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Guidelines for Authors and Reviewers of YANG Data Model Documents
draft-ietf-netmod-yang-usage-01

Status of this Memo

Copyright Notice

Abstract

This memo provides guidelines for authors and reviewers of standards track specifications containing YANG data model modules. Applicable portions may be used as a basis for reviews of other YANG data model documents. Recommendations and procedures are defined, which are

intended to increase interoperability and usability of NETCONF implementations which utilize YANG data model modules.

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1. Introduction

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The standardization of network configuration interfaces for use with the NETCONF (Enns, R., "NETCONF Configuration Protocol," December 2006.) [RFC4741] protocol requires a modular set of data models, which can be reused and extended over time.
This document defines a set of usage guidelines for standards track documents containing YANG (Bjorklund, M., "YANG - A data modeling language for NETCONF," April 2010.) [I-D.ietf-netmod-yang] data models. It is similar to the MIB usage guidelines specification [RFC4181] (Heard, C., "Guidelines for Authors and Reviewers of MIB Documents," September 2005.) in intent and structure.
Many YANG constructs are defined as optional to use, such as the description clause. However, in order to maximize interoperability of NETCONF implementations utilizing YANG data models, it is desirable to define a set of usage guidelines which may require a higher level of compliance than the minimum level defined in the YANG specification.

The NETCONF stack can be conceptually partitioned into four layers.

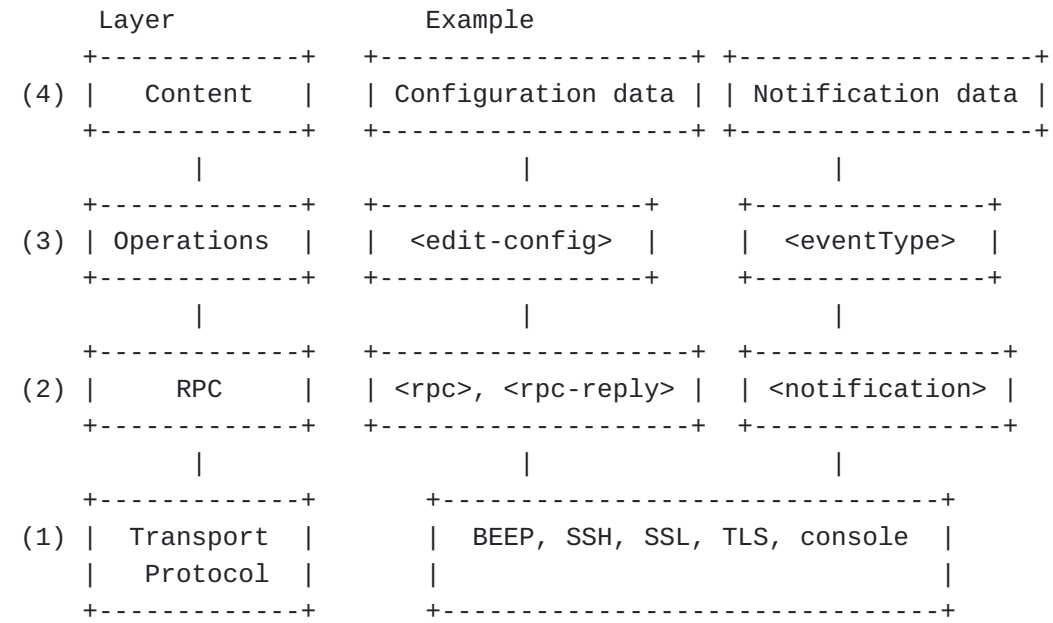

Figure 1

This document defines usage guidelines related to the NETCONF operations layer (3), and NETCONF content layer (4).

2. Terminology

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2.1. Requirements Notation

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The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC2119] (Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels," March 1997.).
RFC 2119 language is used here to express the views of the NETMOD working group regarding YANG module content. Yang modules complying with this document will treat the RFC 2119 terminology as if it were describing best current practices.

2.2. NETCONF Terms

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The following terms are defined in [RFC4741] (Enns, R., "NETCONF Configuration Protocol," December 2006.) and are not redefined here:

- *agent
- *application
- *capabilities
- *manager
- *operation
- *RPC

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2.3. YANG Terms

The following terms are defined in [I-D.ietf-netmod-yang] (Bjorklund, M., “YANG - A data modeling language for NETCONF,” April 2010.) and are not redefined here:

- *data node
- *module
- *submodule
- *namespace
- *version

2.4. Terms

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The following terms are used throughout this document:

- *module: Generic term for a YANG data model module or submodule. When describing properties which are specific to submodules, the term 'YANG submodule', or simply 'submodule' is used instead.
- *Published Document: A stable release of a module, usually contained in an RFC.
- *Unpublished Document: An unstable release of a module, usually contained in an Internet Draft.

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3. General Documentation Guidelines

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YANG data model modules under review are likely to be contained in Internet Drafts. All guidelines for Internet Draft authors MUST be followed. These guidelines are available online at:
http://www.rfc-editor.org/rfc-editor/instructions2authors.txt
The following sections MUST be present in an Internet Draft containing a module:

- *YANG data model boilerplate section
- *Narrative sections

*Definitions section

*Security Considerations section

*IANA Considerations section

*References section

3.1. YANG Data Model Boilerplate Section

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This section MUST contain a verbatim copy of the latest approved Internet-Standard Management Framework boilerplate, which is available on-line at [ed: URL TBD].

3.2. Narrative Sections

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The narrative part MUST include an overview section that describes the scope and field of application of the module(s) defined by the specification and that specifies the relationship (if any) of these modules to other standards, particularly to standards containing other module modules. The narrative part SHOULD include one or more sections to briefly describe the structure of the modules defined in the specification.
If the module(s) defined by the specification import definitions from other modules (except for those defined in the YANG (Bjorklund, M., "YANG - A data modeling language for NETCONF," April 2010.) [I-D.ietf-netmod-yang] or YANG Types (Schoenwaelder, J., "Common YANG Data Types," April 2010.) [I-D.ietf-netmod-yang-types] documents) or are always implemented in conjunction with other modules, then those facts MUST be noted in the overview section, as MUST any special interpretations of objects in other modules.

3.3. Definitions Section

TOC

This section contains the module(s) defined by the specification. These modules MUST be written in YANG [I-D.ietf-netmod-yang] (Bjorklund, M., "YANG - A data modeling language for NETCONF," April 2010.).
See Section 4 (YANG Usage Guidelines) for guidelines on YANG usage.

3.4. Security Considerations Section

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Each specification that defines one or more modules MUST contain a section that discusses security considerations relevant to those modules. This section MUST be patterned after the latest approved template (available at [ed: URL TBD]).
In particular, writable module objects that could be especially disruptive if abused MUST be explicitly listed by name and the associated security risks MUST be spelled out; similarly, readable module objects that contain especially sensitive information or that raise significant privacy concerns MUST be explicitly listed by name and the reasons for the sensitivity/privacy concerns MUST be explained.

3.5. IANA Considerations Section

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In order to comply with IESG policy as set forth in http://www.ietf.org/ID-Checklist.html, every Internet-Draft that is submitted to the IESG for publication MUST contain an IANA Considerations section. The requirements for this section vary depending what actions are required of the IANA.

3.5.1. Documents that Create a New Name Space

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If an Internet-Draft defines a new name space that is to be administered by the IANA, then the document MUST include an IANA Considerations section, that specifies how the name space is to be administered.
Specifically, if any YANG module namespace statement value contained in the document is not already registered with IANA, then a new YANG Namespace registry entry must be requested from the IANA. The YANG specification includes the procedure for this purpose in its IANA Considerations section.

3.5.2. Documents that Extend an Existing Name Space

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If an Internet-Draft defines any extensions to a YANG Namespace already administered by the IANA, then the document MUST include an IANA Considerations section, specifies how the name space extension is to be administered.

Specifically, if any YANG submodule belongs-to value contained in the document is associated with a module that contains a namespace statement value equal to a YANG Namespace already administered by the IANA, then the existing YANG Namespace must be updated to include the new submodule.

3.6. Reference Sections

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[ed: 2223bis text TBD]
For every import or include statement which appears in a module contained in the specification, which identifies a module in a separate document, a corresponding normative reference to that document MUST appear in the Normative References section. The reference MUST correspond to the specific module version actually used within the specification.
For every reference statement which appears in a module contained in the specification, which identifies a separate document, a corresponding normative reference to that document SHOULD appear in the Normative References section. The reference SHOULD correspond to the specific document version actually used within the specification.

3.7. Copyright Notices

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The proper copyright notices MUST be present in the module description statement. [ed.: See RFC 4181, 3.7. Exact text for insertion is TBD.]

3.8. Intellectual Property Section

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The proper IPR statements MUST be present in the document, according to the most current Internet Draft boilerplate. [ed.: actual IETF IPR text reference TBD]

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4. YANG Usage Guidelines

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In general, modules in IETF standards-track specifications MUST comply with all syntactic and semantic requirements of YANG.
[I-D.ietf-netmod-yang] (Bjorklund, M., “YANG - A data modeling language for NETCONF,” April 2010.). The guidelines in this section are intended

to supplement the YANG specification, which is intended to define a minimum set of conformance requirements.
In order to promote interoperability and establish a set of practices based on previous experience, the following sections establish usage guidelines for specific YANG constructs.
Only guidelines which clarify or restrict the minimum conformance requirements are included here.

4.1. Module Naming Conventions

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Modules contained in standards track documents SHOULD be named with the prefix 'ietf-'. Other types of modules MUST NOT use the 'ietf-' prefix string.
A distinctive word or acronym (e.g., protocol name or working group acronym) SHOULD be used in the module name. If new definitions are being defined to extend one or more existing modules, then the same word or acronym should be reused, instead of creating a new one.
All published module names MUST be unique.
Once a module name is published, it MUST not be reused, even if the RFC containing the module is reclassified to 'Historic' status.

4.2. Identifiers

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Identifiers for modules, submodules, typedefs, groupings, data objects, rpcs, and notifications MUST be between 1 and 64 characters in length.

4.3. Defaults

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In general, it is suggested that sub-statements containing default values SHOULD NOT be present. For example, 'status current;', 'config true;', 'mandatory false;', and 'max-elements unbounded;' are common defaults which would make the module difficult to read if used everywhere they are allowed.
Instead, it is suggested that common statements SHOULD only be used when being set to a value other than the default value.

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4.4. Conditional Statements

A module may be conceptually partitioned in several ways, using the 'if-feature' and/or 'when' statements. In addition, NETCONF capabilities are designed to identify optional functionality.
Data model designers need to carefully consider all modularity aspects, including the use of YANG conditional statements.
Objects SHOULD NOT directly reference NETCONF capabilities, in order to specify optional behavior. Instead, a 'feature' statement SHOULD be defined to represent the NETCONF capability, and the 'if-feature' statement SHOULD be used within the object definition.
If the condition associated with the desired semantics is not dependent on any particular instance value within the database, then an 'if-feature' statement SHOULD be used instead of a 'when' statement.
All 'must' and 'when' statements MUST contain valid XPath. If any name tests are present, they MUST contain valid module prefixes and data node names. References to non-existent nodes are considered invalid in YANG, even though they are permitted in XPath.
The 'attribute' and 'namespace' axis SHOULD NOT be used because the associated XML node types are not supported in YANG, and may not be supported consistently across NETCONF agent implementations.
The 'position' and 'last' functions SHOULD NOT be used. Also, the 'preceding', and 'following' axes SHOULD NOT be used. These constructs rely on XML document order within a NETCONF agent configuration database, which may not be supported consistently or produce reliable results across implementations. Predicate expressions based on static node properties (e.g., name, value, ancestors, descendants) SHOULD be used instead.
The 'preceding-sibling' and 'following-sibling' axes MAY be used, with caution. An agent is not required to maintain a persistent or deterministic XML document order, which will affect use of these axes.
Implicit 'position' function calls within predicates SHOULD NOT be used. (e.g., //chapter[42]).
Data nodes which use the 'int64' and 'uint64' built-in type SHOULD NOT be used within relational expressions. There are boundary conditions in which the translation from the YANG 64-bit type to an XPath number can cause incorrect results.
Data modelers need to be careful not to confuse the YANG value space and the XPath value space. The data types are not the same in both, and conversion between YANG and XPath data types SHOULD be considered carefully.
Explicit XPath data type conversions MAY be used (e.g., 'string', 'boolean', or 'number' functions), instead of implicit XPath data type conversions.

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4.5. Lifecycle Management

The status statement SHOULD NOT be present if its value is 'current'.
It MUST be present if its value is 'deprecated' or 'obsolete'.
The module or submodule name MUST NOT be changed, once the document containing the module or submodule is published.
The module namespace URI value SHOULD NOT be changed, once the document containing the module is published.
The revision-date sub-statement (within the imports statement) SHOULD be present. It MUST be present (in all published modules) if any groupings are used from the external module.
The revision-date sub-statement (within the include statement) MAY be present. It SHOULD be present (in all published modules) if any groupings are used from the external sub-module.

4.6. Header Contents

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For published modules, the namespace MUST be a globally unique URI, as defined in [RFC3986] (Berners-Lee, T., Fielding, R., and L. Masinter, “Uniform Resource Identifier (URI): Generic Syntax,” January 2005.).
This value is usually assigned by the IANA.
The organization statement MUST be present. If the module is contained in a documented intended for standards-track status, then the organization SHOULD be the IETF.
The contact statement MUST be present. If the module is contained in a documented intended for standards-track status, then the working group WEB and mailing information MUST be present, and the document author contact information SHOULD be present. In addition, the Area Director and other contact information MAY be present.
The description statement MUST be present. If the module is contained in an unpublished document, then the file name of this document SHOULD be identified in the description statement. This text MUST be removed when the document is published.
Modules are often extracted from their original documents and it is useful for developers and operators to know how to find the original source document in a consistent manner.
The reference statement MUST be present. It MUST identify the published document which contains the module.
If the module relies on information contained in other documents, which are not the same documents implied by the import statements present in the module, then these documents MUST be identified in the reference statement.
A revision statement MUST be present for each published version of the module.
Each new revision MUST include a revision date which is higher than any other revision date in the module.

It is acceptable to reuse the same revision statement within unpublished versions (i.e., Internet Drafts), but the revision date MUST be updated to a higher value each time the Internet Draft is re-published.

4.7. Temporary Namespace Assignments

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It is desirable to include only valid YANG modules in documents, whether they are published yet or not.

- allows the module to compile correctly instead of generating disruptive fatal errors.
- allows early implementors to use the modules without picking a random value for this field.
- allows early interoperability testing since independent implementations will use the same namespace value.

Until a URI is assigned by the IANA, a temporary namespace URI MUST be provided for the namespace statement in a YANG module. A value SHOULD be selected which is not likely to collide with other YANG namespaces. An unpublished module namespace statement value SHOULD include the field 'DRAFT-nn', where 'nn' is replaced by the current Internet Draft number.
If the YANG module has been previously published, then the RPC being updated needs to be identified. In this case, an unpublished module namespace statement value SHOULD include the field 'DRAFT-XXXXBIS-nn', where 'XXXX' is replaced by the RFC number being updated, and 'nn' is replaced by the current Internet Draft number.
A temporary namespace statement value SHOULD have the following form:
<URN prefix string>:<module-name>:<draft-field>
The suggested URN prefix string that SHOULD be used is shown below. This value will be defined by the IANA. urn:ietf:params:xml:ns:yang:
The following example URNs would be valid temporary namespace statement values:

> urn:ietf:params:xml:ns:yang:ietf-netconf-partial-lock:DRAFT-09
>
> urn:ietf:params:xml:ns:yang:ietf-netconf-state:DRAFT-07
>
> urn:ietf:params:xml:ns:yang:ietf-netconf:DRAFT-4741BIS-01

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4.8. Top Level Database Objects

There SHOULD only be one top-level data node defined in each YANG module. However, there MAY be more than one if needed.
The top-level data organization SHOULD be considered carefully, in advance. Data model designers need to consider how the functionality for a given protocol or protocol family will grow over time.
The names and data organization SHOULD reflect persistent information, such as the name of a protocol. The name of the working group SHOULD NOT be used because this may change over time.
A mandatory database object is defined as a node that a manager must provide for the database to be valid. The agent will not provide a value under any conditions.
Top-level database objects MUST NOT be mandatory.
If a mandatory node appears at the top-level, it will immediately cause the database to be invalid. This can occur when the agent boots or when a module is loaded dynamically at runtime.
Top level objects are declared in YANG as mandatory with the mandatory statement or the min-elements statement. All nested non-presence containers are transparent, so a mandatory node nested within one or more non-presence containers causes the top-level container to be considered mandatory.

4.9. Data Types

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Selection of an appropriate data type (i.e., built-in type, existing derived type, or new derived type) is very subjective and therefore few requirements can be specified on that subject.
Data model designers SHOULD use the most appropriate built-in data type for the particular application.
If extensibility of enumerated values is required, then the identityref data type SHOULD be used instead of an enumeration or other built-in type.
For string data types, if a machine-readable pattern can be defined for the desired semantics, then one or more pattern statements SHOULD be present.
For string data types, if the length of the string is not required to be unbounded in all implementations, then a length statement SHOULD be present. [ed: should the 'resource-denied' error be mentioned here?]
For numeric data types, if the values allowed by the intended semantics are different than those allowed by the unbounded intrinsic data type (e.g., int32), then a range statement SHOULD be present.
The signed numeric data types (i.e., 'int8', 'int16', 'int32', and 'int64') SHOULD NOT be used unless negative values are allowed for the desired semantics.

For enumeration or bits data types, the semantics for each enum or bit SHOULD be documented. A separate description statement (within each enum or bit statement) SHOULD be present.

4.10. Reusable Type Definitions

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If an appropriate derived type exists in any standard module, such as [I-D.ietf-netmod-yang-types] (Schoenwaelder, J., “Common YANG Data Types,” April 2010.), then it SHOULD be used instead of defining a new derived type.
If an appropriate units identifier can be associated with the desired semantics, then a units statement SHOULD be present.
If an appropriate default value can be associated with the desired semantics, then a default statement SHOULD be present.
If a significant number of derived types are defined, and it is anticipated that these data types will be reused by multiple modules, then these derived types SHOULD be contained in a separate module or submodule, to allow easier reuse without unnecessary coupling.
The description statement MUST be present.
If the type definition semantics are defined in an external document, then the reference statement SHOULD be present.

4.11. Object Definitions

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The description statement MUST be present in the following body statements:

*extension

*feature

*identity

*typedef

*grouping

*augment

*rpc

*notification

The description statement MUST be present in the following data definition constructs:

- *container
- *leaf
- *leaf-list
- *list
- *choice
- *anyxml

If the object semantics are defined in an external document, then a reference statement SHOULD be present.
The 'anyxml' construct MUST NOT be used within configuration data.
If there are referential integrity constraints associated with the desired semantics that can be represented with XPath, then one or more must statements SHOULD be present.
For list and leaf-list objects, if the number of possible instances is not required to be unbounded for all implementations, then the max-elements statement SHOULD be present.
If any must or when statements are used within the object definition, then the object description statement SHOULD describe the purpose of each one.

4.12. RPC Definitions

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The description statement MUST be present.
If the RPC method semantics are defined in an external document, then a reference statement SHOULD be present.
If the RPC method impacts system behavior in some way, it SHOULD be mentioned in the description statement.
If the RPC method is potentially harmful to system behavior in some way, it MUST be mentioned in the Security Considerations section of the document.

4.13. Notification Definitions

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The description statement MUST be present.
If the notification semantics are defined in an external document, then a reference statement SHOULD be present.

5. IANA Considerations

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There are no actions requested of IANA at this time.

6. Security Considerations

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This document defines documentation guidelines for NETCONF content defined with the YANG data modeling language. It does not introduce any new or increased security risks into the management system. [ed: RFC 4181 style security section TBD]

7. Acknowledgments

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The structure and contents of this document are adapted from Guidelines for MIB Documents (Heard, C., "Guidelines for Authors and Reviewers of MIB Documents," September 2005.) [RFC4181], by C. M. Heard.

8. References

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8.1. Normative References

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[RFC2119]	Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels," BCP 14, RFC 2119, March 1997 (TXT, HTML, XML).
[RFC3986]	Berners-Lee, T., Fielding, R., and L. Masinter, "Uniform Resource Identifier (URI): Generic Syntax," STD 66, RFC 3986, January 2005 (TXT, HTML, XML).
[RFC4741]	Enns, R., "NETCONF Configuration Protocol," RFC 4741, December 2006 (TXT).
[I-D.ietf-netmod-yang]	Bjorklund, M., "YANG - A data modeling language for NETCONF," draft-ietf-netmod-yang-12 (work in progress), April 2010 (TXT).
[I-D.ietf-netmod-yang-types]	Schoenwaelder, J., "Common YANG Data Types," draft-ietf-netmod-yang-types-09 (work in progress), April 2010 (TXT).

8.2. Informative References

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[RFC4181]	Heard, C., “Guidelines for Authors and Reviewers of MIB Documents,” BCP 111, RFC 4181, September 2005 (TXT).

Appendix A. Module Review Checklist

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This section is adapted from RFC 4181.
The purpose of a YANG module review is to review the YANG module both for technical correctness and for adherence to IETF documentation requirements. The following checklist may be helpful when reviewing a draft document:

1. I-D Boilerplate -- verify that the draft contains the required Internet-Draft boilerplate (see http://www.ietf.org/ietf/1id-guidelines.txt), including the appropriate statement to permit publication as an RFC, and that I-D boilerplate does not contain references or section numbers.

2. Abstract -- verify that the abstract does not contain references, that it does not have a section number, and that its content follows the guidelines in http://www.ietf.org/ietf/1id-guidelines.txt.

3. YANG Module Boilerplate -- verify that the draft contains the latest approved SNMP Network Management Framework boilerplate from the OPS area web site (http://www.ops.ietf.org/mib-boilerplate.html). [ed: real URL TBD]

4. Security Considerations Section -- verify that the draft uses the latest approved template from the OPS area web site (http://www.ops.ietf.org/mib-security.html) and that the guidelines therein have been followed.

5. IANA Considerations Section -- this section must always be present. If the draft requires no action from the IANA, ensure that this is explicitly noted. If the draft requires URI values to be assigned, ensure that the IANA Considerations section contains the information specified in [TBD] of these guidelines. If the draft contains the initial version of an IANA-maintained module, verify that the [TBD] invocation contains maintenance instructions that comply with the requirements in RFC 2434. In the latter case, the IANA

Considerations section that will appear in the RFC MUST contain a pointer to the actual IANA-maintained module.

6. References -- verify that the references are properly divided between normative and informative references, that RFC 2119 is included as a normative reference if the terminology defined therein is used in the document, that all references required by the boilerplate are present, that all YANG modules containing imported items are cited as normative references, and that all citations point to the most current RFCs unless there is a valid reason to do otherwise (for example, it is OK to include an informative reference to a previous version of a specification to help explain a feature included for backward compatibility).

7. Copyright Notices -- verify that the draft contains an abbreviated copyright notice in the description statement of each YANG module or sub-module, and that it contains the full copyright notice and disclaimer specified in Sections 5.4 and 5.5 of RFC 3978 at the end of the document. Make sure that the correct year is used in all copyright dates.

8. IPR Notice -- if the draft does not contains a verbatim copy of the IPR notice specified in Section 5 of RFC 3979, recommend that the IPR notice be included.

9. Other Issues -- check for any issues mentioned in http://www.ietf.org/ID-Checklist.html that are not covered elsewhere.

10. Technical Content -- review the actual technical content for compliance with the guidelines in this document. The use of a YANG module compiler is recommended when checking for syntax errors; see [YANG tool URL TBD] for more information. Checking for correct syntax, however, is only part of the job. It is just as important to actually read the YANG module document from the point of view of a potential implementor. It is particularly important to check that description statements are sufficiently clear and unambiguous to allow interoperable implementations to be created.

Appendix B. YANG Module Template

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```
== begin "ietf-template.yang"

module ietf-template {

    // replace this string with a unique namespace URN value
    namespace
      "urn:ietf:params:xml:ns:yang:ietf-template:DRAFT-01";

    // replace this string, and try to pick a unique prefix
    prefix "temp";


    // import statements here: e.g.,
    // import ietf-yang-types { prefix yang; }
    // import ietf-inet-types { prefix inet; }


    organization
       "Internet Engineering Task Force";


    // update this contact statement with your info
    contact
       "WG Web:   <http://tools.ietf.org/wg/your-wg-name/>
        WG List:  <mailto:your-wg-name@ietf.org>

        WG Chair: your-WG-chair
                  <mailto:your-WG-chair@example.com>

        Editor:   your-name
                  <mailto:your-email@example.com>";


    // replace the first sentence in this description statement.
    // replace the copyright notice with the most recent
    // version, if it has been updated since the publication
    // of this document
    description
     "This module defines a template for other YANG modules.

      Copyright (c) 2009 IETF Trust and the persons identified as
      the document authors.  All rights reserved.

      Redistribution and use in source and binary forms, with or
      without modification, are permitted provided that the
      following conditions are met:
```

```
    - Redistributions of source code must retain the above
      copyright notice, this list of conditions and the
      following disclaimer.

    - Redistributions in binary form must reproduce the above
      copyright notice, this list of conditions and the
      following disclaimer in the documentation and/or other
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    OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
    INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
    (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE
    GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
    BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
    LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
    (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT
    OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE
    POSSIBILITY OF SUCH DAMAGE.

    This version of this YANG module is part of RFC XXXX; see
    the RFC itself for full legal notices.";

  // RFC Ed.: replace XXXX with actual RFC number and remove this note

  reference "RFC XXXX";

  // RFC Ed.: remove this note
  // Note: extracted from draft-ietf-netmod-yang-usage-01.txt


  // replace YYYY-MM-DD with a real date (year-month-day)
  // here is an example revision date: 2009-08-12
  revision YYYY-MM-DD {
    description
      "Initial version";
  }

  // extension statements

  // feature statements
```

```
    // identity statements

    // typedef statements

    // grouping statements

    // data definition statements

    // augment statements

    // rpc statements

    // notification statements

    // DO NOT put deviation statements in a published module

}

== end "ietf-template.yang"
```

Figure 2

Appendix C. Change Log

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C.1. Changes from 00 to 01

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*Added transport 'TLS' to figure 1.

*Added note about RFC 2119 terminology.

*Corrected URL for instructions to authors.

*Updated namespace procedures section.

*Updated guidelines on module contact, reference, and organization statements.

*Added note on use of preceding-sibling and following-sibling axes in XPath expressions.

*Added section on temporary namespace statement values.

*Added section on top level database objects.

*Added ietf-template.yang appendix.

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