ALTO Problem Statement

draft-maroocco-alto-problem-statement-03

Enrico Marocco
Vijay Gurbani

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The Problem

• Provide applications with information to perform better-than-random peer selection
  − To improve performance
  − To reduce inter-domain traffic
  − Applies to all applications which can access resources available in multiple instances
Changes from -02

• Clarifications
  - Achieve “better-than-random initial peer selection”
    • Was: find the “best” peer(s)
  - Optimization of network resources may require a balancing of traffic localization and delocalization
    • No assumption that “local” means “optimal”
  - Replaced the term “oracle”
    • To avoid confusion with one possible solution approach

• Restructured
  - Terminology, The Problem, Use Cases, Solution Considerations
Terminology

- Application
- Peer
- Resource
- Resource Identifier
- Local traffic
- Transit traffic
- Peering traffic
- ...

- ALTO Service
- ALTO Client

- ALTO Query
- ALTO Reply
- ALTO Transaction
- ...

- ALTO Server
  - Who serves a query
  - Should not imply a client/server implementation
  - Suggestions?
Solution Considerations

• ALTO Service Providers
  − Network operators, third-parties, communities

• User privacy
  − Must not require disclosure of information sensible for the users (e.g. lists of IPs involved in a swarm)

• Topology hiding
  − Must not require disclosure of information sensible for ISPs (i.e. stay away from business matters)

• Coexistence with caching solutions

• Protocol extensibility