RIFT YANG

draft-ietf-rift-yang-02

RIFT WG

IETF110

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RIFT YANG 02 version update

- Add Bruno Rijsman as co-author.

- Updated according to the implementation experience and YANG rules.
RIFT YANG

• This data model is defined according to [draft-ietf-rift-rift].

• The model includes protocol configuration, state information and some notifications. Some features are added to enhance the protocol.

• Acknowledgement to Tony Przygienda, Benchong Xu for their detailed review and valuable comments.
RIFT Model overview

- Multiple RIFT instances supported
- Node configuration and state
- Interface configuration and state
- Neighbor state
- Database state
- Notification

module: ietf-rift
augment /rt:routing/rt:control-plane-protocols
   /rt:control-plane-protocol:
   +++rw rift
      +++rw name? string
      +++ro level? level
      +++rw system-id system-id
      +++rw pod? uint32
      +++rw configured-level? level
      +++rw overload? boolean
      +++ro protocol-major-version uint8
      +++ro protocol-minor-version uint16
      +++ro hierarchy-indications? enumeration
      +++rw flood-reduction? boolean
      +++rw nonce-increasing-interval? uint16
      +++rw maximum-nonce-delta? uint8 {nonce-delta-adjust}?
      +++rw rx-lie-multicast-address
      |      +++rw ipv4? inet:ipv4-address
      |      +++rw ipv6? inet:ipv6-address
      +++rw tx-lie-multicast-address
      |      +++rw ipv4? inet:ipv4-address
      |      +++rw ipv6? inet:ipv6-address
      +++rw lie-tx-port? inet:port
      +++rw global-link-capabilities
      |      +++rw bfd? boolean
      |      +++rw v4-forwarding-capable? boolean
      +++rw rx-flood-port? inet:port
      +++rw holdtime?
      |      rt-types:timer-value-seconds16
      +++rw tide-generation-interval?
      |      rt-types:timer-value-seconds16
      +++rw tie-security-key-id? uint32
RIFT interface

• Interface configuration and state
• The configurable parameters for message exchange
• The information received by this interface

```plaintext
++-rw interface* [name]
  |  +-ro link-id?      linkid-type
  |  +-rw name          if:interface-ref
  |  +-rw cost?         uint32
  |  +-rw address-families
  |   |  +-rw address-family* [address-family]
  |   |   |  +-rw address-family iana-rt-types:address-family
  |   |  +-rw advertised-source-addresses
  |   |  +-rw ipv4?  inet:ipv4-address
  |   |  +-rw ipv6?  inet:ipv6-address
  |  +-ro direction-type?  enumeration
  |  +-ro was-the-last-lie-accepted?  boolean
  |  +-ro last-lie-reject-reason?  string
  |  +-ro advertised-in-lies
  |   |  +-ro you-are-flood-repeater?  boolean
  |   |  +-ro not-a-ztp-offer?  boolean
  |   |  +-ro you-are-sending-too-quickly?  boolean
  |  +-rw link-capabilities
  |   |  +-rw bfd?  boolean
  |   |  +-rw v4-forwarding-capable?  boolean
  |  +-ro state  enumeration
  |  +-ro number-of-flaps?  uint32
  |  +-ro last-state-change?  yang:date-and-time
```
RIFT neighbor

The state information of the neighbor
- The base info of the neighbor, includes the level, system-id, protocol-version, etc..
- The capabilities of the neighbor
- The potential parallel link pair to the neighbor
RIFT database

The database state
- Base TIE info
- node TIE
- Prefix TIE
- Key-value

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| | +--ro received-link-capabilities
| |  +--ro bfd?  boolean
| |  +--ro v4-forwarding-capable?  boolean
| |  +--ro miscabled-links*  linkid-type
| | +--ro prefix
| |  +--ro prefix?  inet:ip-prefix
| |  +--ro (type)?
| |  |  +--(prefix)
| |  |  |  +--(positive-disaggregation)
| |  |  |  |  +--(negative-disaggregation)
| |  |  |  |  +--(external)
| |  |  |  |  |  +--(positive-external-disaggregation)
| |  |  |  |  |  |  +--(pgp)
| |  +--ro metric?  uint32
| |  +--ro tags*  uint64
| +--ro monotonic-clock
| |  +--ro prefix-sequence-type
| |  +--ro timestamp
| |  |  ieee802-1as-timestamp-type
| |  |  +--ro transaction-id?  uint8
| |  +--ro loopback?  boolean
| |  +--ro directly-attached?  boolean
| |  +--ro from-link?  linkid-type
| | +--ro key-value
| |  +--ro key?  binary
| |  +--ro value?  binary

......
RIFT notification

Notifications:

--- n error-set
---ro tie-level-error
  | ---ro tie* [originator]
  |   | ---ro direction-type? enumeration
  |   | ---ro originator system-id
  |   | ---ro tie-type? enumeration
  |   | ---ro tie-number? uint32
  |   | ---ro seq? uint64
  |   | ---ro origination-time? uint32
  |   | ---ro origination-lifetime? uint32
---ro neighbor-error
  | ---ro neighbor* [system-id]

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Unexpected TIE and neighbor's error should be notified.
• Any comments welcomed 😊
• Request more review
• WGLC?

Thanks!