

# PvDs for Captive Portals

draft-bruneau-intarea-provisioning-domains

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# What are Provisioning Domains (PvDs)?

# Provisioning Domains

Defined by the Multiple Interfaces (MIF) WG in RFC 7556 *“Multiple Provisioning Domain Architecture”*

A PvD is a **consistent set** of network **configuration information** that a device can be used by a device to access and use the network, and manage multiple network attachments

# Provisioning Domains

## Implicit Discovery

Some PvDs and PvD attributes are discovered implicitly (with system knowledge or with existing protocols)

- DHCP & RAs
- Interface type (Wi-Fi, Cellular, VPN, etc)
- DNS attributes

# Provisioning Domains

## Explicit Discovery

Explicit discovery is required to use multiple PvDs on a single interface...

- A PvD for each IPv6 prefix, representing different next-hop uplinks

... and for extended attributes

- Captive portals or limits of access
- Cost and requirements
- Quality expectations

Explicit PvD discovery is very similar  
to discovering and using Captive Portals

# Proposal for PvD Discovery

Identifier

Discovering PvDs requires some consistent identifier that can be used by a client device to correlate information

Draft defines PvD ID as a **Fully-Qualified Domain Name**

ID is sent via **IPv6 Router Advertisement**

Other proposals included DNS-SD and Reverse DNS lookup

# Proposal for PvD Discovery

## Extended PvD Information

A subset of the PvD information may be contained in a new IPv6 RA option

Full PvD information can be retrieved in JSON format by accessing:

**`https://<PvD-ID>/v1.json`**

# Proposal for PvD Discovery

## Extended PvD Information

JSON Key	Type	Description
name	UTF-8 String	User-visible name, should be part of bootstrap PvD
prefixes6	Array of IPv6 prefixes	Accessible IPv6 prefixes
noInternet	boolean	Signals if network provides general access
isCaptivePortal	boolean	If network is captive
captivePortal	URL of portal	Pointer to captive page
cost	Object?	Pricing information
timeout	Date/Time	Timeout for NAT or Captive Portal

# Captive Portals + PvDs

A solution that explicitly discovers Captive Portals will likely look very similar to one for PvDs

How do we make sure we have cohesive solutions?

Are there any conflicting requirements?