

NETMOD Working Group
Internet-Draft
Updates: 6020, 7950, 9907 (if approved)
Intended status: Standards Track
Expires: 22 November 2026

P. Andersson
Ionio Systems
21 May 2026

YANG module file name convention
draft-ietf-netmod-yang-module-filename-11

Abstract

This document presents YANG module file name convention. The convention extends the current YANG module file name using revision-date, with the YANG semantic version extension. The YANG semantic version extension allows for an informative version to be associated with a particular YANG module revision.

This document updates RFCs 6020, 7950, and 9907.

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of BCP 78 and BCP 79.

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at <https://datatracker.ietf.org/drafts/current/>.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

This Internet-Draft will expire on 22 November 2026.

Copyright Notice

Copyright (c) 2026 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to BCP 78 and the IETF Trust's Legal Provisions Relating to IETF Documents (<https://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Revised BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Revised BSD License.

Table of Contents

1. Introduction	2
1.1. Terminology	2
1.2. Motivation	3
2. YANG Module File Names	3
2.1. Coexistence with YANG Semver	3
3. Operational Considerations	4
4. IANA Considerations	4
5. Security Considerations	4
6. References	4
6.1. Normative References	4
6.2. Informative References	5
Appendix A. Known Incompatibilities	6
Acknowledgements	6
Author's Address	6

1. Introduction

This document defines the YANG module file name convention. It extends the current convention defined in [RFC6020], [RFC7950], and [RFC9907], which uses revision-date, with the YANG semantic version extension defined in [I-D.ietf-netmod-yang-semver].

1.1. Terminology

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.

1.2. Motivation

The motivation for using YANG semantic version instead of revision date is that it conveys additional information to the user. A revision date only tells the user that it has been updated, while, for instance, a YANG Semver version can tell the user about the module's compatibility level at a glance. Having this information available as early as possible, i.e. in the module file name, makes it possible to quickly identify the module revision; compared to searching in the file contents and checking the revisions. Having the YANG semantic version visible in the file name will make it easier to handle large sets of YANG modules.

2. YANG Module File Names

This section updates Section 5.2 of [RFC7950], Section 5.2 of [RFC6020], and Section 3.2 of [RFC9907].

If a revision has an associated YANG semantic version (ysv:version) then a YANG file **MUST** be created that use the YANG semantic version in the file name. Additionally, a YANG file with the revision-date **MAY** be created. The name of the files **SHOULD** be of the form:

```
module-or-submodule-name ['@' (ysv:version) / (revision-date)]  
    ( '.yang' / '.yin' )
```

E.g., acme-router-module@2.0.3.yang or
acme-router-module@2024-05-15.yang.

In short, the YANG semantic version file name scheme is recommended, as its use will convey compatibility status at a glance without the need to read the module.

If the YANG module (or submodule) has an associated YANG semantic version (ysv:version), then a file name that use the YANG semantic version **MUST** be created. In addition, a file with the revision date in the file name **MAY** be created as well.

2.1. Coexistence with YANG Semver

As can be seen above, all valid identifiers for YANG semantic version are valid in the file name as well. See more details for YANG Semver identifiers in Section 4.3 of [I-D.ietf-netmod-yang-semver].

The following example is a valid YANG module file name

example-module@2.3.1_non_compatible+build2237refM443ss.yang

One consequence of this is that there might exist two modules derived from version 2.0.0 with the same X.Y.Z digits (2.0.1) but different version labels:

2.0.1-draft-superman-super-stuff-03

2.0.1-draft-batman-cool-addition-07 (a competing draft)

3. Operational Considerations

The delimiter symbol for YANG Semver is "@", the at sign. The same symbol is also used for revision-date. The patterns for YANG Semver and revision-date will never match the same string, and it is easy to visually identify each of the conventions.

4. IANA Considerations

For complete guidance on how to handle YANG modules in RFCs and IANA registries, with regards to [I-D.ietf-netmod-yang-module-versioning], [I-D.ietf-netmod-yang-semver], and YANG module file names, see [I-D.ietf-netmod-iana-yang-guidance].

The "YANG Module Names" Registry need to support YANG modules with both the existing file name convention and the file name convention defined in this document.

The registry MUST create a file with a YANG semantic version if the YANG module (or submodule) has an associated YANG semantic version (ysv:version). The registry MUST also create a file with the YANG module using a file name with the revision date. It MUST be ensured that the files' contents are identical.

5. Security Considerations

There are no security considerations for this draft.

6. References

6.1. Normative References

[I-D.ietf-netmod-iana-yang-guidance]

Wilton, R., "Guidance for Managing YANG Modules in RFCs and IANA Registries", Work in Progress, Internet-Draft, draft-ietf-netmod-iana-yang-guidance-02, 14 April 2026, <<https://datatracker.ietf.org/doc/html/draft-ietf-netmod-iana-yang-guidance-02>>.

[I-D.ietf-netmod-yang-module-versioning]

Wilton, R., Rahman, R., Lengyel, B., Clarke, J., and J. Sterne, "Updated YANG Module Revision Handling", Work in Progress, Internet-Draft, draft-ietf-netmod-yang-module-versioning-16, 21 April 2026, <<https://datatracker.ietf.org/doc/html/draft-ietf-netmod-yang-module-versioning-16>>.

[I-D.ietf-netmod-yang-semver]

Clarke, J., Wilton, R., Rahman, R., Lengyel, B., Sterne, J., and B. Claise, "YANG Semantic Versioning", Work in Progress, Internet-Draft, draft-ietf-netmod-yang-semver-26, 7 May 2026, <<https://datatracker.ietf.org/doc/html/draft-ietf-netmod-yang-semver-26>>.

[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/info/rfc2119>>.

[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/info/rfc6020>>.

[RFC7950] Bjorklund, M., Ed., "The YANG 1.1 Data Modeling Language", RFC 7950, DOI 10.17487/RFC7950, August 2016, <<https://www.rfc-editor.org/info/rfc7950>>.

[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/info/rfc8174>>.

[RFC9907] Bierman, A., Boucadair, M., Ed., and Q. Wu, "Guidelines for Authors and Reviewers of Documents Containing YANG Data Models", BCP 216, RFC 9907, DOI 10.17487/RFC9907, March 2026, <<https://www.rfc-editor.org/info/rfc9907>>.

6.2. Informative References

Appendix A. Known Incompatibilities

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

There are currently no known publicly available tools that support the YANG semantic version file name schema. There are known proprietary tooling that already uses the file name schema presented in this document.

At the IETF 119 Hackathon, there was a project that investigated the feasibility to modify popular YANG tooling to support the proposed schema. There was a successful attempt to modify pyang to support the file name schema and also "recommended-min" previously included in [I-D.ietf-netmod-yang-module-versioning]. Furthermore, there were efforts in researching yanger and libyang to support the schema, but the hackathon ended before these projects could be concluded.

Acknowledgements

The author would like to thank Joe Clarke, Reshad Rahman, Mahesh Jethanandani, David Dong, Aihua Guo, Barry Leiba, Joel M. Halpern, Meir Goldman, Carsten Bormann, and Kent Watsen for their excellent technical reviews, support, and guidance.

Author's Address

Per Andersson
Ionio Systems
Email: per.ietf@ionio.se