homenet and mdnsext

Tim Chown
Homenet WG, IETF85 Atlanta
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Naming and service discovery

• We are discussing naming and service discovery requirements in the homenet architecture draft
  – Probably the last part to nail down before WGLC
• The requirements include making naming and service discovery work across multi-link homenets
• The mdnsext BoF is discussing the same thing
  – But for a broader set of scenarios

• Question is what homenet should do
  – Press ahead with own requirements/solution?
  – Defer the topic to mdnsext?
  – Something else
• And NB. mdnsext is not (yet) a WG
mdnsext – draft problem statement

• Currently, zeroconf networking protocols are generally used to discover services within the scope of a single link, specific examples being mDNS (RFC 6762 in AUTH48) and DNS-SD (RFC 6763 in AUTH48)

• The problem is how best to extend these protocols to beyond the single link, e.g. in future multi-link home networks (as envisaged by the homenet WG) or in routed campus/enterprise networks or multi-link LLNs.

• In principle DNS-SD can be used with conventional unicast DNS for wide area service discovery spanning multiple links, but in practice this capability is not widely used.

• As a result, as demand for service discovery across 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 service discovery solutions for routed networks are coordinated towards producing a single, standards-based solution.
mdnsext mail list

• List:
  – mdnsext@ietf.org

• List info:
  – https://www.ietf.org/mailman/listinfo/mdnsext
  – 120 subscribers as of end of October
  – But only 17 messages as of Nov 4th
Mdnsext BoF

• Held a BoF yesterday to consider whether there is the potential to form a WG (using principles in RFC 5434)
  – Good turnout (100+ estimated)
  – Good indication of people willing to do work (~25, including some vendors currently producing early bridging solutions)
  – Some excellent comments made at the mic
• So the BoF was positive, but before a WG can be considered we need to see:
  – More discussion on the list – demonstrate the critical mass
  – A more mature requirements text
  – A more refined charter, problem statement and planned deliverables
• The above can, and must, happen before a WG is formed
Draft mdnsext goals

1. To document a set of requirements for service discovery across 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 HOMENET
   - d) Multi-link/single subnet (mesh) networks, such as ROLL/6LOWPAN

2. To develop an improved, scalable solution for wide-area service discovery spanning multiple links, applicable to the scenarios above.

3. To develop a solution to seamlessly integrate zeroconf (mDNS) and unicast (global DNS) name services, which should include consideration of both the name resolution mechanism and the namespace.
Presentations

• Two presentations made in the BoF
  – See https://datatracker.ietf.org/meeting/85/materials.html
• Use cases for Bonjour in routed networks (Stuart Cheshire)
  – Reviewed mDNS/DNS-SD, Educause petition, ...
• Requirements
  – draft-lynn-mdnsext-requirements-00 (Kerry Lynn)
  – Scalability, usability, deployability
• Good discussion of both
  – Lines at the mic needed to be closed
  – Need to capture those discussions on the list
So...

- Where do we go with mdnsext and homenet?
- Thoughts?