dnssdext BoF

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Note Well

This summary is only meant to point you in the right direction, and doesn't have all the nuances. The IETF's IPR Policy is set forth in BCP 79; please read it carefully.

The brief summary:

❖ **By participating with the IETF, you agree to follow IETF processes.**

❖ **If you are aware that a contribution of yours (something you write, say, or discuss in any IETF context) is covered by patents or patent applications, you need to disclose that fact.**

❖ **You understand that meetings might be recorded, broadcast, and publicly archived.**

For further information, talk to a chair, ask an Area Director, or review the following:
BCP 9 (on the Internet Standards Process)
BCP 25 (on the Working Group processes)
BCP 78 (on the IETF Trust)
BCP 79 (on Intellectual Property Rights in the IETF)

Agenda

* Administravia (5 mins, Chairs)
  Note Well and agenda bashing

* Goals of the BoF (15 mins, Chairs)
  Review of mdnsext BoF at IETF85 and progress since then
  NB. RFC5434, Section 1

* Requirements (30 mins, Stuart Cheshire)
  draft-lynn-mdnsext-requirements-02

* Open discussion (40 mins, Chairs)
  Charter bashing, commitment to do work
  http://www.ietf.org/proceedings/87/slides/slides-87-dnssdext-1.txt

* Conclusion (30 mins, Chairs)
  Are we ready to form a WG with the agreed charter?

mdnsext @ IETF85

- A previous BoF was held at IETF85:
  - c. 200 people
  - c. 25 indicated willingness to do work
  - Lots of positive discussion
  - Some good new contributions
  - Some concern that may be an assumption of mdns
  - Some concern over linkage to unicast DNS services
  - Not so much list email in advance of meeting
- We only get two shots at a WG-forming BoF

Drafts

- A number of personal drafts submitted

- **Requirements draft:**
  - **http://tools.ietf.org/html/draft-lynn-mdnsext-requirements-02**

- Hybrid proposal:
  - http://tools.ietf.org/html/draft-cheshire-mdnsext-hybrid-02

- Cisco requirements/solution:
  - http://tools.ietf.org/html/draft-bhandari-dnssdext-mdns-gateway-01

- OSPF-based proposal:
  - http://tools.ietf.org/html/draft-stenberg-homenet-dnssdext-hybrid-proxy-ospf-00

dnssdext - mail list

- List:
  - mdnsext@ietf.org (old name kept for simplicity)
- List info:
  - https://www.ietf.org/mailman/listinfo/mdnsext
  - Approx 190 emails since IETF85 BoF, versus about 20 list emails before the BoF
- A lot of discussion on extending DNS-SD has also taken place on the homenet mail list
  - And so that relationship also needs to be understood

RFC 5434 - reminder

- If a WG is sought, the goal of the BoF is to demonstrate:
  - There is a problem that needs solving, and the IETF is the right group to attempt solving it.
  - There is a critical mass of participants willing to work on the problem (e.g., write drafts, review drafts, etc.).
  - The scope of the problem is well defined and understood, that is, people generally understand what the WG will work on (and what it won't) and what its actual deliverables will be.
  - There is agreement that the specific deliverables (i.e., proposed documents) are the right set.
  - It is believed that the WG has a reasonable probability of having success (i.e., in completing the deliverables in its charter in a timely fashion).

Presentation

- We will discuss the charter after the discussion led by Stuart Cheshire
  - draft-lynn-mdnsext-requirements-02
  - Get feeling of room as to what we're looking to do

- We then need to consider what is required to move towards forming a WG
  - We need to build a critical mass
  - We need to progress the requirements draft
    - And people committed to work on that
    - Some recent good list comments from Zigbee community

draft-lynn-mdnsext-requirements-02

Stuart Cheshire

The draft charter

http://wiki.tools.ietf.org/bof/trac

http://www.ietf.org/proceedings/87/slides/slides-87-dnssdext-1.txt

Description/Problem statement

- Currently, zeroconf networking protocols are generally used to discover services within the scope of a single link. In particular, the Bonjour protocols suite, comprising mDNS (RFC 6762) and DNS-SD (RFC 6763) are widely used for discovery and resolution of services and names on a single

- The Bonjour protocol suite is commonly used in many scenarios, including home networks, commercial and campus enterprise networks, and may be of use in certain mesh networks. However, the multicast Bonjour protocols are constrained to link-local scope, so can only be used to discover services on the same link. In a typical current home network, which is a single link, users should experience the desired discovery behavior. However, in future multi-link home networks (as envisaged by the homenet WG) and in routed campus or enterprise networks, devices and thus users can only discover services on the same link, which is a significant limitation. Such limitations have led to calls, such as those by the Educause petition, to develop an appropriate solution to span multiple links, or to perform discovery across a wide area (not necessarily on directly connected links).

- In addition, the ZigBee Alliance Smart Energy Profile 2.0 commercial standard currently under development has specified the Bonjour protocols as its method of zero configuration discovery. However, its use of wireless mesh multi-link subnets and its use across traditional routed networks will require extensions to the Bonjour protocols to allow operation across multiple links.

- As demand for service discovery across wider area routed networks grows, some vendors are beginning to ship their own early solutions. It is thus both timely and important that efforts to develop improved, scalable, autonomous service discovery solutions for routed networks are coordinated towards producing a single, standards-based solution.

dnssdext goals

1. To document a set of requirements for scalable DNS-based service discovery in routed, multi-link networks in the following four scenarios:

   a) Commercial enterprise networks
   b) Academic/educational/university campus networks
   c) Multi-link home networks, such as those envisaged by the HOMENET WG
   d) Multi-link/single subnet (mesh) networks, such as those described by
        the ZigBee Alliance Z-IP specification

2. To develop an improved, scalable solution for wide-area service discovery that can operate in multi-link networks, applicable to the scenarios above.

3. To develop a BCP for the coexistence of zeroconf (mDNS) and unicast (global DNS) name services in such multi-link networks, which should include consideration of both the name resolution mechanism and the namespace.

dnssdext deliverables/milestones

- The WG will produce three documents:

    1) an Informational RFC on the requirements for wide-area service discovery protocols;

    2) a Standards Track RFC documenting a wide-area service discovery solution that is applicable to those scenarios;

    3) and a BCP document describing the most effective method to integrate mDNS and global DNS name services.

Sep 2013 Formation of the WG
Oct 2013 Adopt requirements draft as WG document
Nov 2013 Submit requirements draft to the IESG as an Informational RFC
Mar 2014 Adopt wide-area service discovery solution draft as WG document
Mar 2014 Adopt zeroconf and unicast DNS integration BCP draft as WG document
Sep 2014 Submit wide-area service discovery solution draft to the IESG as Standards Track RFC
Sep 2014 Submit zeroconf and unicast DNS integration solution draft to the IESG as BCP

Scope of the charter?

- Is it clear that there is a useful problem to solve here, and the IETF is the place to do it?
- But do we think the problem statement is clear enough and well-scoped?
- How mature is our understanding of the requirements?
- And thus do we think we can solve the problem?
- Are the three goals and deliverables appropriate?
- What is the draft charter missing?

Questions - critical mass

- We need people committed to do the work
- So, who would be willing to author (and work on)
  - The requirements document ?
  - The wide-area service discovery solution ?
  - The name service integration BCP?
- Who would be willing to review documents?
- Based on the commitment, do we want to move forward towards a WG?
  - Subject to mail list and other confirmation/approval