Resource Directory Extensions

`draft-amsuess-core-resource-directory-extensions-05`
(and `draft-amsuess-core-transport-indication-00`)

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Inside resource-directory-extensions

Exercising RD extension points

Reverse Proxy "Please give me a public address"

Infinite Lifetime to allow CTs to never come back

Zone identifier introspection to peek beyond the split horizon

Multicast aggregation Proxy poses as lookup interface, doing multicast discovery on demand

Opportunistic RD including soft hand-over

Reverse Proxy

simplistic TURN for CoAP

Discoverable version of existing practice (LwM2M)

POST /rd?ep=timeserver leading to lookup
<coap://[2a02:b18:c13b:8010:8628:563f:7c92:13bc]/t>

POST /rd?ep=timeserver&proxy=on
<coap://timeserver.proxy.rd.coap.example.com/t>

Valuable in IETF110 without VPN

Reverse Proxy: Downside, mitigation and difficulties

- Wild URI aliasing
  - Being a forward proxy
    - Discovery?

Proxy discovery in `transport-indication-00`

- Declare that there is a proxy

  ```
  </res>,<coap+tcp://h1.example.com>;
      rel=has-proxy;anchor="/"
  ```

  "CoAP-over-TCP on h1.example.com is a usable proxy for all resources hosted on /"

- No URI aliasing in the application (only on the wire if `has-unique-proxy` is set; then Uri-Host / Proxy-Scheme can be elided)

Next steps

- Talk about it
- Tune relationship semantics and directions to be practical
- Adjust and try out next-gen RD proxying that uses it