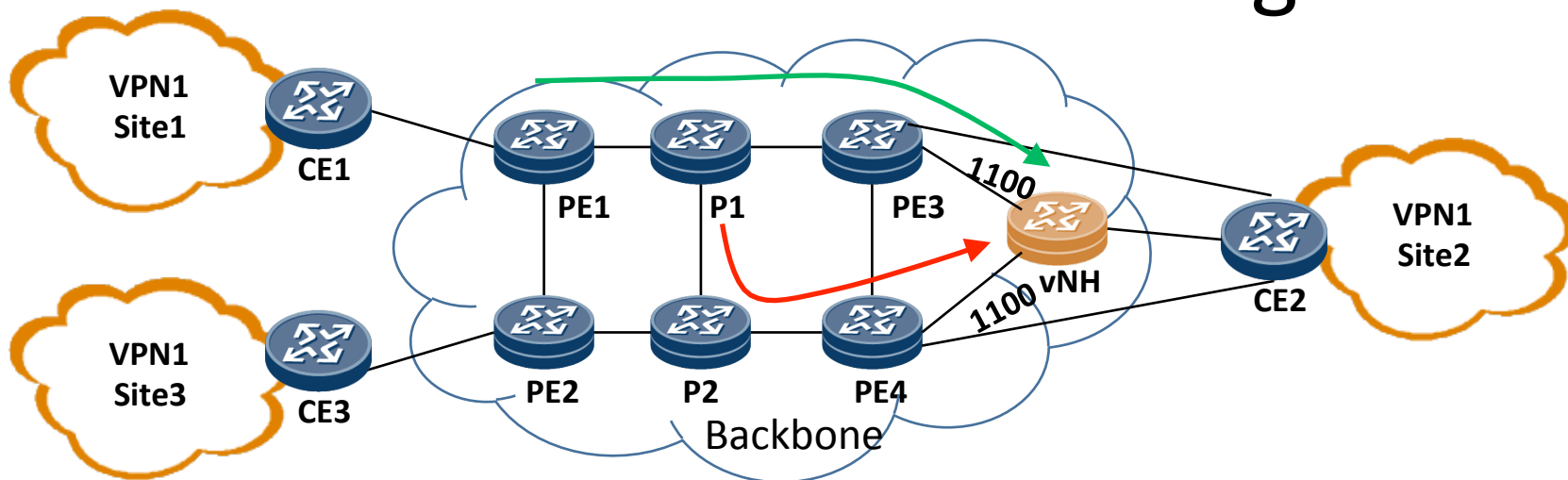


ICCP Application TLVs for VPN Route Label Sharing

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A Brief Intro to the Application: VPN Route Label Sharing

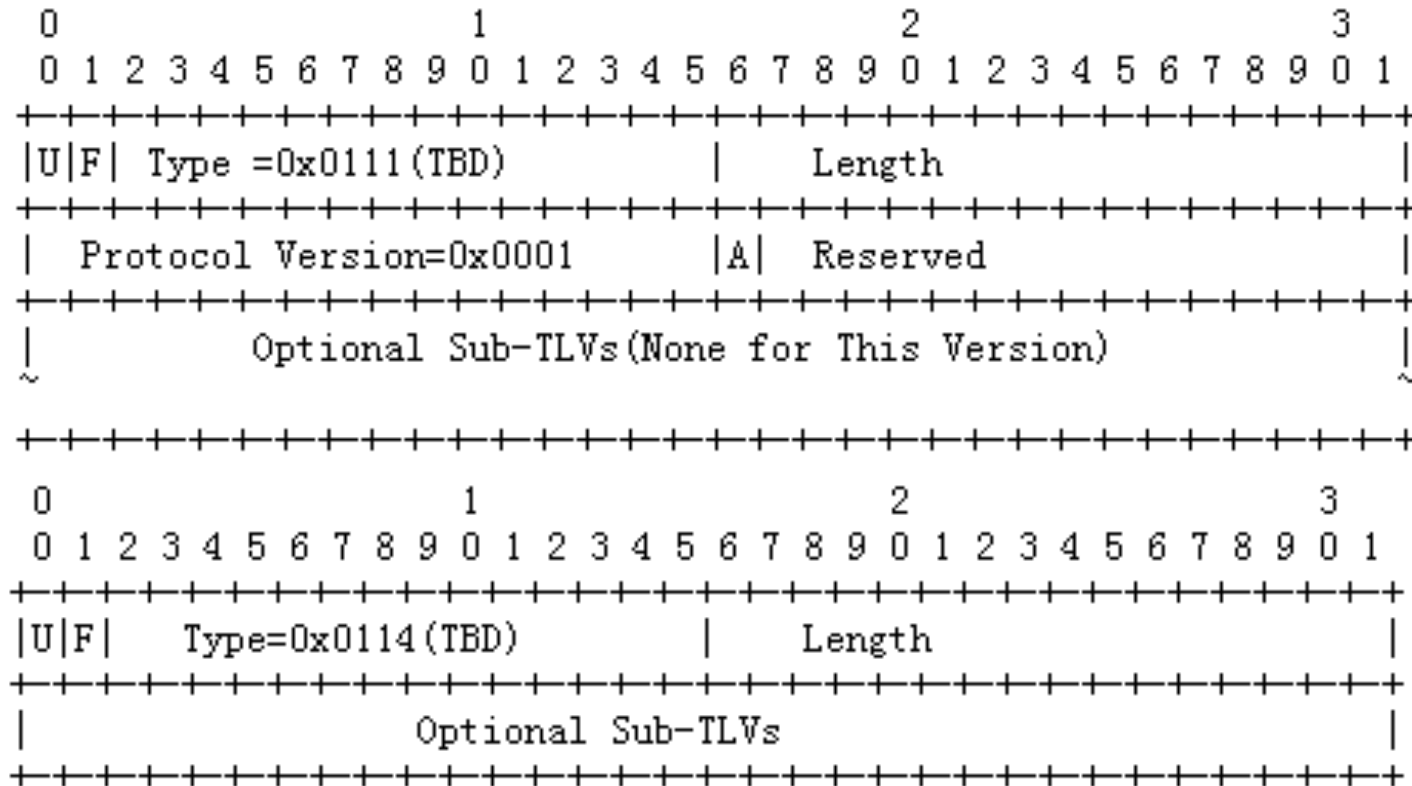


- Ingress PEs: PE1, PE2
- Egress PEs: PE3, PE4, they share the label 1100 for VRFs that CE2 is associated with.
- vNH: the virtual BGP Next Hop
- Primary tunnel: PE1->P1->PE3-vNH
- When PE3 fails, backup tunnel P1->P2->PE4->vNH can be used.

What to sync?

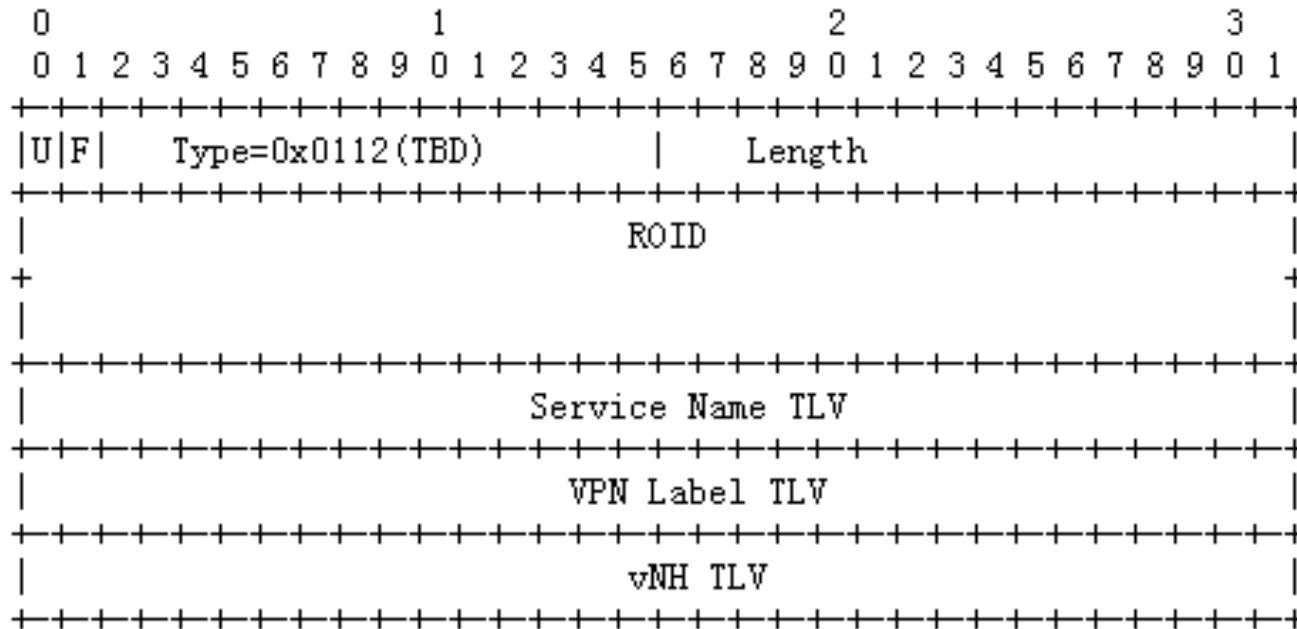
- Egress PEs in the same Redundant Group utilize the ICCP connection to negotiate the "VPN route label" and the "BGP next hop" for each VPN.

Label Sharing Connect & Disconnect



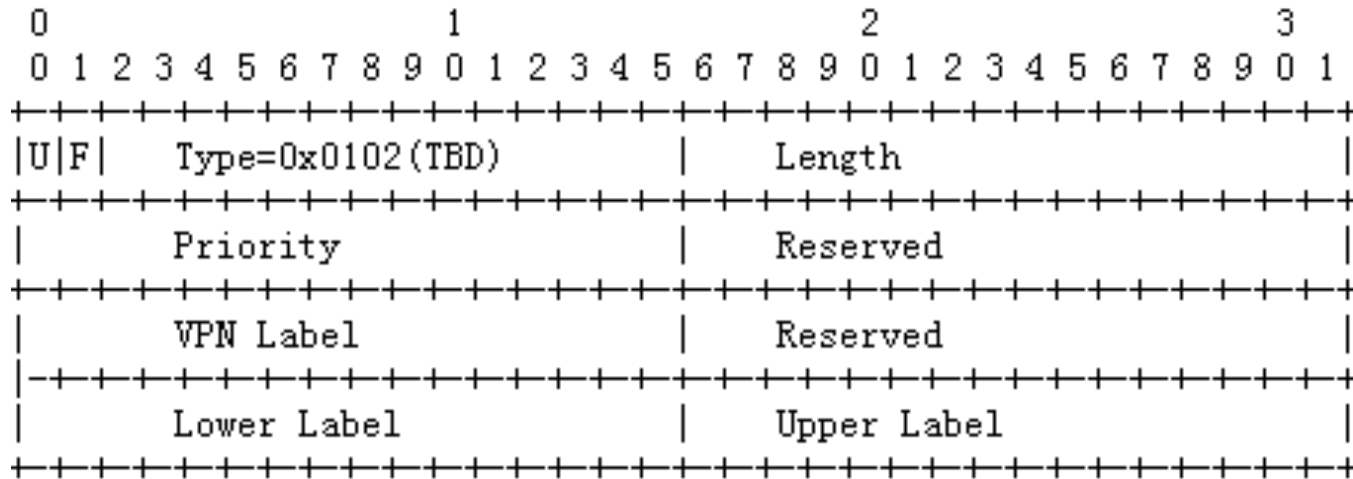
- The ICCP connection for the application is set up using this TLV.

Label Sharing Application Data TLVs



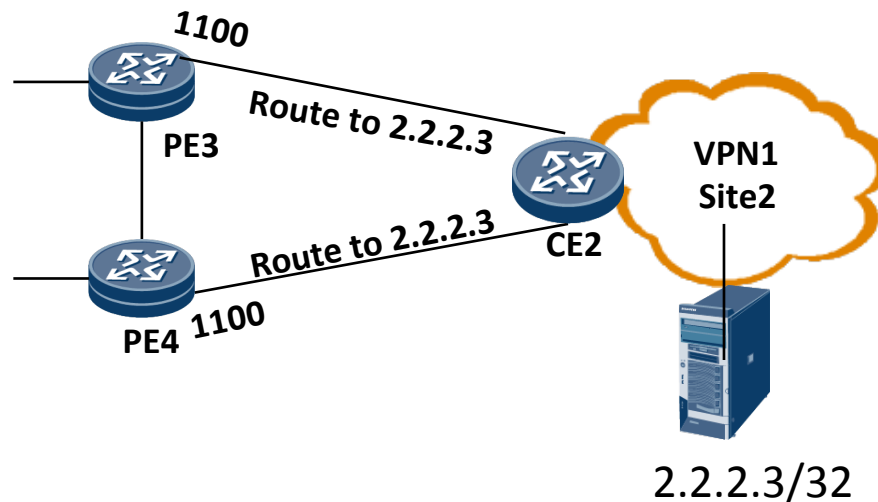
- There are three TLVs to be included in the Application Data TLVs

Sharing the Label



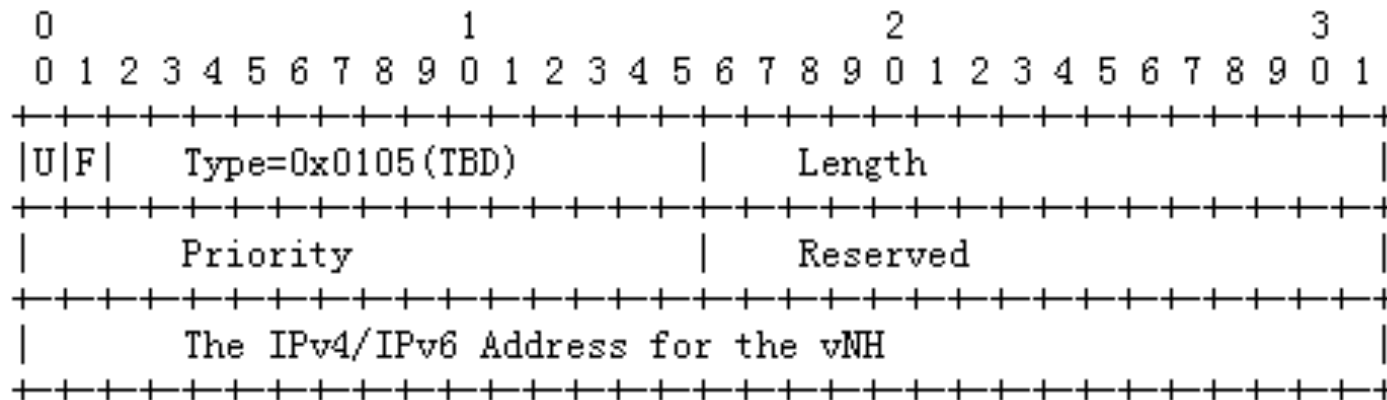
- The “VPN Label TLV” is utilized to deliver the VPN route label to be shared amongst the egress PEs.
- The VPN Label announced by the PE with the highest priority will be used by all PEs in the RG.

Share the Label for Routes from VPN1



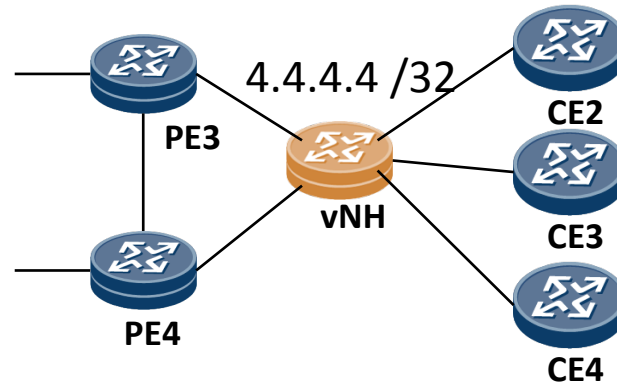
- PEs in an RG use the same VPN route label for the routes of one VPN.

Sharing the vNH IP Address



- The IP Address for the vNH is also shared by the egress PEs.
- The PE with the highest priority determines the IP address to be used.
- All egress PEs use this IP address as the BGP next hop when they propagate VPN routes.

One vNH for a set of CEs



- Egress PEs in an RG create a vNH for the set of CEs connected to them.

Next Steps

- Welcome to comments on this draft.
- Get directions from the WG.

Thanks!