\*\*\* **mDNS (Multicast domain name system)**

\_ It’s network protocol for resolving host names to IP address in small network (eg: Local network).

\_ Different wire network in Arduino by Serial ports, it’s so easy to find the right port in many ports. If it’s worst case, we just unplug the device and see which port disappears. Wireless communication (eg: ESP8266, ESP32) need its IP address. That is the fours number with the dots between us (eg: 192.168.1.2). IP addresses are assigned by DHCP server when device connects to network. But it’s not followed by domain name (eg: google.com, amazon.co.jp,…)

\_ **How does mDNS work?** mDNS use broadcast UDP packets. Whenever a client need resolve the host name, it sends a IP multicast query to ask all of hosts. The matching host will respond with its IP address.

\_ **mDNS-SD:** SD stand for Service Discovery. We can find a IP address if we remember the host name. But it will be better when we have a list to select than to remember us. mDNS-SD is protocol for discovering service on the network to make a list of devices we might want to talk to.

\_ Error: Could not be found host name (<http://esp32.local/> - 192.168.1.x):  
 + Install “Bonjour app” in <http://www.apple.com/support>.

+ Creat a .Reg file:

Windows + R → Regedit -> HKey\_local\_machine\Software\Policies\Microsoft\Windows NT → Creat DNSclient → Add DWORD(32bit) – Rename “EnableMulticast” → set 0 value.

(<https://www.megunolink.com/articles/wireless/find-esp32-esp8266-ip-address-with-mdns/>)

**\*\*\* AsyncWebserver**