

RIFT YANG

draft-zhang-rift-yang-00

RIFT WG
IETF101# London

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RIFT YANG

- This data model is defined according to [draft-przygienda-rift].
- This model includes protocol configuration, state information, some notifications and RPC(TBD).
- Some features are added to enhance protocol.

RIFT configuration

```
augment /rt:routing/rt:control-plane-protocols/rt:control-plane-protocol:
```

```
+--rw rift!
```

```
+--rw node-info
```

```
| +--rw systemid      systemid
| +--rw address?     inet:ip-address
| +--rw level-flag?  enumeration
| +--rw level-value? level-value
| +--rw name?        string
| +--rw pod?         uint16
| +--rw hal?         level-value
| +--rw ol?          boolean {overload}?
| +--rw ztp?         boolean {ztp-mode}?
| +--rw bfd?         boolean {bfd}?
| +--rw default-originate? boolean {default-route-
```

```
originate}?
```

```
| +--rw flood-reducing? boolean {flood-reducing}?
| +--rw interfaces* [local-id]
| | +--rw local-id  uint32
| | +--rw name?    if:interface-ref
| | +--rw intf-type
| |   +--rw link-type? enumeration
| +--rw community
| | +--rw type?    enumeration
| | +--rw value?  uint64
| | +--rw action? enumeration
| +--rw policy-info {policy}?
| .....
|
```

- The configuration includes node info, interface info, policy info.

- Base node configuration includes node systemid, address, node level, etc.

- Policies include community and policy-guide-information.

- Some features can be used to enhance protocol, such as BFD, flooding-reducing, overload bit and default-route-origination. etc.

RIFT state

+-rw rift!

.....

+-ro neighbor

.....

+-ro database

.....

+-ro kv-store

.....

+-ro neighbor

```
| +-ro nbrs* [systemid remote-id]
| +-ro systemid    systemid
| +-ro address?   inet:ip-address
| +-ro level-flag? enumeration
| +-ro level-value? level-value
| +-ro name?      string
| +-ro pod?       uint16
| +-ro remote-id  uint32
| +-ro distance? uint32
| +-ro local-id?  uint32
```

RIFT State includes neighbor, database and kv-store information.

RIFT state

+--ro database

```
| +--ro ties* [tie-index]
| | +--ro tie-index uint32
| | +--ro database-tie
| |   +--ro originator? systemid
| |   +--ro direction
| |     | +--ro direction-type? enumeration
| |     +--ro type
| |       | +--ro tie-type? enumeration
| |       +--ro link-type
| |         | +--ro link-type? enumeration
| |         +--ro seq? uint32
| |         +--ro lifetime? uint16
| |         +--ro tie-node
| |           | +--ro layer? level-value
| |           | +--ro nbr-info
| |             | +--ro nbr-addr? inet:ip-address
| |             | | +--ro distance? uint32
| |             | | +--ro nbr-layer? level-value
| |             | | +--ro cost? uint32
| |             | | +--ro link-set* [local-id]
| |             | |   +--ro local-id uint32
| |             +--ro tie-prefix
| |               +--ro prefix? inet:ip-prefix
| |               +--ro cost? uint32
| +--ro (algorithgm-type)?
|   +--:(spf)
```

+--ro kv-store

```
+--ro kvs* [kvs-index]
  +--ro kvs-index uint32
  +--ro kvs-tie
    +--ro originator? systemid
    +--ro direction
      | +--ro direction-type? enumeration
    +--ro type
      | +--ro tie-type? enumeration
    +--ro link-type
      | +--ro link-type? enumeration
    +--ro seq? uint32
    +--ro lifetime? uint16
    +--ro tie-node
      | +--ro layer? level-value
      | +--ro nbr-info
      | | +--ro nbr-addr? inet:ip-address
      | | +--ro distance? uint32
      | | +--ro nbr-layer? level-value
      | | +--ro cost? uint32
      | +--ro link-set* [local-id]
      |   +--ro local-id uint32
    +--ro tie-prefix
      +--ro prefix? inet:ip-prefix
      +--ro cost? uint32
```

RIFT notification

Unexpected TIE and neighbor's layer error should be notified.

notifications:

```
+---n error-set
  +--ro tie-level-error
  | +--ro originator? systemid
  | +--ro direction
  | | +--ro direction-type? enumeration
  | +--ro type
  | | +--ro tie-type? enumeration
  | +--ro link-type
  | | +--ro link-type? enumeration
  | +--ro seq? uint32
  | +--ro lifetime? uint16
  | +--ro tie-node
  | | +--ro layer? level-value
  | | +--ro nbr-info
  | | | +--ro nbr-addr? inet:ip-address
  | | | +--ro distance? uint32
  | | | +--ro nbr-layer? level-value
  | | | +--ro cost? uint32
  | | +--ro link-set* [local-id]
  | |   +--ro local-id uint32
  | +--ro tie-prefix
  |   +--ro prefix? inet:ip-prefix
  |   +--ro cost? uint32
+--ro nbr-error
  +--ro nbrs* [systemid remote-id]
    +--ro systemid systemid
    +--ro address? inet:ip-address
    +--ro level-flag? enumeration
    +--ro level-value? level-value
    +--ro name? string
    +--ro pod? uint16
    +--ro remote-id uint32
    +--ro distance? uint32
    +--ro local-id? uint32
```

- Any comment is welcomed ㄹ

Thanks!