

BIER TE YANG

draft-zhang-bier-te-yang-01

BIER WG

IETF95# Buenos Aires

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BIER TE YANG

- According to draft-eckert-bier-te-arch
- Defines a YANG data model for BIER TE configuration and operation

BIER TE YANG

- BIER TE YANG is parallel with BIER YANG.
- Some common information is needed for BIER YANG and BIER TE YANG, such as sub-domain, BitStringLength, and so on.
- The combination YANG models may like this:

```
augment /rt:routing:  
  +--rw bier-common  
  .....  
  +--rw bier  
  .....  
  +--rw bier-te  
  .....
```

BIER TE YANG---framework

- Because the BitPosition is multi-semantic in different sub-domain and set identifier. The BIER TE forwarding is according to sub-domain.
- The key characters of BIER TE are: ID of adjacency, bitstringlength, ecmp path and FRR item.

```
module: ietf-bier-te
augment /rt:routing:
  +--rw bier-te-config
    +--rw te-subdomain* [subdomain-id]
      +--rw subdomain-id sub-domain-id
      +--rw adj-id* [adjID]
        .....
      +--rw te-bsl* [fwd-bsl]
        .....
      +--rw ecmp-path* [index]
        .....
      +--rw btaft* [adj-index]
        .....
```

BIER TE YANG---detail

```
module: ietf-bier-te
augment /rt:routing:
  +--rw bier-te-config
    +--rw te-subdomain* [subdomain-id]
      +--rw subdomain-id  sub-domain-id
      +--rw adj-id* [adjID]
        | +--rw adjID  adjid
        | +--rw adj-if  uint32
        | +--rw (te-adjID-type)
        |   +--:(p2p)
        |   +--:(bfer)
        |   +--:(leaf-bfer)
        |   +--:(lan)
        |   +--:(spoke)
        |   +--:(ring-clockwise)
        |   +--:(ring-counterclockwise)
        |   +--:(ecmp)
        |   +--:(virtual-link)
        |   +--:(other)
```

- The adjacency ID type describes the ID allocation method.
- The TE adjacency type describes the character of link.
- The ECMP and FRR will be an important part of TE forwarding.

```
+--rw bier-te-config
  +--rw te-subdomain* [subdomain-id]
    +--rw subdomain-id  sub-domain-id
    +--rw adj-id* [adjID]
      .....
    +--rw te-bsl* [fwd-bsl]
      | +--rw fwd-bsl  uint16
      | +--rw te-si* [si]
      |   +--rw si      si
      |   +--rw te-f-index* [te-f-index]
      |     +--rw te-f-index  bit-string
      |     +--rw (te-adj-type)
      |       | +--:(connected)
      |       | +--:(routed)
      |       | +--:(local-decap)
      |       | +--:(ecmp)
      |       | +--:(other)
      |     +--rw f-bm      bit-string
      |     +--rw f-intf   uint32
      |     +--rw ecmp?    boolean
      |     +--rw frr?     boolean
    +--rw ecmp-path* [index]
      | +--rw index  uint32
      | +--rw number* [number]
      |   +--rw number  uint16
      |   +--rw out-if  uint32
    +--rw btaft* [adj-index]
      +--rw adj-index  uint32
      +--rw bitposition  bit-string
      +--rw resetbitmask  bit-string
      +--rw addbitmask  bit-string
```

BIER TE YANG---notification and RPC

notifications:

+---n bier-te-notification

+---ro adjID-is-zero* [if-index]

+---ro if-index uint32

+---ro (te-adjID-type)

+---:(p2p)

+---:(bfer)

+---:(leaf-bfer)

+---:(lan)

+---:(spoke)

+---:(ring-clockwise)

+---:(ring-counterclockwise)

+---:(ecmp)

+---:(virtual-link)

+---:(other)

- It is invalid when the adjacency ID is set to zero.
- Other notifications may be done in the future.

The potential RPCs will be added in future version.

- Any comments are welcome 😊

Thanks!