

ALTO and Content Delivery Networks

draft-penno-alto-cdn

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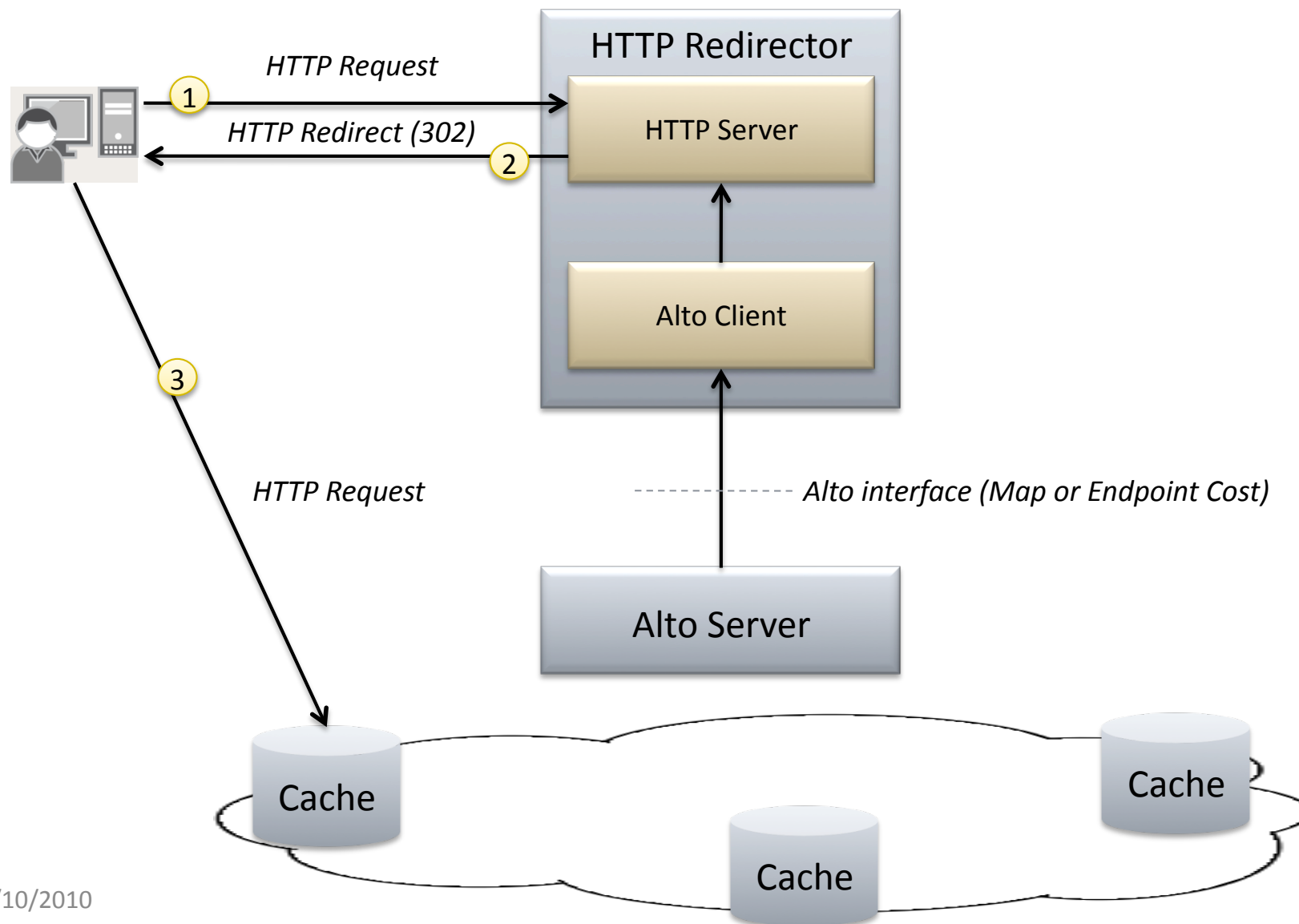
Alto Server and the CDN

- Goals
 - Optimize CDN traffic delivery
 - Improve global and local server load balancing
 - Facilitate topology & status information sharing between domains (e.g., CDN – ISP)
- Non Goals
 - Standardization of particular server selection criteria

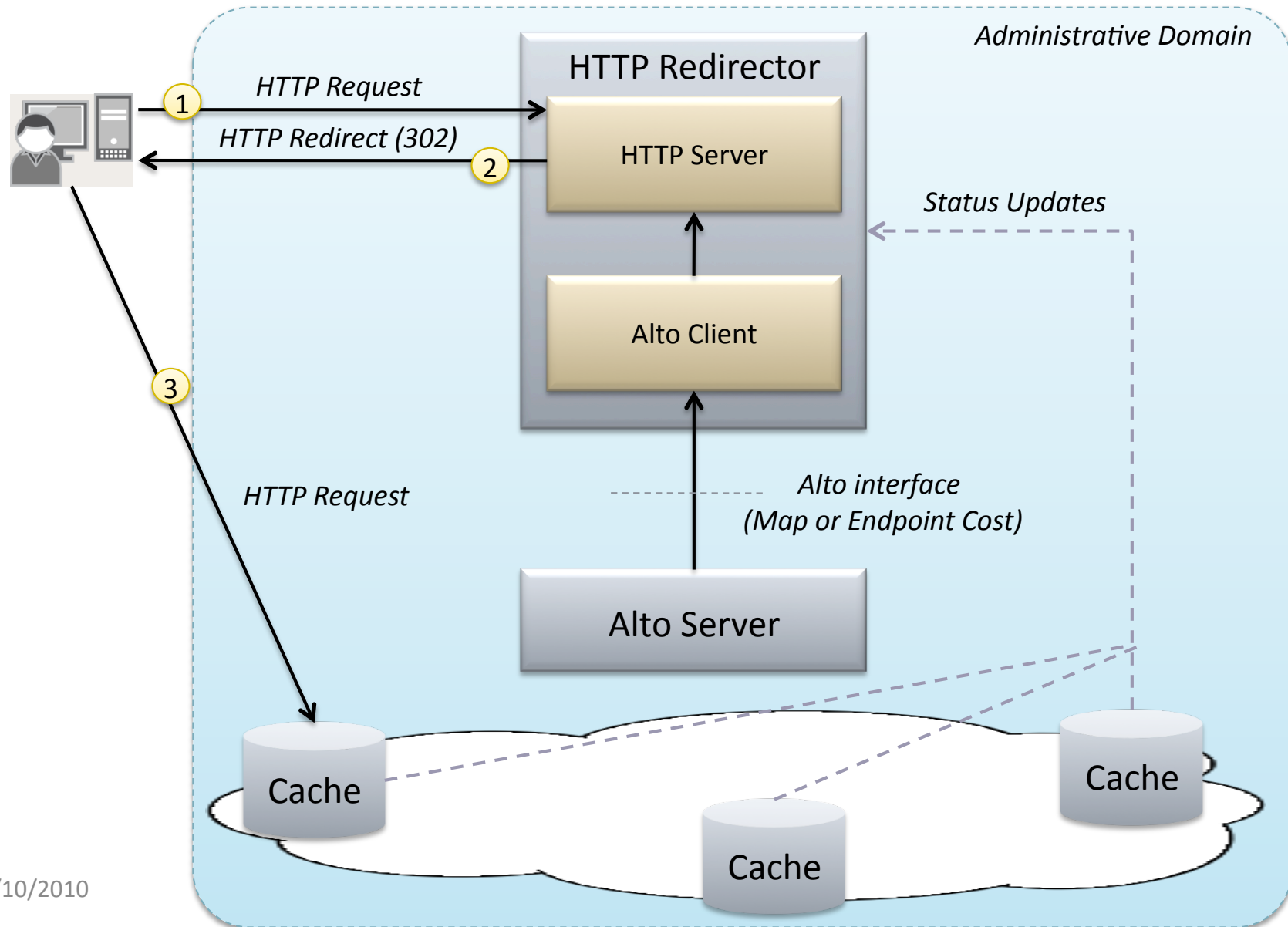
Alto Server and the CDN

- Scope:
 - Integration of the ALTO Service with two main CDN request routing
 - HTTP Redirect
 - DNS Integration
 - Multi-domain use cases

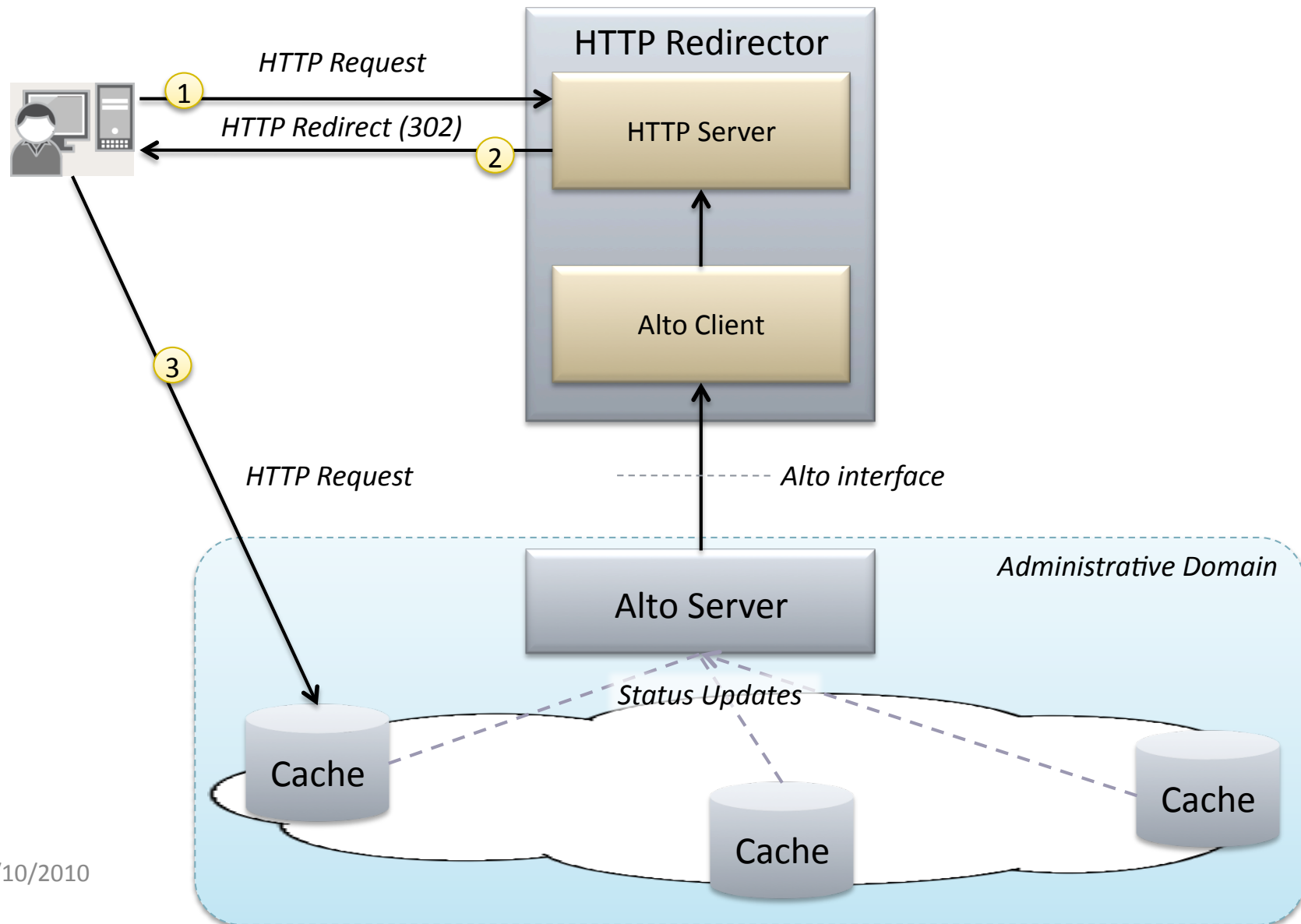
HTTP Redirector



HTTP Redirector (Status Updates)

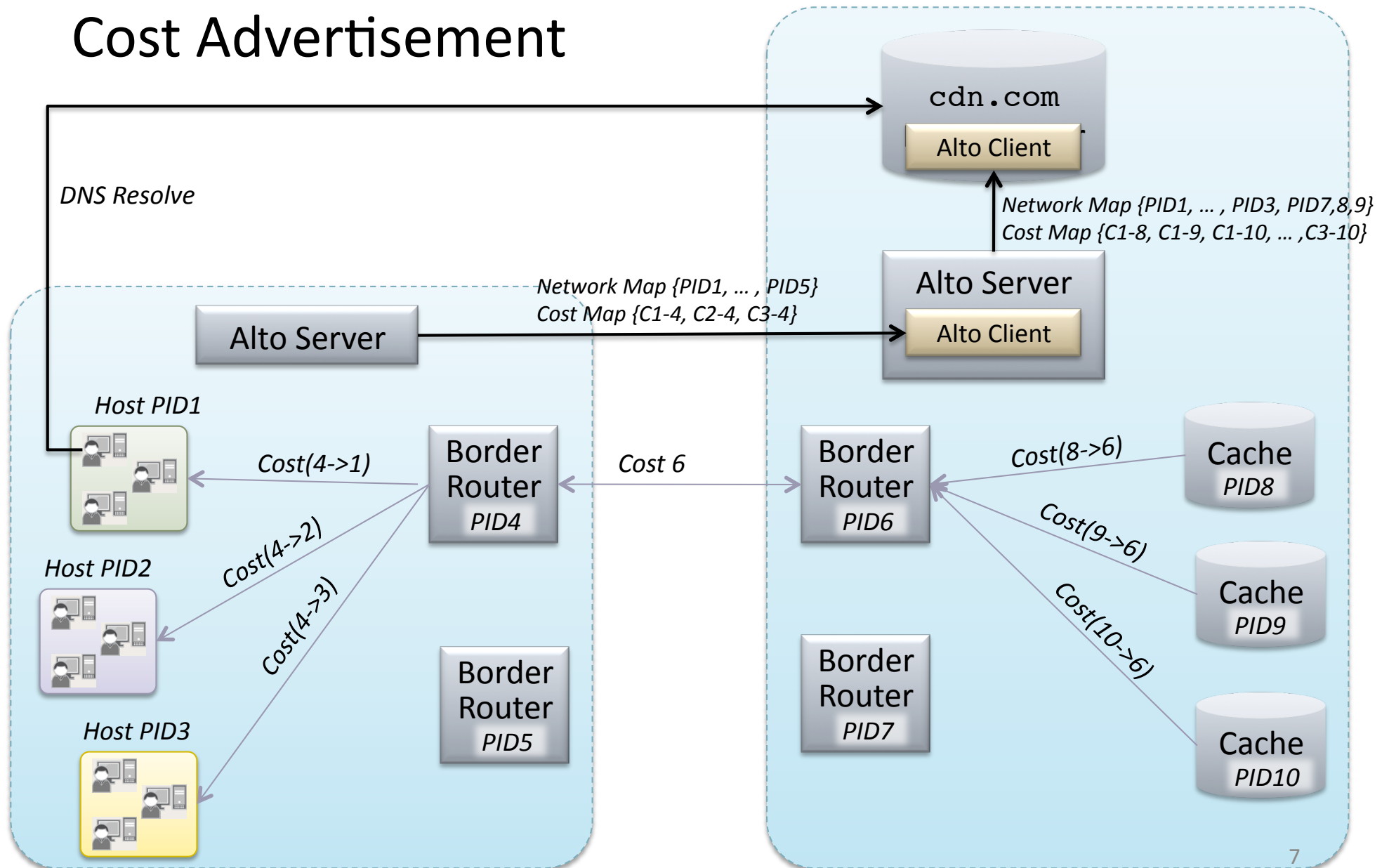


HTTP Redirector (Status Updates)

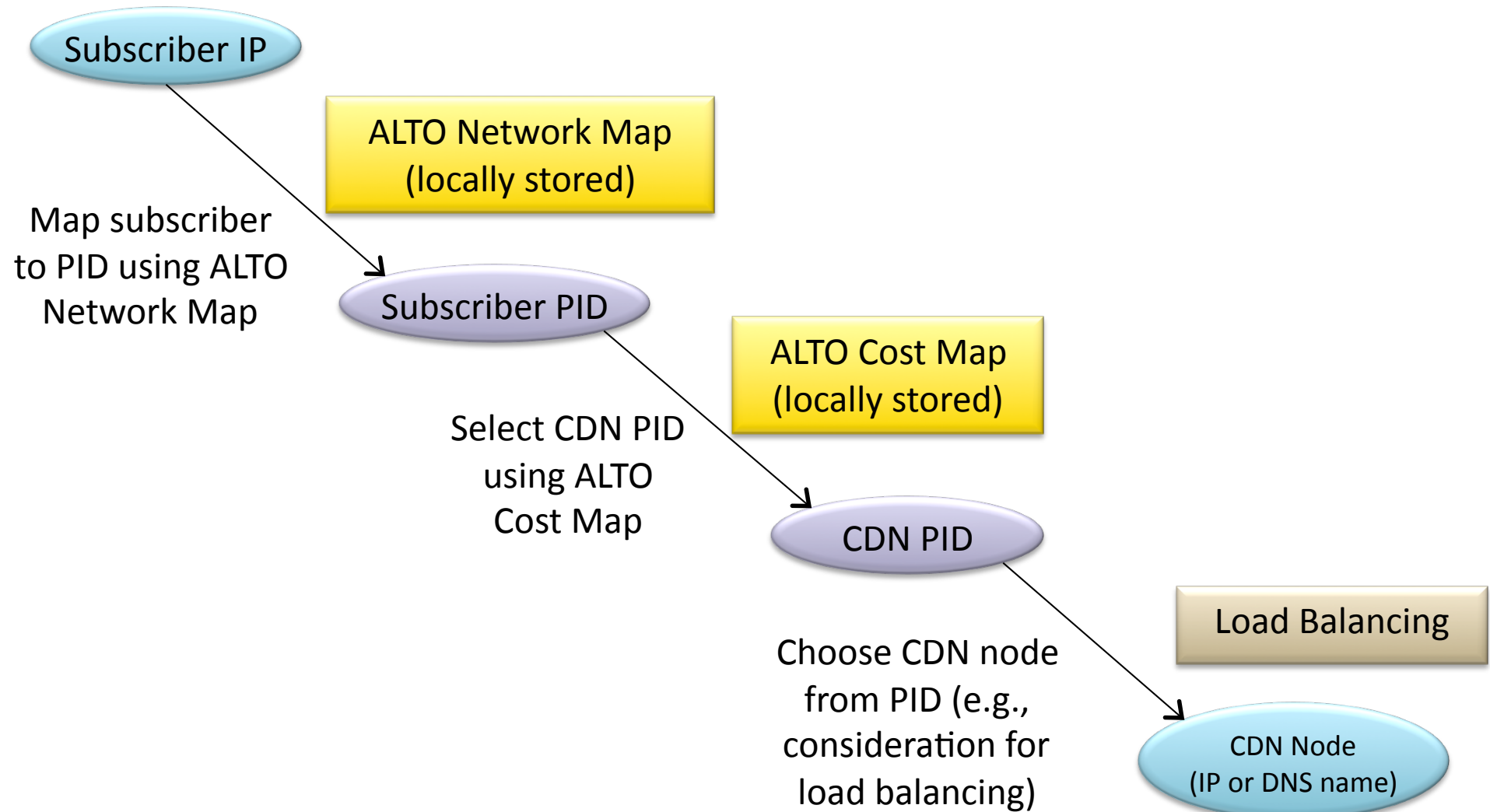


Multiple Admin Domains

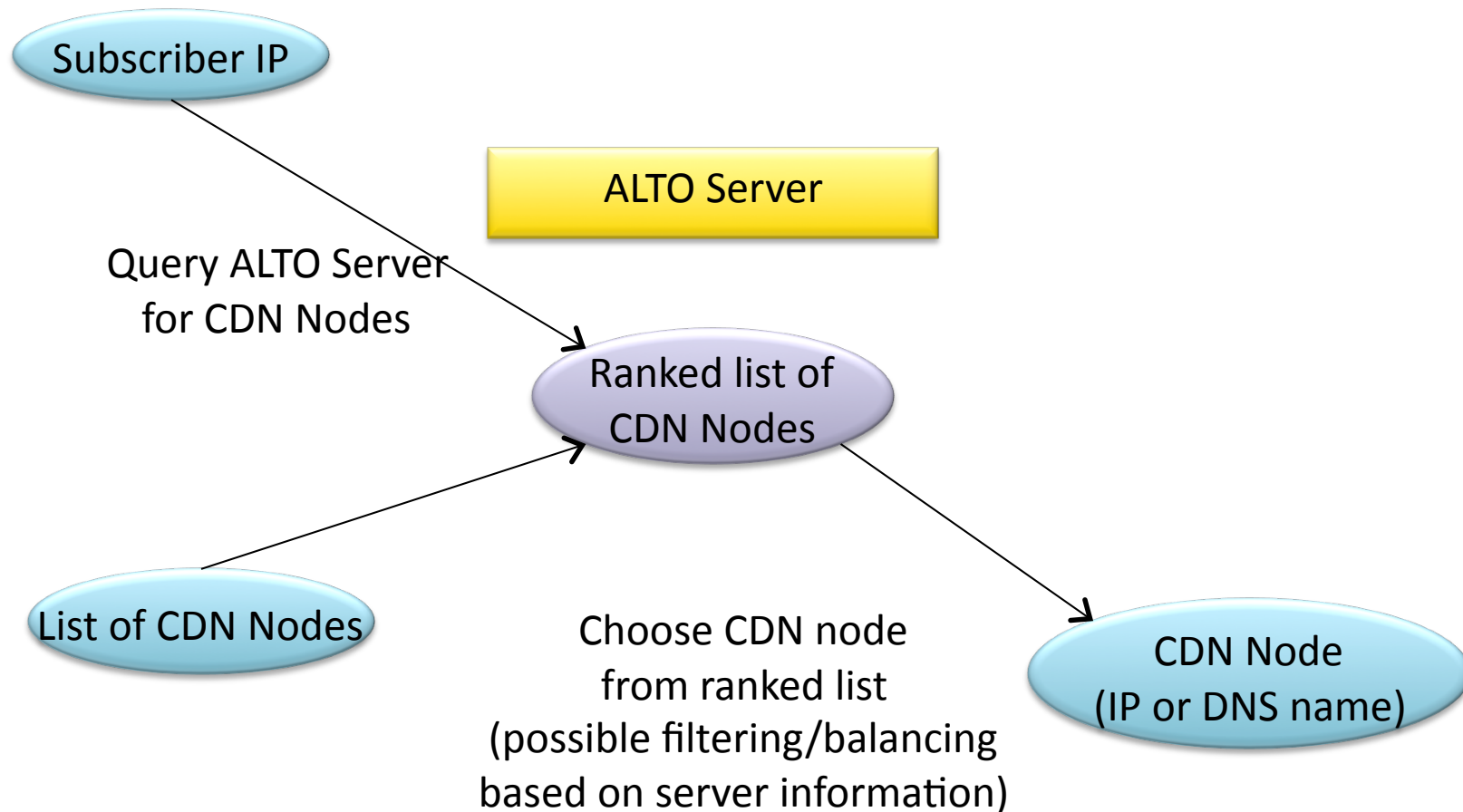
Cost Advertisement



Request Routing using Map Service



Request Routing using Endpoint Cost Service



Suggested Protocol Additions/Extensions

- **PID Attributes (and Query):**
 - Needed to disambiguate between PIDs containing endpoints of a specific class
 - PIDs classified as containing "CDN nodes", "Mobile Hosts", "Wireline Hosts", etc.
 - Allows ALTO Network Map to provide simple resource discovery/location.
- **Incremental Map Updates:**
 - Beneficial if maps are large and/or change often
 - The map contained in the reply is the delta from the previous version
 - Note: pertinent for ongoing discussions regarding mobility.

Additional Suggestions

- **Federated deployment of ALTO Servers**
 - Is anything beyond standard ALTO Protocol needed for distributing information amongst servers?
- **Extensible Cost Maps**
 - Does it make sense to store “opaque” information for paths within ALTO Maps, instead of just numeric/ordinal costs?
- **Discovery**
 - Discover CDN's ALTO Server instead of ISP's ALTO Server. Input to discovery discussion

Backup Slides

DNS Resolution

Single Administrative Domain

