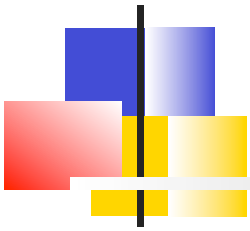
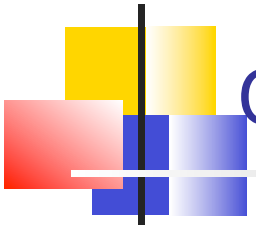
Generic Aggregation of Resource Reservation Protocol (RSVP) for IPv4 and IPv6 Reservation over PCN domains



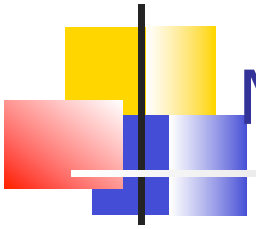
draft-ietf-tsvwg-rsvp-pcn-04

Georgios Karagiannis, Anurag Bhargava



Outline

- Main Changes
- Main open issues
- Additional resolved issue
- Next steps

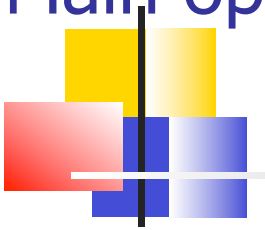


Main changes

Most comments worked out:

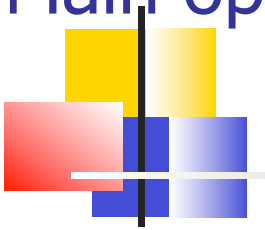
- Comments of Lixia and Ken are worked out
- Argumentation of Francois of selecting RFC 4860 as basis of supporting the RSVP over PCN signaling are included in draft
- Most comments provided by Bob are worked out:
  - not worked out comments are related to facts that:
    - Bob is willing to use e2e RSVP for RSVP over PCN signaling , while this draft focuses on using RFC 4860 for RSVP over PCN signaling (authors do not agree)
    - Bob is willing to introduce a description of a policy-based admission control (PBAC) architecture in this draft (authors do not agree)

Main open issue 1 (1)



- In order to support RSVP over PCN two approaches can be used:
  - Approach 1
    - adapting RFC 4860 aggregation procedures to fit PCN requirements with as **little change** as possible over the RFC 4860 functionality
    - hence performing aggregate RSVP signaling (even if it is to be ignored by PCN interior nodes)
    - using this aggregate RSVP signaling procedures to carry PCN information from PCN-egress-node to the PCN-ingress-node.
  - Approach 2
    - adapting the RFC 4860 aggregation procedures to fit the PCN requirements with **more significant** changes over RFC4860
    - hence not performing aggregate RSVP signaling
    - piggy-backing of the PCN information inside the e2e RSVP signaling

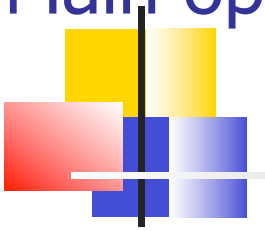
Main open issue 1 (2)



- Selection of RFC 4860 to support RSVP over PCN signaling
  - RFC 4860 operations have been thoroughly studied and implemented, it can be considered that RFC 4860 solution can better deal with the more challenging situations (rerouting in the PCN domain, failure of an PCN-ingress-node, failure of an PCN-egress-node, rerouting towards a different edge, etc.).
  - The above is also reason of choosing Approach (1) for specification of the signaling protocol used to carry PCN information from the PCN-egress-node to the PCN-ingress-node.

In particular, this document specifies **extensions to Generic Aggregated RSVP** [RFC4860] for support of the PCN Controlled Load (CL) and Single Marking (SM) edge behaviors over a Diffserv cloud using Pre-Congestion Notification

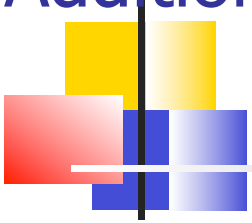
Main open issue 2



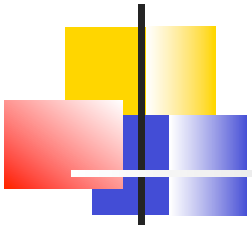
- Bob proposed to introduce description of a policy-based admission control (PBAC) architecture in order to respond to answer about on-path vs off-path policy
- Opinion of authors of this draft:
  - If a new policy-based admission control (PBAC) architecture is to be used in context of PCN, then this should be done within another document and not within draft-ietf-tsvwg-rsvp-pcn
- David wants authors to proceed on this by expanding following paragraph (already in the v4 of draft) to cover Bob's point:

  "If the PCN decision point is not collocated with the PCN-ingress-node then additional signalling procedures are required that are out of the scope of this document."

Additional resolved issue



- David proposed to include text that clarifies error conditions:
  - When not all required objects are contained by Aggregated RESV
  - Due to mis-configuration of edge nodes Aggregated RESV could escape from PCN (aggregated) domain):
    - Authors will work out these comments



Next steps

- Incorporate David's comments
- Working Group Last Call?