Additional Objective Functions and Metric Types in PCEP

draft-ali-pce-additional-of-and-metric-00.txt

Author list:
  Zafar Ali (zali@cisco.com)
  George Swallow (swallow@cisco.com)
  Clarence Filsfils (cfilsfil@cisco.com)
  Siva Sivabalan (msiva@cisco.com)
  Stefano Previdi (sprevidi@cisco.com)
  Kenji Kumaki (ke-kumaki@kddi.com)
Outline

- Requirements
- Solution
- Next Steps
Requirements

• Network performance criteria (e.g. latency) are becoming as critical to path selection as other TE metrics (e.g., in financial networks).

• Selection of a path that minimizes end-to-end latency and/or end-to-end latency variation is required.

• Even if paths are computed to minimize some other TE metric, it is often required to specify an acceptable latency and/or latency variation bound as a constraint.
Solution Background

- The METRIC object is defined in RFC5440.
- RFC5440, RFC5541 and RFC6006 define various Metric Types.
- RFC5541 extends the PCEP to include Objective Functions.
- RFC5541 and RFC6006 defines various Objective Functions supported by PCEP.
Solution

• Solution is simple; define new metric types and objective functions for latency and latency variation metrics.

• New Metric Object Types
  - P2P Latency Metric
  - P2P Latency Variation Metric
  - P2MP Latency Metric
  - P2MP Latency Variation Metric

• New Objective Functions
  - Minimum Latency Path Objective Function
  - Minimum Latency Variation Path Objective Function

• Other than specifying code points for the new metric types and objective function, the draft does not propose any changes to PCEP
Next Steps

- There is an overlap with draft-dhody-pce-pcep-service-aware.
- Authors have agreed to merge the documents.
- Will like to request WG feedback.
Thank You.