IETF 94 Yokohama
Yang Data Model for OSPF Protocol
draft-ietf-ospf-yang-03

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Agenda

- Changes from -01 for ietf-ospf module

- Changes from -01 for ietf-ospf-sr module

- New ietf-ospf-bfd module

- Next step

ietf-ospf

- Add Ing-Wher Chen as new author

- Remove the abstract identity ospf.

  - Keep the identities ospfv2 and ospfv3

- Make area-id-type dotted-quad only.

- Use area-id-type for all area-id leafs.

- Move BFD support to the new ietf-ospf-bfd module

- Restructure notifications.

Restructure Notification

- 3 groupings
    - notification-instance-hdr
    - notification-interface
    - notification-neighbor
- Plus notification specific fields

Restructure Notification (Cont.)

```
+---n if-state-change                                    +---n nbr-state-change
    |  +--ro routing-instance? rt:routing-instance-ref       |  +--ro routing-instance? rt:routing-instance-ref
    |  +--ro routing-protocol-type?   -> ...                 |  +--ro routing-protocol-type?   -> ...
    |  +--ro routing-protocol-name?   -> ...                 |  +--ro routing-protocol-name?   -> ...
    |  +--ro af?                      -> ...                 |  +--ro af?                      -> ...
    |  +--ro (if-link-type-selection)?                       |  +--ro (if-link-type-selection)?
    |  |  +--:(interface)                                    |  |  +--:(interface)
    |  |  |  +--ro interface                                 |  |  |  +--ro interface
    |  |  |     +--ro interface?   if:interface-ref          |  |  |     +--ro interface? if:interface-ref
    |  |  +--:(virtual-link)                                 |  |  +--:(virtual-link)
    |  |  |  +--ro virtual-link                              |  |  |  +--ro virtual-link
    |  |  |     +--ro area-id? area-id-type                  |  |  |     +--ro area-id? area-id-type
    |  |  |     +--ro neighbor-router-id? yang:dotted-quad   |  |  |     +--ro neighbor-router-id? yang:dotted-quad
    |  |  +--:(sham-link)                                    |  |  +--:(sham-link)
    |  |     +--ro sham-link                                 |  |     +--ro sham-link
    |  |        +--ro area-id?          area-id-type         |  |        +--ro area-id?          area-id-type
    |  |        +--ro local-ip-addr?    inet:ip-address      |  |        +--ro local-ip-addr?    inet:ip-address
    |  |        +--ro remote-ip-addr?   inet:ip-address      |  |        +--ro remote-ip-addr?   inet:ip-address
    |  +--ro state?                if-state-type             |  +--ro neighbor-router-id?     yang:dotted-quad
                                                             |  +--ro neighbor-ip-addr?       yang:dotted-quad
                                                             |  +--ro state?                  nbr-state-type
```

ietf-ospf-sr

- Add per-protocol SRGB support

  - Augment the ietf-ospf instance container for both config and operation state using the new sr:srgb-cfg grouping defined in draft-ietf-spring-sr-yang-01

```
container protocol-srgb {
  if-feature sr:protocol-srgb;
    uses sr:srgb-cfg;
    description
      "Per-protocol SRGB.";
}
```

```
+--rw protocol-srgb {sr:protocol-srgb}?
      +--rw srgb* [lower-bound upper-bound]
         +--rw lower-bound    uint32
         +--rw upper-bound    uint32
```

ietf-ospf-bfd

- New ietf-ospf-bfd module in the same document

- Augment config and operation state in the ietf-ospf interface container using grouping defined in draft-ietf-spring-sr-yang-01 for per-protocol BFD parameter

ietf-ospf-bfd (Cont.)

```
container bfd {
  description "BFD configuration.";
  leaf enabled {
    type boolean;
    default false;
    description
      "True if BFD is enabled for the OSPF interface.";
  }
  uses bfd:bfd-grouping-base-cfg-parms {
    if-feature bfd-protocol-parms;
  }
}

 +--rw bfd
     +--rw enabled?                    boolean
     +--rw local-multiplier?           multiplier
     +--rw (interval-config-type)?
        +--:(tx-rx-intervals)
        |  +--rw desired-min-tx-interval     uint32
        |  +--rw required-min-rx-interval    uint32
        +--:(single-interval)
           +--rw min-interval                uint32
```

Next Steps

- Implementation efforts
- Model
    - More config/operation state?
        - Policy
        - Inheritance
        - New requests
    - Operation state placement
- More feedback