L3VPN Yang Models

Team Members

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Scope

- Phase 1 (IETF94):
  - Configuration Data for basic L3VPN based on RFC 2547/RFC 4364.
  - The first version is released as follows:

  https://tools.ietf.org/html/draft-li-bess-l3vpn-yang-00

    - Phase 2 (IETF95):
      - Operational Data for basic L3VPN based on RFC 2547/RFC 4364.

    - Following features may may be taken into account in the future.
      - 6PE
      - V6PE(VPNv6)

Overview of L3VPN Data Model (1)

```
module: ietf-l3vpn
augment /rt:routing/rt:routing-instance:
   +--rw l3vpn
      +--rw ipv4-family
      |   +--rw bgp-parameters
      |   |   +--rw common
      |   |      +--rw route-distinguisher?   string
      |   |      +--rw vpn-targets* [rt-value]
      |   |         +--rw rt-value   string
      |   |         +--rw rt-type    bgp-rt-type
      |   ......
      +--rw ipv6-family
         +--rw bgp-parameters
         |   +--rw common
         |      +--rw route-distinguisher?   string
         |      +--rw vpn-targets* [rt-value]
         |         +--rw rt-value   string
         |         +--rw rt-type    bgp-rt-type
         ......
```

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Overview of L3VPN Data Model (2)

```
+--rw l3vpn
   +--rw ipv4-family
   |   +--rw bgp-parameters
   |   |   +--rw common
   |   |      +--rw route-distinguisher?    string
   |   |      +--rw vpn-targets* [rt-value]
   |   |         +--rw rt-value     string
   |   |         +--rw rt-type      bgp-rt-type
   |   +--rw apply-label-mode?        apply-label-mode-def
   |   +--rw import-route-policy?     string
   |   +--rw export-route-policy?     string
   |   +--rw tunnel-policy?           string
   |   +--rw prefix-limit
   |   |   +--rw prefix-limit-number?    uint32
   |   |   +--rw (prefix-limit-action)?
   |   |      +--:(enable-alert-percent)
   |   |      |   +--rw alert-percent-value?    uint8
   |   |      |   +--rw route-unchanged?        boolean
   |   |      +--:(enable-simple-alert)
   |   |         +--rw simple-alert?           boolean
   |   +--rw routing-table-limit
   |   |   +--rw routing-table-limit-number?    uint32
   |   |   +--rw (routing-table-limit-action)?
   |   |      +--:(enable-alert-percent)
   |   |      |   +--rw alert-percent-value?         uint8
   |   |      +--:(enable-simple-alert)
   |   |         +--rw simple-alert?                boolean
   |   +--rw import-global-rib
   |      +--rw protocol?               enumeration
   |      +--rw processId?              uint32
   |      +--rw bgp-valid-route?        boolean
   |      +--rw route-policy-name?      string
   +--rw ipv6-family
```

Open Questions

- Open questions has been identified by the team:
  - Liaison with Routing Instance Yang defined by https://tools.ietf.org/html/draft-ietf-netmod-routing-cfg-20
    - Should L3VPN Yang augment Routing Instance Yang or be an independent module? If it is to augment, how about L2VPN/EVPN? Should they also augment Routing Instance Yang?
    - It seems Routing Instance Yang also need some coordination work with I2RS RIB model or some static route Yang model. How will it move on?
  - Liaison with BGP Yang defined by https://tools.ietf.org/html/draft-shaikh-idr-bgp-model-02
    - Should the configuration of BGP using for PE-CE belong to BGP model or L3VPN model?
    - There is some configuration in BGP model has much relation with L3VPN. Should it move to L3VPN model? Or can they be seen the common configuration with other AFs and be kept in BGP models?
  - Liaison with L2VPN/EVPN Yang
    - In L2VPN/EVPN Yang AC is adopted. If L3VPN Yang is to augment routing instance Yang, it is called as "interface". How to cope with the issue?

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Other Drafts on L3VPN Yang

- draft-zhuang-bess-l3vpn-yang-01
  - It has been consolidated with draft-li-bess-l3vpn-yang-00. It will be expired.
- draft-keyupate-bess-bgp-l3vpn-cfg-01
  - Will be consolidated with draft-li-bess-l3vpn-yang-00.

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Next Steps

- 1. More configuration data of L3VPN Features will be defined.

- 2. Augment of BGP models for L3VPN will be defined.

- 3. Operational Data of L3VPN will be defined.

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