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YANG deVELpment PrOCess & maintenance (VELOCE)
draft-boucadair-veloce-yang-05

Abstract

This document describes a YANG deVELpment PrOCess & maintenance (VELOCE) that is more suitable for the development of YANG modules or YANG modules update within the IETF.

Discussion Venues

This note is to be removed before publishing as an RFC.

Source for this draft and an issue tracker can be found at <https://github.com/boucadair/draft-boucadair-veloce-yang>.

Status of This Memo

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1. Introduction

RFCs are not suited for documenting and maintaining YANG modules. However, implementers/vendors are looking for reference models and sufficiently stable models to refer to. To that aim, this document proposes a new approach for documenting IETF-endorsed YANG modules.

Guidance for writing YANG modules are discussed in [I-D.ietf-netmod-rfc8407bis]. Guidelines related to code components (Section 3.2 of [I-D.ietf-netmod-rfc8407bis]) or citations to references listed in the YANG module do not apply for VELOCE.

This document mainly focuses on IETF modules. Note that [I-D.ietf-netmod-rfc8407bis] includes provisions for IANA-maintained modules to not be included in RFCs:

The authors MUST include a note to the RFC Editor requesting that the appendix be removed before publication as RFC and that RFC IIII is replaced with the RFC number that is assigned to the document. Initial versions of IANA-maintained modules that are published in RFCs may be misused despite the appropriate language to refer to the IANA registry to retrieve the up-to-date module. This is problematic for interoperability, e.g., when values are deprecated or are associated with a new meaning.

2. Conventions and Definitions

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in BCP 14 [RFC2119] [RFC8174] when, and only when, they appear in all capitals, as shown here.

3. VELOCE Procedure

The following procedure is followed when a WG adopts a new YANG module or update to an existing YANG module:

- * A new repository (Section 4) MUST be created by the WG Chairs following the procedure in Section 3.2 of [RFC8874] to maintain the YANG Module, with the appropriate CI/CD YANG validation in place.
 - The same procedure for managing WG documents (e.g., assign editors) applies for managing YANG modules (Section 6.1 of [RFC2418]).
 - Refer also to Section 3.3 of [RFC8874] for considerations related to granting WG participants write and administrators right.
 - Other administrative policies are defined in [RFC8875].
 - A release tagging mechanism should be defined to track the intermediate versions referenced by WG I-Ds and by the RFC, once published.
- * Contributing methods to YANG module (including issues handling and merge procedure) are similar to those defined in Section 4 of [RFC8874]. A procedure to assessing consensus is discussed in Section 7 of [RFC8874].
- * The WG (WG Chairs) MUST seek in a timely manner after the adoption of the YANG module for the publication of an RFC that describes the initial module objectives and, more importantly, registers the URI in the "ns" subregistry within the "IETF XML Registry" [RFC3688] and the YANG module in the "YANG Module Names" subregistry [RFC6020] within the "YANG Parameters" registry.

Unless we update these rules as well, the publication of the initial RFC is required per Section 14 of [RFC6020], especially the following:

"There are no initial assignments.

For allocation, RFC publication is required"

- * The YANG module MUST NOT be inserted in the document; instead a link to the above repository MUST be included.
- * Bis versions of the initial RFC MAY be considered to document major changes and their rationale. Such a decision is left to the WG. The RFC update is scoped to the narrative part describing the updates. WGs may decide to maintain an adopted YANG module in the IETF repository but never seek for an RFC publication of major module revisions.
- * Bis versions of the initial RFC should be developed by the same WG which was responsible for producing the initial RFC. If the responsible WG concluded, the alternative WG should be consulted with the ADs.
- * All adopted IETF modules are also mirrored in a common IETF repository.

4. IETF-hosted Repository

It is RECOMMENDED that IETF self-hosted repositories are used. Integration using third-party hosted repositories MAY be used for experimentation purposes.

DISCUSSION: Include a recommendation about the hosting. IANA or some IETF gitlab are examples of self-hosting. Example of third-part hosted facility is GitHub.

5. Operational Considerations

The VELOCE approach is meant to address some of operational issues encountered using current YANG development approach within the IETF. Specification, VELOCE ambitions to:

- * Ease integration for operators by providing readily-available YANG code in a well-identified location.
- * Encourage an iterative approach that would fit most of operators needs, rather than waiting for a "perfect" version that solves every deployment case.
- * Catalyst to produce fully-validated modules in a timely manner.

- * Ease reuse/leveraging by other organizations and hopefully avoid redundant efforts.
- * Welcome contributors from the operators community who are more familiar with software development, not only with specification development.

6. Security Considerations

The same considerations discussed in Section 10 of [RFC8874] apply here.

7. IANA Considerations

This document has no IANA actions.

8. References

8.1. Normative References

- [I-D.ietf-netmod-rfc8407bis]
Bierman, A., Boucadair, M., and Q. Wu, "Guidelines for Authors and Reviewers of Documents Containing YANG Data Models", Work in Progress, Internet-Draft, draft-ietf-netmod-rfc8407bis-28, 5 June 2025, <<https://datatracker.ietf.org/doc/html/draft-ietf-netmod-rfc8407bis-28>>.
- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <<https://www.rfc-editor.org/rfc/rfc2119>>.
- [RFC2418] Bradner, S., "IETF Working Group Guidelines and Procedures", BCP 25, RFC 2418, DOI 10.17487/RFC2418, September 1998, <<https://www.rfc-editor.org/rfc/rfc2418>>.
- [RFC6020] Bjorklund, M., Ed., "YANG - A Data Modeling Language for the Network Configuration Protocol (NETCONF)", RFC 6020, DOI 10.17487/RFC6020, October 2010, <<https://www.rfc-editor.org/rfc/rfc6020>>.
- [RFC8174] Leiba, B., "Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words", BCP 14, RFC 8174, DOI 10.17487/RFC8174, May 2017, <<https://www.rfc-editor.org/rfc/rfc8174>>.

- [RFC8874] Thomson, M. and B. Stark, "Working Group GitHub Usage Guidance", RFC 8874, DOI 10.17487/RFC8874, August 2020, <<https://www.rfc-editor.org/rfc/rfc8874>>.
- [RFC8875] Cooper, A. and P. Hoffman, "Working Group GitHub Administration", RFC 8875, DOI 10.17487/RFC8875, August 2020, <<https://www.rfc-editor.org/rfc/rfc8875>>.

8.2. Informative References

- [RFC3688] Mealling, M., "The IETF XML Registry", BCP 81, RFC 3688, DOI 10.17487/RFC3688, January 2004, <<https://www.rfc-editor.org/rfc/rfc3688>>.

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