Topology, YANG and SUPA

ALTO WG

IETF 91 (Toronto)

~~Chairs~~ Peterson

Why Topology?

- Understanding topology is essential to optimization
  - ALTO was originally just about the client/server protocol to convey rankings and maps
  - Now our charter calls for this:

    A document specifying how a graph representation format (originating, say, from a YANG data model) can be used in ALTO and optionally be exported by an ALTO server in addition to network and cost maps.

- Previously, our customers were CDNs, DHTs, etc.
  - Who are the customers of the graph representation format deliverable?
  - Who will produce these graphs and who will consume them?

Excerpt from SUPA Proposed Charter

However the real value… lies within the possible simplification through models provided by such systems to applications and network services running above them (on the so-called northbound side).

Well-designed models are able to provide a wide range of granularity for various applications and network services needs, from the lower-level physical network to high-level application services.

Where do we fit in?

- Other groups are doing YANG network topologies
  - I2rs has a layer 3 topology
  - But it's really focused on ISIS and OSPF
  - Do we think our applications need OSPF data?
    - Or is it higher-layer topology
  - Do we need overlays? PIDs? CDN-specific data? Etc.

- Key takeaway: the IETF should make sure that the Apps and Routing folks have a common understanding of what topological data is useful

Things to focus on

- Let's not get bogged down in encoding, let's worry about semantics
  - Though obviously, choosing the syntax that producers/consumers use today can bootstrap adoption
  - How important is compatibility with ODL?
- Please speak up as to how you would use the graphs and topologies
  - Either as a producer or a consumer
- Is a new effort (different WG) needed?
  - Do we have the expertise and energy here?