Requirements for Addresses Registration

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Problems and Requirements

• Host self-generated addresses notionally conflict with the network managed address architecture
  – Addresses in IPv6 Stateless Address Auto-Configuration [RFC4862, RFC4941] scenario
  – Cryptographically Generated Addresses (CGA, [RFC3972])

• Many operators of enterprise networks and similarly tightly administered networks have expressed the desire to hold on to network managed address model when moving to IPv6
  – Networks may reject the access request from host-generated addr
  – Disable host-generated addresses, also SLAAC and CGA

• Ideal scenario: if the self-generated IPv6 addresses are used, they may need to be registered in and granted by the networking management plate
Figure 1: address registration procedure
A new request option needs to propagate the registration request

- Choice 1: Router Advertisement
- Choice 2: DHCPv6
- May include the default/enforced address registration server

Address Registration Server and Protocol

- The server checks the acceptance of addresses, holds all registered addresses, and may interact with other network functions, such as DNS or ACL.
- Choice 1: Using DHCPv6 and DHCPv6 server
  - *The DHC protocol was originally designed to push configuration information from the network management side to the hosts*
- Choice 2: Defining a new address Registration Protocol
- [Discussion] Any other existing protocol may be used for address registration purposes?
Comments are welcomed!

Is this requirement real?
Should IETF work on it?

Thank You!

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