

PCP and Nested NATs

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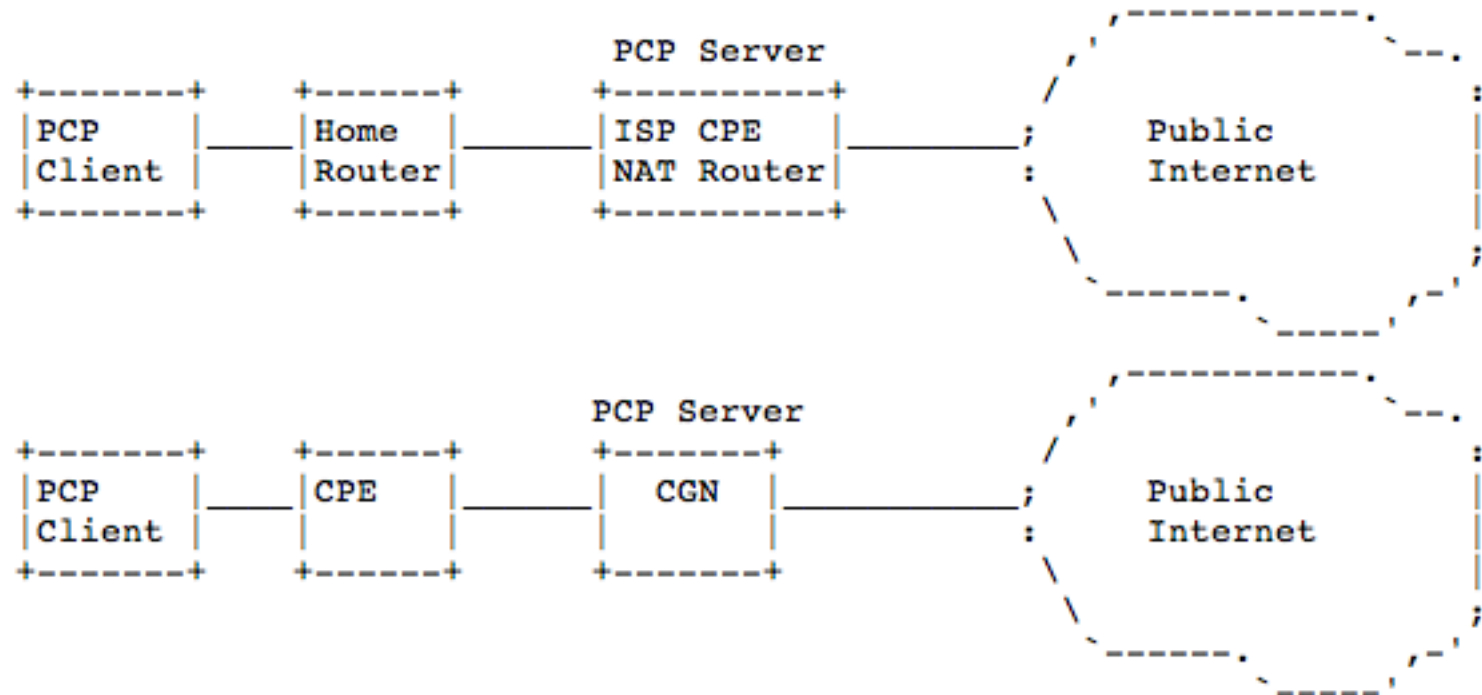
IETF84 – Vancouver

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Problem

- 500M+ fixed broadband Users
- Not counting hotspots, hotels, etc
- Most behind PCP-unaware NAT CPEs
- If new PCP-aware NAT installed how applications can work through 'legacy' CPE?
- How to lower adoption bar for PCP?

Some Scenarios



Proposed Solutions

- Relax IP address check on PCP Server
- Create new PCP Option
- Do nothing...Wait until CPEs replaced.

Relax IP Address Check

PCP Client

PCP-U NAT

PCP Server

```
Map request
Outer sIP:192.68.0.2
Outer sPort:19268
PCP-C Addr:192.168.0.1
PCP-C port:19268
iPort:40000
```

----->

```
Map response
Outer dIP:192.168.0.2
Outer dport:19268
Assigned E-port:20001
Assigned E-IP:20.0.0.1
PCP-C Addr:10.0.0.2
PCP-C port:10002
```

<-----

```
Map request
Outer sIP:10.0.0.2
Outer sPort:10002
PCP-C Addr:192.168.0.1
PCP-C port:19268
iPort:40000
```

----->

```
PCP client IP != Outer IP
Allocate public IP and port
Mapping:
(10.0.0.2, 40000) <- (20.0.0.1, 20001)
```

```
Map response
Outer dIP:10.0.0.2
Outer dport:10002
Assigned E-port:20001
Assigned E-IP:20.0.0.1
PCP-C Addr:10.0.0.2
PCP-C port:10002
```

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RECEIVED_SOURCE_PORT Option

- This option is used by a PCP Server to indicate in a PCP response the source port of PCP messages received from a PCP Client. Together with the IP Address of the PCP Client conveyed in the common PCP header, a PCP Client uses this information to detect whether a NAT is present in the path to reach its PCP Server.

Thank you

- Wireless (Cellular)...