Faculté de sciences et génies

HOWTO - Verify which IP address is associated with which MAC address at the center

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This HOWTO was designed for the Smart Cage project to retrieve .csv data saved on the SD card to our computer, but it could be useful to access any device at the center as long as you know the MAC address. The Smart Cage (or whatever device) must be connected to the same WiFi network than your computer (we used Colloque-CRIUSMQ in our case, password : 29e6c5aac7). The problem with the center's network is that IP addresses change once in a while, but if we are able to find the IP address corresponding to the MAC address, we can retrieve data from it. Here is how you can verify which IP address is assigned to which MAC address with a few command line in the terminal :

MAC address of our Smart Cage : 0c-b8-15-60-bc-c8

IP address that it had at first : 172.16.12.13

1. In the terminal, write `ping IP address` (we used 172.16.12.13)
2. If this IP address is taken by a device, it should return lines such as

   ```
   64 bytes from 172.16.12.13: icmp_seq=24 ttl=255 time=60.776 ms.
   ```

   If it does not print that, try another IP address (such as 172.16.12.14, .11, etc.).
3. On MacOs, write `arp IP address` (Ex : `arp 172.16.12.13`). On Windows, write `arp -a IP address`. This should return the MAC address associated to the IP address. In our case, we obtained

   ```
   esp3260bcc8.crulrg.local (172.16.12.13) at c:b8:15:60:bc:c8 on en0 ifscope [ethernet],
   ```

   which confirmed that the IP address 172.16.12.13 is our Smart Cage (because it has the right MAC address).
4. You can then access this IP address to do whatever you want from your computer.