

DNS-SD and IoT

Peter van der Stok
Ines Robles

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Purpose

- Discuss IoT requirements for DNSSD
- IoT features constrained resources such as:
 - limited bandwidth,
 - limited CPU, memory (less critical)
 - power resources.
- Requirement to reduce network load

IoT extensions for DNSSD

How to adapt/extend DNS-SD; suggestions

- DNS-SD Compression of payload?
- DNS-SD communication reduction?
- Web of Things approach?
 - Integrate Resource Directory?
 - DNS-SD options for different topologies?

Resource Directory

Introduced to reduce discovery multicast traffic:

- RD stores *links* to *endpoints* (*ep*)
- ep send unicast to RD to discover selected eps

Populating RD with links

- Link to ep is inserted by ep itself
- RD is populated by third party (commissioning tool)

Endpoint has resource type (rt), registered with IANA

- RD endpoint has rt: core.rd, core.rd.lookup, ...

Query parameters help to filter selection

Resource Directory

Ongoing work:

- Populate DNS from RD
 - to access endpoints via DNS
- Needs conversion from link attributes to PTR, TXT and SRV records of a service
- Guidelines from fine-grained link to coarser-grained service