

# ALTO Protocol Update

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Grateful to contributions from large number of collaborators;  
see draft for complete list.

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# Outline

- Summary of changes made from -16 to -17
- Proposed changes to be made
- Discussion items
- Proposed timeline

# Summary of Changes Made in -17 (Posted July 14, 2013)

- Changes based on WG interim meeting (June 19, 2013) and email discussions

- Summary posted to working group

<http://www.ietf.org/mail-archive/web/alto/current/msg01999.html>

- Some “major” items

1. Introduction revision
2. Terms: removed ASN, added ALTO Service
3. Introduce Resource ID as a component in IRD and in Version Tag to better handle multiple resources and resource dependency
4. Security consideration revision

# Proposed Change: Making Service IDs JSON Keys

- Proposal (<http://www.ietf.org/mail-archive/web/alto/current/msg02019.html>)
- Proposed change
  - Change the format to the new format (<http://www.ietf.org/mail-archive/web/alto/current/msg02113.html>)

# Proposed Change: cost-type-names

- Issue (<http://www.ietf.org/mail-archive/web/alto/current/msg02031.html>)
- Proposed change (<http://www.ietf.org/mail-archive/web/alto/current/msg02082.html>)
  - Add an explicit statement that cost-type names are local to an IRD
  - Specify the following constraints on IRD consistency:

`media-type==alto-costmap+json && accepts == ""`  
=> cost-type-names has one entry.

`media-type==alto-costmap+json && accepts == "alto-costmapfilter+json"`  
=> cost-type-names has one or more entries.

# Proposed Change: Disallow Duplicate Cost Maps

- Issue (<http://www.ietf.org/mail-archive/web/alto/current/msg02034.html>)
- Proposed change (<http://www.ietf.org/mail-archive/web/alto/current/msg02045.html>)
  - Make the statement that `<cost-type, networkmap>` defines a key for cost map, and no duplicate cost map resources with the same key

# Proposed Change: Mark Default if Multiple Network Maps

- Issue (<http://www.ietf.org/mail-archive/web/alto/current/msg02052.html>)
- Proposed change (<http://www.ietf.org/mail-archive/web/alto/current/msg02065.html>)
  - Label one network map as the default to help client that is designed with dealing with only one network map
  - Add statement that future extension may add other attributes such as granularity

# Proposed Change: ECS MUST NOT Specify that It Uses a Particular Map

- Issue (<http://www.ietf.org/mail-archive/web/alto/current/msg02106.html>)
- Proposed change
  - Adopt following revision (<http://www.ietf.org/mail-archive/web/alto/current/msg02116.html>):

It is important to note that although this resource allows an ALTO Server to reveal costs between individual endpoints, an ALTO Server is not required to do so. A simple implementation of an ECS resource may compute the cost between two endpoints as the cost between the PIDs corresponding to the endpoints, *using one of the exposed network and cost maps defined by the server*. See Section 14.3 for additional details. However, to preserve flexibility, the ECS resource MAY omit declaring in the “uses” attribute the network map and/or cost map on which it depends (see the “uses” attribute in Section 8.5.2).



# Discussion: Endpoint Property/Filtered Cost Map if Multiple Network/Cost Maps

- Issue (<http://www.ietf.org/mail-archive/web/alto/current/msg02110.html>)
- Two design options (not exclusive):
  - Option 1: Indicate the dependency on “uses” in IRD
    - Benefit: explicit sharding to handle multiple maps
  - Option 2: Specify the base resource ID in query input, i.e.,
    - Specify the resource id of the network map that will be used to query PID
    - Specify the resource id of the cost map when specifying filtered cost map
    - Benefit: compress IRDs or use same URI for multiple maps

# Proposed Timeline

- Berlin IETF presentation (July 29, Today)
- Revised ID (August 14, 2013)
- 2<sup>nd</sup> short WGLC (August 28, 2013)
- IESG (September 2013)

# Backup Slides

# Discussion: Must Provide Network/Cost Maps?

- Issue (<http://www.ietf.org/mail-archive/web/alto/current/msg02081.html>)
- Options:
  - No => Imply dropping “MUST provide” sentences in {10.1.1} and {10.1.2}
  - Yes: => May need to add a “dummy” network/cost map to satisfy the requirement (previous decision)
- Proposed decision:
  - Keep the current spec, i.e., must provide a network/cost map