eardley-pcn-architecture-00

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Aim

- We would like this draft to now become a WG draft for the WG's Milestone
    - Nov 2007 Submit 'Flow Admission and Termination Architecture within a Diffserv Domain' to the IESG for consideration as an Informational RFC

- The authors include authors of the various PCN protocol proposals, as well as others
    - Comments indicate the draft is mature

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Summary

- We have tried to ensure that the draft doesn't pre-judge the selection of a marking algorithm & boundary mechanism(s)
  - The authors of the 4 proposals for mechanisms believe that their proposal is compatible with the architecture draft (delta a few minor additions)

- Content
  - Introduction
  - Terminology
  - Assumptions and constraints on scope
  - High-level functional architecture
  - Detailed functional architecture
  - Design goals and challenges
  - Deployment scenarios
  - Operations and Management

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Clarification Comments

- Introduction
  - Clarify that details of marking are not fixed

- Terminology
  - Try to extend RFC2475's (even) more
  - Add a term defining 'pre-congestion'
  - Some alternatives suggested. Not sure how to resolve

- Assumptions and constraints on scope
  - Mainly clarification on what was agreed last time

- High-level functional architecture

- Detailed functional architecture
  - Clarify option with Centralised decision-making node
  - Explain why allowing choice of where admission decision is made (egress, ingress or 'centralised node')

- Design goals and challenges

- Deployment scenarios
  - Clarify which ones are in scope of the Charter & which beyond it

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Things that are missing

- Ensuring 'single marking' approach is not precluded
  - Ok – text to add

- Operations and Management – section needs review
  - The Charter requires us to "include security, manageability and operational considerations" - Does the section fulfil this?

- Discussion of tunnelling and PCN encoding (interactions)
  - (copying marking from outer to inner)

- Addressing – what nodes need to know about another node's address and how they find out

- Probing & ECMP – started discussed on list – need better discussion of them

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Issue 1 - terminology

- How to close?

- Proposal 1
  - (configured)-admissible-rate; admission-marking;
  - (configured)-termination-rate; termination-marking

- Proposal 2
  - Admissible-rate; admission-stop marking;
  - Sustainable-rate; excess-traffic marking

- Proposal 3
  - Rate-1; rate-1-marking
  - Rate-2; rate-2-marking

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Issue 2- ingress-egress addressing

- what nodes need to know about another node's address and how they find out

    - PCN-egress-node needs to know address of PCN-ingress-node (or 'centralised node') that will decide whether to admit the new flow, so it can send it measurements;

        - finds out from higher layer signalling (eg rsvp, nsis)
        - or use ingress-egress tunnelling
        - Other approaches?

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Issue 3 - ECMP

- There is a separate issue for admission control and for flow termination

- We need more discussion on these

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- I will put in changes received so far in next 2 weeks

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