

Babel YANG Model

draft-mahesh-babel-yang-model-00

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Motivation

- IETF wants a YANG model for any new protocol
- Based on [draft-ietf-babel-information-model](#)
 - 02
 - 03 was published after this draft was posted
- YANG 1.1 model
- Network Management Datastore Architecture (NMDA) compatible

Tree Diagram

+--rw babel!

+--rw version? string

+--rw enable? boolean

+--rw router-id binary

+--rw link-type* identityref

+--ro sequence-number? yang:counter32

+--rw cost-compute-algorithm* identityref

+--rw security-supported* identityref

+--rw transport

| ...

+--rw interfaces* [reference]

| ...

+--rw routes* [prefix]

| ...

+--rw security* [mechanism]

...

Issue #1 Interfaces

- Leaf 'reference' under list 'interfaces'
 - Refers to an interface type defined in RFC 8343
 - Does it need to be restricted to a particular interface type?
- Outgoing interface is “leaf neighbor” in the model

Issue #2

- supported-babel-link-types
 - Defined as 'list of link types supported by the implementation'
 - Is read-only
- babel-link-type
 - Indicates link type on an interface
 - Is read-write
- Are the following assertions true
 - Management system reads supported-link-types and sets babel-link-type per interface
 - babel-link-type has to be the same across the two ends of the link
- Same for babel-metric-comp-algorithm?
- Same for babel-security-supported?

Issue #3

- Routes, RIB, VRF and Routing Policy
- Does Babel need to support RFC8349?
 - RFC8349 provides for common building blocks such as routes, RIB etc.
- Does Babel need to support VRF [I-D. ietf-rtgwg-ni-model]?
- Does Babel need to support Routing Policy [I-D. ietf-rtgwg-policy-mode]?
 - Provides generic policy framework.

Basic Routing Protocol YANG model

```
+--rw routing
  +--rw router-id?      yang:dotted-quad
  +--ro interfaces
  | +--ro interface*  if:interface-ref
  +--rw control-plane-protocols
  | +--rw control-plane-protocol* [type name]
  |   +--rw type      identityref
  |   +--rw name      string
  |   +--rw description?  string
  |   +--rw static-routes
  |     +--rw v4ur:ipv4
  |     |   ...
  |     +--rw v6ur:ipv6
  |     |   ...
```

RIB support

+--rw routing

+--rw ribs

+--rw rib* [name]

+--rw name string

+--rw address-family? identityref

+--ro default-rib? boolean {multiple-ribs}?

+--ro routes

| +--ro route*

| ...

+---x active-route

| +---w input

| | +---w v4ur:destination-address? inet:ipv4-address

| | +---w v6ur:destination-address? inet:ipv6-address

| +--ro output

| ...

+--rw description? string

Routing Policy

```
+--rw routing-policy
  +--rw policy-definitions
    +--rw policy-definition* [name]
      +--rw name      string
      +--rw statements
        +--rw statement* [name]
          +--rw name      string
          +--rw conditions
          |   ...
          +--rw actions
          |   ...
```

WG Adoption

- Is this work useful?
- If so, can we have the work adopted?