IETF 102   DNS-SD   JULY 2018   TOM PUSATERI

RE-CHARTER THOUGHTS

WI–FI MULTICAST IS NOT DEPENDABLE

▸ From draft-ietf—dnssd-mdns-relay Section 2:

"Note that it is becoming increasingly common for a multicast link to be smaller than its corresponding unicast link. For example it is becoming common to have multiple Wi-Fi Access Points on a shared Ethernet backbone, where the multiple Wi-Fi Access Points and their shared Ethernet backbone form a single unicast link (a single IPv4 subnet, or single IPv6 prefix) but not a single multicast link."

▸ From draft-perkins-intarea-multicast-ieee802

"Performance issues have been observed when multicast packet transmissions of IETF protocols are used over IEEE 802 wireless media."

MDNS IS NOW LEGACY

Moving forward, we need to focus on Unicast-only

WHAT DOMAIN AM I IN?

▸ Wifi + Cellular confuses domain search

▸ On campus, users want to associate with the campus

▸ location is more important than DHCP domain name

  ▸ traits like bluetooth proximity beacons could help

  ▸ or credentialed domain independent of attached network

▸ DHCP domain becoming less relevant

CAN I TETHER?

Who are you?

SERVICES ARE PERSONAL

▸ Most services now require authorization

▸ attached network is irrelevant

▸ I want to search for services on the .tompusateri domain

▸ Independent of what network they're on or their location

▸ campuses want to offer different services to student, faculty, or employees but not guests

TODO

▸ DISCOVERY Proxy started as unicast/multicast hybrid

　　▸ still useful in a unicast-only world as a sync point

　　▸ relies on domain name from DHCP, static config, or .local for domain enumeration

▸ DNS-SD clients can operate unicast-only but domain discovery on cellular requires intervention

▸ Need a framework for authorizing users for unique service offerings

▸ Do we need to enhance DNS Update to achieve this or standardize this?

▸ Do we need an Update proxy instead of a relay proxy?

▸ Once all the services are in unicast DNS server, DNSSEC w/NSEC is possible!