Using Provisioning Domains for Captive Portal Discovery
draft-pfister-capport-pvd-00

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Provisioning Domains in a nutshell

- Concept of PvD defined by RFC7556

  ```
  A consistent set of network configuration information. Classically,
  all of the configuration information available on a single
  interface is provided by a single source […]
  ```

- draft-ietf-intarea-provisioning-domains-02
  1. **Identify** provisioning domains with **Fully Qualified Domain Names** with a new **Router Advertisement option** (IANA allocated 21).
  2. Provide **additional information** (about the PvD) over **HTTPs** as a **JSON object**.
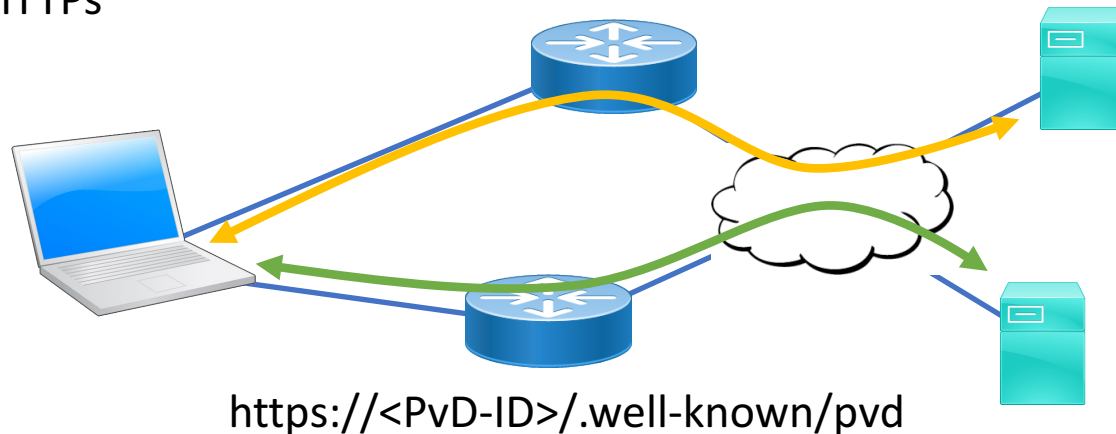
draft-ietf-intarea-provisioning-domains-02

Step 1:

Get the PVD IDs

PvD 1

PvD 2
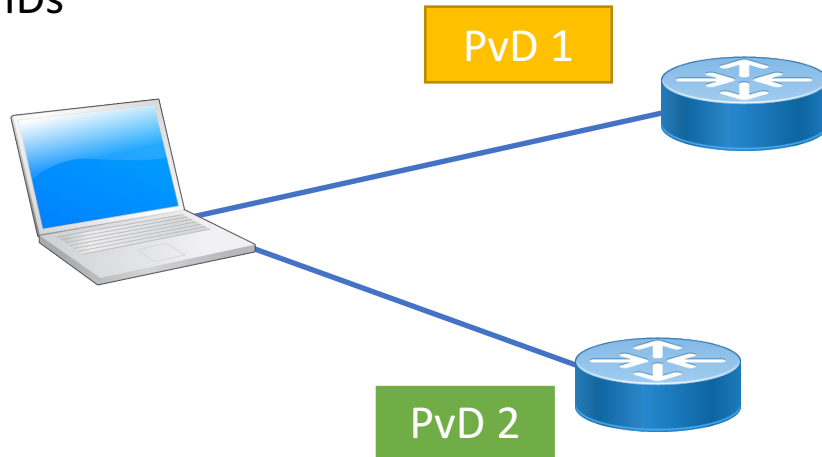
```
 0                   1                   2                   3
 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|      Type       |     Length      |H|L|R|  Reserved   | Delay |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|           Sequence Number           |                      ...
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+                            ...
...                       PvD ID FQDN                        ...
...              +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
...              |                   Padding                  |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                                                            ...
...            Router Advertisement message header          ...
...                (Only present when R-flag is set)         ...
...                                                          |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|  Options ...
+-+-+-+-+-+-+-+-+-+-
```

Step 2:

Get Additional Information
with HTTPs

https://<PvD-ID>/.well-known/pvd

```
{
    "name": "Foo Wireless",
    "localizedName": "Foo-France Wifi",
    "expires": "2017-07-23T06:00:00Z",
    "prefixes" : ["2001:db8:1::/48"],
    "noInternet": true
}
```
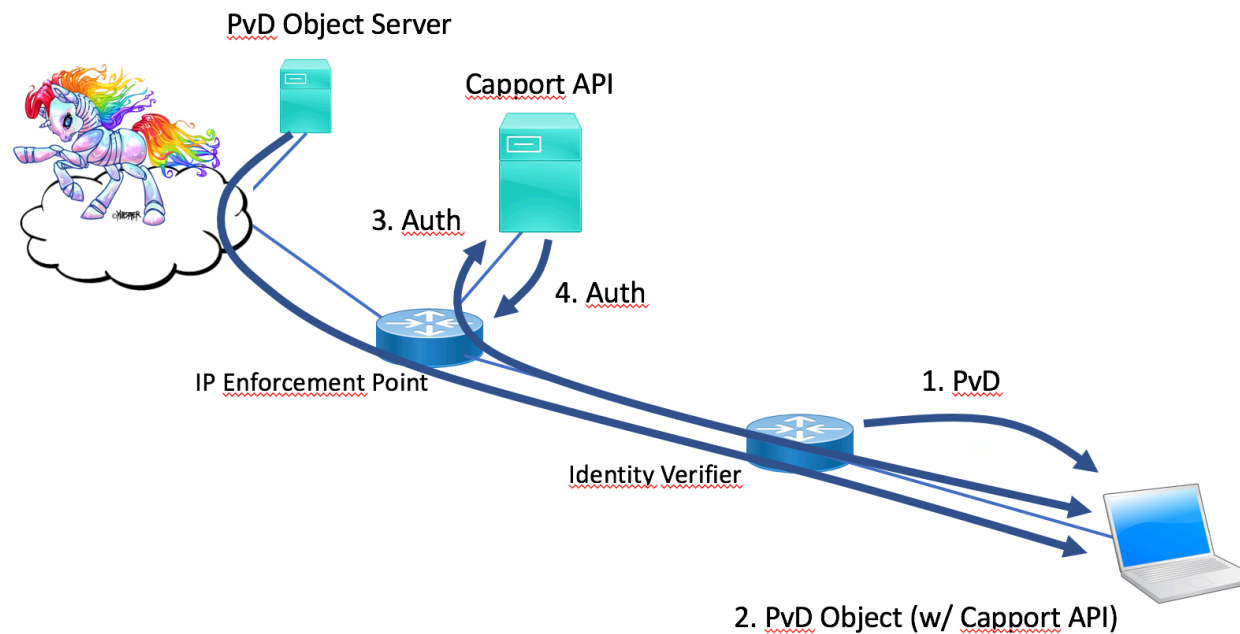
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draft-pfister-capport-pvd-00

- Adding a new "captive-api" key in PvD Additional Information JSON Object.

- Set to the URI of Captive Portal API (draft-ietf-capport-api-01).

- When present, the client is informed that:
    - The PvD is captive.
    - What the Captive Portal API URI is.

IETF 101 - Hackathon
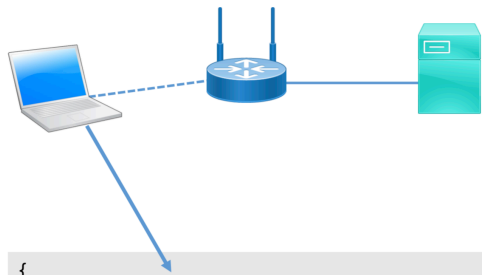

Captive portals with PvD

IETF 99 - Hackathon

Hackathon Achievements

draft-ietf-rtgwg-enterprise-pa-multihoming-01
draft-bruneau-intarea-provisioning-domains-01
draft-tbd-capport-tbd

Mozilla Firefox

http://localhost:8080/ ✕ | 🌊 Captive Portal for sim ✕ | 🔱 Get your IP address ✕ | +

⬅ ➡ ① localhost:8080 | ⟳ | 🔍 Rechercher | ☆ | ☰ | ⬇ | 🏠 | ▽ | ☰

Provisioning Domains

Simple, no fuss PvD	Authenticate	Select	Authenticated	Not selected Internet access
PvD for smart people	Authenticate	Select	Not authenticated Selected	Internet access
Free walled garden		Select		Not selected No Internet access

Hackathon Achievements

draft-ietf-rtgwg-enterprise-pa-multihoming-01
draft-bruneau-intarea-provisioning-domains-01
draft-tbd-capport-tbd

PvD Server and Captive Portal

I E T F

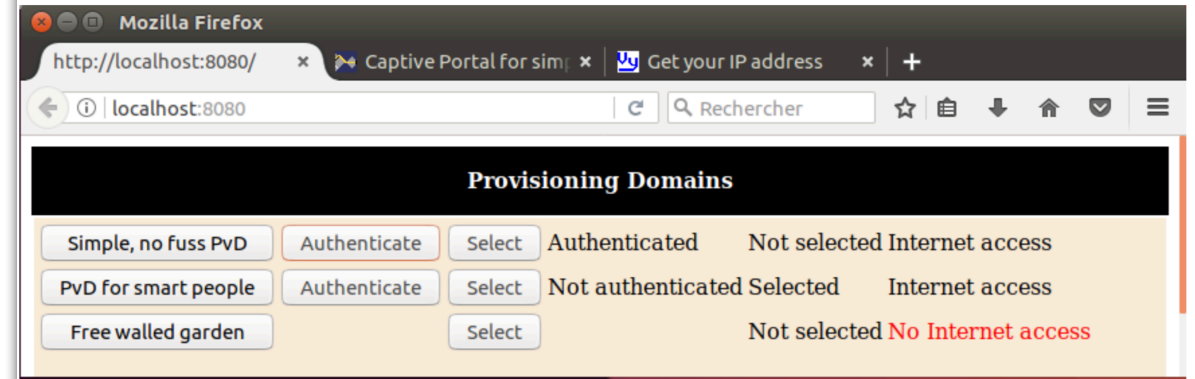**To connect to the smart PvD, answer this challenge**

What is the protocol used in IPv6 to delegate a prefix: [   ]
Submit

```
{
    "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"
}
```
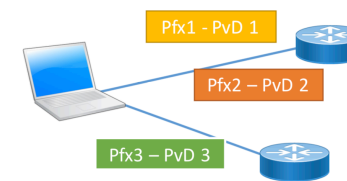
PvDs + CAPPORT in 15 seconds

Pfx1 - PvD 1
Pfx2 – PvD 2
Pfx3 – PvD 3

Step 1:
   Get the PVD IDs

draft-ietf-rtgwg-enterprise-pa-multihoming-01
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

For discussion

- Define `captive-api-gui` key for:

    Faster GUI access.

    Support of captive-portals without API.

- Define way to state the PvD is NOT captive (e.g. "`captive-api`":"").

- Pros/Cons of using PvD (instead of capport RA or DHCP option)
    - Con: Introduce additional step (pulling the PvD Object)
    - Pro: Increased extensibility (JSON, e.g. GUI URI)
    - Pro: More incentive to implement and deploy new RA option parsing.

- Does the working group think this is useful ?