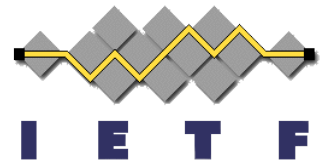


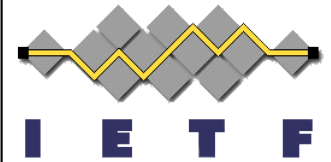
Some YANG Updates

Yingzhen Qu

IETF106, Singapore

November, 2019





OSPF and ISIS Base YANG

- After five years, both in RFC Ed Queue!
- Gone through multiple revisions during LC to address comments
- One major change: flags changed from type bits to identity.

Active Contributors

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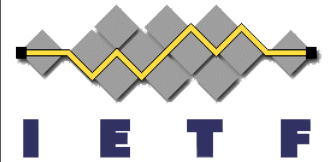
Stephane
Litkowski

Yingzhen
Qu

<https://datatracker.ietf.org/doc/draft-ietf-ospf-yang/>

<https://datatracker.ietf.org/doc/draft-ietf-isis-yang-isis-cfg/>

Flags: bits to identity



```
leaf informational-flags {
  type bits {
    bit graceful-restart-capability {
      description
        "When set, the router is capable of restarting
        gracefully.";
      reference "RFC 3623 - Graceful OSPF Restart
        RFC 5187 - OSPFv3 Graceful Restart";
    } ...
  }
}
```

```
identity informational-capability {
  description
    "Base identity for router informational
    capabilities.";
}

identity graceful-restart {
  base informational-capability;
  description
    "When set, the router is capable of restarting
    gracefully.";
  reference "RFC 3623: Graceful OSPF Restart
    RFC 5187: OSPFv3 Graceful Restart";
}
```

```
container router-informational-capabilities {
  leaf-list informational-capabilities {
    type identityref {
      base informational-capability;
    }
  }
  description
    "Informational capability list. This list will
    contains the identities for the informational
    capabilities supported by router.";
}
description
  "OSPF Router Informational Flag Definitions.";
```

OSPF/ISIS YANG Data Model for Segment Routing

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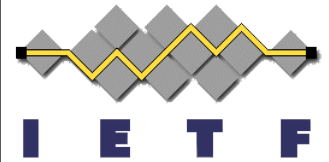
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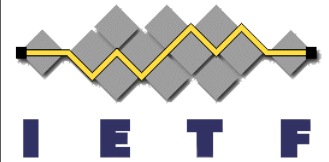


OSPF and ISIS SR YANG

- Minor changes in OSPF SR YANG due to changes in the base model
- Expect to do one more revision before LC
- Please review and comment

<https://datatracker.ietf.org/doc/draft-ietf-ospf-sr-yang/>

<https://datatracker.ietf.org/doc/draft-ietf-isis-sr-yang/>



New WG Documents

- YANG Model for OSPFv3 Extended LSAs: draft-ietf-lsr-ospfv3-extended-lsa-yang

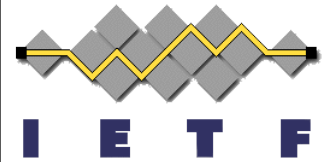
- Flags type changed from bits to identity

<https://datatracker.ietf.org/doc/draft-ietf-lsr-ospfv3-extended-lsa-yang/>

- OSPF YANG Model Augmentations for Additional Features - Version 1: draft-ietf-lsr-ospf-yang-augmentation-v1

- New module ietf-ospfv3-te: Traffic Engineering extensions to OSPFv3 [RFC5329]
- ietf-ospf-two-part-metric [RFC8042]: added TE support
- Minor fixes due to base model changes

<https://datatracker.ietf.org/doc/draft-ietf-lsr-ospf-yang-augmentation-v1/>



OSPFv3 SR YANG

- New draft to support OSPFv3 Extensions for SR-MPLS (draft-ietf-ospf-ospfv3-segment-routing-extensions in RFC editor queue).
- Augmenting OSPF SR YANG.
- Including the following TLVs:
 - sr-algorithm-tlv
 - sid-range-tlv
 - local-block-tlv
 - srms-preference-tlv
 - ospfv3-extended-prefix-range-tlv
 - prefix-sid-sub-tlv
 - adj-sid-sub-tlv
 - lan-adj-sid-sub-tlv

<https://datatracker.ietf.org/doc/draft-acee-lsr-ospfv3-sr-yang/>

IS-IS YANG Model Augmentations for Additional Features - Version 1

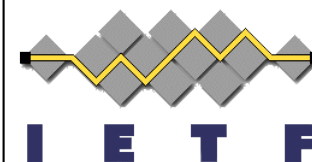
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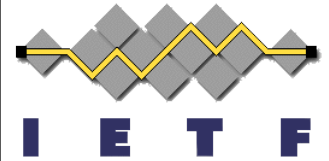
Yingzhen Qu (yingzhen.qu@futurewei.com)



ISIS RFCs Published since 2016



RFC	Title	YANG Status
7775	IS-IS Route Preference for Extended IP and IPv6 Reachability	No YANG support needed
7794	IS-IS Prefix Attributes for Extended IPv4 and IPv6 Reachability	Included in base model
7813	IS-IS Path Control and Reservation	No plan to support yet
7883	Advertising Seamless Bidirectional Forwarding Detection (S-BFD) Discriminators in IS-IS	Dependency on S-BFD Yang support
7917	Advertising Node Administrative Tags in IS-IS	Included in base model
7981	IS-IS Extensions for Advertising Router Information	Included in base model
7987	IS-IS Minimum Remaining Lifetime	Included in this draft
8196	IS-IS Autoconfiguration	No plan yet
8202	IS-IS Multi-Instance	No plan yet
8401	Bit Index Explicit Replication (BIER) Support via IS-IS	draft-ietf-bier-bier-yang
8405	Shortest Path First (SPF) Back-off Delay Algorithm for Link-State IGPs	Included in base model
8491	Signaling Maximum SID Depth (MSD) Using IS-IS	Included in ISIS SR YANG
8500	IS-IS Routing with Reverse Metric	draft-hopps-lsr-yang-isis-reverse-metric
8570	IS-IS Traffic Engineering (TE) Metric Extensions.	Included in base model



IS-IS YANG Model Augmentations for Additional Features - Version 1

- IS-IS Minimum Remaining Life Time [RFC7987]

<https://tools.ietf.org/html/draft-acee-lsr-isis-yang-augmentation-v1-00>

```
module: ietf-isis-remaining-lifetime
```

```
notifications:
```

```
+---n corrupt-remaining-lifetime
```

```
+--ro routing-protocol-name?  -> /rt:routing  
                               /control-plane-protocols  
                               /control-plane-protocol/name
```

```
+--ro isis-level?             level
```

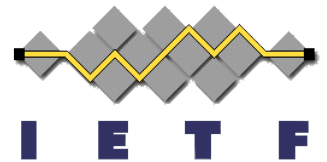
```
+--ro lsp-id?                 isis:lsp-id
```

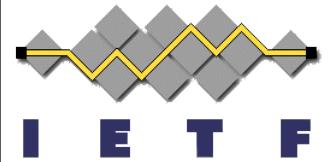
YANG Data Model for IS-IS SRv6

draft-hu-isis-srv6-yang-02

Zhibo Hu, Dan Ye, Yingzhen Qu, Jiajia Dong

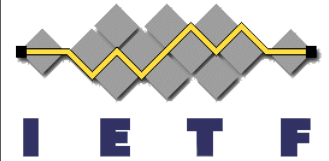
IETF 106





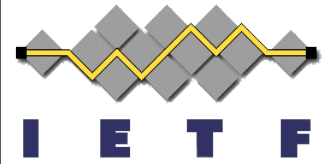
IS-IS SRv6 YANG Requirement

- IS-IS SRv6 Extensions published in draft-ietf-lsr-isis-srv6-extensions-03
- 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 Next Steps

- Please review and comment
- Request WG Adoption



THANKS