draft-ietf-tsvwg-diffserv-intercon

IETF 92, Dallas

Presented by: David Black

Version -01 has been better structured.

- Reviews by network provider representatives indicate beyond others that a better structure is desired.
- An applicability statement has been added.
- RFC5127 related statements appeared in several sections in prior drafts – now they are put together in one document.

Issues requiring discussion

- The draft expects that remarking of unknown DSCPs to Default DSCP is allowed. The issue treatment of unknown DSCPs received at network boundaries should be discussed in a separate draft. Diffserv-Intercon -01 still contains some related discussion which will be removed.
- Assignment of RFC4594s Multimedia Streaming class to one of the DiffServ-Intercon Treatment Aggregate.

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Applicability

- This document is primarily applicable to use of Differentiated Services for interconnection traffic between networks (in particular MPLS-based networks).
- Diffserv-Intercon is not intended for use within the interconnected networks, where RFC 5127 is among the possible alternatives.
- Diffserv-Intercon simplifies (negotiation and operation of) IP based interconnection to domains operating MPLS Short Pipe to transport plain IP traffic terminating within or transiting through the receiving domain.
  - Transit traffic is received and sent with the same PHB and DSCP.
  - Terminating traffic maintains the PHB with which it was received, however the DSCP may change.

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Relation to RFC5127

- RFC5127s general definitions largely apply to DiffServ Intercon.
- Differences mainly refer to the example given in RFC 5127 and some details are are discussed.
  - A main point here is the presence of a Telephony Class at interconnection. In regulated markets, it may have to be present to avoid discrimination against competitors.
  - Another case is the absence of a Network Control class at interconnection. Transit of plain IP Network Control traffic is however an unusual case. That's why there's no Network Control Interconnection class.
  - Treatment of network control traffic is included (this issue can't be ignored). RFC4594 text was picked up and some interconnection related proposals were added.

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Remarking of unknown DSCPs at interconnection

- Bob Briscoe identified this as an issue to be better handled in a separate draft.
- As David prior had proposed to remove Appendix/Annex A from the draft, which is related to the remarking issue, Bob's proposal is absolutely reasonable.
- The DiffServ RFCs are inconsistent on this topic.
- On ingress to network a network A remarks /all/ received DSCPs to what network A understands. This is widely deployed (including remarking unrecognized DSCPs to CS0).
- A separate draft should discuss, appropriate and allowed treatment. Some operational guidance may be helpful too – it seems to be useful to indicate treatment of all DSCPs when setting up QoS aware interconnection.

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Assigning RFC4594 Multimedia Streaming class to a DiffServ-intercon Treatment Aggregate

- Require near-real-time packet forwarding of variable rate elastic traffic sources In general, the Multimedia Streaming service class assumes that the traffic is buffered at the source/destination; therefore, it is less sensitive to delay and jitter.
- Backbone MPLS transport is assumed to be free of congestion in all classes.
- This traffic may be assigned to the DiffServ-Intercon Bulk Real-Time Treatment Aggregate or to the Assured Elastic Treatment Aggregate.
- Discussion is welcome.

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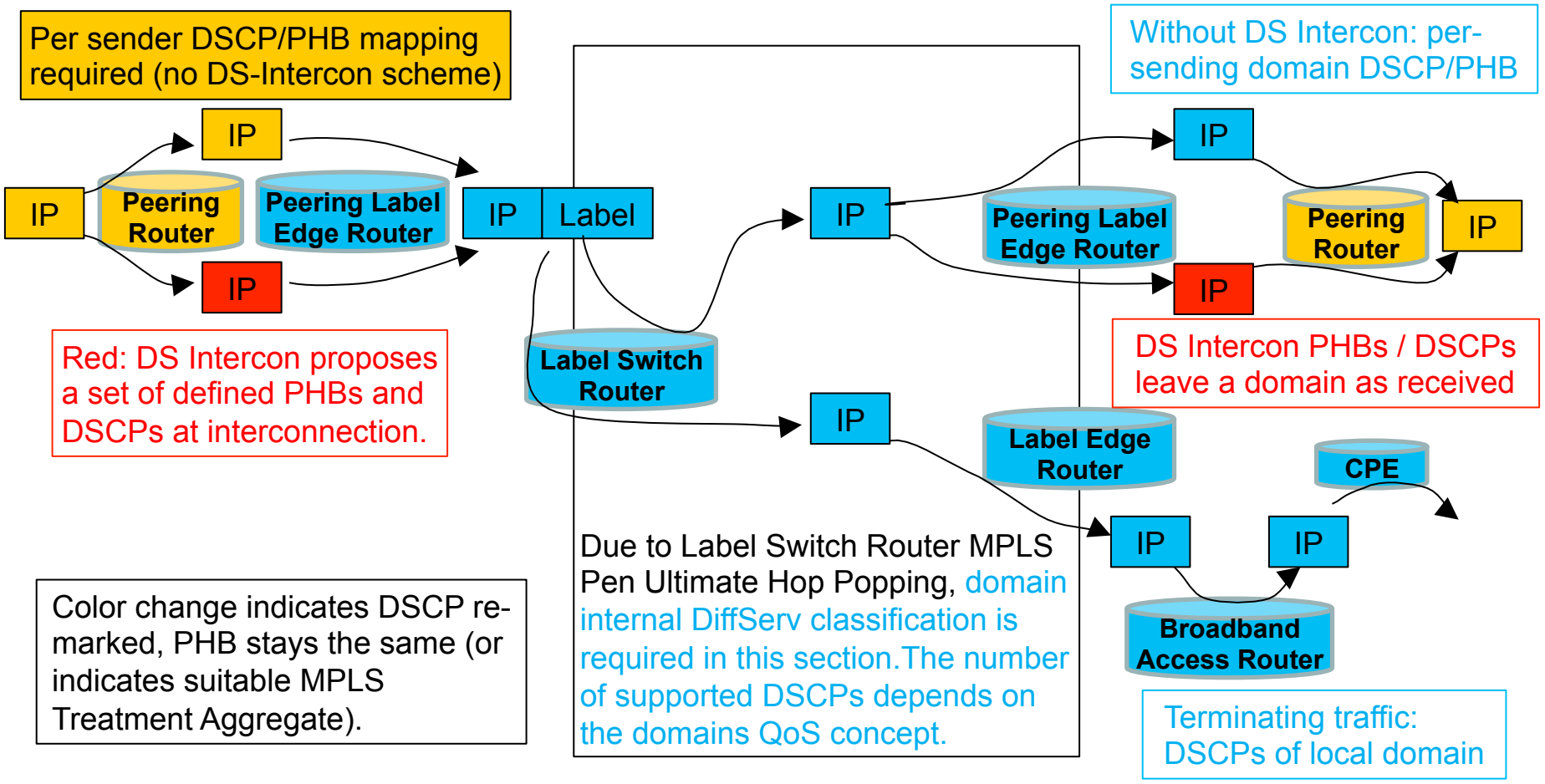
MPLS Short Pipe, non-tunneled IPv4 and DiffServ combined



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Next Steps

Aim: Informational RFC

Clarify applicability of the draft and finalise it.