**ArubaOS OpenRoaming configuration snippets**

This configuration was tested on ArubaOS 8.7.1.1 (Vela build). Configuration of OpenRoaming (and Passpoint in general) is not possible via the UI, one needs to resort to CLI mode. The total configuration consists of multiple building blocks, each of which has its own section below. Much of it is copy&paste - the bits to adapt are marked with ".

### Main body: "wlan ssid-profile" definition

```
wlan ssid-profile PasspointAruba
   enable
   type employee
   essid PasspointAruba                                       # ANPs choice and irrelevant for OpenRoaming
purposes
   opmode wpa2-aes
   max-authentication-failures 0
   auth-server OR_Proxy_eduroamOT                              # we will only connect you if you are an eduroam
SP! Definition see below.
   rf-band all
   dtim-period 1
   broadcast-filter arp
   dmo-channel-utilization-threshold 90
   local-probe-req-thresh 0
   max-clients-threshold 64
   hotspot-profile OpenRoaming                                 # the important bit. Definition see below.
```

### Passpoint with OpenRoaming RCOIs: "hotspot-profile" definition

```
hotspot hs-profile OpenRoaming
   enable
   no comeback-mode
   no asra
internet
   no pame-bi
   no group-frame-block
   no p2p-dev-mgmt
   no p2p-cross-connect
   addtl-roam-cons-ois 0                                       # there are not more than 3 roaming consortium OIs
   gas-comeback-delay 500
   query-response-length-limit 6
   access-network-type private
   venue-group business
venue-type research-and-dev-facility
   roam-cons-len-1 5                                           # OpenRoaming RCOIs are always 4.5 bytes long (5 octets rounded)
   roam-cons-oi-1 5a03ba0000                                   # the main OpenRoaming RCOI: "OpenRoaming-All"
   (# unsettled access, all identities welcome, baseline QoS)
   roam-cons-len-2 3                                           # Cisco’s legacy OpenRoaming RCOI is 3 bytes long
   roam-cons-oi-2 004096                                       # Cisco’s legacy OpenRoaming RCOI, still needed for their OpenRoaming app and Samsung OneUI onboarding workflow
   roam-cons-len-3 0
advertisement-profile anqp-venue-name YourVenueInfo         # description of the venue in ANQP. Definition see below.
advertisement-profile anqp-roam-cons OpenRoaming
advertisement-profile anqp-roam-cons OpenRoamingCiscoLegacy # in case a station does run ANQP for the list of RCOIs, also add the same RCOIs as an ANQP element
```

### Uplink to authentication server: "auth-server"

The uplink can be realised over "good old" RADIUS/UDP, but then a shared secret and static IP address need to be negotiated with eduroam OT. Or, as a holder of a eduPKI RADIUS/TLS certificate, the connection can be established over RADIUS/TLS ("RadSec"). Pick one of the two variants below.

**RADIUS/UDP**
wlan auth-server OR_Proxy_eduroamOT
  ip ... # IP address of the preliminary OpenRoaming ANP-side proxy of eduroam OT
  port 1812
cacctport 1813
dkey ... # your shared secret for the preliminary OpenRoaming ANP-side proxy of eduroam OT
  service-type-framed-user 1x

RADIUS/TLS
wlan auth-server OR_Proxy_eduroamOT
  radsec
    ip openroaming-ap.eduroam.org
    port 1812 # this is the real hostname
    The port used is TCP/2083.
cacctport 1813 # these don't matter, it is an ArubaOS artifact.
The port used is TCP/2083.
  rfc5997 auth-only
  service-type-framed-user 1x

# the certificates themselves need to be uploaded in the web interface (Maintenance -> Certificates -> Upload -> Client/Trusted CA)
wlan cert-assignment-profile
  pki-cert-assign application radsec cert-type ClientCert certname RADIUS-TLS-Cert # "RADIUS-TLS-Cert" is the friendly name given to the client certificate during upload
  pki-cert-assign application radsec cert-type TrustedCA certname eduPKI-Root # "eduPKI-Root" is the friendly name given to the Trusted CA certificate during upload

Venue information in ANQP: "anqp-venue-name"
hotspot anqp-venue-name-profile YourVenueInfo
  enable
    venue-group business # repeats beacon info (see above) in ANQP
    venue-type research-and-dev-facility # repeats beacon info (see above) in ANQP
    venue-lang-code eng # a descriptive name for the venue in English
    venue-name "RESTENA Offices" # the name in English

RCOI information in ANQP: "anqp-roam-cons"
hotspot anqp-roam-cons-profile OpenRoaming
  enable
    roam-cons-oil-len 5
    roam-cons-oil 5A03BA0000

hotspot anqp-roam-cons-profile OpenRoamingCiscoLegacy
  enable
    roam-cons-oil-len 3
    roam-cons-oil 004096