Using PCP to control NAT & FW in Multihoming

draft-patil-pcp-multihoming-00

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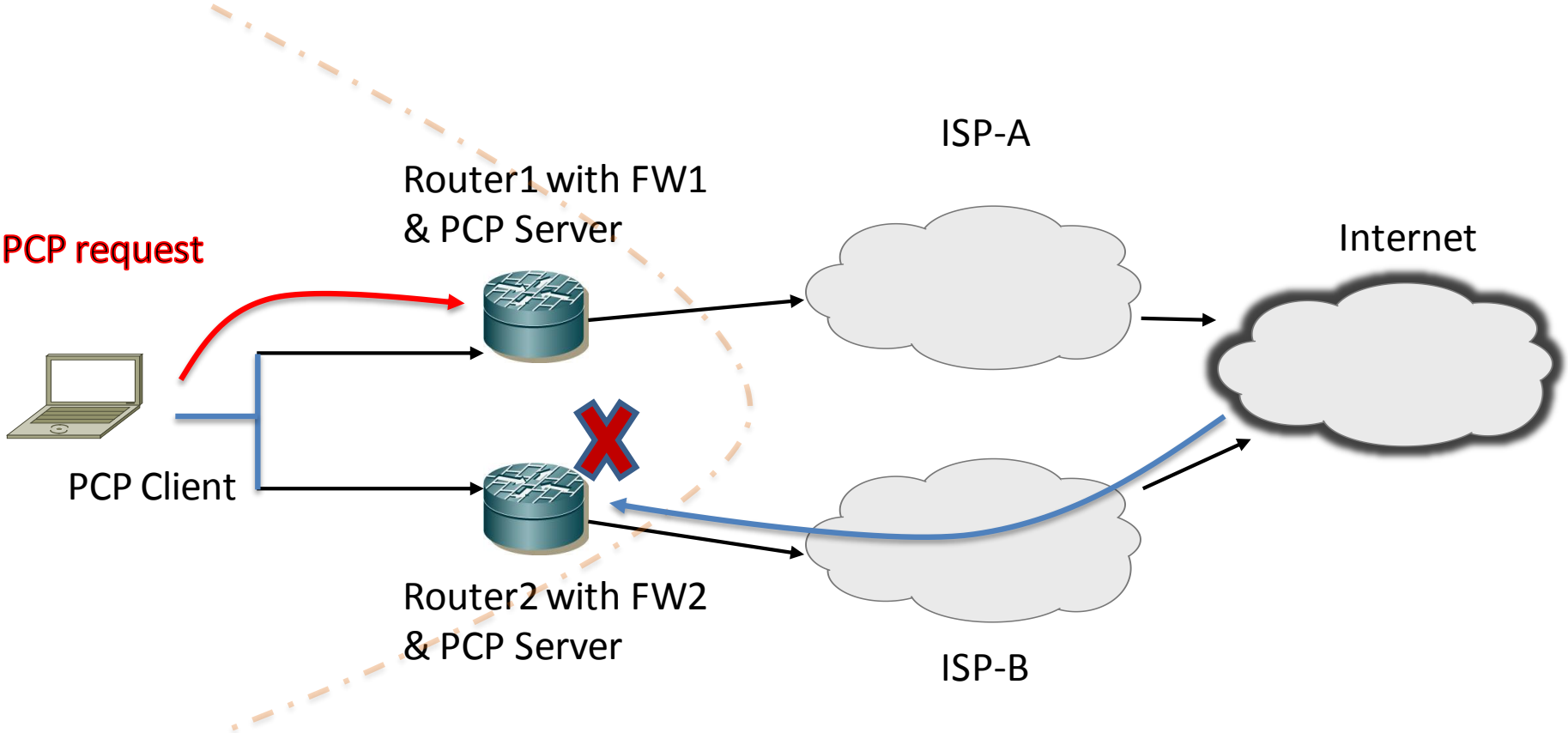
Problem

One PCP client, Multiple PCP Servers

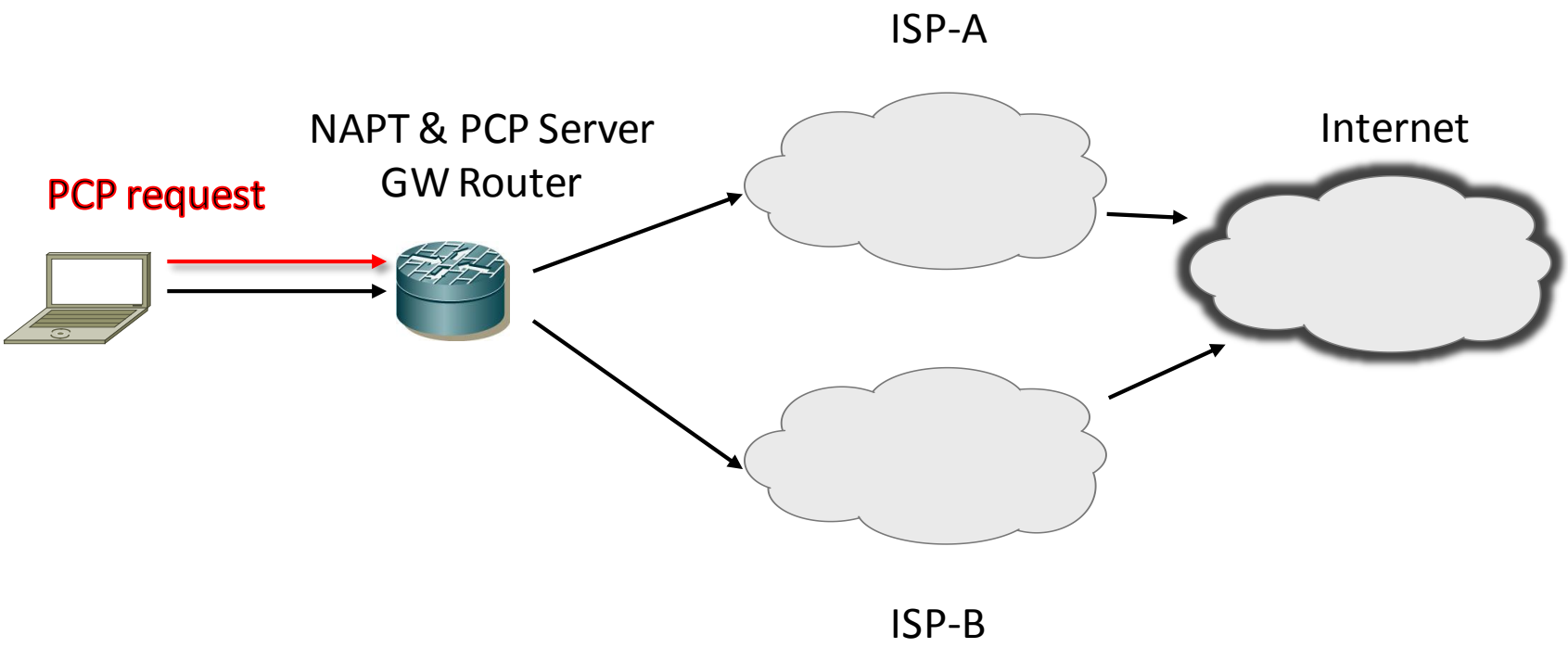
IPv6 Multihoming



- 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)

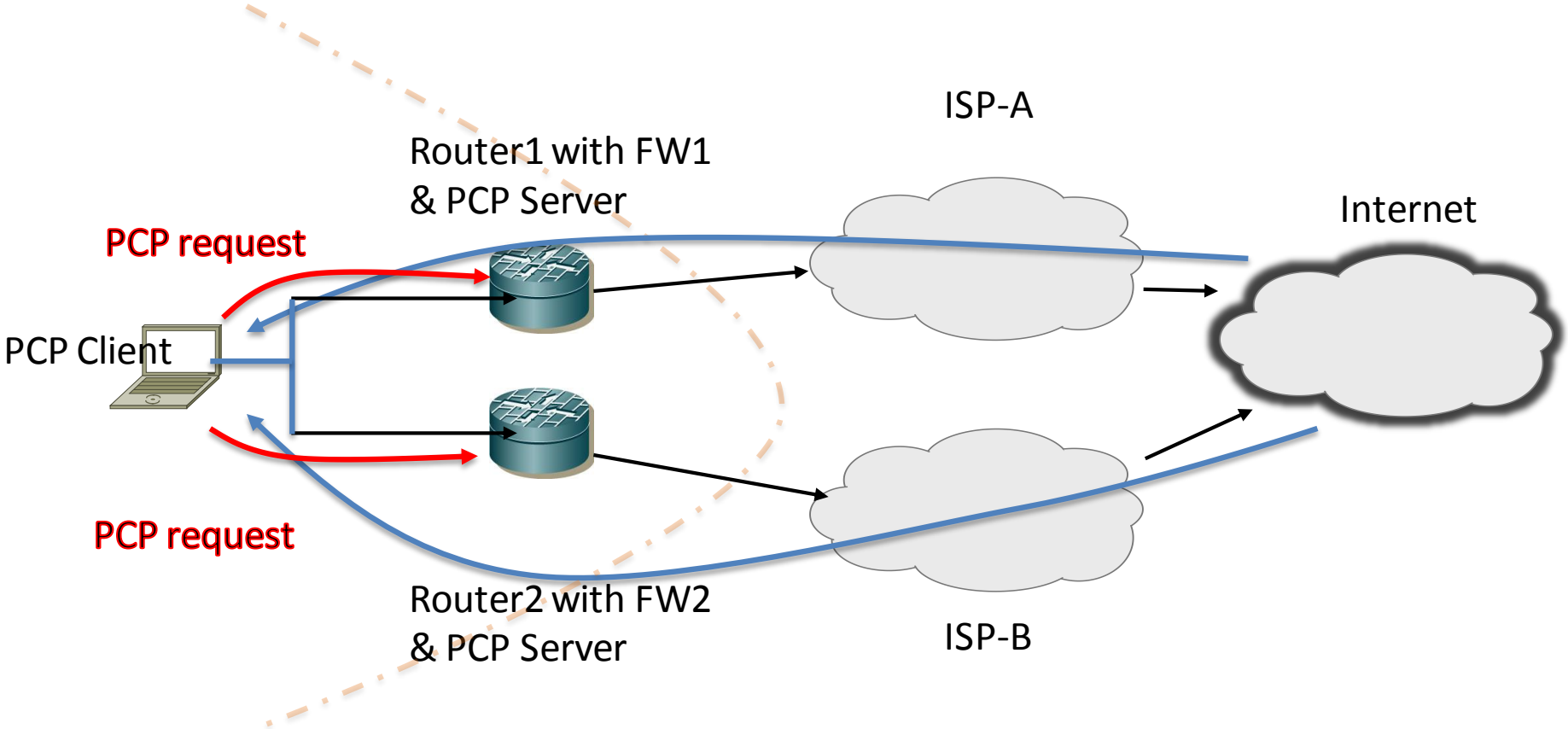


PCP client using single PCP server will learn only one external address (eg ISP-A).
If ISP-A is broken, there is no way for a peer to reach the PCP client.

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

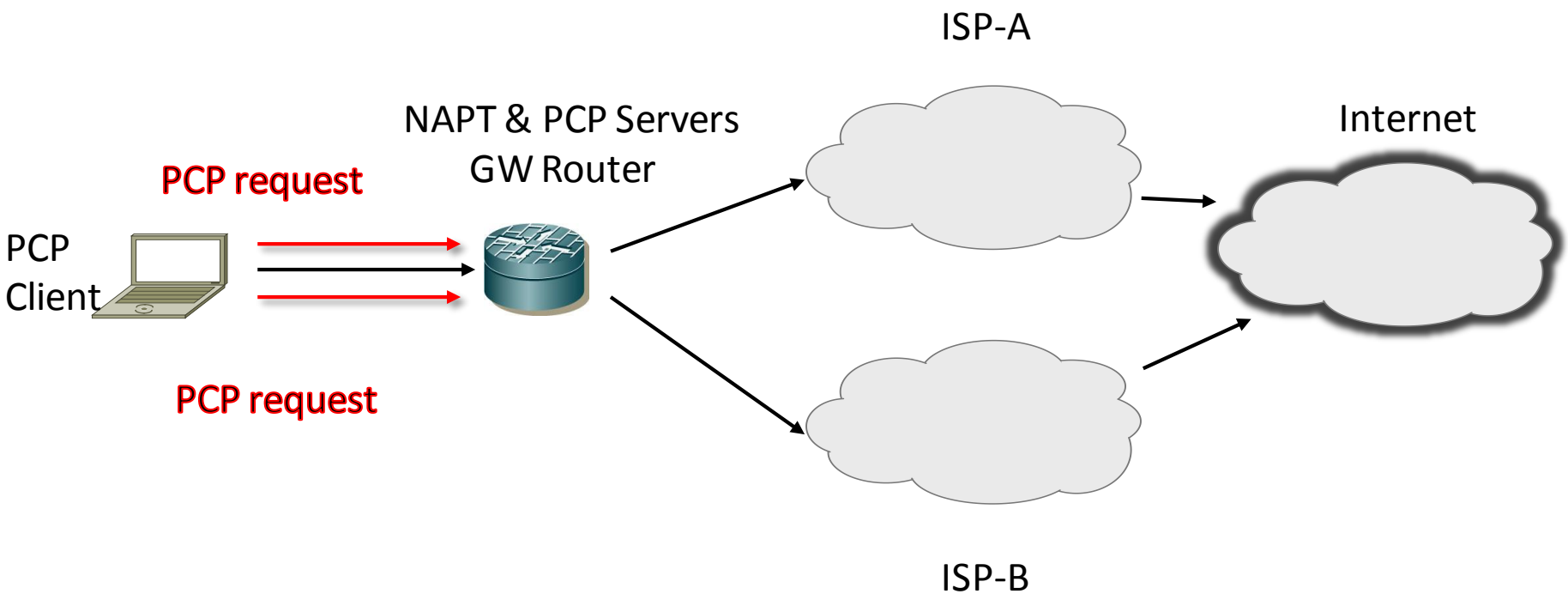
IPv6 Multihoming



Traffic from remote peer communicating can now communicate with client over either ISPs.

IPv4 Multihoming

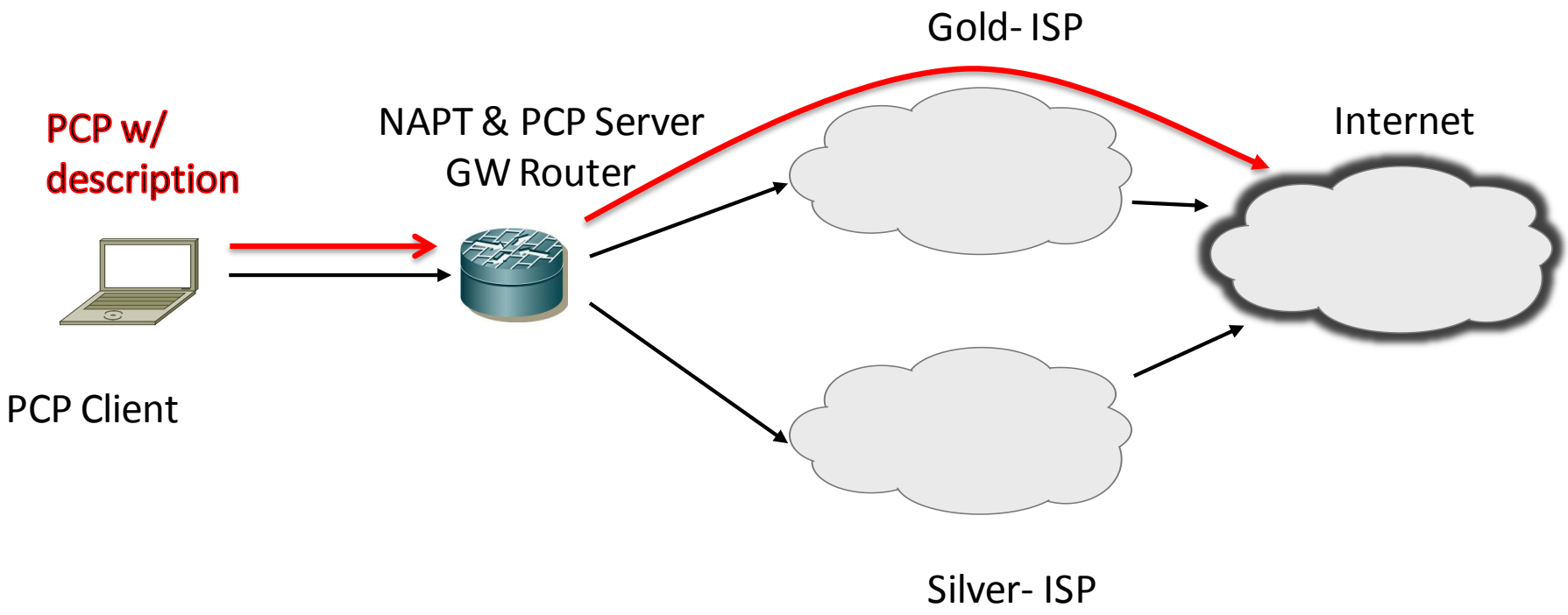
NAT/RFC2260-based Multihoming – RFC4116 (PA)



PCP client now learns both external addresses. If ISP-A link is broken, the client can still be reached over ISP-B.

Policy Based Routing

NAT/RFC2260-based Multihoming – RFC4116 (PA)



Choice of Gold vs Silver ISP can be made based on description provided in PCP

Next Steps?