PCE Path Profiles

draft-alvarez-pce-path-profiles

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Problem Statement

• PCC initiated paths cannot benefit from centralized path definition / management when relying on PCE centralized path computation

• PCE has limited ability to influence how a path that it initiates will be used
Path Parameter Types

• Fully operational paths have two parameter types
  Path computation parameters
  Path usage parameters

• Path computation parameters
  Determine path computation and/or path signaling (if using RSVP-TE)
  Standard based

• Path usage parameters
  Determine local behaviors on path head end
  Not necessarily standardized (locally significant)

• Path usage and path computation parameters may interact

• Both parameters types apply to RSVP-TE signaled and Segment Routing TE paths

• A combination of path computation and path usage parameter values define a path profile
Path Profiles in Use

**PCC-Initiated Paths**

Stateful / Stateless PCE

PCEP Request Destination, path profile 10

PCEP Reply Path computation parameters, path profile 10

Stateful PCE

PCEP Create / Initiate Path computation parameters, path profile 10

**PCE-Initiated Paths**

PCC-Initiated Paths

Stateful / Stateless PCE

PCEP Request Destination, path profile 10

PCEP Reply Path computation parameters, path profile 10

Stateful PCE

PCEP Create / Initiate Path computation parameters, path profile 10
Next Steps

• Revise profile id space (32 bit?)
• Define optional TLVs to allow a PCE to influence some path usage parameters when initiating a path
• Add point-to-multipoint details and security considerations
• Comments?
Thank you!