Active Leasequery for DHCPv6

draft-raghuvanshi-dhc-dhcpv6-active-leasequery-00.txt

Presenter:
Kim Kinnear

Authors:
Dushyant Raghuvanshi
Deepak Kukrety
Upcoming Quiz Question ...

Does anyone want to standardize a capability to allow an external process to keep up to date with all leasing activity on a DHCPv6 or DHCPv4 server?
What is Active Leasequery

A way for an external process to receive near real-time updates regarding lease activity performed by a DHCPv6 server.
What is Active Leasequery

A way for an external process to receive near real-time updates regarding lease activity performed by a DHCPv6 server.

- Multiple clients can connect to multiple DHCPv6 servers.
- One client can (and should) connect to both DHCPv6 servers which are associated to provide high availability (or load balancing).
Why do we need Active Leasequery?

• People want to know what the DHCPv6 server knows, and they want to know it in near real-time.

• Our customers keep writing extensions to do this themselves (and not getting it quite right).

• Alternatives certainly exist (e.g., database access to DHCPv6 server’s database), but difficult to standardize, not always available.

• Possibly useful to standardize an approach?
Related Work

DHCPv4 Active Leasequery

• We have customers using DHCPv4 Active Leasequery today

• Presented DHCPv4 Active Leasequery draft-kinnear-dhc-dhcpv4-active-leasequery-01.txt at IETF77 Mar 2010, IETF79 Nov 2010 and found no apparent interest in adopting it as a DHC WG work item.
How does Active Leasequery work?

- Builds on techniques defined for Bulk Leasequery.
- Client creates TCP session to DHCPv6 server.
- Client sends in Active Leasequery request.
- Server sends response messages (which look like Bulk leasequery messages) until connection is dropped.
How does Active Leasequery work?

DHCPv6 Client  DHCPv6 Server  Active LQ Client

SOLICIT/ADVERTISE/REQUEST/REPLY

ACTIVELEASEQUERY

LEASEQUERY-REPLY

LEASEQUERY-DATA

RENEW/REPLY

LEASEQUERY-DATA
Next Steps

WG should not adopt this

Don’t see much point, but won’t stand in the way

Adopt some Active Leasequery as a WG work item

Adopt DHCPv6 Active Leasequery draft as WG work item (no interest in DHCPv4)

Adopt individual DHCPv6 and DHCPv4 Active Leasequery drafts as WG work items

Adopt merged DHCPv6 and DHCPv4 Active Leasequery draft as single WG work item