



SR Service Programming

YANG Model

draft-jags-spring-sr-service-programming-yang-00

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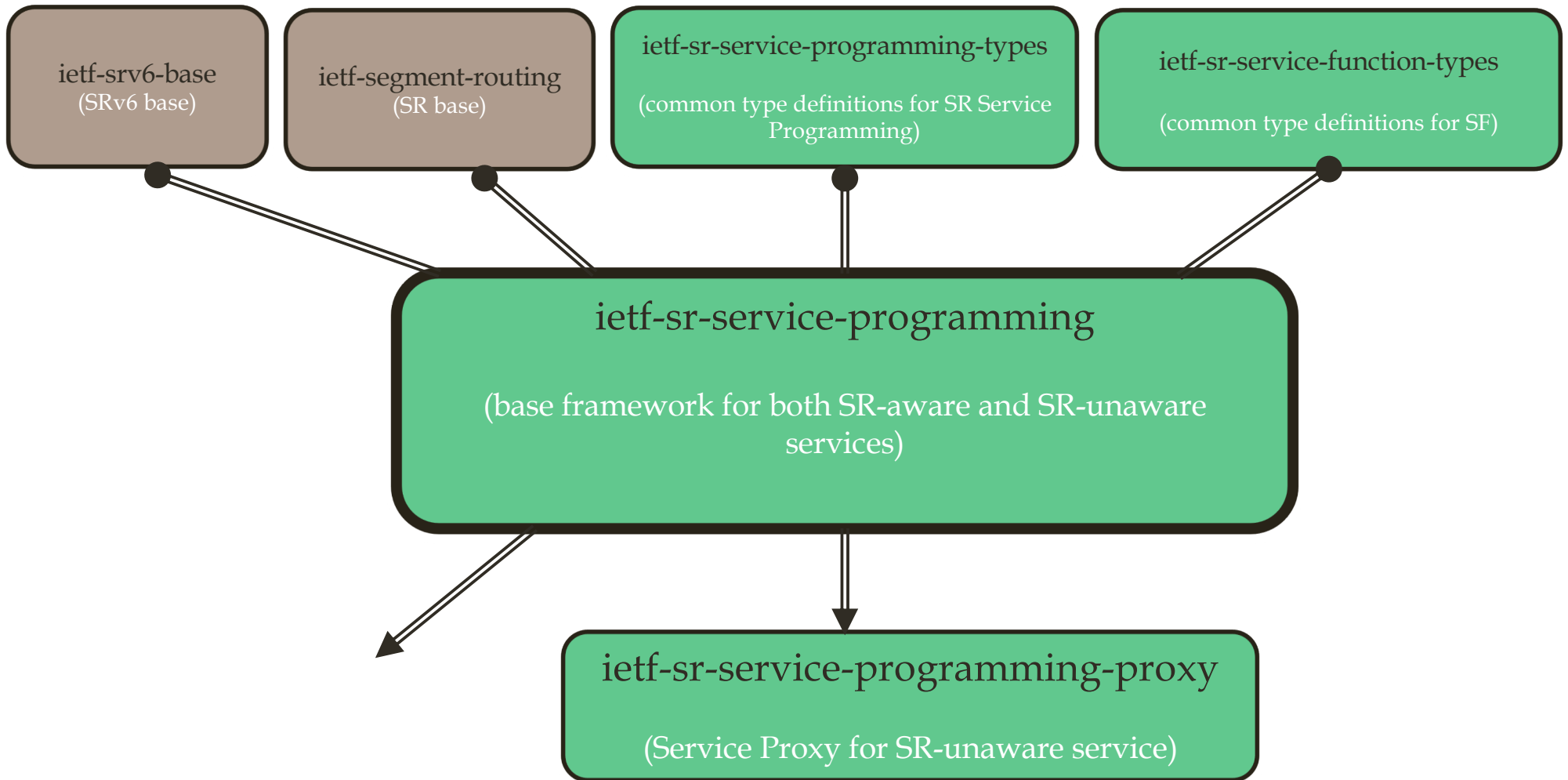
MUST READ !!!

draft-ietf-spring-sr-service-programming

Overview

- YANG data model for SR Service Programming
 - provides base framework for configuring and managing a SR aware/unaware services
 - expected to be augmented by other SR-aware technology models accordingly
- Additional YANG model for Service Proxy (for SR-unaware service)
 - allows a user to configure and manage specific attributes relate to an SR Proxy (for SR-unaware service)

YANG modules



Service Programming: Configuration

```
module: ietf-sr-service-programming
augment /rt:routing/sr:segment-routing:
  +--rw service-programming
    +--rw service-program* [name]
      +--rw name string
      +--rw behaviour identityref
      +--rw service-type identityref
      +--rw service-instance uint32
      +--rw dataplane sr-svc-pgm-types:dataplane-type
      +--rw admin-status? sr-svc-pgm-types:admin-status-type
      +--rw sid-binding
        +--rw alloc-mode sr-svc-pgm-types:sid-alloc-mode-type
        +--rw mpls
          +--rw sid? rt-types:mpls-label
        +--rw srv6
          +--rw sid? srv6-types:srv6-sid
          +--rw locator? -> /rt:routing/sr:segment-routing/
            srv6:srv6/locators/locator/name
      +--rw sr-services
```

SR service programming behavior like SR-aware, static-proxy, dynamic-proxy, masq-proxy, masq-nat-proxy, masq-cache-proxy, masq-nat-cache-proxy

Represents a service

SR-aware and SR-unaware services could augment this container to add service specific parameters

Service Programming: Operational State

```
module: ietf-sr-service-programming
augment /rt:routing/sr:segment-routing:
  +--rw service-programming
    +--rw service-program* [name]
      +--ro oper-status identityref
      +--ro statistics
        +--ro in-packet-count? yang:counter64
        +--ro in-bytes-count? yang:counter64
        +--ro out-packet-count? yang:counter64
        +--ro out-bytes-count? yang:counter64
        +--ro in-drop-packet-count? yang:counter64
        +--ro out-drop-packet-count? yang:counter64
```


Service Proxy: Static

```
module: ietf-sr-service-programming-proxy
  augment /rt:routing/sr:segment-routing/
    sr-svc-pgm:service-programming/
    sr-svc-pgm:service-program/
    sr-svc-pgm:sr-services:
  +--rw service-proxy
    +--rw (proxy-type)
      +--:(static)
        +--rw static-proxy
          +--rw inner-packet-type          identityref
          +--rw next-hop?                  yang:mac-address
          +--rw out-interface-name         string
          +--rw in-interface-name         string
          +--rw packet-cache-info
            +--rw (cache-type)
              +--:(mpls)
                | +--rw mpls-sids* [index]
                |   +--rw index          uint8
                |   +--rw mpls-label     rt-types:mpls-label
              +--:(srv6)
                +--rw ipv6-source-address? inet:ipv6-address
                +--rw srv6-sids* [index]
                  +--rw index          uint8
                  +--rw srv6-sid       srv6-types:srv6-sid
```


Service Proxy: Dynamic

```
module: ietf-sr-service-programming-proxy
  augment /rt:routing/sr:segment-routing/
    sr-svc-pgm:service-programming/
    sr-svc-pgm:service-program/
    sr-svc-pgm:sr-services:
  +--rw service-proxy
    +--rw (proxy-type)
      +--:(dynamic)
        +--rw dynamic-proxy
          +--rw out-interface-name  string
          +--rw in-interface-name   string
```

Service Proxy: Masquerading

```
module: ietf-sr-service-programming-proxy
  augment /rt:routing/sr:segment-routing/
    sr-svc-pgm:service-programming/
    sr-svc-pgm:service-program/
    sr-svc-pgm:sr-services:
      +--rw service-proxy
        +--rw (proxy-type)
          +--:(masquerading)
            +--rw masquerading-proxy
              +--rw next-hop?                yang:mac-address
              +--rw out-interface-name      string
              +--rw in-interface-name       string
```

Next Steps

- Seeking WG input and feedback