

Incremental Updates

- draft-ietf-alto-incr-update-sse-00
- General framework for updates to any ALTO resource
 - Including Endpoint Cost & Property Services
 - Provides *continuous* updates, which may be full or incremental
- Server defines one or more Update Stream resources
 - Continuous stream of update messages for a resource set
 - One stream may update several resources (network + cost maps)
- Update Streams are optional & flexible
 - Server can provide updates for some, all or none of its resources

Transport & Update Mechanisms

- Transport mechanism: Server-Sent Events (SSEs)
 - Update Stream is a sequence of SSE messages
 - Each SSE message updates one resource
- Full update format:
 - ALTO data message
- Incremental update format:
 - Recommended: JSON Merge-Patch (RFC 7386)
 - Extensible to other incremental update formats
 - Server offers set of incremental update formats
 - Client selects from set

Alternatives

- Use HTTP/2 (RFC 7540) instead of SSE
 - Affects transport; does not change update format
- Pluses:
 - IETF Standard
 - Should be widely supported – *eventually*
- Minuses:
 - Much more complex than HTTP/1.1
 - Not yet widely supported in libraries
 - HTTP proxies must support HTTP/2
- Recommendation:
 - We need incremental update *NOW*
 - Offer HTTP/2 version when support becomes common