Status

- Many discussions among the co-authors on the subjects that was listed in the previous IETF meeting
- Concluded along the line of objectives set out during the last IETF meeting – e.g., to reduce # of options where possible and to improve readability of the draft
Delta from rev0

- Added new section 7 to describe Ethernet Tag and its value setting for different types of services
- Added new section 9 to describe all important concepts upfront in one place for better readability (previously nits and bits of it were spread throughout the draft)
- Reduced number of options for Ether AD route
- Removed ‘don’t-care’ split-horizon label
- Removed source quenching option
- Added additional text for active/standby mode
New Section 7 – Ethernet Tag

- Describes the relationship between Ethernet Tag in EVPN routes, broadcast domain IDs (e.g., CE-VIDs), and EVI

- Describes the setting for Ethernet Tag value in EVPN routes for different services:
  - VLAN-based service Interfaces
  - VLAN-bundle service interfaces
    - Port-based service interfaces
  - VLAN-aware bundle service interfaces
    - Port based VLAN aware service interfaces
New Section 9 – Multi-homing Functions

- Multi-homed Ethernet Segment Auto Discovery
- Fast Convergence & Mass Withdraw
- Split Horizon
- Aliasing
- Designated Forwarder Election
Reduction of options for Ether AD route

<table>
<thead>
<tr>
<th>Flavor</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>RD</td>
<td>VPN RD</td>
<td>VPN RD</td>
<td>Segment RD</td>
<td>Segment RD</td>
<td>Segment RD</td>
<td>VPN RD</td>
</tr>
<tr>
<td>Ethernet Segment ID</td>
<td>VALID</td>
<td>NULL</td>
<td>VALID</td>
<td>NULL</td>
<td>VALID</td>
<td>NULL</td>
</tr>
<tr>
<td>Ethernet Tag ID</td>
<td>VALID</td>
<td>NULL</td>
<td>NULL</td>
<td>NULL</td>
<td>NULL</td>
<td>VALID</td>
</tr>
<tr>
<td>MPLS Label</td>
<td>VALID</td>
<td>VALID</td>
<td>NULL</td>
<td>NULL</td>
<td>VALID</td>
<td>VALID</td>
</tr>
<tr>
<td>RT</td>
<td>Single</td>
<td>Single</td>
<td>Multiple (corresponding to all VPNs on Segment)</td>
<td>Multiple (corresponding to all VPN instances enabled on PE)</td>
<td>Multiple (corresponding to all VPNs on Segment)</td>
<td>Single</td>
</tr>
<tr>
<td>ESI MPLS Label Extended Community</td>
<td>Not used</td>
<td>Not used</td>
<td>Contains the SH Label</td>
<td>Contains the SH Label</td>
<td>Contains the SH Label</td>
<td>Not used</td>
</tr>
<tr>
<td>Use</td>
<td>Advertise forwarding label per (ESI, Tag) for MPLS-based disposition.</td>
<td>Advertise forwarding label per VPN for MAC-based disposition.</td>
<td>1. Advertise SH Label for an Ethernet Segment. 2. Mass Mac withdraw upon an ES link failure</td>
<td>1. Advertise the special ‘Don’t Care’ SH Label for ingress replication w/o source quenching 2. Keep MPLS label stack consistent specially w/ flow label</td>
<td>1. Advertise forwarding label per ESI for MPLS-based disposition with label stack. 2. Advertise SH Label for an Ethernet Segment.</td>
<td>Advertise forwarding label per Tag for MPLS-based disposition with label stack.</td>
</tr>
</tbody>
</table>
Don’t care split-horizon label

- Removed this label and the associated mode in the Ethernet AD route
- Since Entropy label can be preceded with a reserved label, there is no ambiguity in MPLS label stack and thus no need for don’t care split-horizon label
Source quenching

- This option is used with ingress replication such that the replicating PE will replicate one BUM packet per egress site per egress PE.
  - This option would allow for ingress PE not to send a packet to a multi-homed site that is participating in.
  - This option is very inefficient and thus it is removed.
  - As the result, segment-id in mcast route is no longer needed.
Active/Standby mode

- Added a section to describe Active/standby mode
- Active/standby flag is “ESI MPLS Label Extended Community” is set by the multi-homed PE advertising this route
- Remote PEs upon receiving this route can deduce that the received MAC advertisements from these sites, are sent by the primary PE
- Upon primary PE failure, if the site is dual-homed, then the remote PEs, can simply set the adjacency for these MAC addresses to the backup PEs for faster convergence and reduced flooding.
Next Step

- Authors think that the draft is in a good enough shape for WG last call