

mDNS X-Link IETF89

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DHCP uses broadcast Proxy

- DHCP uses a broadcast proxy and it works.
- mDNS lacks a means to link proxies and also lacks a means to communicate inwardly.
- Services in DNS-SD placed into DNS and seen on different Bridged networks must operate in conjunction with some form of routing.

ZC in Private Space

- Facility infrastructure are assigned local addresses.
- draft-cheshire-dnssd-hybrid recommends suppression of local addresses making this unsuitable and unsafe for MOST use cases.
- mDNS character repertoire can not be simply mapped to DNS.
- Automatic DNS-SD resource placement into DNS has significant security implications.

Auto DNS Zones

- Use of <http://publicsuffix.org/> list can help with label conversion.
- A growing number of recognized TLDs might conflict with private namespace such as: ***link, domain, build, red, blue, black, pink, home, haus, casa, event, college, meet, feedback, best, rest, supplies, supply, bid, bar, pub, exposed, cards, community, parts, report, tools, expert, london, photo, pics, network, zone, club, social, ninja, wiki, email, ren, computer, support, guide, menu, camera, equipment, etc...***
- Amidst rapid namespace expansion, dependence on DNS search lists may prove problematic.

mDNS —> DNS

- Automatically placing any mDNS resources into DNS is not without risk.
- DNS resource information will cause exposure well beyond what mDNS provides.
- Such added disclosure WILL lead to compromises.

RBridge offers incremental deployment

- Replacing the IEEE 802.1 Bridges with RBridges will ease the implementation of desired goals.
- Intended for customer but not provider use.
- Bridges replaced by RBridges with default configuration will Just Work.
- Note: A spanning tree never forms through an RBridge but terminates at RBridge ports.

RBridge ether type "L2-IS-IS"

- RBridges together establish a link state protocol to compute pairwise optimal paths for unicast and distribution trees for known destinations or multicast/broadcast groups.
- To mitigate temporary loop issues, RBridges forward based on IEEE 802.3 encapsulation hop count. RBridges also specify next hop RBridge as the destination when forwarding unicast frames across a shared-media link to avoid spawning additional copies during a temporary loop. Forward/Reverse checks are also made on multi-destination frames.
- Multicast frames will have a multicast destination MAC address of "All-IS-IS-RBridges".
- See [RFC6325](#) and [RFC6439](#).

- Questions?