IETF®
dnssdext – DNS-SD Extensions

Date: Wednesday, July 31

Time: 0900-1130
Room: Potsdam 3
Chairs: Tim Chown,
Ralph Droms

Description:
Today's zeroconf service discovery protocols operate within the scope of a single link. However, there is a growing demand for such protocols to be capable of working in multi-link, routed networks. For example, a user on a wireless device may wish to use a display device in the same room, but that runs in a different wired subnet.

In particular, the Bonjour protocol suite, comprising mDNS (RFC 6762) and DNS-SD (RFC 6763), is widely used for discovery and resolution of services and names on a single link. However, the multicast Bonjour protocols are constrained to link-local scope, so can only be used to discover services on the same link.

Such limitations are likely to cause significant problems for users in many scenarios, including future multi-link home networks, as envisaged by the homenet WG, and in routed campus or enterprise networks.

There have thus been many 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 (which may not necessarily be on directly connected links).

The dnssdext BoF aims to form a WG to develop solutions to provide scalable DNS-SD services in multi-link, routed networks, as found in academic, enterprise, home network and mesh radio scenarios.

There are some early products being released by vendors to address this problem. 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; given its use of wireless mesh multi-link subnets it will require extensions to the Bonjour protocols to allow operation across multiple links.

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.

This is a second BoF on the topic of DNS-SD extensions, following the mdnsext BoF during IETF 85.