

Determining the optimal external peer out of (and eventually in from) a peering fabric

- 1) A knows how to get to Volttron
- 2) A knows its own connecting flow rate (1 Gbps) and its optimization preference (UX vs. BW vs. \$\$)
- 3) A is a container running with Contiv networking
- 4) The API Gateway is a RESTful interface
- 5) The time between LC service requests is greater than Voltlon's update interval for bandwidth (required?)
- 6) The DC is configured with sufficient MTU between A & B for the label stack

French Press Service is relevant only to a peering fabric. In the simpler CDN case, there is only a single peering fabric so no need to associate the host with a fabric. As it scales, though, the host will be responsible only for getting to the "best" peering fabric and the local peering fabric will need to advertise and interpret the received SID to provide the appropriate steering to its external peers.

-A peering fabric service to simply provide shortest path routing to the optimal peering fabric is a base component of this use case. Really, it's just a query to the BGP table from the endpoint.

Includes:

- 1) Location of liveness checks for FP data publisher (are data populated for the selected algorithm?)
- 2) Initial service parameters:
 - min time between GraphDB queries
 - % of paths covered by measurements before advertising API
 - minimum freshness of latency data

- * How does BAF service deal with 100's to 1000's of endpoints? *one answer: have a set of best paths and round-robin through them*
- * Due to telemetry data lag, need to be flexible of definition of "least used path" i.e. a set of low utilization paths
- * Need to consider synchronization between "best path set" at time t, and new information received from telemetry
- * Due to high bi-sectional bandwidth in the fabric, the most probable point of bottle necks is flow polarization to a single egress leaf node (note Max Flow Capacity of paths).
- * Can we streamline service needs and data acquisition? Perhaps Kafka topics is a solution

* Debug ability - what events & data do we need to log and/or track within Voltron?

