IETF 100th Singapore

An Optional Encoding of the BIFT-id Field in the non-MPLS BIER Encapsulation

draft-wijnandsxu-bier-non-mpls-bift-encoding-00

IJsbrand Wijnands　　　　Cisco　　　　　　ice@cisco.com

Xiaohu Xu　　　　Huawei　　　　　xuxiaohu@huawei.com

Hooman Bidgoli　　　Nokia　　　hooman.bidgoli@nokia.com

1

Background/History

- We have had a long discussion around encapsulation
    - MPLS labels vs Ethernet encoding
    - Decoupling Sub-Domain, Set Identifier, BSL from BIFT-id.
    - Static vs Dynamic BIFT-id's.

- Main goal, have a shared encoding between MPLS and non-MPLS encoding.

- We succeeded in having a shared encapsulation (draft-ietf-bier-mpls-encapsulation-12)!

- No need to rehash that discussion!

Open issues

- Xiaohu has expressed (from day one) the desire to have static allocated BIFT-id's.

- We have had lively discussions around that topic �

- The main reason to avoid static BIFT-id's it to prevent the data-plane from being aware of the BIFT arguments, like Sub-Domain, SI, BSL (others in the future).

- In this draft we're defining a method to create a static BIFT, without the data-plane to be aware.

Static BIFT-id encoding

```
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
| BSL  |      SD      |       SI      | TC  |S|      TTL      |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|-------- 20 bit BIFT-id Field ---------|
```

- The BIFT-id is 20 bits.

- We overload this BIFT-id field and carve out space for: BSL, SD and SI.

- For the data-pane, this remains a 20 bit value!!!

- Data-plane MUST never parse this field.

4

Static BIFT-id benefits

- No need to advertise BIFT-id to {SD, SI, BSL} mapping.
- The BIFT-id is globally unique.
  Easier to troubleshoot.

Informational draft

- The reason to document this encoding is to make sure different vendors are interoperable.

- There is no IANA action required.

- This is an informational draft

Questions?