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YANG Data Model for LDP and mLDP

(draft-raza-mpls-ldp-mldp-yang-02)

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… and several other contributors as acknowledged in the draft

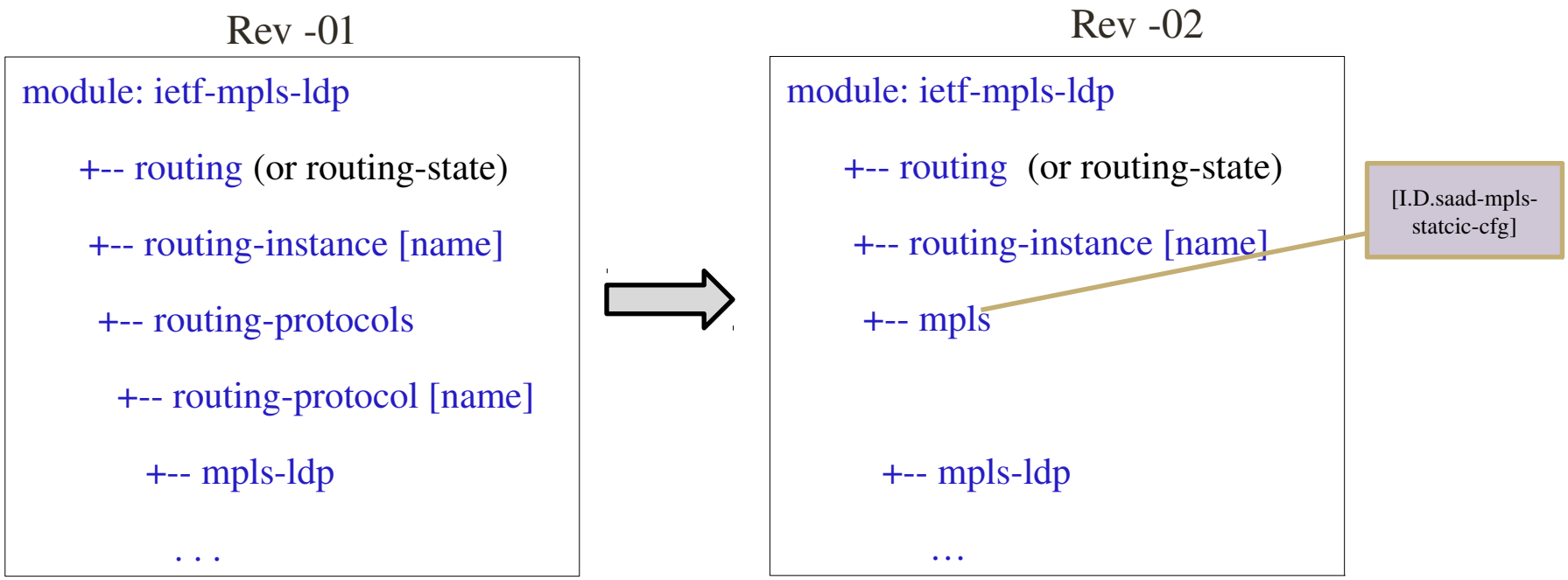
History

- Design Team:
  - Multi-vendor, multi-operator design team
  - Formed during/after IETF 91 and extended since then
- Document / I.D Revisions:
  - Rev -00 posted before, and presented at, IETF 92 in Dallas.
    - Covered base LDP configuration, rpc, and notification
  - Rev -01 posted before, and presented at, IETF 93 in Prague.
    - Covered base mLDP configuration, rpc, and notification
  - Rev -02 posted before this IETF 94 in Yokohama
    - Alignment with mpls-base and open-config (work in progress)

Changes in Rev -02

- Alignment with mpls-base
  - augments “mpls” defined in ietf-mpls module [I-D.saad-mpls-static-yang]
- Alignment with open-config operational model
  - follows the approach described in [I-D.openconfig-netmod-opstate] to represent the configuration (intended state) and operational (applied and derived) state
- Clarifies the semantics of a “default” VRF in our model in view of [RFC4364]

Alignment with mpls-base



* For interface enabling, alignment with mpls-base interface is pending

Operational State

- Ref [I-D.openconfig-netmod-opstate], two types of operational state:
  - Applied – actual state corresponding to an intended/configuration item
  - Derived – state generated as result of protocol own interactions
- To comply with above, our mode defines:
  - a “config” and corresponding “state” container for every configuration item (or set of item) to provide applied state
  - “mpls-ldp” state tree that augments MPLS routing-state tree
- This model is applied on both LDP and mLDP.

Operational State: Example

Applied State

```
module: ietf-mpls-ldp
augment /rt:routing/rt:routing-instance/mpls:mpls:
+--rw mpls-ldp!
     +--rw global
     |  +--rw config
     |  |  +--rw lsr-id
     |  |  +--rw nonstop-routing
     |  +--ro state
     |     +--ro lsr-id?
     |     +--ro nonstop-routing
     +--rw address-family* [af]
     |  …
     |  …
```

Derived State

```
module: ietf-mpls-ldp
 augment /rt:routing-state/rt:routing-instance/mpls:mpls:
     +--ro mpls-ldp
        +-- ...
        +-- …
```

Pending / Open Items

- Policies:
  - Global
- Derived State
  - Some work has started but not captured in rev -02.

Next Steps

- I.D:
  - Extend LDP/mLDP YANG data model for “derived” states
  - Align with mpls-base for LDP/mLDP interfaces
- WG:
  - Seeking comments
  - Asking for WG adoption