

draft-singh-l2vpn-bgp-vpls-control-flags-01.txt

Updated processing of control flags for BGP VPLS

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BGP VPLS: Summary and an issue

- **Summary of BGP VPLS: efficiency of control messaging**
 - A PE's NLRI specifies behavior expected from all other PEs in that block (per VPLS):
 - VPLS label to use
 - Behavior regarding acting on control flags, etc
- **Issue:** PE behavior when mismatching settings of control flags:
 - Expectation of NLRI-originating PE cannot be met by every remote PE (w.r.t. acting on received control flags)
 - No support for selectively asking only some PEs to act on control flags
 - What do the other PEs do? What does NLRI-originating-PE do?
 - Ignore the mismatch?
 - Not bring up the PW?

What is this draft about?

- Supporting mixed-settings of control flags in a given VPLS:
 - Making BGP VPLS work when PEs differ in their settings of the control flags
 - For every (per-VPLS) PE-pair, if one PE does not have the same value for C-bit, the PW between the pair still comes up. However, does not use CW.
 - Similarly for other bits in the control-flags
 - Works in a backward compatible fashion
- Enabling use of p2mp LSPs as transport when PEs in per-VPLS PE-set have mismatching control flags

Feedback on “-00” @ IETF-88 (Vancouver)

- Address multi-homing cases
- Get feedback

New in “-01”

- Additional co-author
- Single-homed sites:
 - Behavior for S-bit mismatch handling changed w.r.t. “-00”
 - Use of p2mp transport clarified due to change (w.r.t. “-00”) of behavior for handling S-bit mismatch
- Multi-homed site use-cases addressed:
 - C-bit mismatch behavior specified for multi-homed sites
 - S-bit mismatch behavior specified for multi-homed sites
 - Use of p2mp transport for above mismatches specified

Next steps

- Requesting WG adoption:
 - Draft addresses valid deployment scenarios that operators face
 - Scope of draft specifies behavior for mismatch of standardized bits in the control-flags field
- Work-in-progress drafts that are defining new (not already standardized) bits in control-flags would address mismatch for those bits separately