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YANG Data Model for the IS-IS Reverse Metric Extension

Abstract

This document defines a YANG module for managing the reverse metric extension to the the intermediate system to intermediate system routeing protocol.

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1. Introduction

This document defines a YANG module for managing the reverse metric extension to the intermediate system to intermediate system routeing protocol (IS-IS) [[RFC8500](#)], [[ISO10589](#)]. Please refer to [[RFC8500](#)] for the description and definition of the functionality managed by this module.

The YANG data model described in this document conforms to the Network Management Datastore Architecture defined in [[RFC8342](#)].

2. YANG Management

2.1. YANG Tree

The following is the YANG tree diagram ([[RFC8340](#)]) for the IS-IS reverse metric extension additions.

```

module: ietf-isis-reverse-metric
augment /rt:routing/rt:control-plane-protocols
    /rt:control-plane-protocol/isis:isis:interfaces
    /isis:interface:
        +-rw reverse-metric
            +-rw reverse-metric
                | +-rw metric?    isis:wide-metric
                | +-rw flags?    bits
                +-rw exclude-te-metric?  boolean
augment /rt:routing/rt:control-plane-protocols
    /rt:control-plane-protocol/isis:isis:interfaces
    /isis:interface/isis:adjacencies/isis:adjacency:
        +-ro reverse-metric
            | +-ro metric?    isis:wide-metric
            | +-ro flags?    bits
            +-ro te-metric?      uint32

```

2.2. YANG Module

The following is the YANG module for managing the IS-IS reverse metric functionality defined in [[RFC8500](#)].

```
<CODE BEGINS> file "ietf-isis-reverse-metric@2019-03-31.yang" module ietf-isis-reverse-metric
```

3. IANA Considerations

3.1. Updates to the IETF XML Registry

This document registers a URI in the "IETF XML Registry" [[RFC3688](#)]. Following the format in [[RFC3688](#)], the following registration has been made:

URI urn:ietf:params:xml:ns:yang:ietf-isis-reverse-metric

Registrant Contact The IESG.

XML N/A; the requested URI is an XML namespace.

3.2. Updates to the YANG Module Names Registry

This document registers one YANG module in the "YANG Module Names" registry [[RFC6020](#)]. Following the format in [[RFC6020](#)], the following registration has been made:

name ietf-isis-reverse-metric

namespace urn:ietf:params:xml:ns:yang:ietf-isis-reverse-metric

```
prefix
    isis-rmetric

reference RFC XXXX (RFC Ed.: replace XXX with actual RFC number and
remove this note.)
```

4. Security Considerations

The YANG module specified in this document defines a schema for data that is designed to be accessed via network management protocols such as NETCONF [[RFC6241](#)] or RESTCONF [[RFC8040](#)]. The lowest NETCONF layer is the secure transport layer, and the mandatory-to-implement secure transport is Secure Shell (SSH) [[RFC6242](#)]. The lowest RESTCONF layer is HTTPS, and the mandatory-to-implement secure transport is TLS [[RFC8446](#)].

The Network Configuration Access Control Model (NACM) [[RFC8341](#)] provides the means to restrict access for particular NETCONF or RESTCONF users to a preconfigured subset of all available NETCONF or RESTCONF protocol operations and content.

The YANG module defined in this document can enable, disable and modify the behavior of metrics used by routing. For the security implications regarding these types of changes consult the [[RFC8500](#)] which defines the functionality.

5. Normative References

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6. Informative References

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