Softwire Tunnel Option

• The Softwire-Tunnel-Option is a DHCPv6 option, provided by the server if the client requests it.
• It is simply a binary IPv6 address:
IPv4 Softwire: How it Works

• The client starts its DHCP client(s).
  ▪ This MUST include RA and DHCPv6 (with this option on the “ORO”), but MAY include DHCPv4.

• A server replies with the DHCPv6 Softwire Tunnel Endpoint option.

• The client terminates further attempts to perform IPv4 configuration.
  ▪ IFF the client was not “IPv4-lite”.

• A Softwire tunnel is established with the identified IPv6 address.
The option format is only the tunnel endpoint binary IPv6 address.

- “There is nothing left to remove.”
- Should there be multiple (a list of) IPv6 addresses? What would that mean (try-in-order, parallel-connections)?

The presence of this option suggests its use.

- It is a little unusual that this DHCPv6 option might cause the client to stop performing DHCPv4, or revoke other IPv4 behaviours, if it were doing so to start with.
- The author requests feedback on this.
Discussion: WG Item?

• Tunnel type and port numbers?
  ▪ It seems like if there were multiple tunnel types, clients would be required to implement all tunnel types in order to cope with arbitrary DHCPv6 server replies.
  ▪ If multiple tunnel types MAY be supported, perhaps there should be a mechanism for the client to advertise supported types (the obvious mechanism is the ORO – suggesting a DHCPv6 option for each type), so the server can choose appropriately.
  ▪ Port numbers only really seem useful if you want to permit Softwire tunnel collectors to SMP load balance clients by port.

• IPv6-over-IPv4 Softwire?
  ▪ Would suggest a DHCPv4 option, so the client need not implement RA/DHCPv6 (IPv6-lite). Is one needed?