

# YANG Data Model for IS-IS SRv6

draft-hu-isis-srv6-yang-01

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# IS-IS SRv6 Yang Requirement

- IS-IS SRv6 Extensions published in draft-ietf-lsr-isis-srv6-extensions-02
- Not included in ietf-isis-sr yang model
- IS-IS SRv6 Yang requirements :
  - 1: SRv6 activation
  - 2: Locator setting
  - 3: SRv6 fast rerouting

# IS-IS SRv6 YANG Configuration

Augment both Instance and fast-reroute config with SRv6 Support.

```
module: ietf-isis-srv6
```

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

```
  /rt:control-plane-protocol/isis:isis:
```

```
  +--rw srv6-cfg
```

```
    +--rw enable?          boolean
```

```
    +--rw default-locator? boolean
```

```
    +--rw locator-name?    -> /rt:routing/srv6:srv6
                               /locators/locator/name
```

```
    +--rw persistent-end-x-sid? boolean
```

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

```
  /rt:control-plane-protocol/isis:isis
```

```
  /isis:interfaces/isis:interface/isis:fast-reroute:
```

```
  +--rw srv6-ti-lfa {srv6-ti-lfa}?
```

```
    +--rw enable?  boolean
```

# IS-IS SRv6 YANG Operational State

Augment both database lsp, capabilities, is-neighbor, adjacency with SRv6 information attach:

```
augment /rt:routing/rt:control-plane-protocols
    /rt:control-plane-protocol/isis:isis/isis:database
    /isis:level-db/isis:lsp/isis:router-capabilities:
```

```
+--ro v6-capability
```

```
| +--ro flags?  bits
```

```
+--ro v6-msd
```

```
  +--ro max-segments-left?  uint8
```

```
  +--ro max-end-pop?        uint8
```

```
  +--ro max-t-insert?       uint8
```

```
  +--ro max-t-encap?        uint8
```

```
  +--ro max-end-d?          uint8
```

# IS-IS SRv6 YANG Operational State

```
augment /rt:routing/rt:control-plane-protocols
  /rt:control-plane-protocol/isis:isis/isis:database
  /isis:level-db/isis:lsp/isis:extended-is-neighbor
  /isis:neighbor:
+--ro srv6-end-x-sids
  +--ro end-x-sid* [sid]
    +--ro func-flags?    bits
    +--ro algorithm?    uint8
    +--ro weight?       uint8
    +--ro endpoint-func
      | +--ro flags?          uint8
      | +--ro endpoint-func?  identityref
      | +--ro undefined-endpoint-func?  uint16
    +--ro sid            srv6-sid-value
    +--ro neighbor-id?  isis:system-id
```

# IS-IS SRv6 YANG Operational State

```
augment /rt:routing/rt:control-plane-protocols
  /rt:control-plane-protocol/isis:isis/isis:database
  /isis:level-db/isis:lsp/isis:mt-is-neighbor/isis:neighbor:
+--ro srv6-end-x-sids
  +--ro end-x-sid* [sid]
    +--ro func-flags?   bits
    +--ro algorithm?   uint8
    +--ro weight?      uint8
    +--ro endpoint-func
      | +--ro flags?          uint8
      | +--ro endpoint-func?  identityref
      | +--ro undefined-endpoint-func? uint16
    +--ro sid            srv6-sid-value
    +--ro neighbor-id?  isis:system-id
```

# IS-IS SRv6 YANG Operational State

```
augment /rt:routing/rt:control-plane-protocols
  /rt:control-plane-protocol/isis:isis/isis:database
  /isis:level-db/isis:lsp:
+--ro srv6-locators
+--ro locator* [locator]
  +--ro mt-id?          uint16
  +--ro flags?         bits
  +--ro metric?        uint32
  +--ro algorithm?     uint8
  +--ro loc-size?     uint8
  +--ro locator        inet:ipv6-address-no-zone
+--ro srv6-end-sids
  | +--ro end-sid* [sid]
  |   +--ro flags?      uint8
  |   +--ro endpoint-func
  |     | +--ro flags?      uint8
  |     | +--ro endpoint-func?  identityref
  |     | +--ro undefined-endpoint-func?  uint16
  |     +--ro sid        srv6-sid-value
+--ro external-prefix-flag?  boolean
+--ro readvertisement-flag?  boolean
+--ro node-flag?             boolean
+--ro ipv4-source-router-id?  inet:ipv4-address
+--ro ipv6-source-router-id?  inet:ipv6-address
```

# IS-IS SRv6 YANG Operational State

```
augment /rt:routing/rt:control-plane-protocols
  /rt:control-plane-protocol/isis:isis/isis:interfaces
  /isis:interface/isis:adjacencies/isis:adjacency:
+--ro end-x-sid* [value]
  +--ro value          srv6-sid-value
  +--ro weight?       uint8
  +--ro protection-requested? boolean
  +--ro persistent?   boolean
  +--ro algorithm?    uint8
  +--ro endpoint-func
    +--ro flags?       uint8
    +--ro endpoint-func? identityref
    +--ro undefined-endpoint-func? uint16
```



# IS-IS SRv6 Yang Next Steps

- Request review and comment
- We will initiate discussion in mail list
- WG Adoption in LSR Working group