draft-geib-tsvwg-diffserv-intercon
IETF 91, Honolulu

Presented by (the new co-author): David Black

Version -07 refers to prior IETF work (RFCs 5127, 4594…).

- Content related to other standards bodies has been removed.

MPLS-based Network Providers: MPLS Short Pipe tunnel model

- MPLS pen-ultimate hop [label] popping: top label removed before tunnel egress

- Used to provide pain IP transport service to customers

- Motivation for DiffServ-Intercon changes wrt RFC 5127 examples.

November 2014   Rüdiger Geib & David Black

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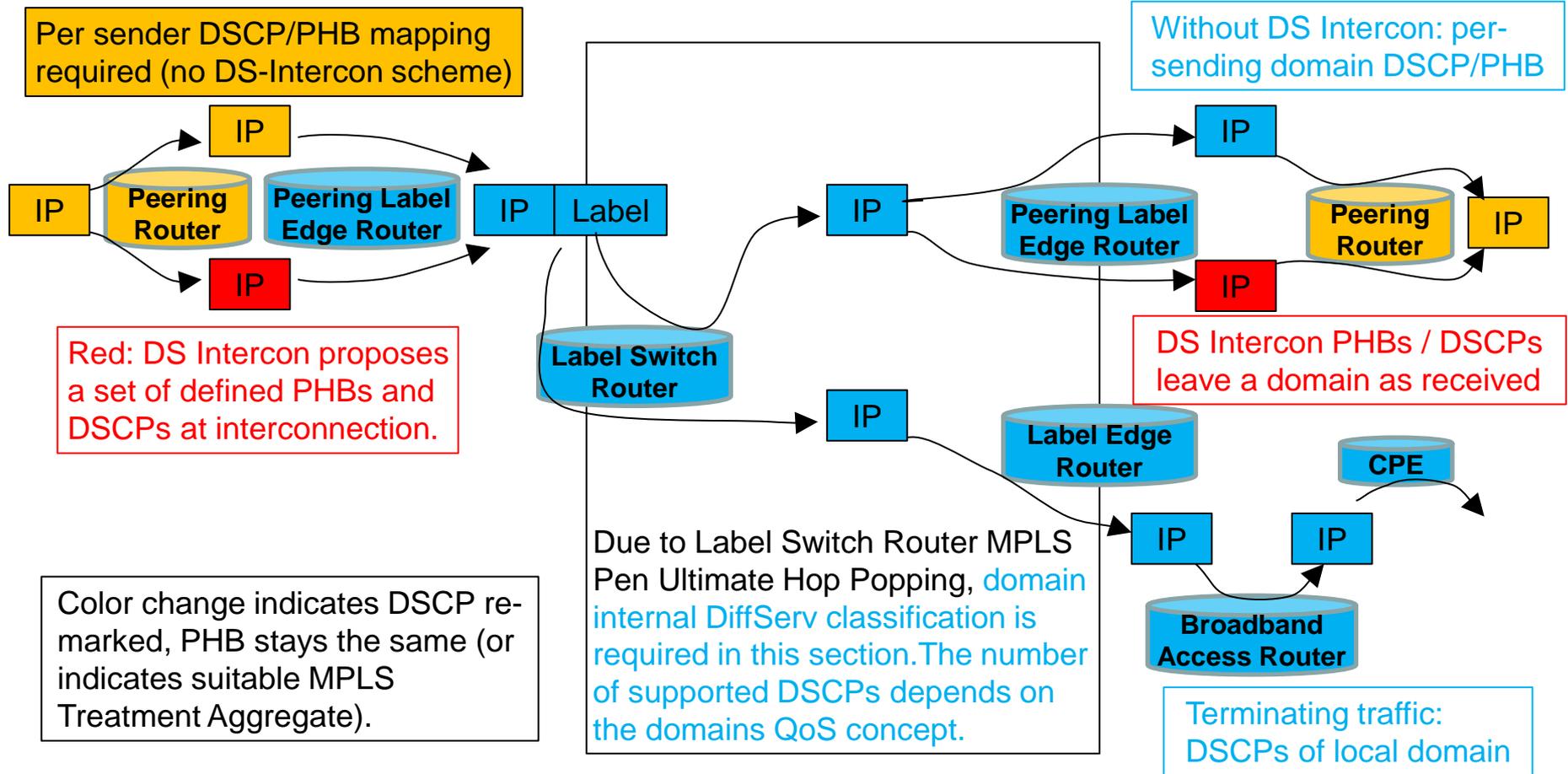RFC 5127 treatment aggregate example - comparison to DiffServ Intercon draft

- DiffServ-Intercon: One additional aggregate

- Service class-to-aggregate mapping differences

RFC 5127 Treatment Aggregate (RFC 4594 Service classes)	DiffServ-Intercon Treatment Agg (PHB)	Comment
Network Control (Network Control)	N/A	Not end-to-end Intercon treatment discussed.
Real-Time (VoIP, Streaming, MMConf., Interact., Bcast video)	Telephony Service only (EF and VOICE-ADMIT).	Strict Priority Queue
N/A	Bulk RT - MMConf., Interact., Bcast video (AF41 only)	Rate Queue (tail drop or similar), Streaming is optional
Assured Elastic	Assured Elastic (AF3x group)	Streaming may also fit here, AQM assumed
Elastic (Standard Service / Default , Low-Prority data)	Default /Elastic (Default - CS 0 DSCP)	Unsupported DSCPs remarked to CS0; No Low-priority data (CS1)

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MPLS Short Pipe, non-tunneled IPv4 and DiffServ combined

Per sender DSCP/PHB mapping required (no DS-Intercon scheme)

Without DS Intercon: per-sending domain DSCP/PHB

IP

IP

Peering Router

Peering Label Edge Router

IP | Label

IP

Peering Label Edge Router

Peering Router

IP

IP

IP

IP

Red: DS Intercon proposes a set of defined PHBs and DSCPs at interconnection.

Label Switch Router

IP

DS Intercon PHBs / DSCPs leave a domain as received

IP

Label Edge Router

CPE

Color change indicates DSCP re-marked, PHB stays the same (or indicates suitable MPLS Treatment Aggregate).

Due to Label Switch Router MPLS Pen Ultimate Hop Popping, domain internal DiffServ classification is required in this section.The number of supported DSCPs depends on the domains QoS concept.

IP

IP

Broadband Access Router

Terminating traffic: DSCPs of local domain

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Next Steps

Aim: Informational RFC

Draft has been rewritten (David Black is now a co-author), should meet TSVWG expectations.

Comments from other providers are welcome (and being solicited).

Request: WG adoption of draft (as basis for further work).