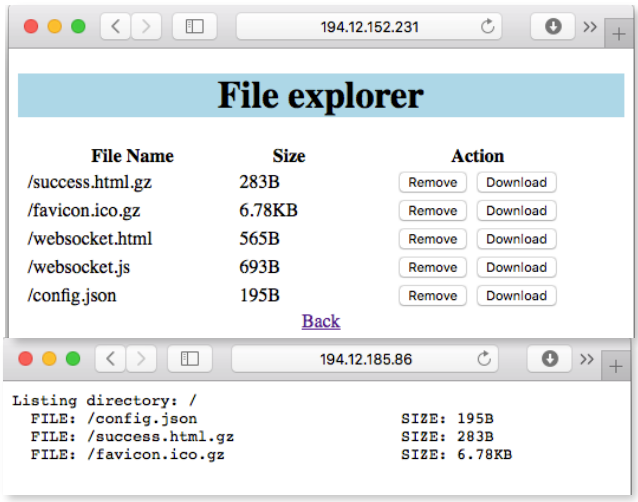
Esp32_Framework is a small development brick that establish the core of a future development always with the Esp32.

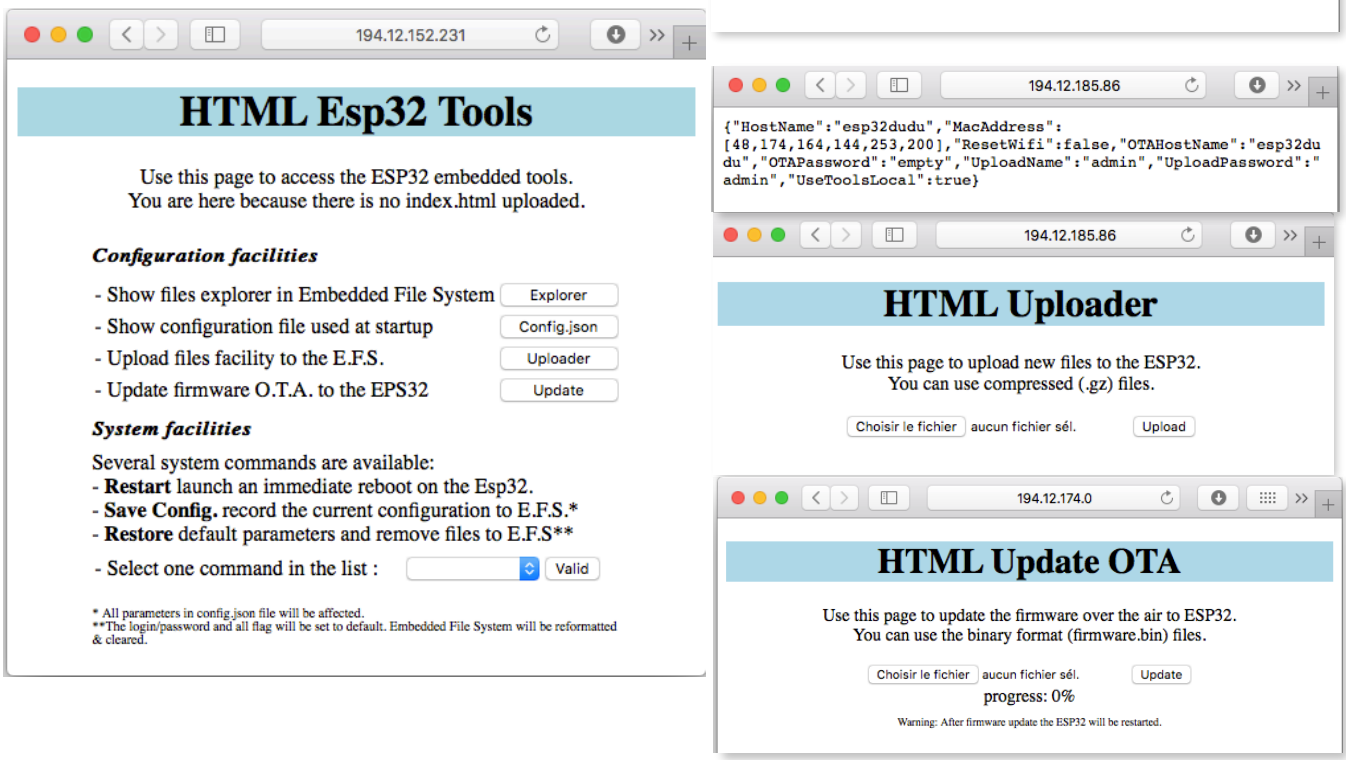
This framework build the starting point to a configurable future development. It allows:
- Initialize and start **SPI Flash File System** file system wrapper (In **the EEPROM**).
- Store the skeleton of the configuration in **JSON** file (call *config.json*).
- Start the Wifi (with WifiManager library). The Access Point is stated at the first time and allows to record the **SSID** and password for the future network connection. The preferred **MAC** address and host name are defined in the *config.json* (see method *loadConfiguration*).
- Start the **OTA** (Over the Air) update is the process of loading the firmware to **ESP** module using Wi-Fi connection rather that a serial port.
- Start the Web socket server.
- Start the Web server. Allows file management in the local file system.
- Start the nDNS service. Allows the hostname publication on the network *boujour*.

Default config.json file:

```
{
« HostName":"esp32dudu",
« MacAddress":[48,174,164,144,253,200],
« ResetWifi":false,
« LoginName":"admin",
« LoginPassword":"admin",
« UseToolsLocal":true
}
```



Basic tools embedded is ESP are visible here:



This tools allows to record file into Esp32 file system to constitute the future Web site.

With the configuration file it's possible to change default parameters like host name Mac address, and several password. Embedded in the SPI Flash system some basic tools are usable to mange the files and codes usable by Eps32 platform.

Key	Default value	Observation
HostName	esp32dudu	
MacAddress	30:AE:A4:90:FD:C8	Use be the router to affect a constant IP address.
ResetWifi	false	If true the SSID and password of WiFi will be erased.
LoginName	admin	Login use for OTA firmware update, Web embedded tools,…
LoginPassword	admin	
useToolsLocal	true	True some embedded html page is sent to client, when no found in files system.

HTTP_GET functions available (if parameter useToolsLocal = true)

http://eps32dudu.local	
/ or /index.html	Open HTML Esp32 Tools
/explorer or /ls	Open files explorer or show list of file in SPI Flash File system.
/explorer? cmd=remove&file=\file2delete	Delete file if present in SPIFFS.
/explorer? cmd=download&file=file2dounload	Download file from SPIFFS.
/upload	Allows to upload a file into SPIFFS
/update	Allows to update the firmware into Esp32.

HTTP_POST functions available

http://eps32dudu.local/post	
cmd=save-config	Copy current configuration to SPIFFS.
cmd=restart	Restart Esp32.
cmd=restore	Format SPIFFS and restore default parameter. The partition / will be rebuild with the default config.json file.

Remark:

Html page	
/index.html	
/update.html	
/upload.html	
/success.html	
/post	
/ls	
/explorer	