draft-chan-pcn-encoding-comparison-01.txt
@
70th IETF in Vancouver

Kwok Ho Chan

Georgios Karagiannis

December 3, 2007

Purpose of Encoding Comparison

- Indicate the different encoding approaches
- Compare the different approaches
- Provide set of choices, each with clear reason for its selection
- Help select an encoding

Method of Comparison

- Base on the encoding transport method
- Consider different encoding for each transport method

Encoding Transport

- The use of DiffServ to separate PCN and non-PCN traffic is a fact of PCN that will not be changed in different phases of the Charter. Hence the use of DSCP as part of encoding is a given.

- Should we consider Encoding Transports that does not involve the use of DiffServ? Should we remove section 3.2?

- Motion to remove section 3.4 (Out-of-Band Channel as Encoding Transport).

Encoding States

- PCN Traffic and Non-PCN Traffic
- Not Pre-Congested Indication
- Stop/Start Admission Indication
- Start/Stop Termination Indication
- Affected Marking Indication
- Nonce Indication – required?

Criteria

- How well an encoding supports the required PCN Encoding States

- How well an encoding supports PCN traffic's friendliness to ECN traffic

- How well an encoding supports ECN traffic's friendliness to PCN traffic

- How well an encoding allows PCN to work with ECMP

Open Issues (1)

- Is PCN Traffic and Non-PCN Traffic indicaton an Encoding State?

  – The algorithm does not need to indicate if the traffic is PCN traffic or Non-PCN traffic

  – Remove this as encoding state if PCN traffic can always be separated

- Use of PCN by multiple DiffServ PHBs.

Open Issues (2)

- Interaction between PCN and ECMP and its impact on Encoding Choices
  - How does ECMP algorithms use DSCPs?
  - Can PCN use different DSCPs to help its usage with ECMP?

- Will changes in PCN's operating environment require choosing different encoding?

- Change the terminology + abbreviation to PCN focus instead of ECN focused.

Next Steps

- Re-organize the draft based on the simplification steps discussed today.

- Expand and deepen the explanations for the remaining encoding choices.

- Consider additional encoding choices for the remaining transport methods.

- Add discussion of how each encoding choice support the known algorithms.