

ALTO Problem Statement

draft-marocco-alto-problem-statement-03

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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