DNSSD Next Steps

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Discovery Broker
Sleep Proxy
Advertising Proxy
Zone Stitching
DNSSD Roadmap
Discovery Broker

Meta Discovery Proxy
Network intermediary

• Looks like Discovery Proxy to clients
• Looks like client to Discovery Proxies and other servers

Improves efficiency

• Client talks to one Discovery Broker, which talks to several Discovery Proxies on its behalf
• Discovery Proxy on link can serve single Discovery Broker, which serves multiple clients
Sleep Proxy

Apple has shipped this for years

Basically, Sleep Proxy is:

• DNS Update (RFC 2136)
• Garbage collection (Dynamic DNS Update Leases — draft-sekar-dns-ul)
• Wake-on-LAN magic packet (EDNS0 Owner Option — draft-cheshire-edns0-owner-option)

Time to document it
Advertising Proxy

Conceptual mirror image of Discovery Proxy
Allows non-local devices to advertise services
Applicable for mesh networks like 6LoWPAN (as used by Thread)
  • Supporting multicast on these networks is unreasonably onerous
Basically Sleep Proxy, without the Wake-on-LAN magic packet
  • DNS Update (RFC 2136)
  • Garbage collection (Dynamic DNS Update Leases — draft-sekar-dns-ul)
Zone Stitching

Avoid duplicate names when querying multiple links
• e.g., using Discovery Broker

Could just expose link names to disambiguate

Or could force name uniqueness
• Could build on Discovery Proxy to check for duplicate names on related links
• Could result in $n^2$ bilateral connections between all Discovery Proxies on related links
• But, maybe not a problem, if $n$ is small
DNSSD Roadmap

There are getting to be a lot of parts here
Enough that we need an overview document
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