How to use ElegantOTA updates

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OTA updates work with ACCESSPOINT and STATIONMODE. Make sure that you have installed the Library for ElegantOTA before proceeding.

1: SET CONTROLLER MODE

First, you need to enable the controller mode in Section 8 of the ***controllerconfig.h*** **file**. In the example below, STATIONMODE is selected. In S**ection 8** of the file, enable STATIONMODE

```
// to work as a station accessing an existing AP, define stationmode,
// uncomment next line
#define STATIONMODE 3
```

2: SET OTA METHOD

In **Section 11**, select the **OTA method** as UseElegantOTA

```
// ====================================================================
// 11: OTAUPDATES (OVER THE AIR UPDATE) NAME AND PASSWORD CONFIGURATION
// ====================================================================
// Select ONE of the following choices for OTA
// If not using OTA then leave as commented and go to the next section

// To use the ArduinoOTA code, uncomment the next line
//#define OTAUPDATES      UseArduinoOTA

// To use theElegantOTA code, uncomment the next line
#define OTAUPDATES      UseElegantOTA
```

3: SET AUTHENTICATION CREDENTIALS

Take a note of the authentication credentials and change them if necessary (OTAName and OTAPassword)

```
#if (OTAUPDATES == UseElegantOTA)          // For the ElegantOTA service
const char *OTAName = "mysqmesp";          // the username and password for the
ElegantOTA service
const char *OTAPassword = "mysqmesp";      // use lowercase only for the password
#endif // #if defined(ElegantOTAupdates)
```

4: PROGRAM THE CONTROLLER

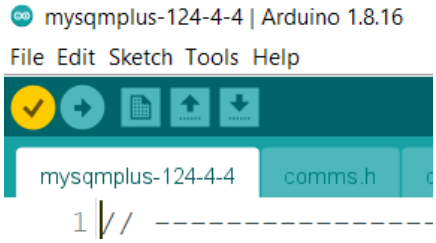
Compile and flash the firmware.

5: USING OTA

After the update, future updates can be done in a web-browser. How-ever, you can only upload bin files, and are generated using the Arduino IDE.

5.1 VERIFY THE CODE

Use Arduino IDE to compile the new code (CTRL-R). This creates the special files that are needed for OTA uploads.

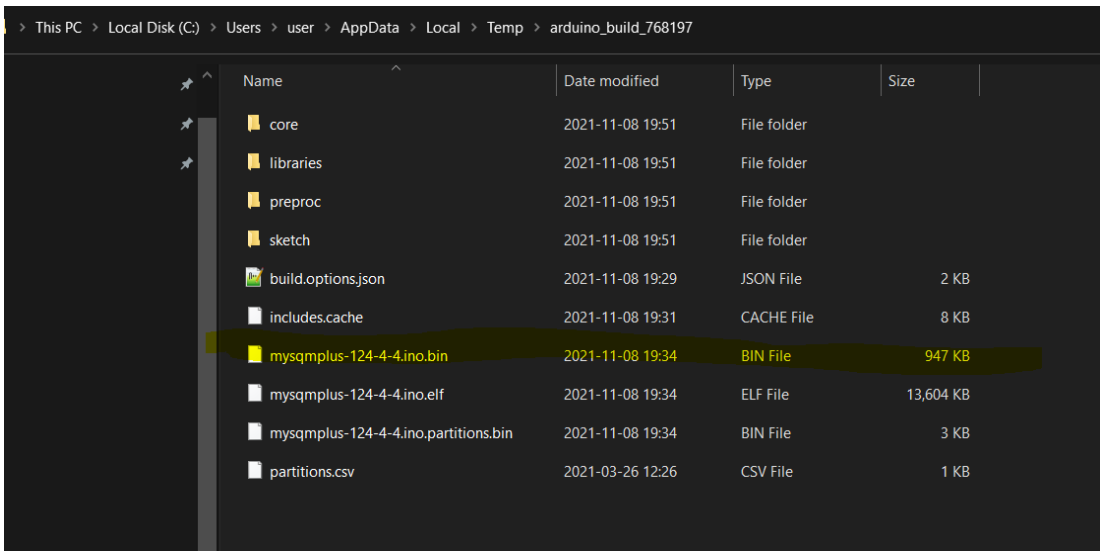


5.2 FIND THE LOCATION OF THE CONTROLLER BIN FILE

When the Arduino IDE has finished compiling the sketch, find the folder where the build files were created, usually it's in the line above “Sketch uses” as illustrated below

```
C:\\Users\\paul\\AppData\\Local\\Arduino15\\packages\\esp32\\tools\\xtensa-esp32-elf-gcc\\1.22.0-97-gc752ad5-5.2.0/bin/xtensa-esp32-elf-size"
-A "C:\\Users\\user\\AppData\\Local\\Temp\\arduino_build_XXXXXX/mysqmplus-124-4-4.ino.elf
"Sketch uses xxx bytes (yy%) of program storage space. Maximum is ..." in the status window:
```

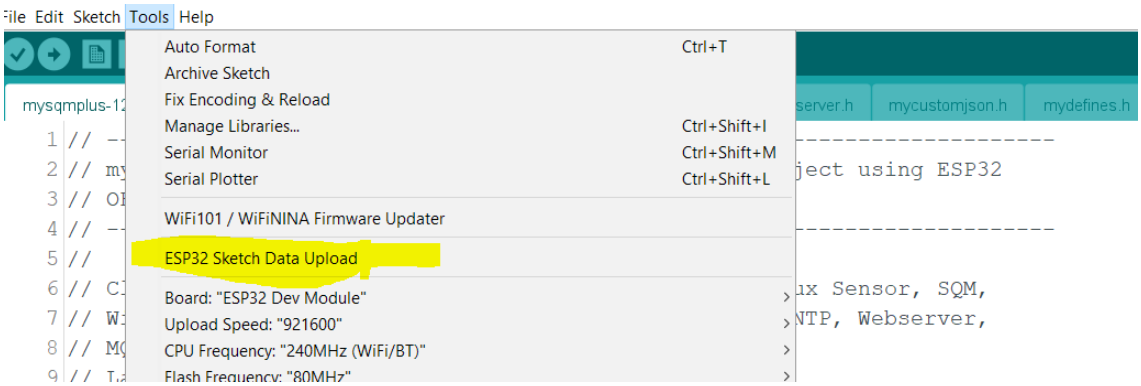
Copy the highlighted part, open file-explorer, paste it in the address bar of the Explorer Window (replacing \\ with a single \ ) and press enter.



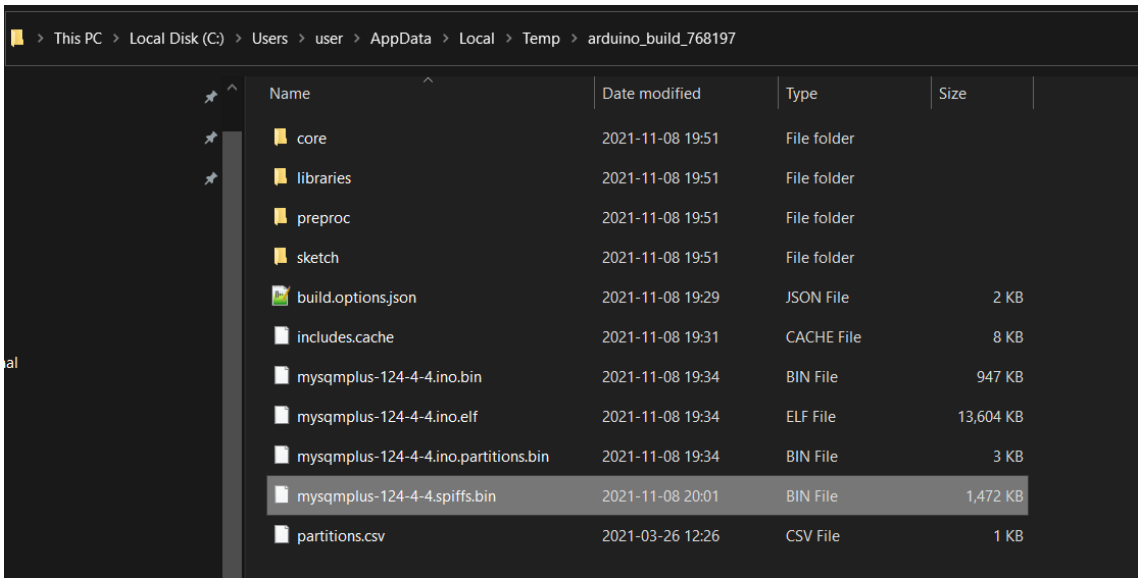
The binary firmware file is the **mysqmplus-xxx.ino.bin** file.

5.3 GENERATE SPIFFS BIN FILE

To generate a bin file for the data files from the Arduino IDE select Tools-ESP32 Sketch Data Upload. Don't worry about having no controller connected.



The upload will fail, but the binary file we need has been generated. It resides in the same folder as before, and is called xxx.spiffs.bin



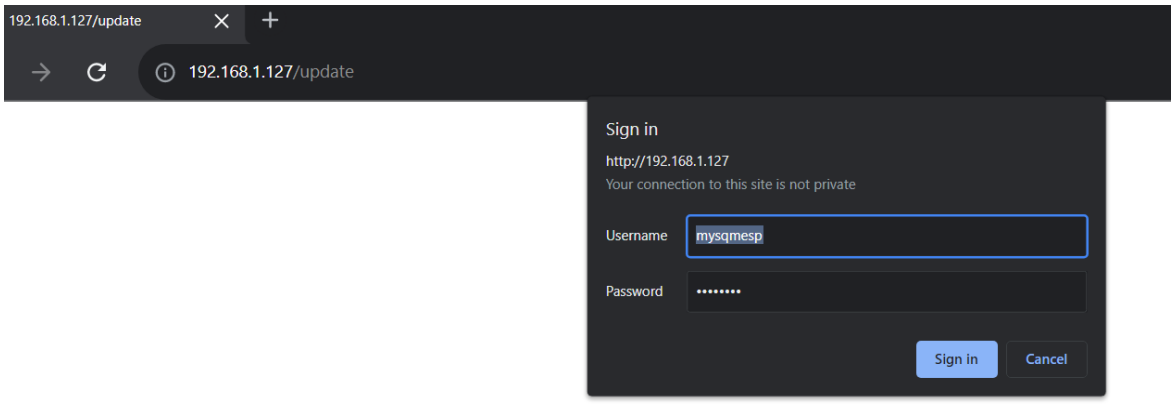
These two files can be used from here, or be copied to a convenient location first.

6: UPDATING CONTROLLER CODE AND SKETCH DATA FILES USING OTA

6.1 CONNECT TO THE OTA UPDATE PAGE

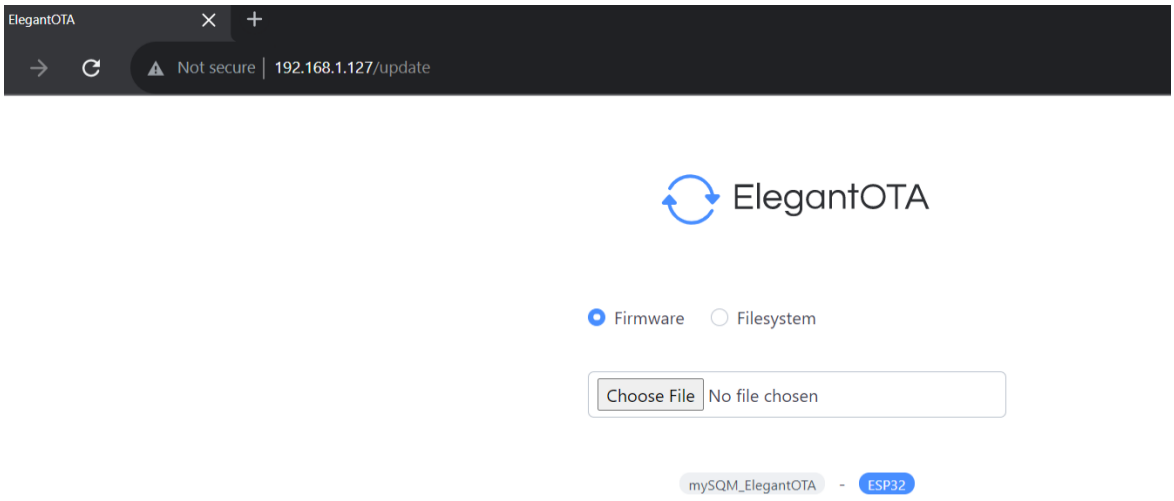
To upload the files to the controller (which is running), open a web-browser type in the following URL (**change** 192.168.1.127 to the address of your mySQM+ controller and enter the required credentials).

http:// 192.168.1.127/update



6.2 THE OTA UPDATE PAGE

After signing in to the OTA service. the home page for updating is shown (screenshot below)



6.3 UPLOAD THE NEW CONTROLLER FIRMWARE CODE

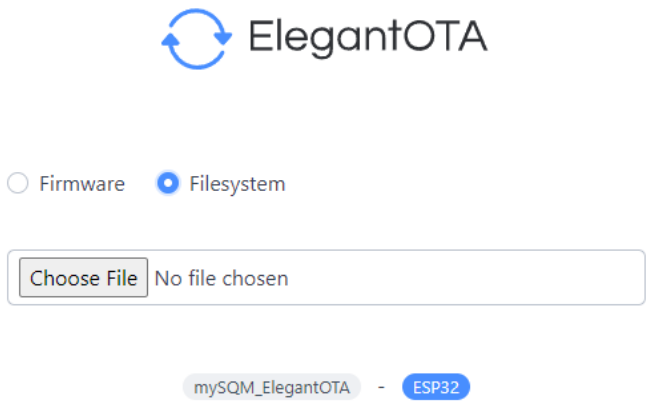
Select **Firmware**, then **Choose File**. Navigate to the folder where the **mysqmplus---.ino.bin** file was found, select the file and the upload will start.

When the upload is finished, click back (in the web-browser), wait a few seconds for the controller to reboot.

6.4 UPLOAD THE NEW CONTROLLER SPIFFS SKETCH DATA FILES

You may need to reconnect to the OTA update page (see 6.1)

Select **Filesystem**. then **Choose File**. Navigate to the folder where the **mysqmplus---spiffs.bin** file was located, select the file and the upload will start.



That's all...

Also check out the video!