DHCP Relay Agent Assignment Notification Option
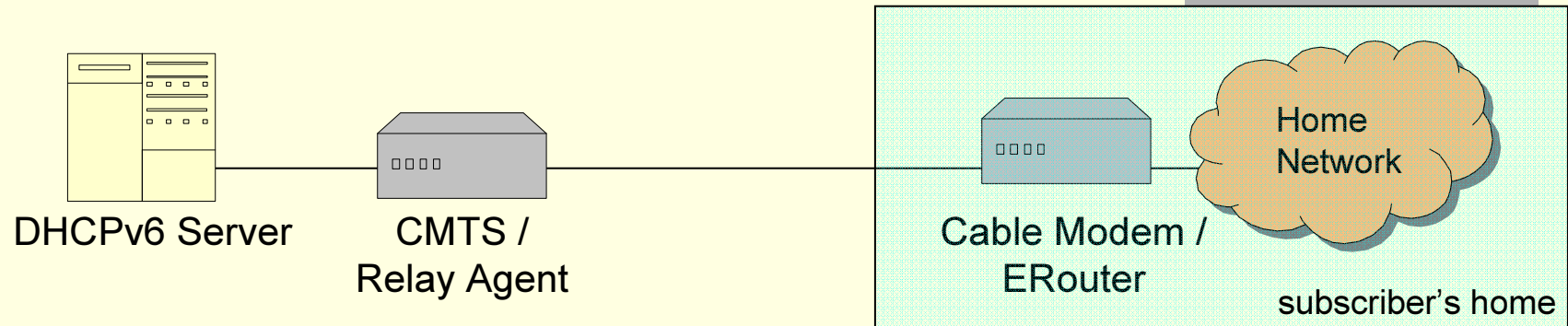
IETF-68

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Problem Statement – DOCSIS 3.0

DHCPv6 Server   CMTS / Relay Agent   Cable Modem / ERouter   Home Network   subscriber's home

- ERouter is delegated a prefix by DHCPv6 server with CMTS acting as relay agent
- How does CMTS learn of delegated prefix?
  - CMTS must know which outgoing traffic to allow from subscriber and which incoming traffic to route to subscriber
    - Route needs to be injected into SP's network
    - Packets from subscriber need to be source validated
  - Can't trust subscriber's ERouter or needs a means by which to validate

Possible Current Solutions

- CMTS (relay agent) snoops DHCPv6 packets
  - This is done for DHCPv4 today
  - This has issues if DHCPv6 Auth were ever used
- DHCPv6 Server must communicate to CMTS via other means (routing protocol?)
- CMTS could act as server to ERouter and client to DHCPv6 server (proxy server)
- draft-ietf-dhc-dhcpv6-agentopt-delegate
  - Server includes RAAN option in Relay-Reply
  - Had objections during WG last call
- Others

Last Call Issues

- Release/Decline Reply may be lost so Relay Agent may not get RAAN information and therefore does not know to remove the routes

- (My words) A general dislike of the idea of piggybacking routing related data on a regular DHCPv6 transaction

How to Move Forward

IETF-68, DHC WG