

RSVP-TE Path Diversity using Exclude Routes

draft-ietf-ccamp-lsp-diversity-03.txt

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Motivation

- Find a simple means in which a client can express diversity needs as a service request to the server network
- Request needs to be stable and persistent
- Status of whether the request is fulfilled (or not) needs to be communicated to server

Primary Use Case

- IP or OTN as a client of Optical
- All networks under a single administration
- Server network may be multiple domains
- Clients may be dual homed
- Requested LSP
 - may need to be diverse of a Tunnel where one or both ends are neither the source or destination of the requested LSP

Terminology

- TUNNEL FEC
 - (Tunnel id, Source, Destination, Extended Tunnel-id)
- (TUNNEL) LSP FEC
 - (Tunnel id, LSP ID, Source, Destination, Extended Tunnel-id)
 - May be useful but the LSP ID may change over time
- Primarily interested in the TUNNEL FEC
 - Saw no point in ruling out LSP FEC

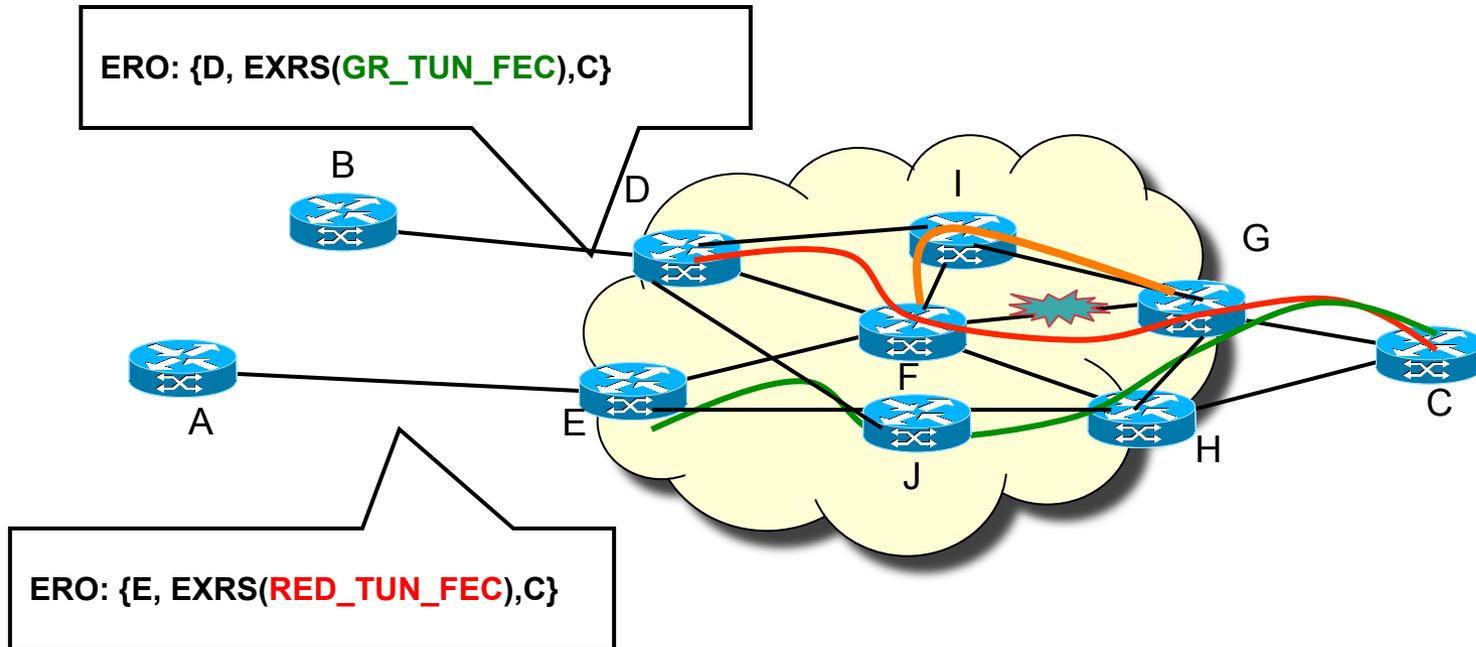
Requirements

- Tunnel Identifier
 - Understood by both Client and Server
 - Stable over long periods of time
 - Presentable in human comprehensible format
 - Referenceable even if it is not yet signaled
 - Stable even when Tunnel is rerouted
- Server network
 - No assumptions made on information distribution
 - e.g. IGP, PCE, NMS
- No assumption on any protocols running between client and server other than GMPLS

Server Network

- Though no assumptions are made, guessing that many implementations would have information to determine path feasibility before signaling
- Any and all information available should be used
- Motivation here is purely pragmatic as to what we can expect to have in deployed networks and over the next few years
- Crankback used as a last resort

Rerouting



- Red LSP is rerouted using RFC4920
Text needs to be added to support this!
- No impact on green LSP
Setting a flag to allow impact has been requested
(diverse paths exist, but existing needs to be moved)

Possible Road Forward

- Chairs held a meeting Tuesday with authors and interested parties
- Weds we had discussion with authors of draft-fedyk-ccamp-uni-extensions
 - Both drafts are signaling based approaches.
 - Tunnel FEC and Path Affinity Set (PAS) are similar constructs.
- These could both be accommodated in a single TLV with sub-TLVs

Next Steps

- Will continue to work with authors of other drafts to find common ground
- Will (hopefully) result in a merger of 2 or all 3 drafts



Thank You