**AIW(EWM) FAQ**

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| **Category** | AIW(EWM) | **Date** | 2023/02/18 |
| **Keyword** | EWM-W193H01E, RTL8822CE, Ubuntu 18.04, ARK-2250V |

* **Question:**

How to enable SoftAP function for EWM-W193H01E(RTL8822CE) on Ubuntu 18.04 with kernel 4.15.0-176-generic?

* **Instructions :**

**Basically, the setup procedure is divided in three sections.**

1. **Setup and host a network**

Step 1

 We need hostapd, if it’s not installed yet, please install it first.

 If it has been installed, please ignore here.

 # sudo apt install hostapd

Create a hostapd.conf with following commands and paste following codes.

 # sudo vi /etc/hostapd/hostapd.conf or sudo nano /etc/hostapd/hostapd.conf

interface=wlp2s0
driver=nl80211
ssid=test
hw\_mode=g
channel=1
macaddr\_acl=0
auth\_algs=1
ignore\_broadcast\_ssid=0
wpa=2
wpa\_passphrase=12345678
wpa\_key\_mgmt=WPA-PSK
wpa\_pairwise=TKIP
rsn\_pairwise=CCMP

 \* Change interface name to the wireless interface name. (ifconfig or iwconfig to check)
 \* ssid name and wpa\_passphrase can be changed.



\*For 802.11n, please add “ieee80211n=1” and modify the hostapd.conf as following.



Step 2

Edit hostpad with following command.

 # sudo vi /etc/default/hostapd or sudo nano /etc/default/hostapd

 Modify the line of DAEMON\_CONF as following.

 DAEMON\_CONF="/etc/hostapd/hostapd.conf"



**(B) Set up DHCP server for IP address management**

Step 1

 Install isc-dhcp-server.

 # sudo apt install isc-dhcp-server

Step 2

 Edit the file /etc/default/isc-dhcp-server.

 # sudo vi /etc/default/isc-dhcp-server or sudo nano /etc/default/isc-dhcp-server

 Modify the line of INTERFACESv4 as following.

 INTERFACESv4=”wlp2s0”

 \* The same as wireless interface name.



Step 3

 Edit the file /etc/dhcp/dhcpd.conf

 # sudo vi /etc/dhcp/dhcpd.conf or sudo nano /etc/dhcp/dhcpd.conf

 Add # as following.

# option definitions common to all supported networks…
#option domain-name “example.org”;
#option domain-name-servers ns1.example.org, ns2.example.org;

#default-lease-time 600;
#max-lease-time 7200;

**

Add following in the end.

Subnet 10.10.0.0 netmask 255.255.255.0 {
range 10.10.0.2 10.10.0.16;
option domain-name-servers 8.8.4.4, 208.67.222.222;
option routers 10.10.0.1;
}

\* Range describe how long the address pool will be. you need to adjust subnet value also. This config can give IP up to 15 devices

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Step 4

Edit the file /etc/network/interfaces.

# sudo vi /etc/network/interfaces or sudo nano /etc/network/interfaces

Add following contents.

auto wlp2s0
iface wlp2s0 inet static
address 10.10.0.1
netmask 255.255.255.0

\* wlp2s0 is the wireless interface name.



Then execute following commands to check if there’s any error.

# sudo service isc-dhcp-server start

# sudo service hostapd start

\* If encountered the error that hostapd.service is masked, please input below commands to unmask then try to start hostapd service again.

# sudo systemctl unmask hostapd.service

Reboot the system to make all above configurations take effect.

**(C) Setup internet connection setting**

Step 1

# sudo echo 1 | sudo tee /proc/sys/net/ipv4/ip\_forward

Step 2

# sudo iptables -t nat -A POSTROUTING -s 10.10.0.0/24 -o enp0s31f6 -j MASQUERADE



\* enp0s31f6 is the ethernet Interface name for the Internet connection.

* When wireless module is in AP mode, it can’t connect to any other SSID as normal.

To make wireless module back to normal station mode, please modify /etc/network/interfaces as following.

# sudo vi /etc/network/interfaces or sudo nano /etc/network/interfaces



# sudo service NetworkManager restart

Then users are able to connect to other SSID as normal.

* **Conclusion :**



**Test platform information:**

Ubuntu 18.04 with kernel 4.15.0-176-generic

