ALTO Protocol

draft-ietf-alto-protocol-07

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Grateful to contributions from large number of collaborators; see draft for complete list.

Outline

- Summary of Changes

- Impending revisions

- Remaining Issues

Change Summary

- **Additions**

  - ❑ *Address types*

- **Minor updates / fixes**

  - ❑ Protocol version number format (must be integer)

  - ❑ Fix status codes in examples (they are strings, not integers)

  - ❑ Clarification to text on redistribution and when ALTO Servers should have the same Service ID

  - ❑ Signature in redistribution

Address Types

- **Motivation**
  - ❑ Finally ALTO knows the difference between IPv4 and IPv6

- **Two ways in which types are used:**

  - ❑ Describe type of a single endpoint
    - ◼ Used in endpoint cost/properties

  - ❑ Describe types of multiple endpoints
    - ◼ More compact; used in map services

Excerpt from Endpoint Cost Response:

```
"map" : {
  "ipv4:192.0.2.2": {
    "ipv4:192.0.2.89"    : 1,
    "ipv4:198.51.100.34" : 2,
    "ipv4:203.0.113.45"  : 3
  }
}
```

Excerpt from Network Map Response:

```
"map" : {
  "PID1" : {
    "ipv4" : [
      "192.0.2.0/24",
      "198.51.100.0/25"
    ]
  },
  "PID2" : {
    "ipv4" : [
      "198.51.100.128/25"
    ]
  },
  "PID3" : {
    "ipv4" : [
      "0.0.0.0/0"
    ],
    "ipv6" : [
      "::/0"
    ]
  ]
}
```

Impending Revisions

- Discussion on mailing list resulted in some additional suggestions
  - Fix places where certain requirements are overspecified, e.g.,
    - Clarify that implementations MUST NOT make use of cookies (they should only be silently ignored)
    - Which caching headers should be specified
  - Make the character set for PID names have at least 64 characters
    - To allow them to be Base64-encoded hashes

Remaining Issues

- REST-ful or REST-like

- Keep the feedback from implementations coming