PCN Edge Behaviour Drafts

Status as of IETF 75

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Background

- Updated drafts submitted in early July
  - draft-ietf-pcn-cl-edge-behaviour-00.txt
  - draft-ietf-pcn-sm-edge-behaviour-00.txt
- Reflect outcome of last meeting's discussions
  - Also reflect a great deal of off-list discussion
- Issues raised both on- and off-list
On-List Issues

- Need to address problem of identifying an IEA
  - Proposal: not going to vary with the edge behaviour
  - Hence document problem and solution elsewhere, perhaps with reference from edge behaviour drafts
  - Chartered signalling draft milestone the likely place (should have been the architecture document)

- Granularity of flow identification at egress and ingress
  - We can't see a way to avoid DSCP + 5-tuple granularity in IP case
  - Could be DSCP and tunnel ID or LSP in specific deployments
On-List Issues cont'd

• Measurement delays for flow termination (CL case)
  • see discussion of effect of differing round trip times

• Information flows need to be related to use/non-use of resource signalling
  • agreed that flow termination always requires asynchronous messaging from egress node
  • drafts currently assume asynchronous signalling for admission state
  • asynchronous signalling implies requirement for reliability, hence delays for reattempts when message lost
  • should add to current discussion the case where admission state is added to (implicit in?) egress node response to resource signalling
Off-List Issues

- Effect of RTT on flow termination
  - Daisuke has demonstrated interaction between multiple aggregates traversing the same bottleneck
  - Differing round trip times can result in termination biases
    - More of the shorter RTT flows may be terminated
  - Finding has provoked discussion of details of measurement behaviour for flow termination
  - Probably want initial measurement periods just long enough to produce reliable estimates at both egress and ingress
    - ~30 unmarked packets, based on statistical rule of thumb
  - Discussion continues over timing and processing of subsequent observations in same episode
Off-List Issues cont'd

- Amount of memory/smoothing needed in the system
  - Averaging per packet or per period or over multi periods
  - Does oscillation matter? If not, don't need much smoothing
  - Discussion continues