

How to append vendor specific IE in driver management frames

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Introduction

This document can teach user, how to append vendor specific IE in Realtek driver management frames by iwpriv (rtwpriv) command.

Please follow those steps to set vendor ie setting.

Driver setting.

1. Please enable append vendor ie feature from Makefile

`CONFIG_APPEND_VENDOR_IE_ENABLE = n ==>`

`CONFIG_APPEND_VENDOR_IE_ENABLE = y`

Step.

1. Insert Realtek driver
Ex: `insmod 8821au.ko`
2. Up interface
Ex: `ifconfig wlan0 up`
3. Use iwpriv tools (or rtwpriv tools) and command “vendor_ie_set” to set vendor ie
Ex: `iwpriv wlan0 vendor_ie_set`
`0,5,dd3300e04c0123456789abcdef0123456789abcdef0123456789abcdef0123456789abcdef0123456789abcdef`
4. Can use iwpriv tools (or rtwpriv tools) and command “vendor_ie_get” to get vendor ie setting
5. Run hostapd or wpa_supplicant

Note: If want to change vendor IE , after setting , must restart hostapd or wpa_supplicant.

```

+ T WPS ID=221 WPS Len=24 OUI=00-50-F2 MICROSOFT CORP. OUI Type=4 Version=0x10
- T Vendor Specific
  Element ID: 221 Vendor Specific [205]
  Length: 51 [206]
  OUI: 00-E0-4C REALTEK SEMICONDUCTOR CORP. [207-209]
  Value: (48 bytes) [210-257]
+ T [258-261] FCS: FCS=0xB6DD9729

```

```
0000: 00 00 00 00 FF FF FF FF FF FF EE EE 05 08 2E F7 B8 EE 65 08 2E F7 30 78 FD 51 A6 09 00 00 00 00 64 00 11 04 00 00 79 69 77 65 69 5F 74 65 73 74 5F 61 70 01 08 82 84 88 96 0C 12 18 24 03
0062: 01 06 05 04 00 01 00 00 2A 01 04 32 04 30 48 60 6C 30 14 01 00 00 0F AC 04 01 00 00 0F AC 04 01 00 00 0F AC 02 0C 00 2D 1A 2C 00 1F FF FF 00 00 00 00 00 00 00 00 2C 01 01 00 00 00 00 00
0124: 00 00 00 00 00 3D 16 06 00 01 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0186: 44 00 01 10 10 44 00 01 02 10 49 00 06 00 37 2A 00 01 20 00 33 00 E0 4C 01 23 45 67 89 AB CD EF 01 23 45 67 89 AB CD EF 01 23 45 67 89 AB CD EF 01 23 45 67 89 AB CD EF 01 23 45 67 89 AB
0248: CD EF 01 23 45 67 89 AB CD EF 86 DD 97 29
```

Setting example: To set group 0 or group 3

iwpriv wlan0 vendor_ie_set

**0,5,dd3300e04c0123456789abcdef0123456789abcdef0123456789abcdef0123456789abcdef
0123456789abcdef**

or

iwpriv wlan0 vendor_ie_set

**3,3,dd3300e04c0123456789abcdef0123456789abcdef0123456789abcdef0123456789abcdef
0123456789abcdef**

2. vendor_ie_get:

iwpriv [interface_name] vendor_ie_get [vendor_ie_number]

interface_name: wifi interface name

vendor_ie_number: want check appended vender ie number , can support number 0~4 , totals 5 groups

vendor ie.

ex: To get group 0 setting or get group 3 setting

iwpriv wlan0 vendor_ie_get 0

wlan0 vendor_ie_get:

Vendor IE num 0 , Mask:5 [Beacon][Probe Resp]

Vendor IE:

dd3300e04c0123456789abcdef0123456789abcdef0123456789abcdef0123456789abcdef0123456789abcdef

or

iwpriv wlan0 vendor_ie_get 3

wlan0 vendor_ie_get:

Vendor IE num 3 , Mask:3 [Beacon][Probe Req]

Vendor IE:

dd3300e04c0123456789abcdef0123456789abcdef0123456789abcdef0123456789abcdef0123456789abcdef

3. Clear vendor ie setting:

ex: To clear vendor ie number 1 group

iwpriv wlan0 vendor_ie_set 1,0,0

Can use vendor_ie_get to check

iwpriv wlan0 vendor_ie_get 0

wlan0 vendor_ie_get:

Vendor IE num 0 , Mask:0

Vendor IE: