Changes Needed to Allow for IPv6 Network Discovery

draft-pashby-ipv6-network-discovery-00.txt

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Purpose

- To allow discovery of all IPv6 nodes and all addresses on an IPv6 network

Justification

- Network discovery is key to network management and network security
- Currently the only method will return link-local addresses only
- Procedures should have mechanism to limit Denial-of-Service attacks

Changes required to ICMPv6

- ICMP Echo requests that are received via multicast address must be responded to after a random hold-off timeout
- Other multicast echo requests received during the hold-off timeout will be silently discarded

Changes to Inverse Neighbor Discovery (IND)

- Make implementation of IND mandatory in all nodes for all link types
- IND requests that are received via multicast address must be responded after a random hold-off timeout
- Other multicast IND requests received during the hold-off timeout will be silently discarded

Changes to ICMP Names Draft

draft-ietf-ipv6-icmp-name-lookups

- Recommend that ICMP Names be implemented in all nodes
- Node Information (NI) requests that are received via multicast address must be responded after a random hold-off timeout
- Other multicast NI requests received during the hold-off timeout will be silently discarded

Related Drafts

- Draft-ietf-ipv6-icmp-name-lookups
  - IPv6 Node Information Queries
  - Describes protocol for asking an IPv6 node to supply certain network information, such as its IPv6 addresses, hostname or fully-qualified domain name

Recommendation

- Accept this draft as a WG draft and proceed to incorporate modifications into the documents.