Using PCP to control NAT & FW in Multihoming

draft-patil-pcp-multihoming-00

P.Patil, T.Reddy, R.Penno, D.Wing
Problem

One PCP client, Multiple PCP Servers
IPv6 Multihoming

- Broken – Traffic from remote peer communicating with client over ISP-B is broken because Router2 with FW2 has no mappings.
IPv4 Multihoming

NAT/RFC2260-based Multihoming – RFC4116 (PA)

PCP client using single PCP server will learn only one external address (eg ISP-A). If ISP-A is broken, there is no way for a peer to reach the PCP client.
Solution

- PCP Client sends PCP requests to all servers in parallel
- PCP requests are independent – result of a PCP request to one server does not influence the other
Traffic from remote peer communicating can now communicate with client over either ISPs.
IPv4 Multihoming

NAT/RFC2260-based Multihoming – RFC4116 (PA)

PCP Client

PCP request

NAPT & PCP Servers
GW Router

ISP-A

Internet

ISP-B

PCP client now learns both external addresses. If ISP-A link is broken, the client can still be reached over ISP-B.
Choice of Gold vs Silver ISP can be made based on description provided in PCP
Next Steps?