

Have fun!

Mòdul Monitoratge

<https://github.com/BenRoe/MMM-SystemStats>

```
pi@raspberrypi:~ $ cd ~/MagicMirror/modules
pi@raspberrypi:~/MagicMirror/modules $ git clone https://github.com/BenRoe/MMM-SystemStats
S'està clonant a «MMM-SystemStats»...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 234 (delta 0), reused 0 (delta 0), pack-reused 231
S'estan rebent objectes: 100% (234/234), 88.03 KiB | 892.00 KiB/s, fet.
S'estan resolent les diferències: 100% (125/125), fet.
pi@raspberrypi:~/MagicMirror/modules $ cd MMM-SystemStats/ && npm install
npm notice created a lockfile as package-lock.json. You should commit this file.
added 1 package from 1 contributor and audited 1 package in 1.416s
found 0 vulnerabilities

pi@raspberrypi:~/MagicMirror/modules/MMM-SystemStats $
```

```
Seleccinar pi@raspberrypi ~  
GNU nano 3.2 MagicMirror/config/config.js  
  
    showModuleApiMenu: true,  
    secureEndpoints: true,  
  },  
},  
{  
  module: 'MMM-Cursor',  
  config: {  
    // See 'Configuration options' for more information.  
  },  
},  
{  
  module: "MMM-Test",  
  position: "bottom_left",  
  config: {}  
},  
},  
module: 'MMM-SystemStats',  
position: 'top_left', // This can be any of the regions.  
classes: 'small dimmed', // Add your own styling. OPTIONAL.  
language: "es",  
header: 'Estat de la Raspberry Pi 4',  
config: {  
  updateInterval: 10000, // every 10 seconds  
  align: 'right', // align labels  
  language: "es",  
  //header: 'System Stats', // This is optional  
  units: 'metric', // default, metric, imperial  
  label: 'icon'  
}
```

```
pi@raspberrypi: ~/PyMLX90614-0.0.3  
GNU nano 3.2 mlx90614test.py  
  
from smbus2 import SMBus  
from mlx90614 import MLX90614  
  
bus = SMBus(1)  
sensor = MLX90614(bus, address=0x5A)  
print "Ambient Temperature :", sensor.get_ambient()  
print "Object Temperature :", sensor.get_object_1()  
bus.close()
```

Mòdul Alexa

<https://awesome-alexa.js.org/#/installation>

Primer hem de fer una instal·lació de les llibreries necessàries, per que pugui llegir el micròfon, consultes, etc...

```

pi@raspberrypi:/Fotos $ sudo apt-get install sox libsox-fmt-all
S'està llegend la llista de paquets... Fet
S'està construint l'arbre de dependències
S'està llegend la informació de l'estat... Fet
El paquets següents s'han instal·lat automàticament i ja no serà necessaris:
gyp libc-ares2 libjs-inherits libjs-is-typedarray libssl-dev libuv1-dev node-abbrev node-ajv node-ansi
node-ansi-align node-ansi-regex node-ansi-styles node-ansi-styles node-archy node-are-we-there-yet
node-asn1 node-assert-plus node-asynckit node-aws-sign2 node-aws4 node-balanced-match node-bcrypt-pbkdf
node-bluebird node-boxen node-brace-expansion node-builtin-modules node-builtins node-cacache node-call-limit
node-camelcase node-caseless node-chalk node-chownr node-cli-boxes node-cliui node-clone node-co
node-color-convert node-color-name node-combined-stream node-concat-map node-concat-stream node-config-chain
node-console-control-strings node-copy-concurrently node-core-util-is node-cross-spawn node-cyclist node-dashdash
node-decamelize node-decompress-response node-deep-extend node-defaults node-delayed-stream node-delegates
node-detect-indent node-detect-newline node-duplexer3 node-duplexify node-ecc-jsbn node-editor node-encoding
node-end-of-stream node-errno node-escape-string-regexp node-execa node-extend node-extends node-find-up
node-flush-write-stream node-forever-agent node-form-data node-from2 node-fs-vacuum node-fs-write-stream-atomic
node-fs.realpath node-gauge node-get-caller-file node-get-stream node-getpass node-glob node-got node-graceful-fs
node-har-schema node-har-validator node-has-flag node-has-symbol-support-x node-has-to-string-tag-x
node-has-unicode node-hosted-git-info node-http-signature node-iconv-lite node-iferr node-import-lazy
node-imurmurhash node-inflight node-inherits node-ini node-invert-kv node-is-builtin-module node-is-npm
node-is-object node-is-plain-obj node-is-retry-allowed node-is-stream node-is-typedarray node-isarray node-isexe
node-istream node-isurl node-jsbn node-json-parse-better-errors node-json-schema node-json-stable-stringify
node-json-stringify-safe node-jsonify node-jsonparse node-jsonstream node-jsprim node-latest-version
node-lazy-property node-lcid node-libnpx node-locate-path node-lockfile node-lowercase-keys node-lru-cache
node-mem node-mime-types node-mimic-fn node-mimic-response node-minimatch node-minimist node-mississippi
node-mkdirp node-move-concurrently node-mute-stream node-node-uuid node-nopt node-normalize-package-data
node-npm-package-arg node-npm-run-path node-npmlog node-oauth-sign node-object-assign node-once node-opener
node-os-locale node-osenv node-p-cancelable node-p-finally node-p-limit node-p-locate node-p-timeout
node-package-json node-parallel-transform node-path-exists node-path-is-absolute node-path-is-inside
node-performance-now node-prepend-http node-process-nexttick-args node-promise-inflight node-promzard
node-protocol node-prr node-pump node-pumpify node-punycode node-qs node-qw node-rc node-read
node-read-package-json node-readable-stream node-registry-auth-token node-registry-url node-request
node-require-directory node-require-main-filename node-resolve-from node-retry node-rimraf node-run-queue
node-safe-buffer node-semver node-semver-diff node-set-blocking node-sha node-shebang-command node-shebang-regex
node-signal-exit node-slash node-slide node-sorted-object node-spdx-correct node-spdx-expression-parse
node-spdx-license-ids node-sshpk node-ssri node-stream-each node-stream-iterate node-stream-shift
node-string-decoder node-string-width node-strip-ansi node-strip-eof node-strip-json-comments node-supports-color
node-tar node-term-size node-text-table node-through node-through2 node-timed-out node-tough-cookie
node-tunnel-agent node-tweetnacl node-typedarray node-uid-number node-unique-filename node-unpipe
node-url-parse-lax node-url-to-options node-util-deprecate node-uuid node-validate-npm-package-license
node-validate-npm-package-name node-veerror node-wcwidth.js node-which node-which-module node-wide-align
node-widest-line node-wrap-ansi node-wrappy node-write-file-atomic node-xdg-basedir node-xtend node-y18n
node-yallist node-yargs node-yargs-parser nodejs-doc
Empreu «sudo apt autoremove» per a suprimir-los.
S'instal·laran els següents paquets extres:
libportaudio2
Paquets suggerits:
python-pyaudio-doc
S'instal·laran els paquets NOUS següents:
libportaudio2 python-pyaudio python3-pyaudio
0 actualitzats, 3 nous a instal·lar, 0 a suprimir i 4 no actualitzats.
S'ha d'obtenir 106 kB d'arxius.
Després d'aquesta operació s'empraran 418 kB d'espai en disc addicional.
Voleu continuar? [5/n]

```

```

pi@raspberrypi:/Fotos $ sudo apt-get install swig3.0 python-pyaudio python3-pyaudio sox
S'està llegend la llista de paquets... Fet
S'està construint l'arbre de dependències
S'està llegend la informació de l'estat... Fet
sox ja està en la versió més recent (14.4.2+git20190427-1).
swig3.0 ja està en la versió més recent (3.0.12-2).
S'ha marcat swig3.0 com instal·lat manualment.
El paquets següents s'han instal·lat automàticament i ja no serà necessaris:
gyp libc-ares2 libjs-inherits libjs-is-typedarray libssl-dev libuv1-dev node-abbrev node-ajv node-ansi
node-ansi-align node-ansi-regex node-ansi-styles node-ansi-styles node-archy node-are-we-there-yet
node-asn1 node-assert-plus node-asynckit node-aws-sign2 node-aws4 node-balanced-match node-bcrypt-pbkdf
node-bluebird node-boxen node-brace-expansion node-builtin-modules node-builtins node-cacache node-call-limit
node-camelcase node-caseless node-chalk node-chownr node-cli-boxes node-cliui node-clone node-co
node-color-convert node-color-name node-combined-stream node-concat-map node-concat-stream node-config-chain
node-console-control-strings node-copy-concurrently node-core-util-is node-cross-spawn node-cyclist node-dashdash
node-decamelize node-decompress-response node-deep-extend node-defaults node-delayed-stream node-delegates
node-detect-indent node-detect-newline node-duplexer3 node-duplexify node-ecc-jsbn node-editor node-encoding
node-end-of-stream node-errno node-escape-string-regexp node-execa node-extend node-extends node-find-up
node-flush-write-stream node-forever-agent node-form-data node-from2 node-fs-vacuum node-fs-write-stream-atomic
node-fs.realpath node-gauge node-get-caller-file node-get-stream node-getpass node-glob node-got node-graceful-fs
node-har-schema node-har-validator node-has-flag node-has-symbol-support-x node-has-to-string-tag-x
node-has-unicode node-hosted-git-info node-http-signature node-iconv-lite node-iferr node-import-lazy
node-imurmurhash node-inflight node-inherits node-ini node-invert-kv node-is-builtin-module node-is-npm
node-is-object node-is-plain-obj node-is-retry-allowed node-is-stream node-is-typedarray node-isarray node-isexe
node-istream node-isurl node-jsbn node-json-parse-better-errors node-json-schema node-json-stable-stringify
node-json-stringify-safe node-jsonify node-jsonparse node-jsonstream node-jsprim node-latest-version
node-lazy-property node-lcid node-libnpx node-locate-path node-lockfile node-lowercase-keys node-lru-cache
node-mem node-mime-types node-mimic-fn node-mimic-response node-minimatch node-minimist node-mississippi
node-mkdirp node-move-concurrently node-mute-stream node-node-uuid node-nopt node-normalize-package-data
node-npm-package-arg node-npm-run-path node-npmlog node-oauth-sign node-object-assign node-once node-opener
node-os-locale node-osenv node-p-cancelable node-p-finally node-p-limit node-p-locate node-p-timeout
node-package-json node-parallel-transform node-path-exists node-path-is-absolute node-path-is-inside
node-performance-now node-prepend-http node-process-nexttick-args node-promise-inflight node-promzard
node-protocol node-prr node-pump node-pumpify node-punycode node-qs node-qw node-rc node-read
node-read-package-json node-readable-stream node-registry-auth-token node-registry-url node-request
node-require-directory node-require-main-filename node-resolve-from node-retry node-rimraf node-run-queue
node-safe-buffer node-semver node-semver-diff node-set-blocking node-sha node-shebang-command node-shebang-regex
node-signal-exit node-slash node-slide node-sorted-object node-spdx-correct node-spdx-expression-parse
node-spdx-license-ids node-sshpk node-ssri node-stream-each node-stream-iterate node-stream-shift
node-string-decoder node-string-width node-strip-ansi node-strip-eof node-strip-json-comments node-supports-color
node-tar node-term-size node-text-table node-through node-through2 node-timed-out node-tough-cookie
node-tunnel-agent node-tweetnacl node-typedarray node-uid-number node-unique-filename node-unpipe
node-url-parse-lax node-url-to-options node-util-deprecate node-uuid node-validate-npm-package-license
node-validate-npm-package-name node-veerror node-wcwidth.js node-which node-which-module node-wide-align
node-widest-line node-wrap-ansi node-wrappy node-write-file-atomic node-xdg-basedir node-xtend node-y18n
node-yallist node-yargs node-yargs-parser nodejs-doc
Empreu «sudo apt autoremove» per a suprimir-los.
S'instal·laran els següents paquets extres:
libportaudio2
Paquets suggerits:
python-pyaudio-doc
S'instal·laran els paquets NOUS següents:
libportaudio2 python-pyaudio python3-pyaudio
0 actualitzats, 3 nous a instal·lar, 0 a suprimir i 4 no actualitzats.
S'ha d'obtenir 106 kB d'arxius.
Després d'aquesta operació s'empraran 418 kB d'espai en disc addicional.
Voleu continuar? [5/n]

```

```

pi@raspberrypi:~/Fotos $ sudo apt-get install libatlas-base-dev
S'està lligint la llista de paquets... Fet
S'està construint l'arbre de dependències
S'està lligint la informació de l'estat... Fet
Els paquets següents s'han instal·lat automàticament i ja no serà necessaris:
 gyp libc-ares2 libjs-inherits libjs-is-typedarray libssl-dev libuv1-dev node-abbrev node-ajv node-ansi
 node-ansi-align node-ansi-regex node-ansi-styles node-ansistyles node-aproba node-archy node-are-we-there-yet
 node-asn1 node-assert-plus node-asyncify node-aws-sign2 node-aws4 node-balanced-match node-bcrypt-pbkdf
 node-bluebird node-bowser node-brace-expansion node-builtin-modules node-builtins node-cacache node-call-limit
 node-camelcase node-caseless node-chalk node-chownr node-cli-boxes node-cliui node-clone node-co
 node-color-convert node-color-name node-combined-stream node-concat-map node-concat-stream node-config-chain
 node-console-control-strings node-copy-concurrently node-core-util-is node-cross-spawn node-cyclist node-dashdash
 node-decamelize node-decompress-response node-deep-extend node-defaults node-delayed-stream node-delegates
 node-detect-indent node-detect-newline node-duplexer3 node-duplexify node-ecc-jsbn node-editor node-encoding
 node-end-of-stream node-errno node-escape-string-regexp node-execa node-extend node-extendable node-extsprintf node-find-up
 node-flush-write-stream node-forever-agent node-form-data node-from2 node-fs-vacuum node-fs-write-stream-atomic
 node-fs.realpath node-gauge node-get-caller-file node-get-stream node-getpass node-glob node-got node-graceful-fs
 node-har-schema node-har-validator node-has-flag node-has-symbol-support-x node-has-to-string-tag-x
 node-has-unicode node-hosted-git-info node-http-signature node-iconv-lite node-iferr node-import-lazy
 node-immurhash node-inflight node-inherits node-ini node-invert-kv node-is-builtin-module node-is-npm

```

```

pi@raspberrypi:~/Fotos $ sudo apt-get install libasound-dev portaudio19-dev libportaudio2 libportaudiocpp0 ffmpeg
S'està lligint la llista de paquets... Fet
S'està construint l'arbre de dependències
S'està lligint la informació de l'estat... Fet
Nota: s'està seleccionant «libasound2-dev» en lloc de «libasound-dev»
libportaudio2 ja està en la versió més recent (19.6.0-1+deb10u1).
S'ha marcat libportaudio2 com instal·lat manualment.
ffmpeg ja està en la versió més recent (7:4.1.6-1+deb10u1+rpt1).
Els paquets següents s'han instal·lat automàticament i ja no serà necessaris:
 gyp libc-ares2 libjs-inherits libjs-is-typedarray libssl-dev libuv1-dev node-abbrev node-ajv node-ansi
 node-ansi-align node-ansi-regex node-ansi-styles node-ansistyles node-aproba node-archy node-are-we-there-yet
 node-asn1 node-assert-plus node-asyncify node-aws-sign2 node-aws4 node-balanced-match node-bcrypt-pbkdf
 node-bluebird node-boxen node-brace-expansion node-builtin-modules node-builtins node-cacache node-call-limit
 node-camelcase node-caseless node-chalk node-chownr node-cli-boxes node-cliui node-clone node-co
 node-color-convert node-color-name node-combined-stream node-concat-map node-concat-stream node-config-chain
 node-console-control-strings node-copy-concurrently node-core-util-is node-cross-spawn node-cyclist node-dashdash
 node-decamelize node-decompress-response node-deep-extend node-defaults node-delayed-stream node-delegates
 node-detect-indent node-detect-newline node-duplexer3 node-duplexify node-ecc-jsbn node-editor node-encoding
 node-end-of-stream node-errno node-escape-string-regexp node-execa node-extend node-extendable node-extsprintf node-find-up
 node-flush-write-stream node-forever-agent node-form-data node-from2 node-fs-vacuum node-fs-write-stream-atomic
 node-fs.realpath node-gauge node-get-caller-file node-get-stream node-getpass node-glob node-got node-graceful-fs
 node-har-schema node-har-validator node-has-flag node-has-symbol-support-x node-has-to-string-tag-x
 node-has-unicode node-hosted-git-info node-http-signature node-iconv-lite node-iferr node-import-lazy
 node-immurhash node-inflight node-inherits node-ini node-invert-kv node-is-builtin-module node-is-npm

```

```

gyp info spawn args
gyp info spawn args '-I',
gyp info spawn args '/home/pi/MagicMirror/modules/MMM-awesome-alexa/node_modules/snowboy/build/config.gypi',
gyp info spawn args '-I',
gyp info spawn args '/home/pi/MagicMirror/modules/MMM-awesome-alexa/node_modules/snowboy/node_modules/node-gyp/addon
n.gypi',
gyp info spawn args '-I',
gyp info spawn args '/home/pi/.electron-gyp/11.3.0/include/node/common.gypi',
gyp info spawn args '-Dlibrary=shared_library',
gyp info spawn args '-Dvisibility=default',
gyp info spawn args '-Dnode_root_dir=/home/pi/.electron-gyp/11.3.0',
gyp info spawn args '-Dnode_gyp_dir=/home/pi/MagicMirror/modules/MMM-awesome-alexa/node_modules/snowboy/node_module
s/node-gyp',
gyp info spawn args '-Dnode_lib_file=/home/pi/.electron-gyp/11.3.0/$(target_arch)/node.lib',
gyp info spawn args '-Dmodule_root_dir=/home/pi/MagicMirror/modules/MMM-awesome-alexa/node_modules/snowboy',
gyp info spawn args '-Dnode_engine=v8',
gyp info spawn args '--depth=.',
gyp info spawn args '--no-parallel',
gyp info spawn args '--generator-output',
gyp info spawn args 'build',
gyp info spawn args '  --output_dir=.' ]
Building module: snowboy, Completed: 0gyp info spawn make
gyp info spawn args [ 'BUILDTYPE=Release', '-C', 'build' ]
make: Entering directory '/home/pi/MagicMirror/modules/MMM-awesome-alexa/node_modules/snowboy/build'
CXX(target) Release/obj.target/snowboy/swig/Node/snowboy.o
Building module: snowboy, Completed: 0In file included from /home/pi/.electron-gyp/11.3.0/include/node/node.h:67,
from ../node_modules/nan/nan.h:56,
from ../swig/Node/snowboy.cc:1:
/home/pi/.electron-gyp/11.3.0/include/node/v8.h:9182:75: warning: 'MicrotasksCompletedCallback' is deprecated [-Wdepr
ecated-declarations]
void AddMicrotasksCompletedCallback(MicrotasksCompletedCallback callback);
/home/pi/.electron-gyp/11.3.0/include/node/v8.h:9190:78: warning: 'MicrotasksCompletedCallback' is deprecated [-Wdepr
ecated-declarations]
void RemoveMicrotasksCompletedCallback(MicrotasksCompletedCallback callback);
Building module: snowboy, Completed: 0../swig/Node/snowboy.cc: In constructor 'SnowboyDetect::SnowboyDetect(const s
tring&, const string&)':
../swig/Node/snowboy.cc:38:31: warning: catching polymorphic type 'class std::runtime_error' by value [-Wcatch-value
]
} catch (std::runtime_error e) {
In file included from ../node_modules/nan/nan.h:56,
from ../swig/Node/snowboy.cc:1:
../swig/Node/snowboy.cc: At global scope:
/home/pi/.electron-gyp/11.3.0/include/node/node.h:614:43: warning: cast between incompatible function types from 'voi
d (*)(Nan::ADDON_REGISTER_FUNCTION_ARGS_TYPE)' (aka 'void (*)(v8::Local<v8::Object>)') to 'node::addon_register_func'
(aka 'void (*)(v8::Local<v8::Object>, v8::Local<v8::Value>, void*)') [-Wcast-function-type]
(node::addon_register_func) (regfunc),
/home/pi/.electron-gyp/11.3.0/include/node/node.h:648:3: note: in expansion of macro 'NODE_MODULE_X'
NODE_MODULE_X(modname, regfunc, NULL, 0) // NOLINT (readability/null_usage)
../swig/Node/snowboy.cc:183:11: note: in expansion of macro 'NODE_MODULE'
NODE_MODULE(SnowboyDetect, SnowboyDetect::Init)
Building module: snowboy, Completed: 0SOLINK_MODULE(target) Release/obj.target/snowboy.node
Building module: snowboy, Completed: 0COPY Release/snowboy.node
COPY /home/pi/MagicMirror/modules/MMM-awesome-alexa/node_modules/snowboy/lib/node/binding/Release/electron-v11.3-11
nux-arm/snowboy.node
TOUCH Release/obj.target/action_after_build.stamp
make: Leaving directory '/home/pi/MagicMirror/modules/MMM-awesome-alexa/node_modules/snowboy/build'
Rebuild Complete
pi@raspberrypi:~/MagicMirror/modules/MMM-awesome-alexa/node_modules/snowboy $

```

Després resarem 3 pares nostres per intentar crear i verificar una comte d'Amazon desenvolupadors

developer.amazon.com/settings/console/registration

Nueva pestaña material SISTEMES... Calculadora IP - Su... (26) WhatsApp (1) Inicio / Twitter Lista de lectura

amazon developer

Amazon Developer Registration

Developer details

First name *

Alex ✓

Apellidos *

Blazquez Ruiz ✓

Country / Region *

Spain ▼

Nombre de la empresa/desarrollador *

Sapalamera ✓

Company phone number *

ES (+34) ▼ 695117697 ✓

Company email address *

Can be different from your login email. Used as primary communication method.

a.blazquez@sapalamera.cat ✓

Support email address

Enter your customer support email address.

☐ Same as company email address.

The name, email address and phone number entered above won't be displayed in Amazon appstore.

Quan ens validin la comte, haurem de crear un producte amb les característiques que vulguem

alexa voice service

Products Analytics Resources Support Settings Signed in as Administrator at Sapalamera

< Back to all Products

Raspberry

DELETE PRODUCT VIEW ANALYTICS

Client ID
amzn1.application-oa2-client.5cc1081561fa437580f50e97861bb930

Amazon ID
A1NH6WHPDATHY

Client secret
4e40d1a0d8cb6fa87159552de99bd3227f239719ae29948ba79877d39bc92a

Product Details

Information

Security Profile

Capabilities

Entertainment

Product name *

Raspberry

Product ID *

Raspberry

Please select your product type. *

Why are certain options disabled? ⓘ

- ☒ **Application with Alexa built-in**
A standalone app. This includes apps on the web, Android, Kindle, iOS, FireTV, AppleTV, etc.
- ☐ **Device with Alexa built-in**
Physical product with the potential to have buttons, knobs, a touch screen, etc. Examples are speakers, headsets, televisions, set top boxes, appliances, etc. Includes Alexa Mobile Accessories.
- ☐ **Alexa Gadget**
An accessory that connects to a compatible Echo device via Bluetooth. For example, an animatronic that moves a motor in response to sound, or lights up if a notification arrives. [Learn More](#)

FEEDBACK

És molt important apuntar les id's ja que s'utilitzen per registrar i validar el nostre producte

Client ID amzn1.application-oa2-client.5cc1081561fa4375b0f50a97861bb930 Client secret 4e40d1add8cb6faf87159552de99bd3227f239719ae29948ba79877d39bcb92a	Amazon ID A1NH6WH9PDATHY
---	------------------------------------

Product Details

Information
Security Profile
Capabilities
Entertainment

Security Profile *

Perfil

or [CREATE NEW PROFILE](#)

Security Profile description

Perfil Principal

Security Profile ID ⓘ

amzn1.application.6ef993f617f149b3b5ab85348337d8ab

COPY

Web
Android / Kindle
iOS
Other devices and platforms

Add all possible origin URLs of your LWA implementation to associate with the web Client ID and secret below.[Learn More](#)

Client ID ⓘ

amzn1.application-oa2-client.5cc1081561fa4375b0f50a97861bb930

COPY

Client secret ⓘ

4e40d1add8cb6faf87159552de99bd3227f239719ae29948ba79877d39bcb92a

COPY

Allowed origins ⓘ

https://www.example.com

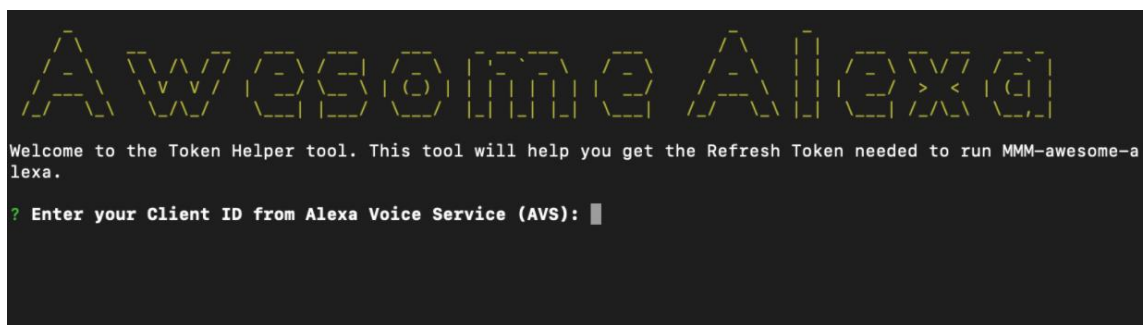
ADD

https://10.0.0.1:3000/auth/callback

ADD

Ens posarem dintre del directori de Alexa i posarem les següents comandes

```
npm run config-helper
```



Porta un assistent que ens anirà preguntant totes les dades per la seva instal·lació, les validarà de nou.

Si ho hem fet correctament (és molt difícil que surti a la primera)

Ens donarà les següents dades


```

{
  module: "MMM-awesome-alexa",
  position: "bottom_bar",
  config: {
    wakeWord: "Alexa",
    clientId: "YOUR_CLIENT_ID",
    clientSecret: "YOUR_CLIENT_SECRET",
    deviceId: "YOUR_DEVICE_ID",
    refreshToken: "YOUR_REFRESH_TOKEN",
    lite: false,
    isSpeechVisualizationEnabled: false
  }
}

```

Amb això ho podrem implementar dintre del config.js (aquets Tokens son els meus)

```

{ module: 'MMM-awesome-alexa',
  position: 'bottom_bar',
  config: { wakeWord: 'Alexa',
    clientId: 'amzn1.application-oa2-client.5cc1081561fa4375b0f50a97861bb930',
    clientSecret: '4e40d1add8cb6faf87159552de99bd3227f239719ae29948ba79877d39bcb92a$',
    refreshToken: 'Atzr|IwEBIKjpp7P5rOut4YhbbezF_6mYgIEqkar_VafJGaEMIX54VC8P1M6g-ql$',
    isSpeechVisualizationEnabled: true,
    deviceId: 'Raspberry',
    lite: false,
  }
}

```

Recomano mirar el tutorial del Git ja que té infinitat de paràmetres de configuració i infinitat de problemes.

Mòdul d'administració remota

<https://github.com/Jopyth/MMM-Remote-Control>

Clonarem el repositori per fer la instal·lació i fem la instal·lació

```

pi@raspberrypi:~ $ cd ~/MagicMirror/modules
pi@raspberrypi:~/MagicMirror/modules $ git clone https://github.com/Jopyth/MMM-Remote-Control.git
S'està clonant a «MMM-Remote-Control»...
remote: Enumerating objects: 1067, done.
remote: Counting objects: 100% (33/33), done.
remote: Compressing objects: 100% (25/25), done.
remote: Total 1067 (delta 13), reused 24 (delta 8), pack-reused 1034
S'estan rebent objectes: 100% (1067/1067), 923.05 KiB | 1.85 MiB/s, fet.
S'estan resolent les diferències: 100% (666/666), fet.
pi@raspberrypi:~/MagicMirror/modules $ cd MMM-Remote-Control
pi@raspberrypi:~/MagicMirror/modules/MMM-Remote-Control $ npm install
npm notice created a lockfile as package-lock.json. You should commit this file.
added 31 packages from 26 contributors and audited 31 packages in 6.234s
found 0 vulnerabilities

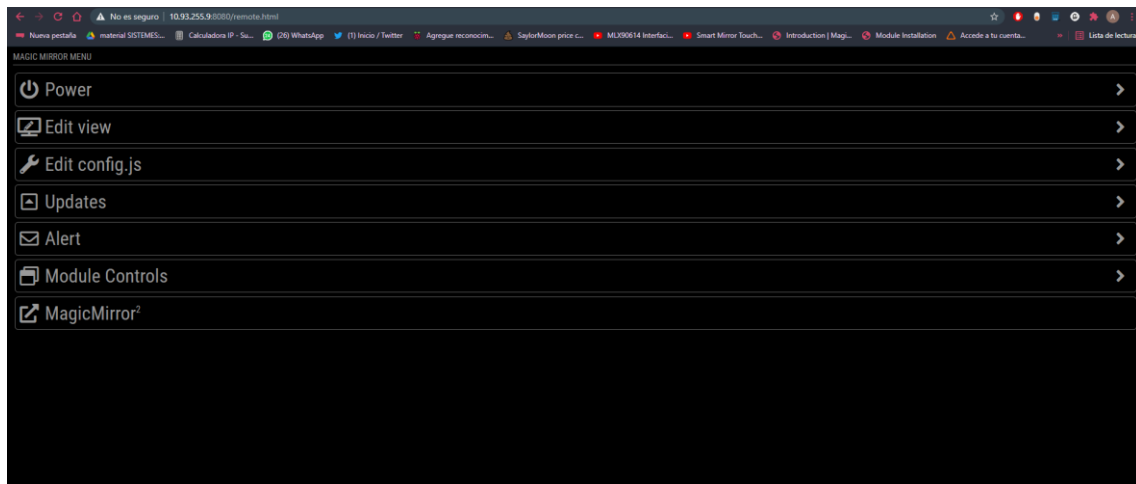
```

New major version of npm available! 6.14.12 → 7.13.0
 Changelog: <https://github.com/npm/cli/releases/tag/v7.13.0>
 Run `npm install -g npm` to update!

Configurem el config/config.js amb els paràmetres que vulguem

```
modules: [  
  {  
    module: 'MMM-Remote-Control',  
    config: {  
      customCommand: {},  
      showModuleApiMenu: true,  
      secureEndpoints: true,  
    },  
  },  
]
```

<https://ipraspberrypi:8080/remote.html>



Pi Hole

(S'han acabat els mòduls)

<https://pi-hole.net/>

Farem un CURL per agafar els paràmetres d'script automàtic


```

root@raspberrypi:/tmp/pi-hole# tar xvfz v3.2.1.tar.gz
pi-hole-3.2.1/
pi-hole-3.2.1/.editorconfig
pi-hole-3.2.1/.gitattributes
pi-hole-3.2.1/.github/
pi-hole-3.2.1/.github/ISSUE_TEMPLATE.md
pi-hole-3.2.1/.github/PULL_REQUEST_TEMPLATE.md
pi-hole-3.2.1/.gitignore
pi-hole-3.2.1/.idea/
pi-hole-3.2.1/.idea/codeStyleSettings.xml
pi-hole-3.2.1/.pullapprove.yml
pi-hole-3.2.1/.stickler.yml
pi-hole-3.2.1/.travis.yml
pi-hole-3.2.1/CONTRIBUTING.md
pi-hole-3.2.1/LICENSE
pi-hole-3.2.1/README.md
pi-hole-3.2.1/adlists.default
pi-hole-3.2.1/advanced/
pi-hole-3.2.1/advanced/01-pihole.conf
pi-hole-3.2.1/advanced/GIFs/
pi-hole-3.2.1/advanced/GIFs/25Bytes.gif
pi-hole-3.2.1/advanced/GIFs/26Bytes.gif
pi-hole-3.2.1/advanced/GIFs/37Bytes.gif
pi-hole-3.2.1/advanced/GIFs/43Bytes.gif
pi-hole-3.2.1/advanced/Scripts/
pi-hole-3.2.1/advanced/Scripts/COL_TABLE
pi-hole-3.2.1/advanced/Scripts/chronometer.sh
pi-hole-3.2.1/advanced/Scripts/list.sh
pi-hole-3.2.1/advanced/Scripts/piholeCheckout.sh
pi-hole-3.2.1/advanced/Scripts/piholeDebug.sh
pi-hole-3.2.1/advanced/Scripts/piholeLogFlush.sh
pi-hole-3.2.1/advanced/Scripts/setupLCD.sh
pi-hole-3.2.1/advanced/Scripts/update.sh
pi-hole-3.2.1/advanced/Scripts/updatecheck.sh
pi-hole-3.2.1/advanced/Scripts/version.sh
pi-hole-3.2.1/advanced/Scripts/webpage.sh
pi-hole-3.2.1/advanced/bash-completion/
pi-hole-3.2.1/advanced/bash-completion/pihole
pi-hole-3.2.1/advanced/blockingpage.css
pi-hole-3.2.1/advanced/cmdline.txt
pi-hole-3.2.1/advanced/console-setup
pi-hole-3.2.1/advanced/dnsmasq.conf.original
pi-hole-3.2.1/advanced/index.php
pi-hole-3.2.1/advanced/lighttpd.conf.debian
pi-hole-3.2.1/advanced/lighttpd.conf.fedora
pi-hole-3.2.1/advanced/logrotate
pi-hole-3.2.1/advanced/pihole-FTL.service
pi-hole-3.2.1/advanced/pihole.cron
pi-hole-3.2.1/advanced/pihole.sudo
pi-hole-3.2.1/automated install/
pi-hole-3.2.1/automated install/basic-install.sh
pi-hole-3.2.1/automated install/uninstall.sh
pi-hole-3.2.1/autotest

```

Farem la instal·lació automàtica

```

root@raspberrypi:/tmp/pi-hole/pi-hole-3.2.1# cd auto
automated install/ autotest
root@raspberrypi:/tmp/pi-hole/pi-hole-3.2.1# cd automated\ install/
root@raspberrypi:/tmp/pi-hole/pi-hole-3.2.1/automated install#

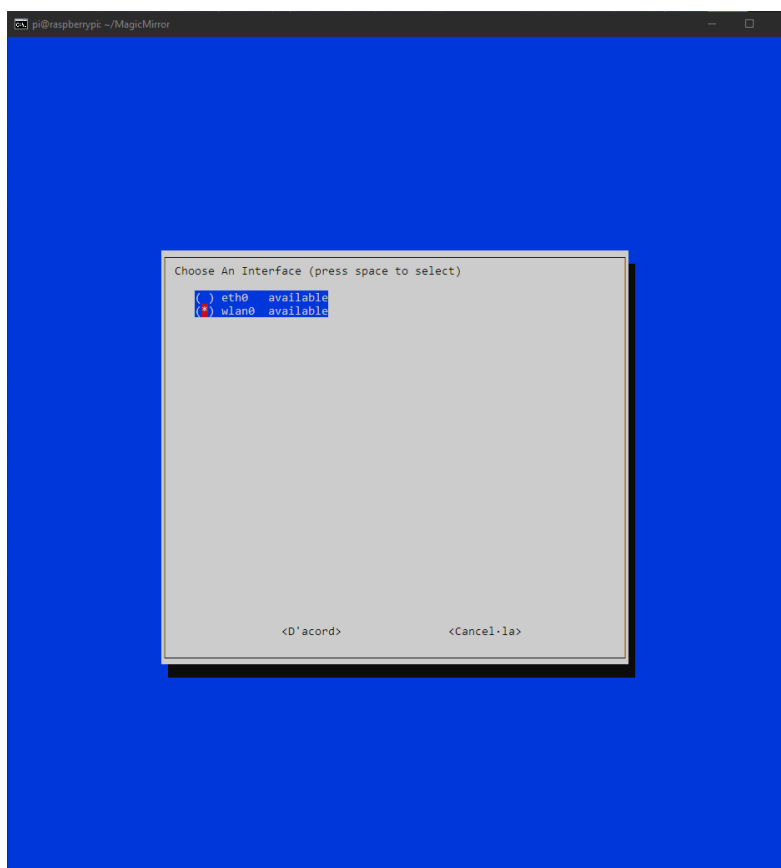
```

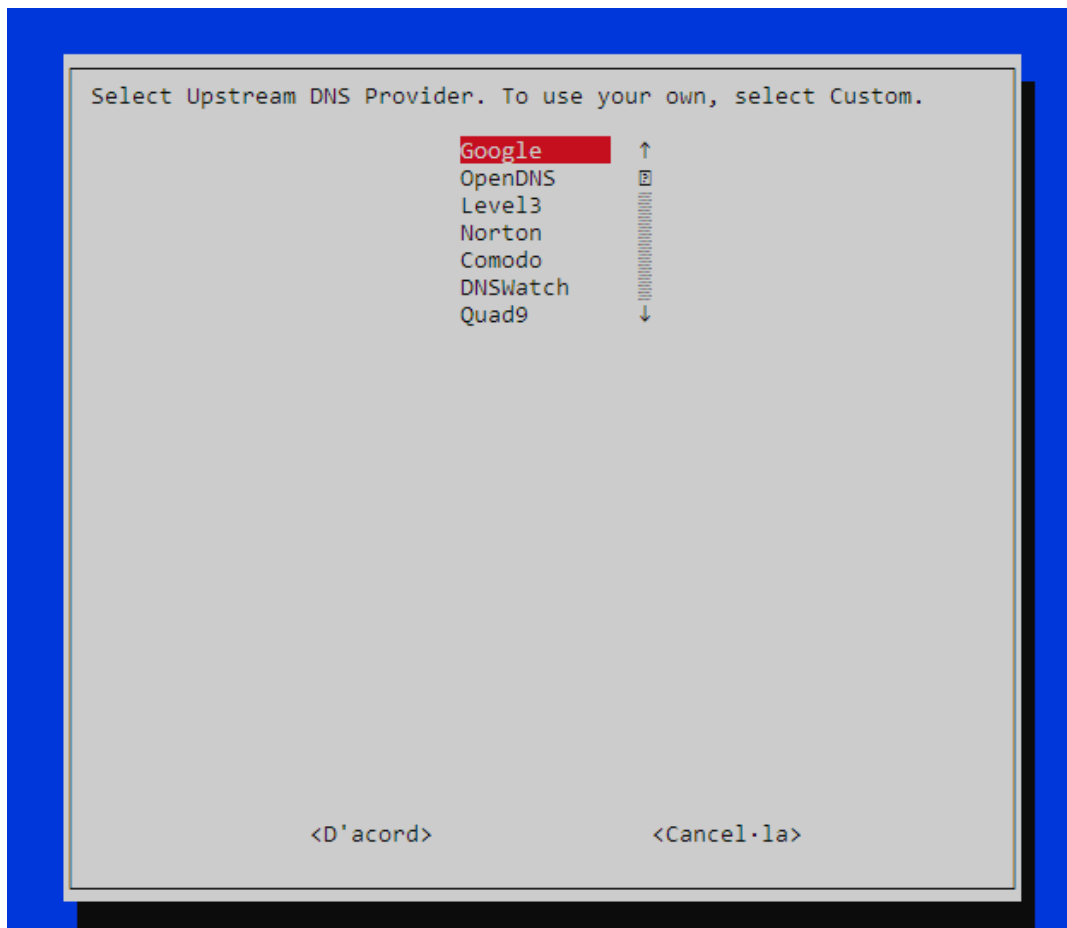
```
root@raspberrypi:/tmp/pi-hole/pi-hole-3.2.1/automated install# ./basic-install.sh

.;;;.
.cccccc;.
:cccclll:.
:ccccclll. ;ooode
'ccll;;ll .ooodec
.;cll.;;looo:.

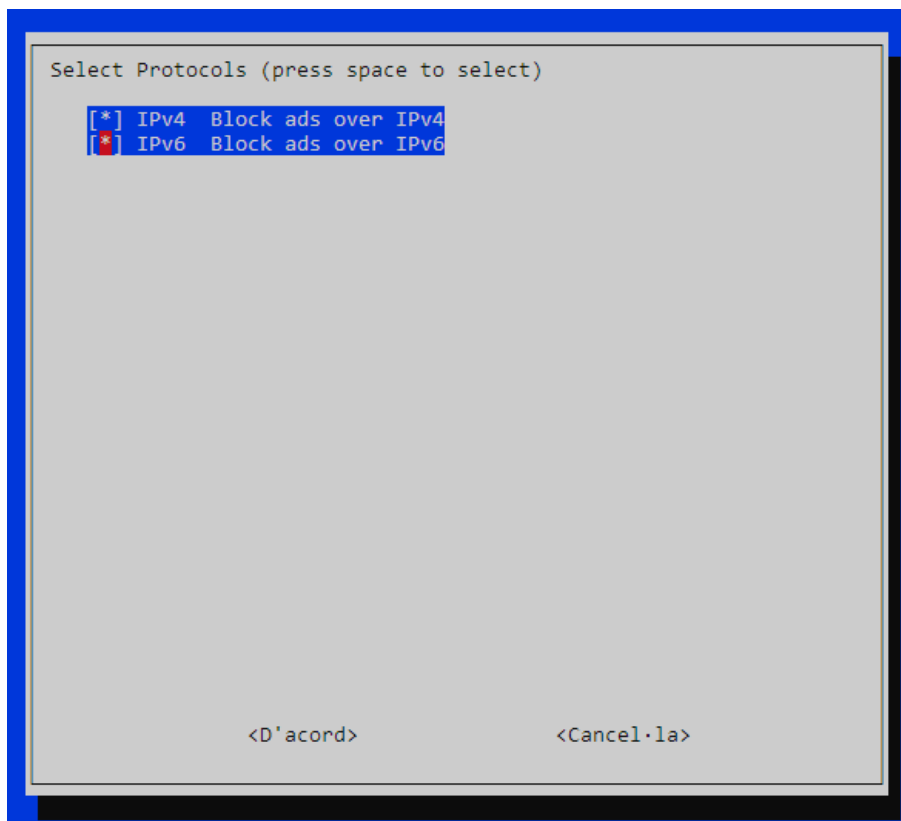
[6] Root user check
```

Aquí podrem escollir cap a quina targeta de xarxa volem fer la instal·lació i quins paràmetres voldrem, per exemple escollir el nostre forwarded DNS

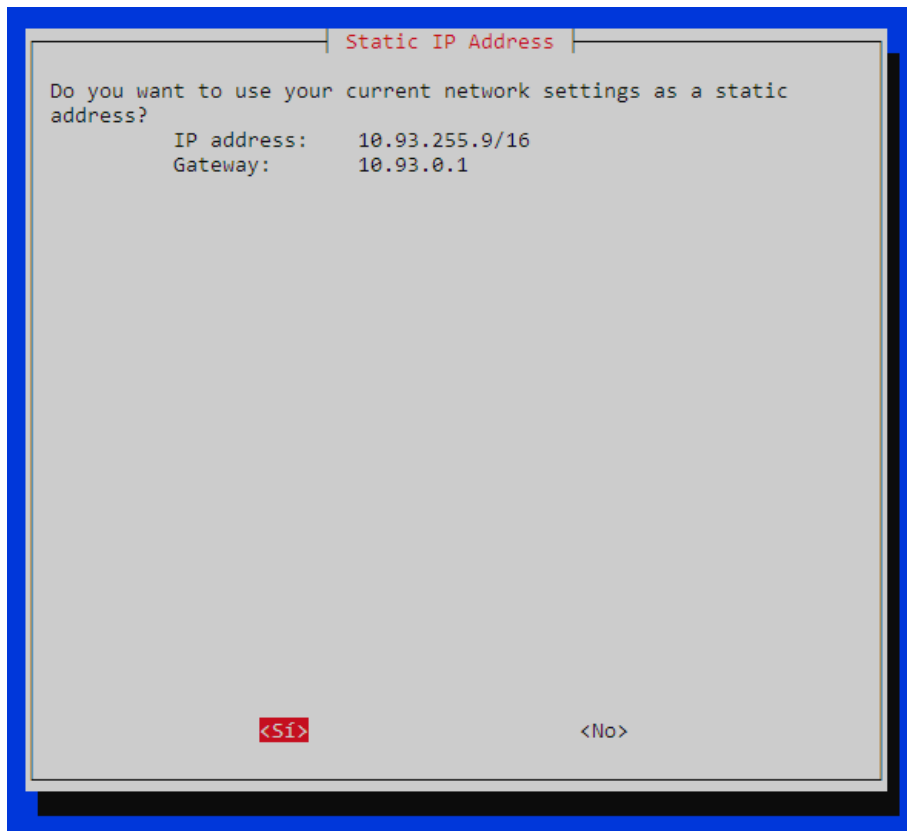




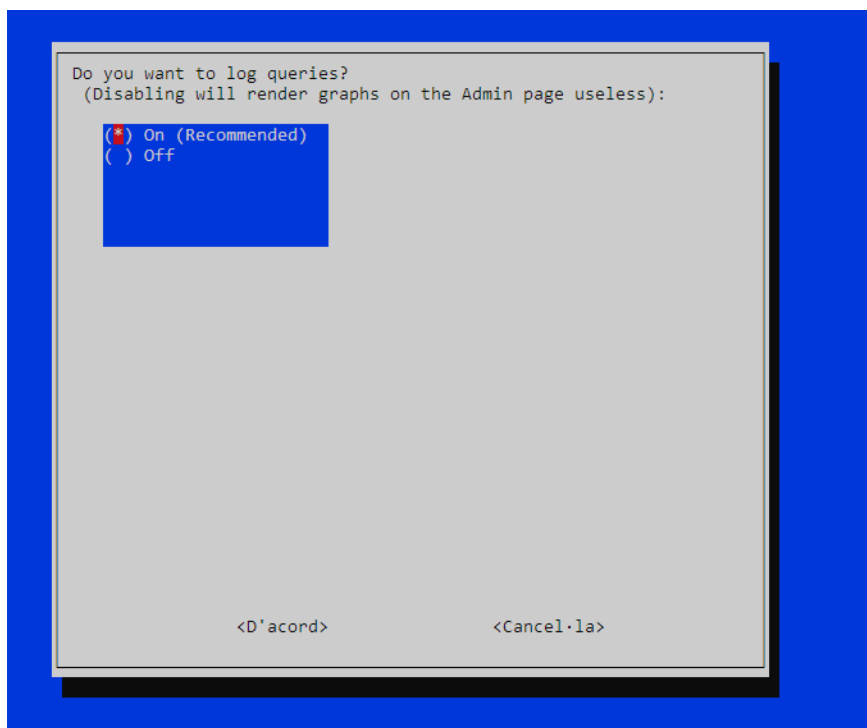
El protocol de xarxa, si volem que sigui ipv4 o ipv6



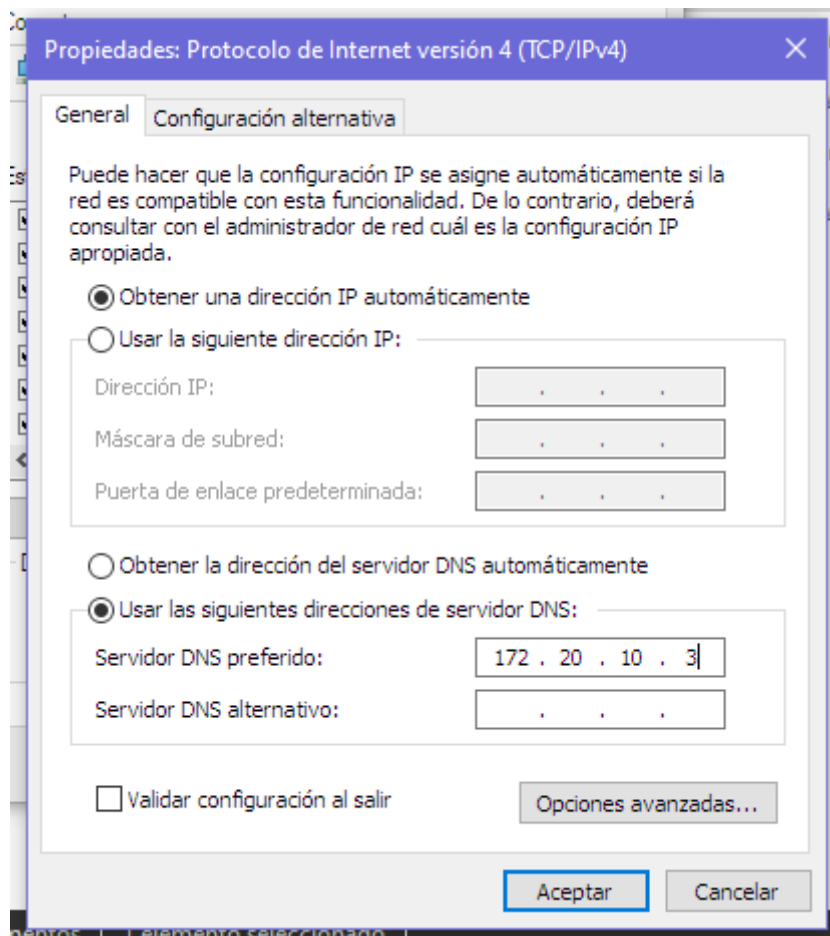
Escollim la ip (ha de ser fixa) no te cap sentit posar una dinàmica si ha ser el servidor DNS i fa de firewall



Activem els logs



Podrem activar el servei com a dhcp, com no podrem fer-ho, ja que tenim un servidor DHCP al Sapalomera doncs ho haurem de posar manualment al client



Com heu vist al document principal, vaig fer una demo navegant per internet cap alguns diaris



A les peticions dels clients es pot veure quins dominis esta bloquejat i ens podem donar comte que son tot, analítiques i ads.

Time	Type	Domain	Client	Status	Reply	Action
2021-05-19 18:23:57	A	googleads.g.doubleclick.net	172.20.10.2	Blocked (gravity)	IP (0.4ms)	Whitelist
2021-05-19 18:23:39	A	checkappsec.microsoft.com	172.20.10.2	OK (forwarded to dns.google#53)	CNAME (11.1ms)	Blacklist
2021-05-19 18:23:39	A	checkappsec.microsoft.com	172.20.10.2	Retried	N/A (0.0ms)	
2021-05-19 18:23:26	A	content-autofill.googleapis.com	172.20.10.2	OK (forwarded to dns.google#53)	IP (56.4ms)	Blacklist
2021-05-19 18:23:20	A	www.google-analytics.com	172.20.10.2	Blocked (gravity)	IP (0.2ms)	Whitelist
2021-05-19 18:23:20	A	vz-cdn2.trafficjunky.net	172.20.10.2	Blocked (gravity)	IP (0.2ms)	Whitelist
2021-05-19 18:23:20	A	vz-cdn2.admg.com	172.20.10.2	Blocked (gravity)	IP (0.2ms)	Whitelist
2021-05-19 18:23:20	A	media.trafficjunky.net	172.20.10.2	Blocked (gravity)	IP (0.4ms)	Whitelist
2021-05-19 18:23:20	A	m1.nsing.net	172.20.10.2	Blocked (gravity)	IP (0.2ms)	Whitelist
2021-05-19 18:23:20	A	m2.nsing.net	172.20.10.2	Blocked (gravity)	IP (0.2ms)	Whitelist

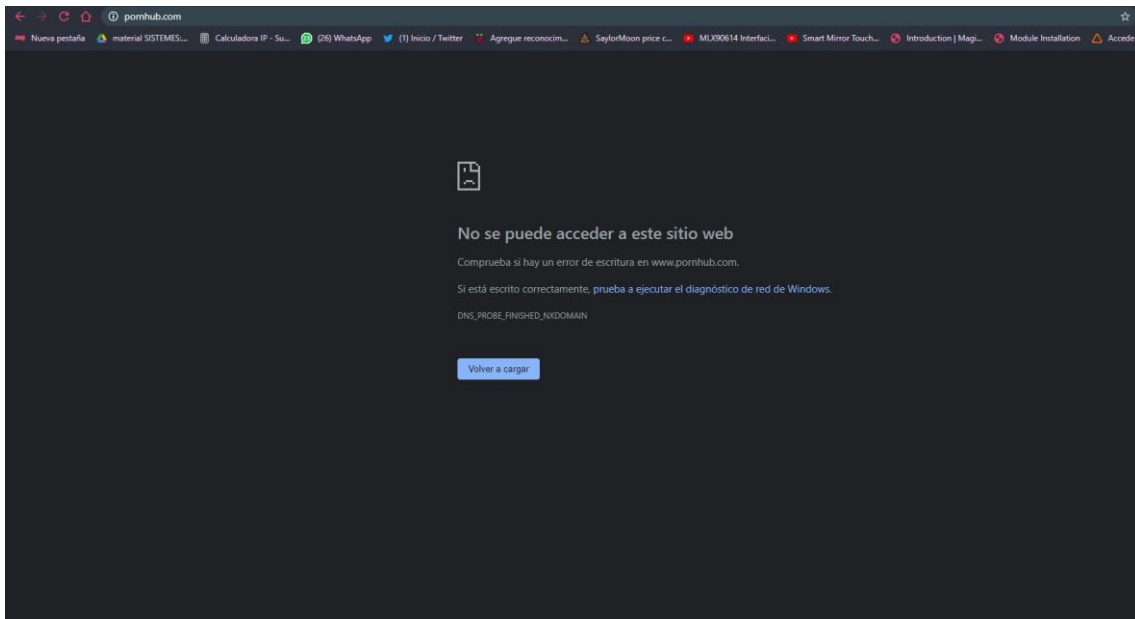
A sobre podem capar allà directament les pàgines

Time	Type	Domain	Client	Status	Reply	Action
2021-05-19 18:25:02	A	pornhub.com	172.20.10.2	OK (forwarded to 8.8.4.4#53)	N/A (0.0ms)	Blacklist

Accepta també regex

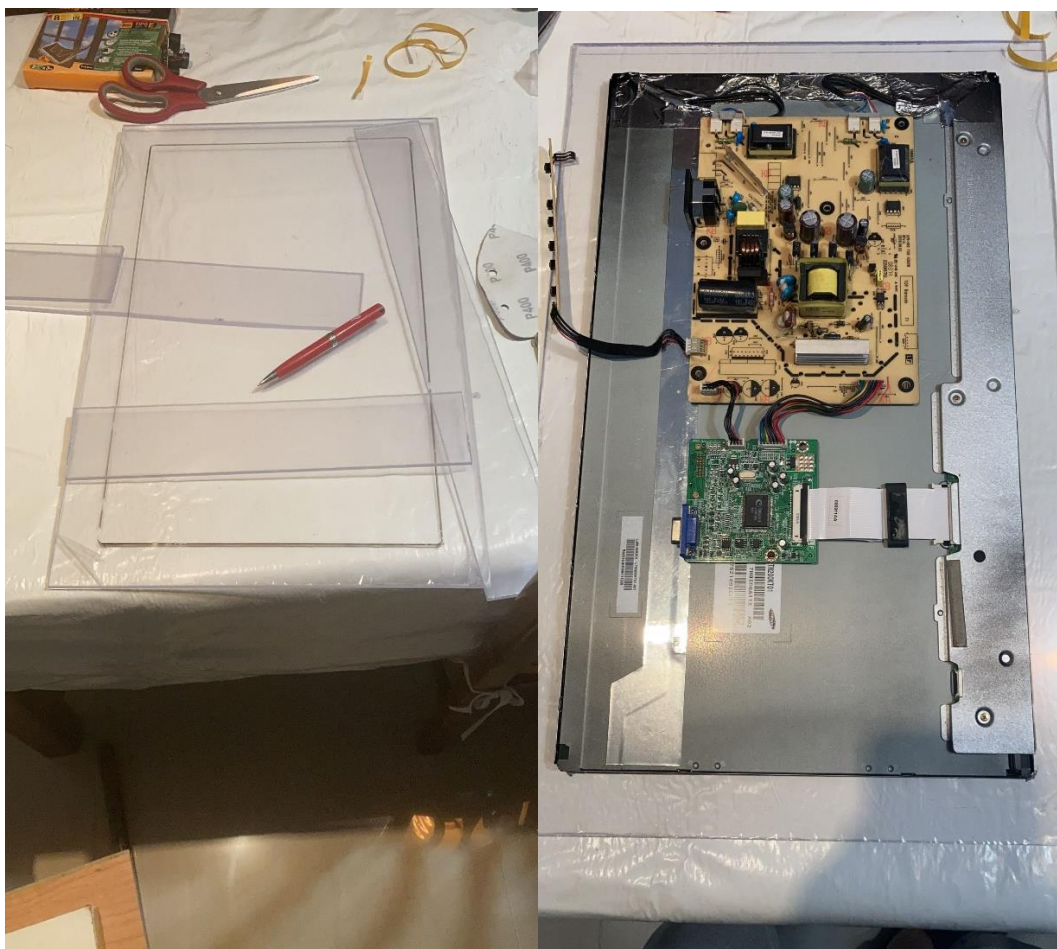
Domain/Regex	Type	Status	Comment	Action
www.pornhub.com	Exact blacklist	Enabled	Added from Query Log	Remove
pornhub.com	Exact blacklist	Enabled	Added from Query Log	Remove
es.pornhub.com	Exact blacklist	Enabled		Remove
porn	Regex blacklist	Enabled		Remove
porn	Regex blacklist	Enabled		Remove
www.capalomena.cat	Exact blacklist	Enabled		Remove
capalomena	Regex blacklist	Enabled		Remove

I funciona bastant ràpid, si el client no te cache al navegador, a la pròxima vegada que vulgui accedir no li deixarà.



Construcció de la estructura

El primer que vaig fer va ser mesurar el metacrilat i posicionar més o menys a on anirien els components



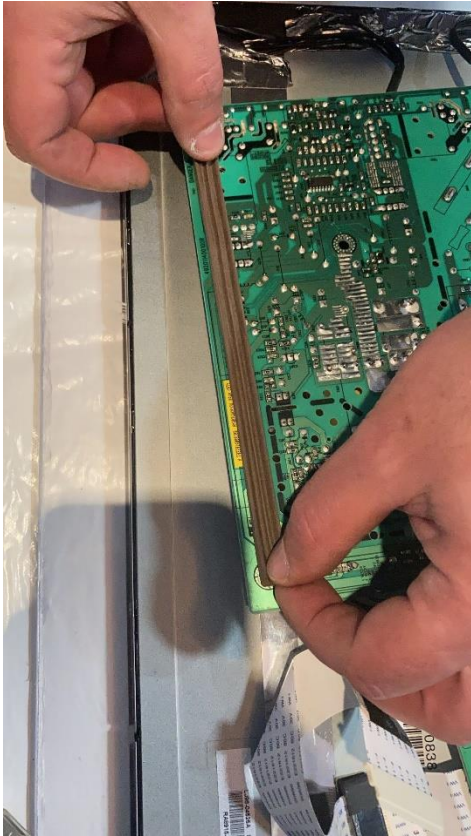
Òbviamment vaig provar la pantalla per que funciones tot.



Vam enganxar tot els components darrera la pantalla



Vaig aïllar la font d'alimentació per no crear cap curtcircuit ja que hi havia molt de perill, ja que la superfície era de ferro, per tant seria conductor de la electricitat.



Vaig tallar el metacrilat amb molta paciència amb un cúter per què quedes els millors acabats



Una vegada muntada la estructura base, tocava posar el vinil *Two Way Mirror*, amb aigua i sabó (no es cap broma, es posa així)



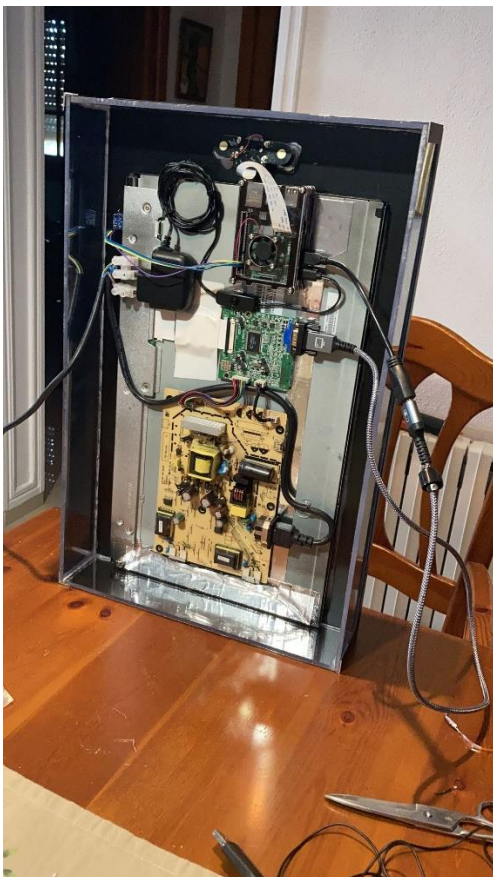
Quan estava tot vinilat tocava tallar l'alumini amb angles perfectes de 90º, i enganxar la pantalla amb el metacrilat, vaig utilitzar un enganxament bicomponent que suporta molt be altes temperatures (no ens hem d'oblidar que la pantalla allibera molta calor)



Per poder manipular la raspberry la vaig enganxar amb velcro.



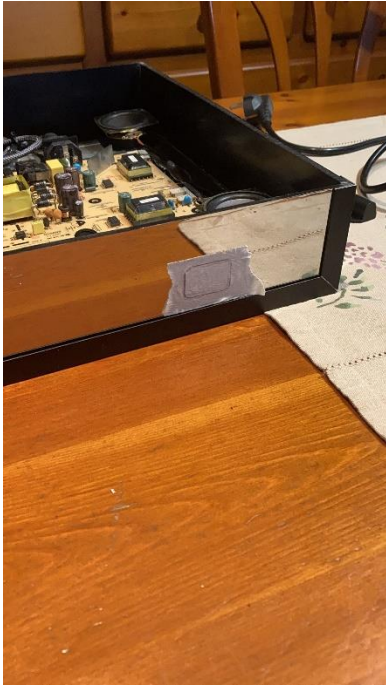
Tocava fer la manipulació de cables, enganxats amb silicona, de la càmera posar la regleta, sensor i fer proves



Donar acabats de pintura era important



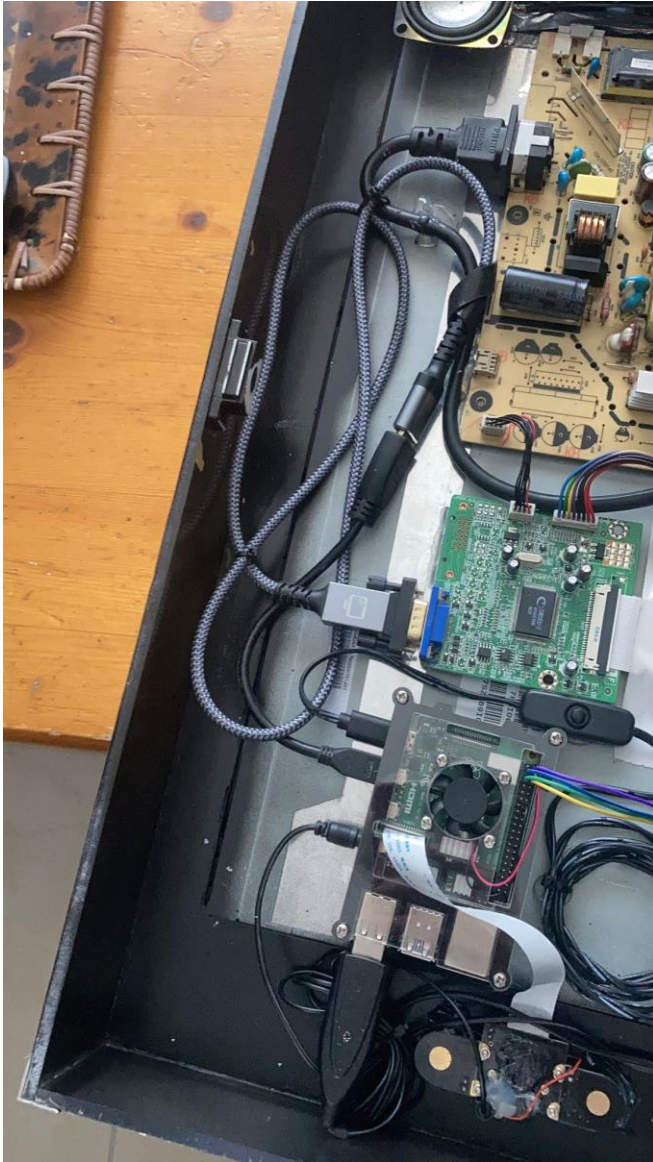
Per donar-li un toc més professional vaig posar-li un connector per no tenir que anar amb un cable penjant



Vaig tallar i pintar una capa de metacrilat menys gruixuda , posant-li xarneres, per la tapa darrera



I un imant per acabar d'enllestir i perfeccionar el procés



Resultat final

