Having fun with Provisioning Domains & Captive Portals

MICROSOFT

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neat

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“A small router vendor company” (Fred B.)

Tommy Pauly

“Some fruit company” (Forrest Gump)

CableLabs®

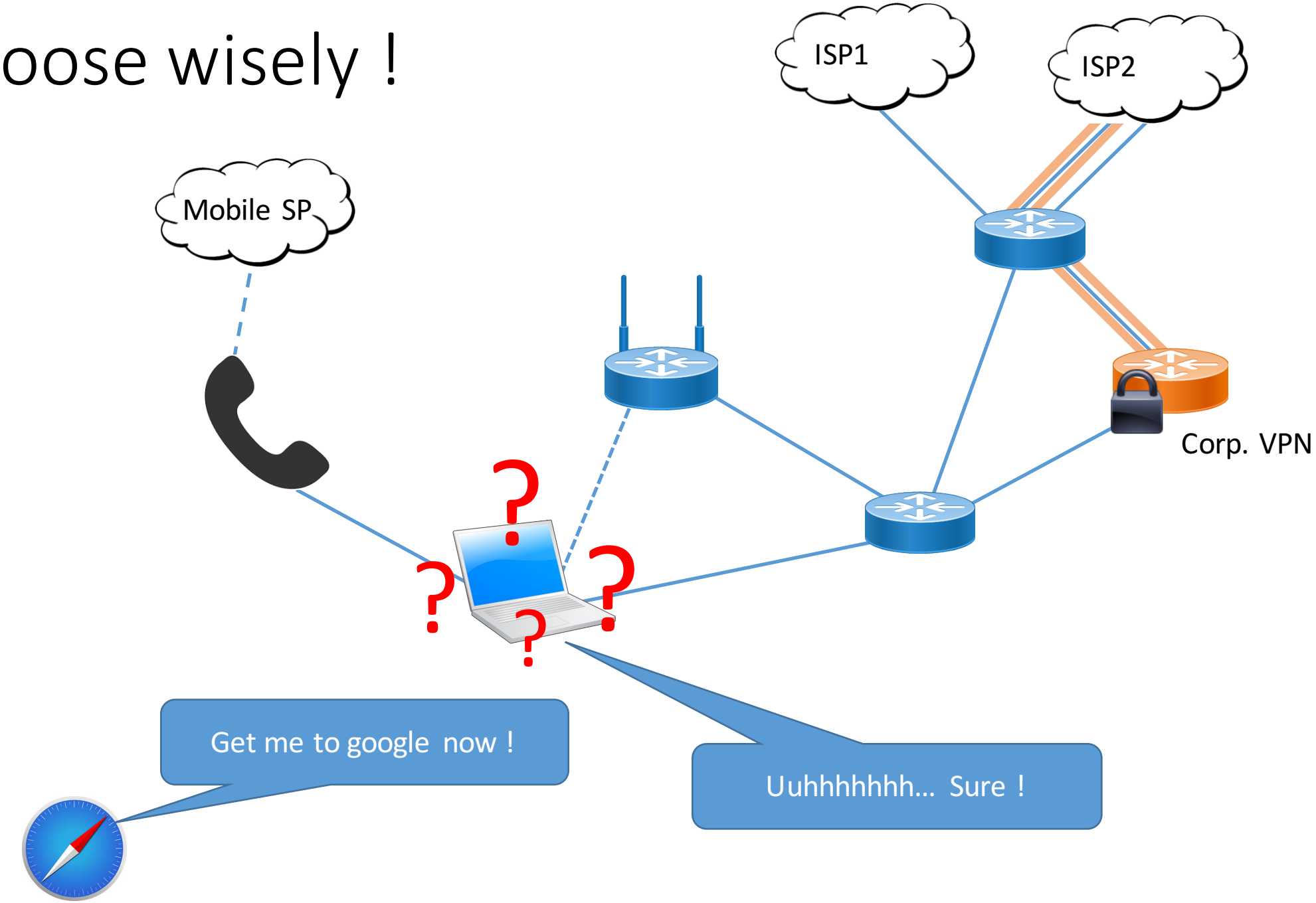
Darshak Thakore

Erik Kline

* First IETF-timers

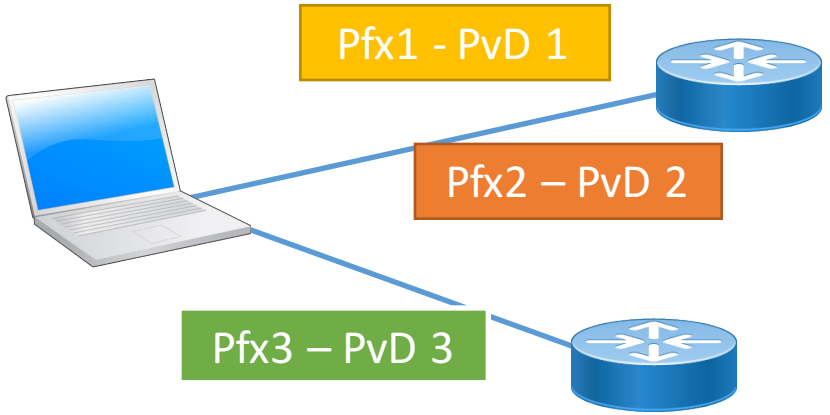
IETF 99 Hackathon

Choose wisely !



PvDs + CAPPORT in 15 seconds

Step 1:
Get the PVD IDs



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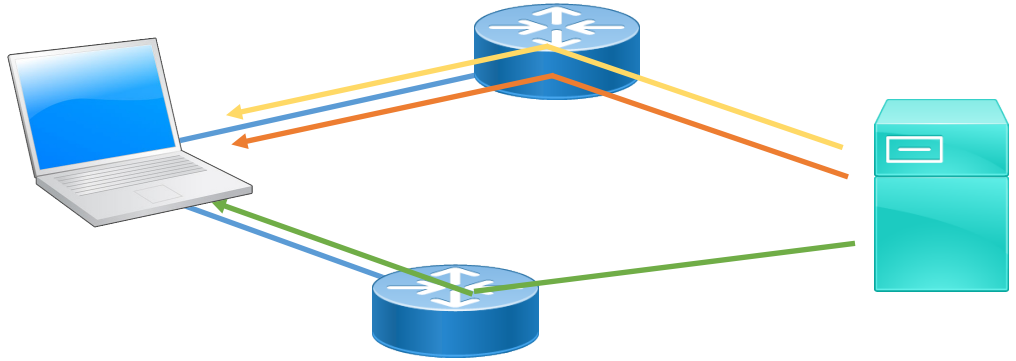
draft-bruneau-intarea-provisioning-domains-01

PVD-ID = FQDN

Step 2:
Get Additional Information with HTTP



HTTP GET http://<pvd-id>/pvd.json

Step 3:
Get to the captive portal.

Captive Portal API

Hackathon Achievements

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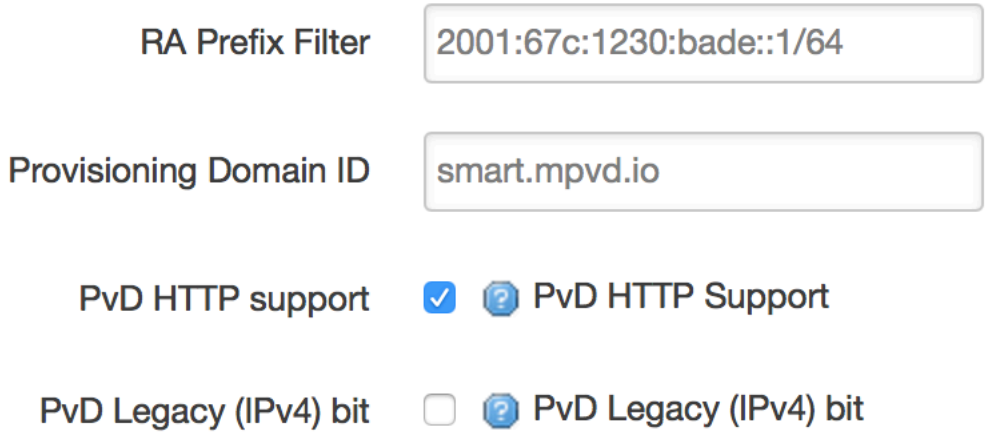
draft-bruneau-intarea-provisioning-domains-01
draft-tbd-capport-tbd

OpenWrt Support

https://github.com/Oryon/ietf99-odhcpd

- odhcpd PVD ID RA Option
- odhcpd multiple RAs per interface
- Luci configuration interface




```
option pvd_id 'smart.mpvd.io'
option pvd_http '1'
option prefix_filter '2001:67c:1230:bade::1/64'
option ra_maxinterval '15'
```

Hackathon Achievements

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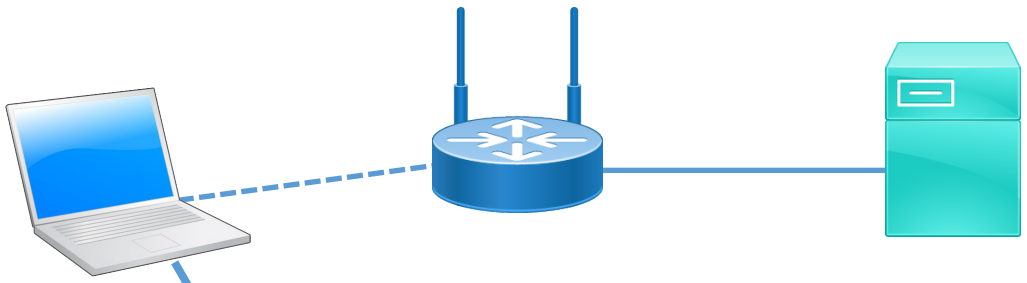
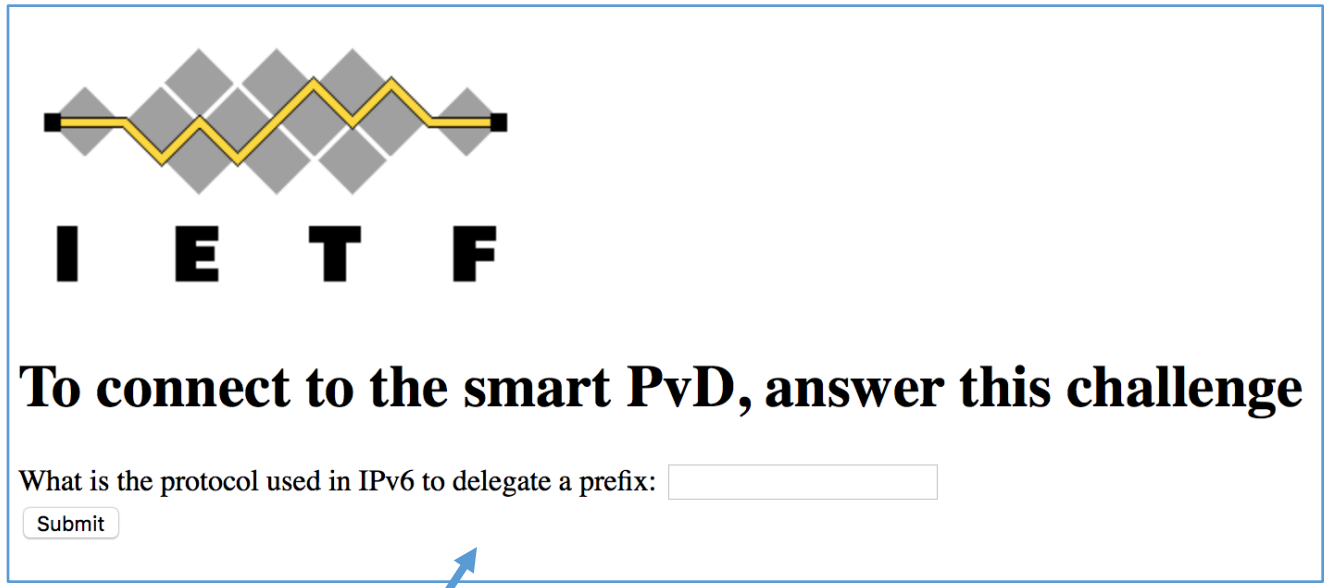
PvD Server and Captive Portal






```
{
  "name": "PvD for smart people",
  "prefixes": ["2001:67c:1230:abba::1/64",
"2001:67c:1230:bade::1/64"],
  "noInternet": false,
  "metered": false,
  "captivePortalURL" : "https://smart.mpvd.io/captive.php"
}
```

Hackathon Achievements

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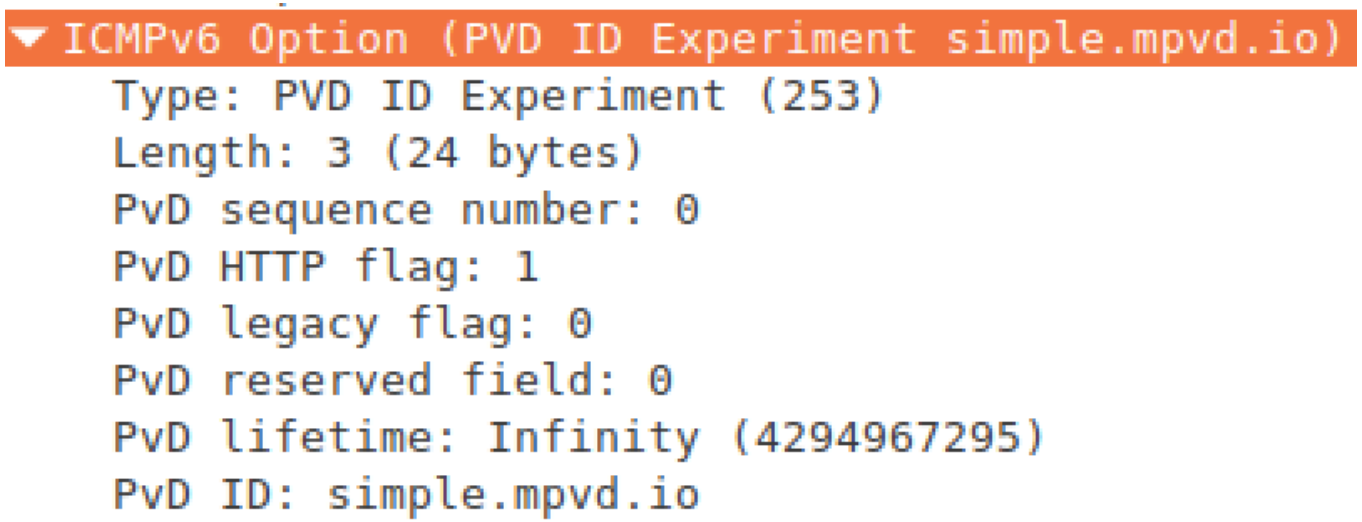
Linux Support

https://github.com/IPv6-mPvD

- **Interop. with OpenWrt**
  - Fix Wireshark dissector
  - Fix radvd
  - Fix Linux RA parsing

- Captive portal detection and popup

- Select the PvD with Firefox



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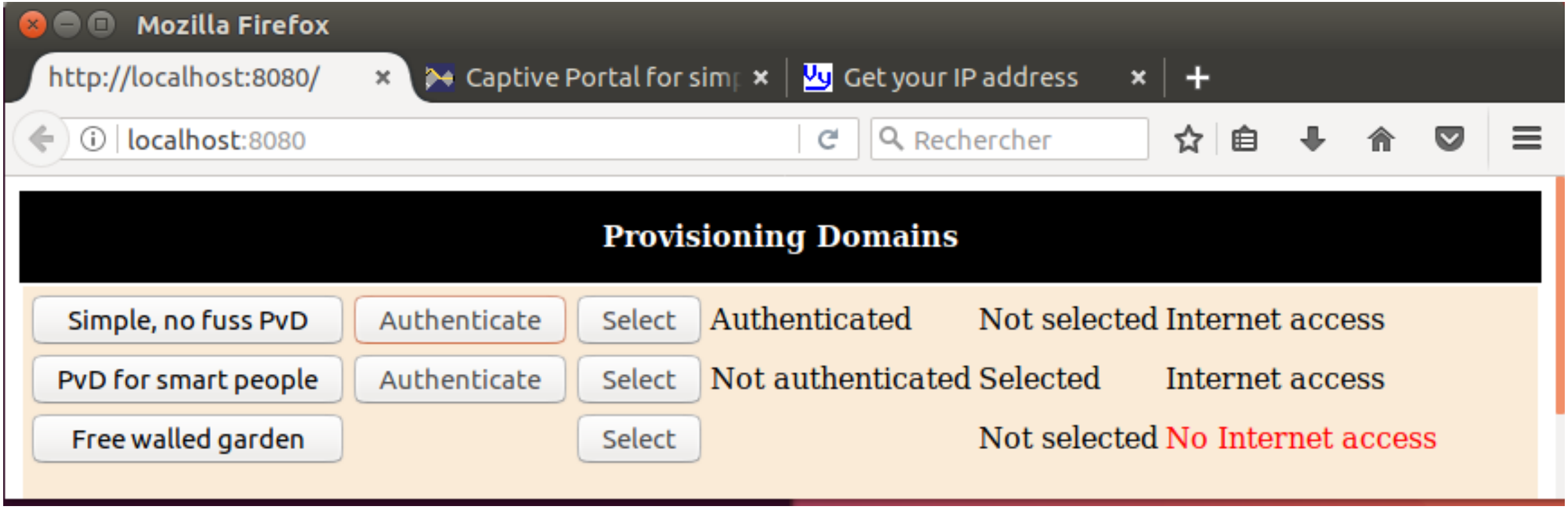

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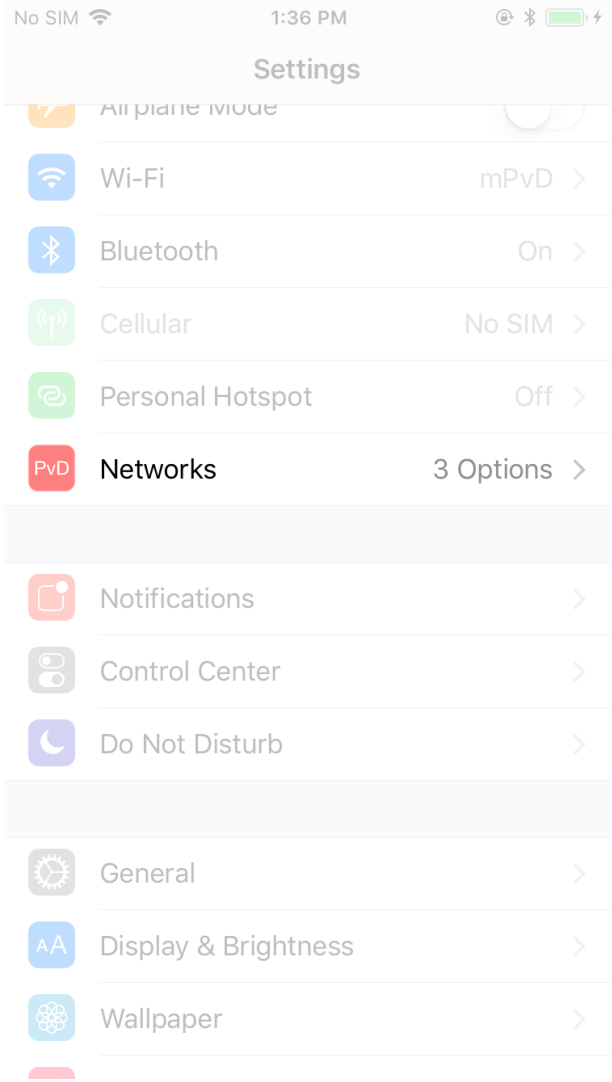
iOS Support

- Parsing RA PVD ID Option
- Fetch JSON PvD Additional Data
- Provide data to userland
- Accept multiple PvDs on single interface



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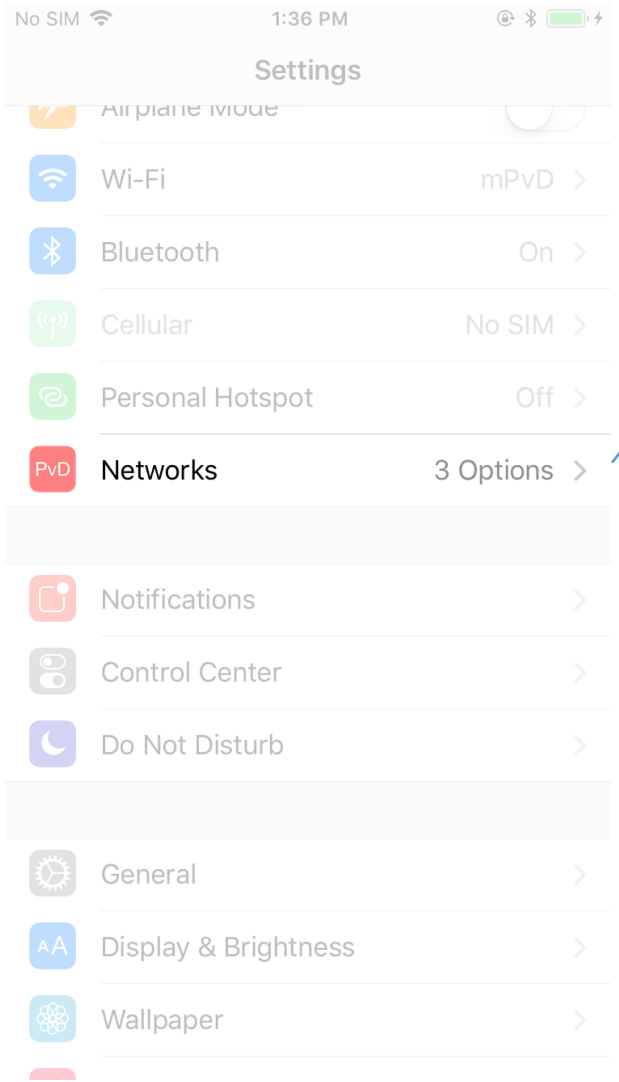

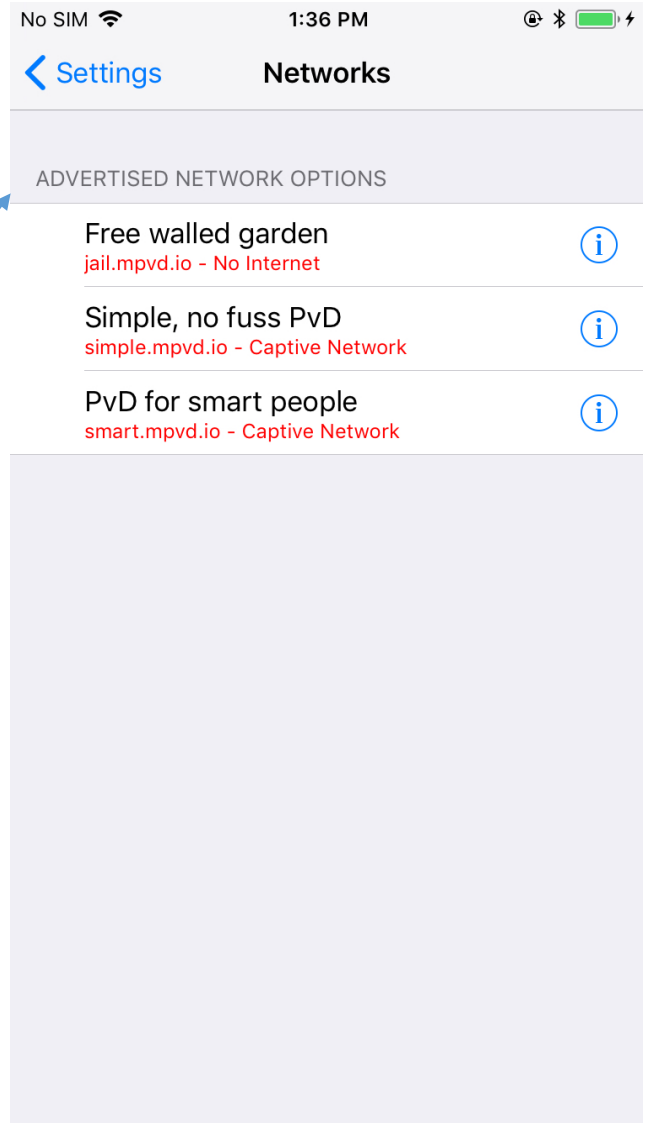

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neat support

- Fetch PvD List
- Integrate with NEAT information base

```
{
 "description": "PvD CIB node for remote host 192.168.56.10",
 "expire": -1.0,
 "filename": "pvd-enp0s8-192.168.56.10.cib",
 "link": true,
 "priority": 0,
 "properties": [
     [ {   "interface": { "precedence": 2,  "value": "enp0s8" },
           "local_interface": { "precedence": 2, "value": true }   } ],
     [ {   "capacity": { "precedence": 2, "value": 2000000 },
           "rtt": {"precedence": 2,  "value": 0.1 } } ]
  ],
 "root": false,   "uid": "pvd-enp0s8-192.168.56.10"
}
```

Feedback received during the hackathon

- Use ASCII formatting in RA option

- Use https://<pvd-id>/*.well-known/pvd*

Go read the drafts !

Go write code !