Connect Reuse
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draft-ietf-sip-connect-reuse-05
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Changes since -04

- Expanded security consideration section, including additional discussion on attacks possible across TCP (if alias was used for TCP).
- Took out use cases that pertained to outbound.
- Expanded normative behavior section.
- Took out Requirement 2 from –04: “A connection sharing mechanism SHOULD allow SIP entities to reuse existing connections with closely coupled nodes that act as a single SIP entity (for example, a cluster of nodes acting as a proxy server).
  - Did not interplay well with DNS SRV and load balancing.
Connect-reuse-05

- Reuse done by using IP:port as index.
- Reuse comes into the picture after DNS NAPTR and SRV and A/AAAA lookups are done.

INVITE ...
Via: SIP/2.0/TLS p1.example.com;alias;branch=z9...
received=192.0.1.1
8293
5061

<table>
<thead>
<tr>
<th>Dest. IP</th>
<th>Dest. Port</th>
<th>Reuse descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.0.1.1</td>
<td>5061</td>
<td>26</td>
</tr>
</tbody>
</table>

Diagram:
- Proxy P1
- Proxy P2
- Reuse done by using IP:port as index.
Open Issues
- Virtual hosting

Client connection 1
Uses TLS extended hello for a.com

Client connection 2
Uses TLS extended hello for b.com

Problem:
1. Proxy opens a connection to c.com; sends a request.
2. c.com does not know whether request from a.com or b.com?

Thoughts:
c.com could examine the topmost Via sent-by (if fqdn).
Open Issues

- Virtual hosting

Client 1 connected to a.com
Client 2 connected to b.com

Later, b.com wants to send a request to Client 1. Because of the alias (using IP:port), the virtual SIP proxy may use the a.com->Client 1 connection.

What to do about virtual hosting? Is it a requirement to support virtual hosting now? Or later?