

図 1. システム起動後、アクセスポイント (hostapd) を起動

```
root@armadillo:~# date
Wed Dec 7 15:47:31 JST 2022
root@armadillo:~#
root@armadillo:~# [dhd] CFG80211-ERROR) wl_cfg80211_change_station : WLC_SCB_AUTHORIZE sta_flags_mask not set
NOHZ: local_softirq_pending 08
[dhd] CFG80211-ERROR) wl_cfg80211_get_key : Invalid algo (0x44)
NOHZ: local_softirq_pending 08
nf_conntrack: default automatic helper assignment has been turned off for security reasons and CT-based firewall rule not found. Use the iptables CT target to attach helpers instead.

root@armadillo:~#
root@armadillo:~# systemctl -l status hostapd.service --no-pager
● hostapd.service - Advanced IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP Authenticator
   Loaded: loaded (/lib/systemd/system/hostapd.service; enabled; vendor preset: enabled)
   Active: active (running) since Wed 2022-12-07 15:45:54 JST; 1min 51s ago
     Process: 2350 ExecStart=/usr/sbin/hostapd -B -P /run/hostapd.pid -B $DAEMON_OPTS ${DAEMON_CONF} (code=exited, status=0/SUCCESS)
    Main PID: 2463 (hostapd)
      Memory: 1.6M
    CGroup: /system.slice/hostapd.service
            └─2463 /usr/sbin/hostapd -B -P /run/hostapd.pid -B /etc/hostapd/hostapd.conf

Dec 07 15:45:53 armadillo systemd[1]: Starting Advanced IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP Authenticator...
Dec 07 15:45:53 armadillo hostapd[2350]: Configuration file: /etc/hostapd/hostapd.conf
Dec 07 15:45:53 armadillo hostapd[2350]: Using interface wlan0 with hwaddr 00:0e:8e:a2:96:ca and ssid "ARMADILLO-X1_NEWWLANMODULE"
Dec 07 15:45:54 armadillo hostapd[2350]: wlan0: interface state UNINITIALIZED->ENABLED
Dec 07 15:45:54 armadillo hostapd[2350]: wlan0: AP-ENABLED
Dec 07 15:45:54 armadillo systemd[1]: Started Advanced IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP Authenticator.
Dec 07 15:47:33 armadillo hostapd[2463]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: associated
Dec 07 15:47:33 armadillo hostapd[2463]: wlan0: STA 80:45:dd:f7:24:de RADIUS: starting accounting session 410FC733FE2FC373
Dec 07 15:47:33 armadillo hostapd[2463]: wlan0: STA 80:45:dd:f7:24:de WPA: pairwise key handshake completed (RSN)
root@armadillo:~#
root@armadillo:~#
```

図 2. スキャンコマンド (hcidool scan) 実行

⇒Wi-Fi 通信が切断される

(hostapd.service のログを確認すると disassociated 状態)

```
root@armadillo:~# date
Wed Dec 7 15:49:43 JST 2022
root@armadillo:~#
root@armadillo:~# hcidool scan
Scanning ...
    80:45:DD:F7:24:74      DESKTOP-N1I5UA4
root@armadillo:~#
root@armadillo:~# systemctl -l status hostapd.service --no-pager
● hostapd.service - Advanced IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP Authenticator
   Loaded: loaded (/lib/systemd/system/hostapd.service; enabled; vendor preset: enabled)
   Active: active (running) since Wed 2022-12-07 15:45:54 JST; 4min 29s ago
     Process: 2350 ExecStart=/usr/sbin/hostapd -B -P /run/hostapd.pid -B $DAEMON_OPTS ${DAEMON_CONF} (code=exited, status=0/SUCCESS)
    Main PID: 2463 (hostapd)
      Memory: 1.6M
    CGroup: /system.slice/hostapd.service
            └─2463 /usr/sbin/hostapd -B -P /run/hostapd.pid -B /etc/hostapd/hostapd.conf

Dec 07 15:45:53 armadillo systemd[1]: Starting Advanced IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP Authenticator...
Dec 07 15:45:53 armadillo hostapd[2350]: Configuration file: /etc/hostapd/hostapd.conf
Dec 07 15:45:53 armadillo hostapd[2350]: Using interface wlan0 with hwaddr 00:0e:8e:a2:96:ca and ssid "ARMADILLO-X1_NEWWLANMODULE"
Dec 07 15:45:54 armadillo hostapd[2350]: wlan0: interface state UNINITIALIZED->ENABLED
Dec 07 15:45:54 armadillo hostapd[2350]: wlan0: AP-ENABLED
Dec 07 15:45:54 armadillo systemd[1]: Started Advanced IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP Authenticator.
Dec 07 15:47:33 armadillo hostapd[2463]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: associated
Dec 07 15:47:33 armadillo hostapd[2463]: wlan0: STA 80:45:dd:f7:24:de RADIUS: starting accounting session 410FC733FE2FC373
Dec 07 15:47:33 armadillo hostapd[2463]: wlan0: STA 80:45:dd:f7:24:de WPA: pairwise key handshake completed (RSN)
Dec 07 15:50:14 armadillo hostapd[2463]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: disassociated
root@armadillo:~#
root@armadillo:~#
```

図 3-1. スキャンコマンド (bluetoothctl scan on) 実行

```
root@armadillo: # [dhd] CFG80211-ERROR: wl_cfg80211_change_station : WLC_SCB_AUTHORIZE sta_flags_mask not set
[dhd] CFG80211-ERROR: wl_cfg80211_get_key : Invalid algo (0x44)

root@armadillo: ~#
root@armadillo: ~# date
Wed Dec 7 16:27:10 JST 2022
root@armadillo: ~#
root@armadillo: ~# journalctl -u hostapd.service --no-pager
-- Logs begin at Wed 2022-12-07 16:20:34 JST, end at Wed 2022-12-07 16:27:08 JST. --
Dec 07 16:20:53 armadillo systemd[1]: Starting Advanced IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP Authenticator...
Dec 07 16:20:53 armadillo hostapd[2355]: Configuration file: /etc/hostapd/hostapd.conf
Dec 07 16:20:54 armadillo hostapd[2355]: Using interface wlan0 with hwaddr 00:0e:8e:a2:96:ca and ssid "ARMADILLO-X1_NEWWLANMODULE"
Dec 07 16:20:54 armadillo hostapd[2355]: wlan0: interface state UNINITIALIZED->ENABLED
Dec 07 16:20:54 armadillo hostapd[2355]: wlan0: AP-ENABLED
Dec 07 16:20:54 armadillo systemd[1]: Started Advanced IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP Authenticator.
Dec 07 16:22:08 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: associated
Dec 07 16:22:08 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de RADIUS: starting accounting session 61F59EA86C85C5FF
Dec 07 16:22:08 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de WPA: pairwise key handshake completed (RSN)
Dec 07 16:22:51 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: associated
Dec 07 16:22:51 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de RADIUS: starting accounting session 61F59EA86C85C5FF
Dec 07 16:22:51 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de WPA: pairwise key handshake completed (RSN)
Dec 07 16:26:36 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: disassociated
Dec 07 16:27:06 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: associated
Dec 07 16:27:06 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de RADIUS: starting accounting session C2D9D7A850E4A289
Dec 07 16:27:06 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de WPA: pairwise key handshake completed (RSN)
root@armadillo: ~#
root@armadillo: ~# systemctl -l status hostapd.service --no-pager
● hostapd.service - Advanced IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP Authenticator
   Loaded: loaded (/lib/systemd/system/hostapd.service; enabled; vendor preset: enabled)
   Active: active (running) since Wed 2022-12-07 16:20:54 JST; 6min ago
     Process: 2355 ExecStart=/usr/sbin/hostapd -B -P /run/hostapd.pid -B $DAEMON_OPTS ${DAEMON_CONF} (code=exited, status=0/SUCCESS)
    Main PID: 2475 (hostapd)
      Memory: 1.7M
      CGroup: /system.slice/hostapd.service
             └─2475 /usr/sbin/hostapd -B -P /run/hostapd.pid -B /etc/hostapd/hostapd.conf

Dec 07 16:22:08 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: associated
Dec 07 16:22:08 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de RADIUS: starting accounting session 61F59EA86C85C5FF
Dec 07 16:22:08 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de WPA: pairwise key handshake completed (RSN)
Dec 07 16:22:51 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: associated
Dec 07 16:22:51 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de RADIUS: starting accounting session 61F59EA86C85C5FF
Dec 07 16:22:51 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de WPA: pairwise key handshake completed (RSN)
Dec 07 16:26:36 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: disassociated
Dec 07 16:27:06 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: associated
Dec 07 16:27:06 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de RADIUS: starting accounting session C2D9D7A850E4A289
Dec 07 16:27:06 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de WPA: pairwise key handshake completed (RSN)
root@armadillo: ~#
root@armadillo: ~# bluetoothctl scan on
```

図 3-2. スキャンコマンド (bluetoothctl scan on) 実行

⇒Wi-Fi 通信が切断される

(hostapd.service のログを確認すると disassociated 状態)

```
[CHG] Device 00:1C:4D:4F:44:C4 RSSI: -95
[CHG] Device 00:1C:4D:4F:44:C4 TxPower: 2
[CHG] Device 5A:EB:83:F2:72:92 RSSI: -88
[CHG] Device 10:A2:E1:BA:18:BA RSSI: -94
[CHG] Device 52:87:E8:4F:F2:65 RSSI: -65
[CHG] Device 69:7B:7B:F8:48:09 RSSI: -95
[CHG] Device 69:7B:7B:F8:48:09 TxPower: 7
[CHG] Device 69:7B:7B:F8:48:09 RSSI: -104
[CHG] Device 69:7B:7B:F8:48:09 AdvertisingFlags:
00
[NEW] Device 49:5B:3D:46:8C:7B 49-5B-3D-46-8C-7B
[CHG] Device 52:87:E8:4F:F2:65 RSSI: -52
[CHG] Device 69:7B:7B:F8:48:09 RSSI: -96
[CHG] Device 69:7B:7B:F8:48:09 AdvertisingFlags:
1a
[NEW] Device 62:D9:99:49:ED:E9 62-D9-99-49-ED-E9
[CHG] Device 00:1C:4D:4F:44:C4 RSSI: -87
[CHG] Device 52:87:E8:4F:F2:65 RSSI: -29
[CHG] Device 80:45:DD:F7:24:74 RSSI: -75
[CHG] Device 80:45:DD:F7:24:74 TxPower: 10
[CHG] Device 3C:F0:11:83:52:E2 RSSI: -97
[CHG] Device 3C:F0:11:83:52:E2 TxPower: 12
[CHG] Device 52:87:E8:4F:F2:65 RSSI: -52
[CHG] Device 62:D9:99:49:ED:E9 RSSI: -100
[CHG] Device 52:87:E8:4F:F2:65 RSSI: -69
[NEW] Device 79:B2:07:FF:45:85 79-B2-07-FF-45-85
[CHG] Device 52:87:E8:4F:F2:65 RSSI: -56
^Croot@armadillo:~# systemctl -l status hostapd.service --no-pager
● hostapd.service - Advanced IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP Authenticator
   Loaded: loaded (/lib/systemd/system/hostapd.service; enabled; vendor preset: enabled)
   Active: active (running) since Wed 2022-12-07 16:20:54 JST; 11min ago
     Process: 2355 ExecStart=/usr/sbin/hostapd -B -P /run/hostapd.pid -B $DAEMON_OPTS ${DAEMON_CONF} (code=exited, status=0/SUCCESS)
    Main PID: 2475 (hostapd)
      Memory: 1.7M
    CGroup: /system.slice/hostapd.service
            └─2475 /usr/sbin/hostapd -B -P /run/hostapd.pid -B /etc/hostapd/hostapd.conf

Dec 07 16:22:08 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de RADIUS: starting accounting session 61F59EA86C65C5FF
Dec 07 16:22:08 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de WPA: pairwise key handshake completed (RSN)
Dec 07 16:22:51 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: associated
Dec 07 16:22:51 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de RADIUS: starting accounting session 61F59EA86C65C5FF
Dec 07 16:22:51 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de WPA: pairwise key handshake completed (RSN)
Dec 07 16:26:36 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: disassociated
Dec 07 16:27:06 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: associated
Dec 07 16:27:06 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de RADIUS: starting accounting session C2D9D7A850E4A289
Dec 07 16:27:06 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de WPA: pairwise key handshake completed (RSN)
Dec 07 16:32:16 armadillo hostapd[2475]: wlan0: STA 80:45:dd:f7:24:de IEEE 802.11: disassociated
root@armadillo:~#
root@armadillo:~#
```

以上