draft-ietf-pcp-proxy-05

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Status

- Merger / acquisition :-)
- New management >:-]
- Changed significantly in the last revision
- Needs discussion / reviews

-05

- Guidance from Vancouver:
  - Merge with draft-cheshire-recursive-pcp
  - Ensure unknown opcodes and options are propagated upstream
- As a consequence, the spec was simplified and shortened
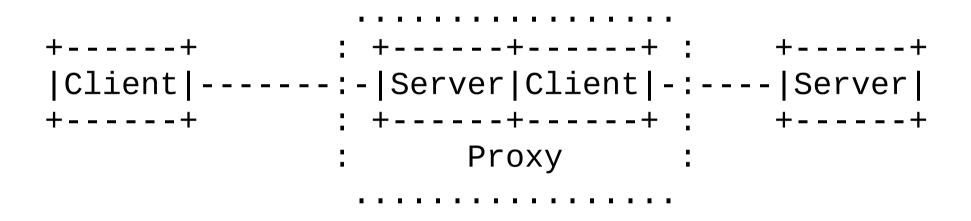- Rough corners to be sanded...

Architecture

```
                      ..................
 +------+            : +------+------+ :     +------+
 |Client|-----------:-|Server|Client|-:----|Server|
 +------+            : +------+------+ :     +------+
                     :      Proxy     :
                      ..................
```

Figure 1: Reference Architecture

Relay use case

```
              |
+------+      |
|Client|--+
+------+  |   +-----+                                        +------+
          +--|Proxy|--------<ISP network>-----------|Server|
+------+  |   +-----+                                        +------+
|Client|--+     CPE
+------+  |
          |
        LAN

          Figure 2: PCP Relay Use Case
```
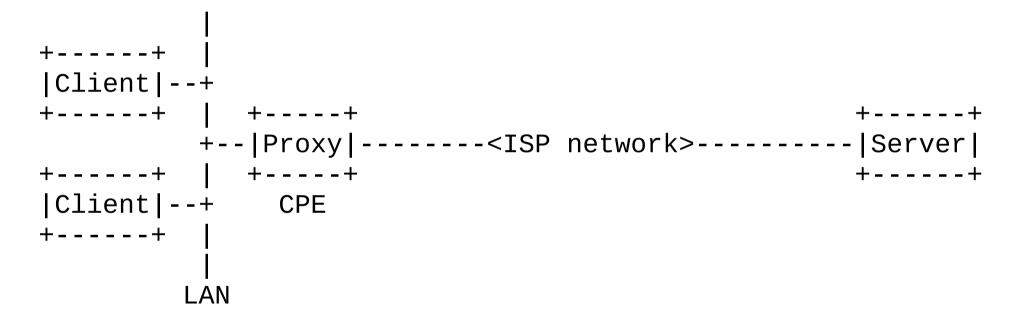
Back-to-back client and server vs proxy functional element

- "Requiring the proxy to embed the full features of a PCP Server is too high. The design philosophy we had is to detail the behavior of the proxy as a new functional elements and specify the exact behavior when receiving a message.

  I really don't want that out teams run the full test suites they are running for the PCP server for the DS-Lite CPE."

- What does the WG think of this? Do we need to revisit Vancouver's consensus?

Termination of recursion

- Current termination cases:

  a) Static configuration

  b) Having a public external IP address

- Problem: What happens if a NAT has a public external IP address...

  - ...but is still not the last PCP-controlled NAT in the chain?

  - ...but there is a PCP-controlled stateful firewall situated upstream?

- Ideas:

  1. Remove b).

  2. Remove everything. Never terminate. When you're a proxy, you always try upstream. You may fail. Consider failure normal and expected.

  3. Something else?

Unknown opcodes and options

3.4. **Unknown OpCodes and Options**

[Editor's note: I think this section is severely broken. I'll leave it as-is for this revision and will start discussion on the list.]

By default, the proxy MUST relay unknown OpCodes and mandatory-to-process unknown Options. [... go read it now while I talk...]

Because PCP messages with an unknown OpCode or mandatory-to-process unknown Options can carry a hidden internal address or internal port that will not be translated, **a PCP Proxy MUST be configurable to disable relaying unknown OpCodes and mandatory-to-process unknown Options.**

wat?

Next steps

- Reviews! Reviews! Reviews!
- -06 to be published