

# PCP Nested NAT/Middleboxes

IETF-86 Orlando

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# Problem Statement

- PCP does not work through existing NAT CPEs
  - Around 271M new Broadband CPEs between 2006-2010. Assuming same trend, a total of 390M until 2012.
  - Takes many years to be replaced (just ask IPv6 folks)
- How can PCP work through existing NAT CPEs?
- Follow up: How can PCP be successful and deployed in a timely fashion?

# Summary of Issues

- PCP MAP
  - In order to work through nested NATs, applications need to use UPnP/NAT-PMP to prime intervening NAT through a multiple step process
  - UPnP/NAT-PMP is usually not enabled or implemented on NAT CPEs.
- PCP PEER
  - Send-then-connect
    - Need to rely on PI-EIM (Protocol Independent Endpoint Independent Mapping)
  - Connect-then-send
    - Even trickier. Not a suitable way for an application (PCP Client) to find out the external source port used by intervening NAT device.

# Next Steps

- Is this a problem the WG should solve?
- If yes, Is this draft ready for adoption?