Deployment considerations
draft-ietf-alto-deployments-08

Martin Stiemerling, Sebastian Kiesel, Stefano Previdi, Michael Scharf

Presented by Vijay Gurbani

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Status of draft-ietf-alto-deployments
Version -08

- ALTO charter: An informational document discussing deployment related issues and documenting lessons learned from early implementation experiences

- Previous version -07
  - Updates mainly in section 3 for non-P2P deployments
  - Additional author

- Current version -08
  - Reorganization of the table of content, therefore the diff looks significant
  - However: Hardly any content deleted – just a better story line
  - Selected additions of content (see next slides)
  - … more will follow

-08 is intended as baseline ToC for upcoming improvements
New Table of Content in -08
Many Changes – But Mainly Reorganization

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduction</td>
<td>3</td>
</tr>
<tr>
<td>2. General Considerations</td>
<td>4</td>
</tr>
<tr>
<td>2.1. ALTO Entities</td>
<td>4</td>
</tr>
<tr>
<td>2.1.1. Baseline Scenario</td>
<td>4</td>
</tr>
<tr>
<td>2.1.2. Placement of ALTO Entities</td>
<td>4</td>
</tr>
<tr>
<td>2.2. Classification of Deployment Scenarios</td>
<td>6</td>
</tr>
<tr>
<td>2.2.1. Deployment Degrees of Freedom</td>
<td>6</td>
</tr>
<tr>
<td>2.2.2. Information Exposure Models</td>
<td>7</td>
</tr>
<tr>
<td>2.2.3. More Advanced Deployments</td>
<td>7</td>
</tr>
<tr>
<td>3. Deployment Considerations by ISPs</td>
<td>9</td>
</tr>
<tr>
<td>3.1. Objectives for the Guidance to Applications</td>
<td>9</td>
</tr>
<tr>
<td>3.1.1. General Objectives for Traffic Optimization</td>
<td>9</td>
</tr>
<tr>
<td>3.1.2. Inter-Network Traffic Localization</td>
<td>10</td>
</tr>
<tr>
<td>3.1.3. Intra-Network Traffic Localization</td>
<td>11</td>
</tr>
<tr>
<td>3.1.4. Network Off-Loading</td>
<td>13</td>
</tr>
<tr>
<td>3.1.5. Application Tuning</td>
<td>14</td>
</tr>
<tr>
<td>3.2. Provisioning of ALTO Maps</td>
<td>14</td>
</tr>
<tr>
<td>3.2.1. Data Sources</td>
<td>14</td>
</tr>
<tr>
<td>3.2.2. Privacy Requirements</td>
<td>14</td>
</tr>
<tr>
<td>3.2.3. Map Partitioning and Grouping</td>
<td>15</td>
</tr>
<tr>
<td>3.2.4. Rating Criteria and/or Cost Calculation</td>
<td>15</td>
</tr>
<tr>
<td>3.3. Known Limitations of ALTO</td>
<td>18</td>
</tr>
<tr>
<td>3.3.1. Limitations of Map-based Approaches</td>
<td>18</td>
</tr>
<tr>
<td>3.3.2. Limitations of Non-Map-based Approaches</td>
<td>20</td>
</tr>
<tr>
<td>3.4. Map Examples for Different Types of ISPs</td>
<td>20</td>
</tr>
<tr>
<td>3.4.1. Small ISP with Single Internet Uplink</td>
<td>20</td>
</tr>
<tr>
<td>3.4.2. ISP with Several Fixed Access Networks</td>
<td>22</td>
</tr>
<tr>
<td>3.4.3. ISP with Fixed and Mobile Network</td>
<td>24</td>
</tr>
<tr>
<td>3.5. Deployment Experiences</td>
<td>25</td>
</tr>
<tr>
<td>4. Using ALTO for P2P Traffic Optimization</td>
<td>25</td>
</tr>
<tr>
<td>4.1. Overview</td>
<td>26</td>
</tr>
<tr>
<td>4.1.1. Usage Scenario</td>
<td>26</td>
</tr>
<tr>
<td>4.1.2. Applicability of ALTO</td>
<td>29</td>
</tr>
<tr>
<td>4.2. Deployment Recommendations</td>
<td>29</td>
</tr>
<tr>
<td>4.2.1. ALTO Services</td>
<td>29</td>
</tr>
<tr>
<td>4.2.2. Guidance Considerations</td>
<td>29</td>
</tr>
<tr>
<td>5. Using ALTO for CDNs</td>
<td>33</td>
</tr>
<tr>
<td>5.1. Overview</td>
<td>33</td>
</tr>
<tr>
<td>5.1.1. Usage Scenario</td>
<td>33</td>
</tr>
<tr>
<td>5.1.2. Applicability of ALTO</td>
<td>33</td>
</tr>
<tr>
<td>5.2. Deployment Recommendations</td>
<td>34</td>
</tr>
<tr>
<td>5.2.1. ALTO Services</td>
<td>34</td>
</tr>
<tr>
<td>5.2.2. Guidance Considerations</td>
<td>35</td>
</tr>
<tr>
<td>6. Other Use Cases</td>
<td>36</td>
</tr>
<tr>
<td>6.1. Monitoring Data Reporting</td>
<td>36</td>
</tr>
<tr>
<td>6.2. Virtual Private Networks (VPNs)</td>
<td>36</td>
</tr>
<tr>
<td>6.3. In-Network Caching</td>
<td>36</td>
</tr>
<tr>
<td>7. Security Considerations</td>
<td>37</td>
</tr>
<tr>
<td>7.1. Information Leakage from the ALTO Server</td>
<td>37</td>
</tr>
<tr>
<td>7.2. ALTO Server Access</td>
<td>38</td>
</tr>
<tr>
<td>7.3. Faking ALTO Guidance</td>
<td>38</td>
</tr>
<tr>
<td>8. Conclusion</td>
<td>39</td>
</tr>
<tr>
<td>9. References</td>
<td>39</td>
</tr>
<tr>
<td>9.1. Normative References</td>
<td>39</td>
</tr>
<tr>
<td>9.2. Informative References</td>
<td>39</td>
</tr>
<tr>
<td>Appendix A. Appendix: Monitoring ALTO</td>
<td>41</td>
</tr>
<tr>
<td>A.1. Monitoring Metrics Definition</td>
<td>41</td>
</tr>
<tr>
<td>A.2. Monitoring Data Sources</td>
<td>42</td>
</tr>
<tr>
<td>A.3. Monitoring Structure</td>
<td>42</td>
</tr>
<tr>
<td>Appendix B. Appendix: API between ALTO Client and Application</td>
<td>43</td>
</tr>
<tr>
<td>Appendix C. Contributors List and Acknowledgments</td>
<td>43</td>
</tr>
<tr>
<td>Authors' Addresses</td>
<td>44</td>
</tr>
</tbody>
</table>
Major Changes in -08
List Part 1

• **Section 2 “General Considerations”**
  - New home for Section 2.2.2 “Information Exposure Models” on map service vs. ECS
  - New text in Section 2.2.3 “More Advanced Deployments” on single server vs. multiple servers, cascaded servers, etc.

• **Section 3 “Deployment Considerations by ISPs”**
  - Improved text in Section 3.1 “Objectives for the Guidance to Applications”
  - Section 3.2 “Provisioning of ALTO Maps”
    - Empty section in previous versions (!)
    - Initial text on data sources is based on various considerations previously present in other sections
    - Further improvements planned in next version
  - New home for Section 3.3 “Known Limitations of ALTO”
  - Significant rewording of Section 3.4 “Map Examples for Different Types of ISPs”
    - Original text had numerous editorial issues and bugs
    - Now also includes a small network and cost map example for illustration
Major Changes in -08
List Part 2

• **Section 4 “Using ALTO for P2P Traffic Optimization”** and **Section 5 “Using ALTO for CDNs”**
  • Proposal of a common structure for the different potential ALTO use cases
  • No significant text additions in -08

• **New Section 6 “Other Use Cases”**
  • Intended as a brief summary and reference to other suggested ALTO deployment scenarios
  • Structure is still to be done – current version is just an example:
    • Section 6.1. “Monitoring Data Reporting” ➔ Empty
    • Section 6.2 “Virtual Private Networks (VPNs)” ➔ Empty
    • Section 6.3 “In-Network Caching”
      ➔ Addressing draft-deng-alto-p2pcache (requested by the authors)

• Moving **Section “Monitoring ALTO”** to Appendix
  • Performance directorate review identified numerous issues
  • Future structure unclear (cf. next slide)
Open Issue: “Monitoring ALTO”
Originally Section 6.3, Currently Appendix A

- **Content**: A monitoring infrastructure to assess the benefits of ALTO
- **Monitoring metrics definition**, e.g. reduction of inter-domain traffic, reduction of hop-count, application download rate *(NOT draft-wu-alto-te-metrics* etc.)
- **Monitoring data sources**, e.g., different log servers, P2P clients, OAM systems
- **Monitoring structure**, e.g., how to orchestrate data

- **Issues** noted by **performance directorate review**
  - Monitoring metrics are **not formally defined**
  - Metrics that quantify the benefits of ALTO **depend on the use case**
  - Measurement is challenging due to **required data exchange** (e.g., ISP vs. P2P operator)

- **Suggestions for replacement of original Section 6.3** – to be discussed
  - **No formal definition of metrics** in draft-ietf-alto-deployments
  - **Paragraph for each use case** that discusses how to monitor the benefits of ALTO, but no formal recommendations

➤ Any feedback? Objections?
Summary and Next steps

• Status of -08: Significant changes, but further updates are needed

• Planned next steps
  
  • Additional text on provisioning of ALTO Maps in Section 3.2  
    ➔ Explanation of potential data sources in real networks
  
  • Deployment consideration for P2P and CDN in Sections 4 and 5  
    ➔ Text has to be revised
  
  • Briefly reference other proposed ALTO use cases in Section 6  
    ➔ Current list based on existing Internet Drafts, further suggestions?
  
  • “Monitoring ALTO” considerations (originally Section 6.3, currently Appendix A)  
    ➔ Address performance directorate review (cf. previous slide)
  
  • “API between ALTO Client and Application” (currently Appendix B)  
    ➔ Currently empty section, remove?