

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

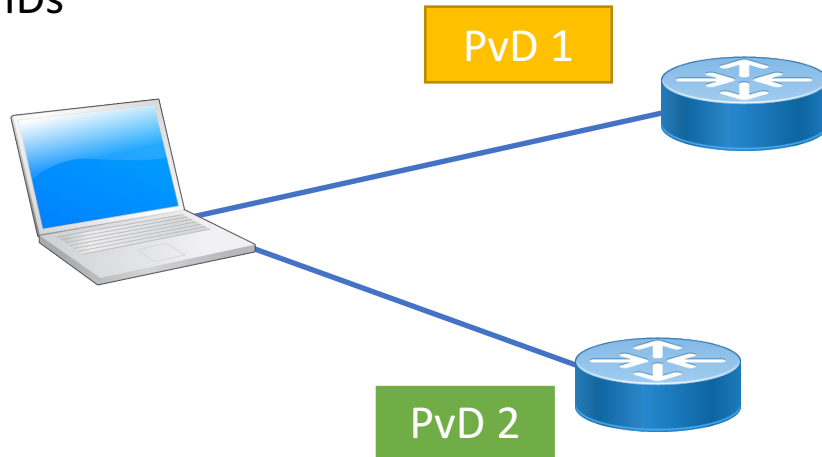
A consistent set of network configuration information. Classically, all of the configuration information available on a single interface is provided by a single source [...]

- 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

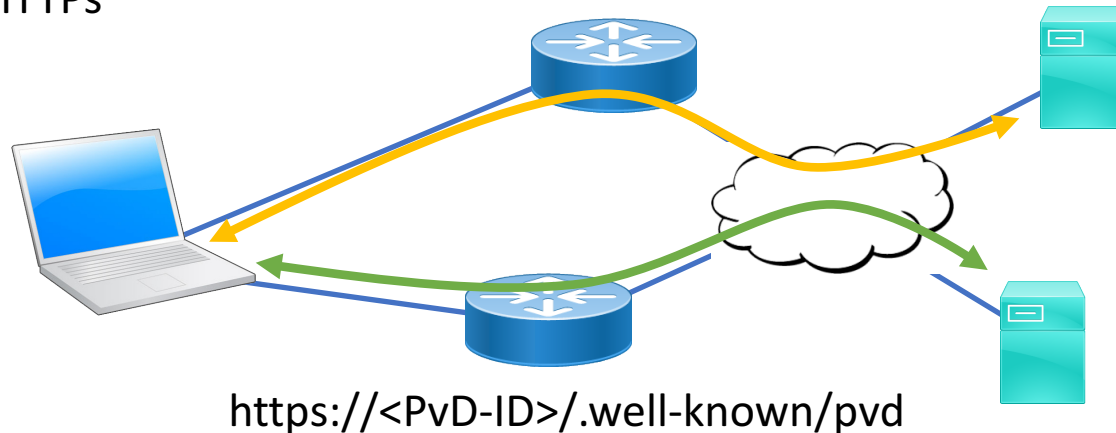
Step 1:

Get the PVD IDs



Step 2:

Get Additional Information
with HTTPs



```

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 ...
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+

```

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

Provisioning Domains Implementation status

Linux - <https://github.com/IPv6-mPvD>

- pvdd: A Daemon to manage PvD IDs and Additional Data
- Linux Kernel patch for RA processing
- iproute tool patch to display PvD IDs
- Wireshark dissector
- RADVD and ODHCPD sending PvD ID

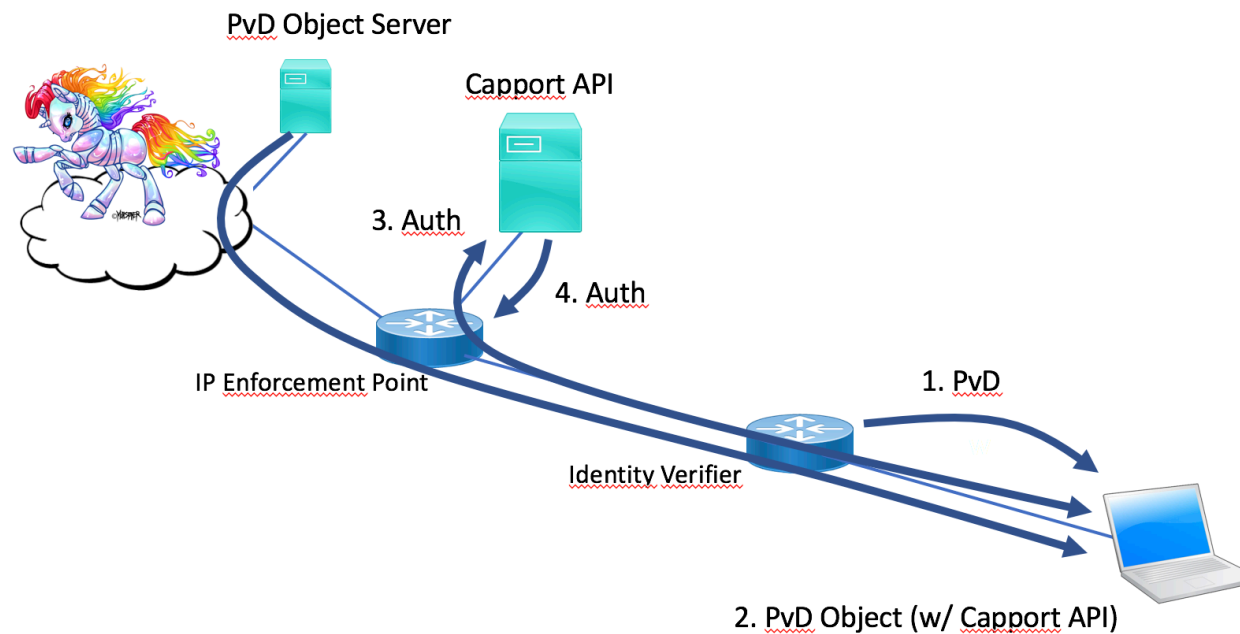
Using Provisioning Domains for Captive Portal Discovery

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

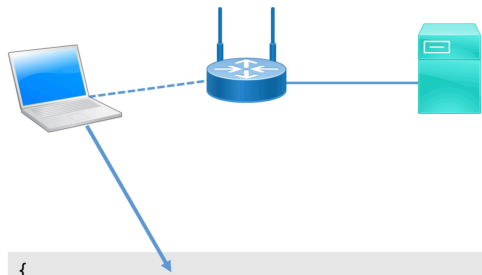


IETF 99 - Hackathon

Hackathon Achievements

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

PvD Server and Captive Portal



To connect to the smart PvD, answer this challenge

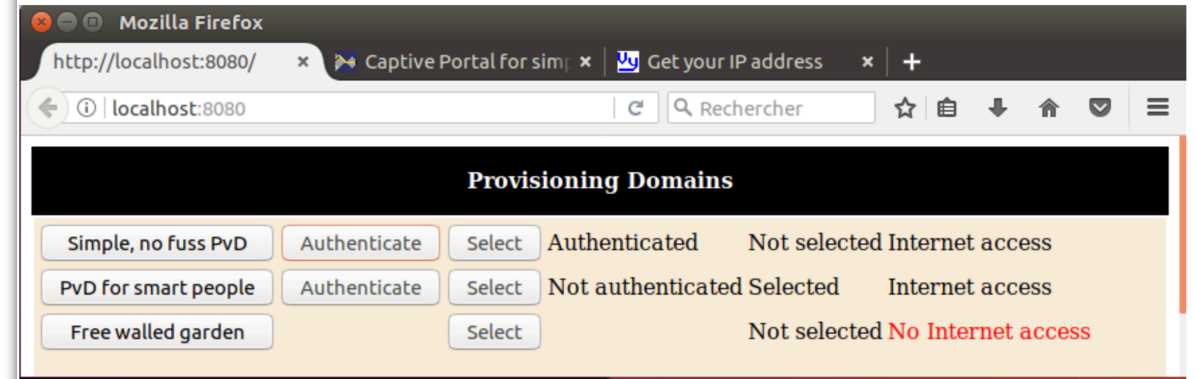
What is the protocol used in IPv6 to delegate a prefix:

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"
}
```

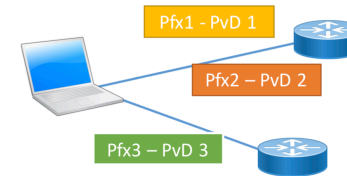
Hackathon Achievements

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



PvDs + CAPPORT in 15 seconds

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.



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 ?