small docuemntation of p-node proyect

https://p-node.org/documentation/pibox/piboxv2_image and https://www.p-node.org/documentation

upload image

upload image to rapsberry pi

image file in:

http://www.p-node.org/pibox_img/pibox_V2.img

next use etcher

upload image on terminal

see de devices coneted

```
 df -h
```

upload iso(img)

```
 sudo dd if=2018-04-18-raspbian-stretch.img of=/dev/sdb status=progress
bs=1M
```

manual configuration

connet via ssh

```
ssh pi@<IP_of_the_pibox>
```

update

```
cd pibox_V2
git pull
```

if ssh dont work plese use and habiliate in raspberry pi config with , you can configurate wifi onthere:

```
sudo raspi-config<code>

**change wifi (manual way)**
<code>
 sudo nano /etc/hostapd/hostapd.conf
```

clear and preparete operating sistem

```
sudo apt-get update
sudo apt-get upgrade
sudo apt-get install git sox libav-tools oggfwd python3-pip
sudo pip3 install bs4
```

install radio on rybn repo

```
cd
git clone http://git.rybn.org/rybn/pibox_V2.git
```

install dependencies

```
sudo apt-get install hostapd dnsmasq
```

stop services to configurate them

```

sudo systemctl stop dnsmasq
sudo systemctl stop hostapd
```

crete file to configurate hospot

```
sudo nano /etc/hostapd/hostapd.conf
```

configurate network

```
   interface=wlan0
   driver=nl80211
   ssid=myssid
   hw_mode=g
   channel=7
   wmm_enabled=0
   macaddr_acl=0
   auth_algs=1
   ignore_broadcast_ssid=0
```

save and close

configurate next file

```
sudo nano /etc/default/hostapd
```

edit file

```
edit this #DAEMON_CONF="" for
   DAEMON_CONF="/etc/hostapd/hostapd.conf"
sudo cp /etc/dnsmasq.conf /etc/dnsmasq.conf_back
```

```
echo "" | sudo tee /etc/dnsmasq.conf
```

save and close

create file for configurate hospot network

```
sudo nano /etc/dnsmasq.conf
```

copy and paste in file

```
   interface=wlan0
   dhcp-range=192.168.100.2,192.168.100.10,255.255.255.0,24h
```

save and close

edit dhcpcd.conf

```
sudo nano /etc/dhcpcd.conf
```

copy and paste this configuration

```
   interface wlan0
   static ip_address=192.168.100.1/24
   nohook wpa_supplicant
```

now can start services

```
sudo systemctl restart dhcpcd
sudo systemctl unmask hostapd
sudo systemctl start hostapd
sudo systemctl enable hostapd
sudo systemctl start dnsmasq
```

set hospot name

```
 sudo hostnamectl set-hostname "pibox"
```

reboot

when you reboot , edit rc.local

```

sudo nano /etc/rc.local
```

copy and paste this in rc.local

```
           #!/bin/sh -e
           #
           # rc.local
           #
           # This script is executed at the end of each multiuser runlevel.
```

```
            # Make sure that the script will "exit 0" on success or any
other
            # value on error.
            #
            # In order to enable or disable this script just change the
execution
            # bits.
            #
            # By default this script does nothing.

            # Print the IP address
            _IP=$(hostname -I) || true
            if [ "$_IP" ]; then
              printf "My IP address is %s\n" "$_IP"
            fi

this        /usr/bin/python3 /home/pi/pibox_V2/go.py 2>
/home/pi/pibox_V2/error_log.txt >/dev/null &

            exit 0

/usr/bin/python3 /home/pi/pibox_V2/go.py 2> /home/pi/pibox_V2/error_log.txt
>/dev/null &
create rules
```

edit network rules

```
 sudo nano /etc/udev/rules.d/70-persistent-net.rules
```

add this

```
     ACTION=="add", SUBSYSTEM=="net", DRIVERS=="r8188eu", NAME="wlan1"
```

shutdown

```
 sudo halt
```

now you can test it

wifi

ssid pibox

password pnodeaccesspass

ip 192.168.100.1

(copy and paste

```
192.168.100.1
```

in your browuser)

more documentation in

https://p-node.org/documentation/pibox/piboxv2
https://p-node.org/documentation/pibox/pibox_antenna