

DHCPv6 Prefix Delegation, Information-Request and TAHI testing

Ralph Droms

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- Problem: Automate assignment of prefixes from ISP to customer network
- Observation: Looks much like DHCPv6 address assignment problem
- Solution: Extend DHCPv6 to delegate IPv6 prefixes from ISP server to CPE

Prefix Delegation mechanism

- Requesting Router (CPE) sends DHCP Request message with container for prefixes
- Delegating Router (ISP aggregation device) identifies prefixes assigned to customer; returns container with prefixes
- Requesting Router assigns subnets from prefix to downstream links in the customer's site

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"Stateless" DHCPv6

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• Host uses:

stateless address autoconfiguration to determine addresses to use

router advertisements to determine prefixes on the link, available to routers

??? for DNS servers, domain search list, other configuration information

DHCPv6 Information-request (aka "stateless" DHCPv6) can pass configuration without address assignment

TAHI Interoperability Testing

 Tested three servers, three clients from four vendors

- Features tested: basic protocol specification, prefix delegation, stateless DHCPv6 (no address assignment)
- Found no showstopper problems with specifications or implementations
- Issues published in:

draft-ietf-dhc-dhcpv6-interop-00.txt

draft-ietf-dhc-dhcpv6-opt-prefix-delegation-03.txt

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