

Using PCP To Coordinate Between the CGN and Home Gateway Via Port Allocation

draft-tsou-pcp-natcoord-03

Tina Tsou

Cathy Zhou

Xiaohong Deng

Mohamed Boucadair

Qiong Sun

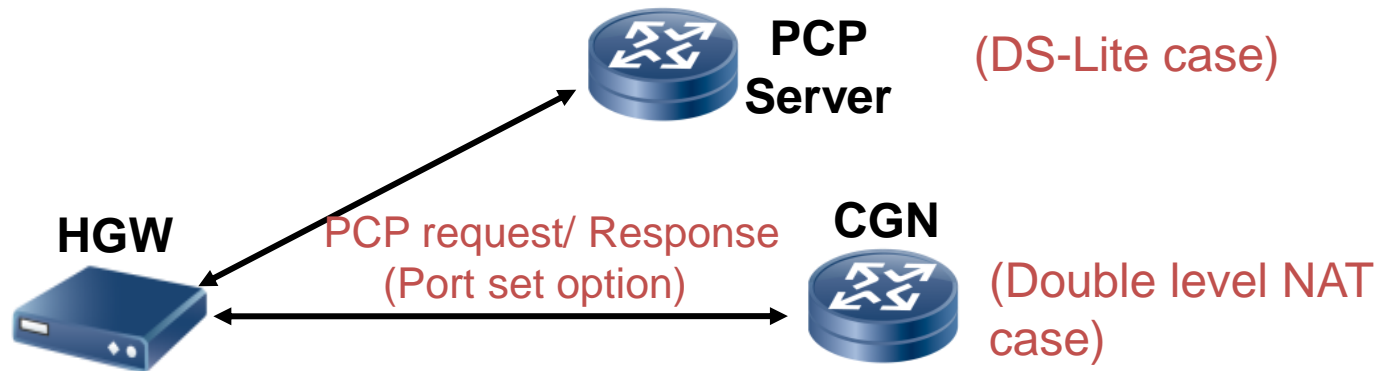
Problem Statement

- The requirement on CGN processing capability grows with increasing subscribers;
- Delegating NAT function to the Home Gateway will offload the burden on CGN.

Basic ideas

- Application scenarios: double level NAT or DS-Lite.
- Can make process more efficient if HGW and CGN can coordinate efforts
 - HGW gets allocation of external ports from CGN
 - HGW assigns those ports on its outgoing side
 - CGN doesn't have to do remapping of ports
- Requires certain assumptions
 - All traffic to and from HGW passes through the CGN
 - CGN recognizes traffic with preallocated ports

PCP extension to support NAT coordination

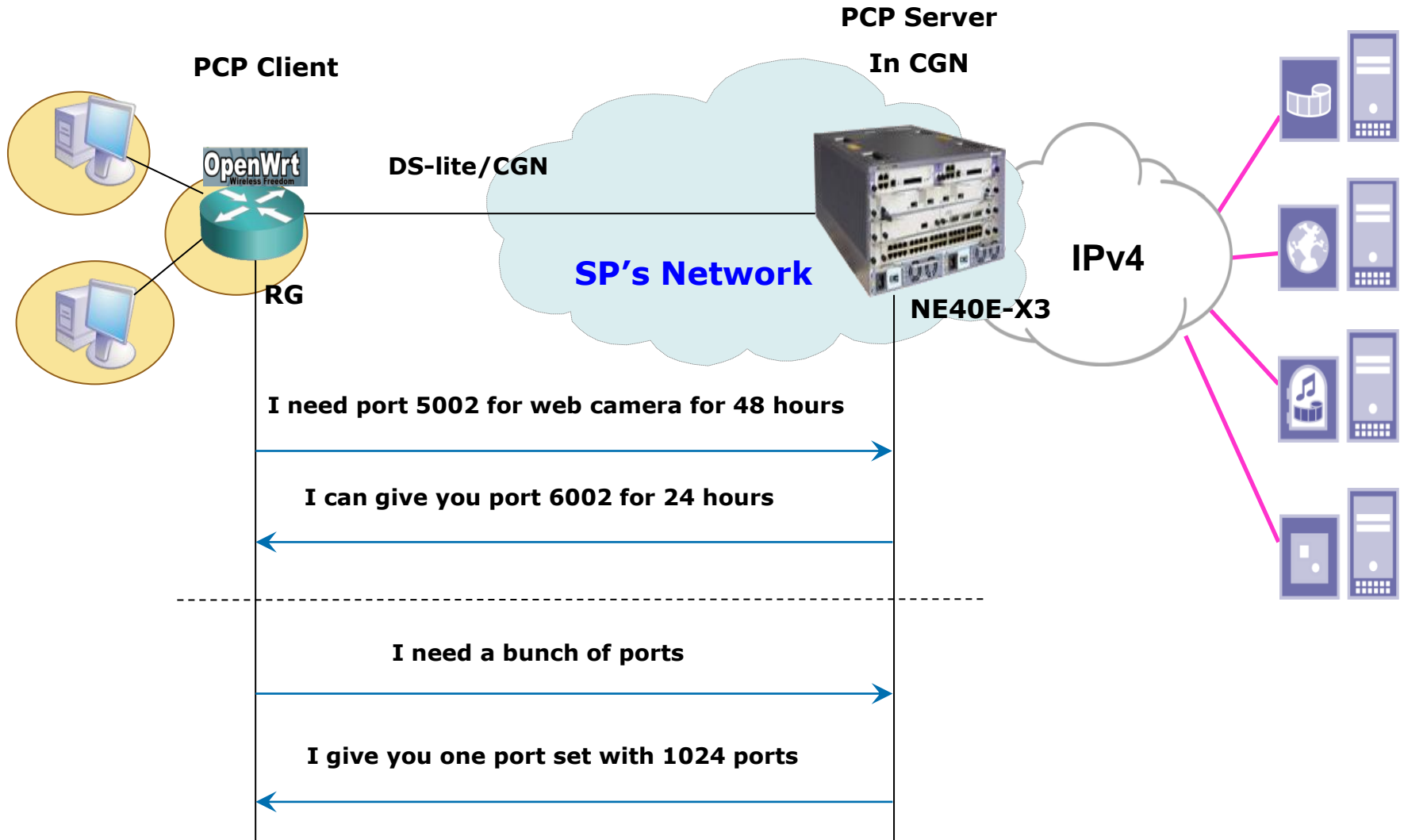


- If the private address is retained by HGW (e.g., double level NAT case), the CGN recognizes it from the original delegation request and changes the source address but not the port before forwarding the packet.
- If the external public address was used (e.g., DS-Lite case), the CGN is not useful and another device may be needed to allocate the port set.
- The port set can be continuous or discontinuous.

A Demo for this draft

- Open hours in IETF-81:
 - Sunday, 1PM-6:30PM
 - Monday to Thursday, 8AM-6:30PM
 - Friday, 8AM-10AM
- Location:
 - The terminal room, 2000D
- Photography time:
 - 3PM, Tuesday

Demo picture



Questions for clarification?
Adopt as a WG draft?