Deployment considerations
draft-ietf-alto-deployments-08

Martin Stiemerling, Sebastian Kiesel, Stefano Previdi, **Michael Scharf**

Presented by Vijay Gurbani

IETF 88, Vancouver, Canada, Nov. 2013

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

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?**