RSVP-TE extension for signaling Objective Function and Metric Bound

draft-ali-ccamp-rc-objective-function-metric-bound-04.txt

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Deutsche Telekom AG
Ericsson
Huawei Technologies
Large SP Transport Layer Environment

- Mixed Vendor Environment; Possible Dual Cores
- Several Vendors in access
- No PCE is deployed
- SDN not yet deployed
- Multiple operations groups
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Operational Culture

• Good fences make good neighbors
  ➢ UNI exists to solve a political problem
  ➢ otherwise we’d just have GMPLS

• Fewer protocols is better (whether or not true, it is perceived)
  ➢ Less training
  ➢ Less configuration
  ➢ Simpler debugging
  ➢ Above sums to less OpEx

• Resistant to allowing devices outside their control to participate in their protocols
The full picture
Recovery Requirements

• Restoration needs to be performed in fully distributed fashion.
  - The entity that provisioned the path options may not be accessible/active during a failure, e.g., SDN controller, planning tool, manual, etc.
  - That entity may be overloaded during failure scenarios
  - Involving that entity will slow down the restoration.
• A centralized entity may provide more relaxed constraints to be used in the event of a hard failure
  - (i.e. the primary constraints or ERO cannot be met)
• This approach offers the benefits of centralized planning, but gives network autonomy to find restoration paths
  - Note that centralized planning could be an off-line exercise
Motivation behind in/exclude route & OF

- RFC4208 restrictive in scope
- Idea is to open it up to information that parties are willing to agree to share
- Allow User to learn SRLGs and latency
- Allow User to specify requirements in more abstract, but highly relevant terms
  - Diverse from another path
  - Follow another path
  - Meet a bound on latency
  - Meet some other objective