

YANG Module Versioning

[draft-ietf-netmod-yang-module-versioning](#)

NETMOD WG

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Summary of issues addressed since IETF109 and virtual interims

Following changes were made in rev -02:

1. Addition of BC rules for config false and output data (section 3.1.2)
2. Clarification on use of # with revision-label in filenames (sect 3.3)
3. New text on impact of removing revisions from history (sect 3.3.2)
4. New text stating that changing import statements is BC (sect 4)
5. Changed revision-label in the YANG module to match allowed chars
6. New text for IANA maintained YANG modules (section 11.2)

BC rules for config false and output data

1. Adding mandatory or optional schema nodes is BC
2. Changing an optional node to mandatory is BC
3. Removing a mandatory or optional schema nodes is NBC
4. Changing a mandatory node to optional is NBC
5. Expanding the range/length of a leaf or leaf-list is BC
6. Decreasing the range of a leaf or leaf-list is BC
7. Changing max-elements or increasing min-elements is BC
8. Reducing min-elements is NBC (like removing mandatory)

Client behaviour for config false and output data

1. A client **MUST** discard any extra/unexpected data (e.g XML elements, JSON attributes) received
2. A client **SHOULD** be able to handle valid parts of a received data set even if it discards other parts as invalid
3. A client **SHOULD** be able to handle data that is outside of the valuespace defined, as long as it is of the same basic type
4. A client **SHOULD** be prepared to handle more items for a list or leaf-list than is defined by the model

Main issues remaining
(still open)

Insignificant whitespace changes

<https://github.com/netmod-wg/yang-ver-dt/issues/8>

Do we need a revision-label bump for insignificant whitespace changes?

This was discussed during the December 2020 interim, (rough?) consensus among weekly call attendees.

As per section 11 of RFC7950, any published change requires a new “revision” statement. A published new revision which ONLY has insignificant whitespace changes should be rare, but it is subject to the same rules.

Section 3.2 of draft-ietf-netmod-yang-semver already mentions “non-significant whitespace changes” as an example of the PATCH version being changed

Next step: clarify this in draft-ietf-netmod-yang-module-versioning

Need to define impact of extension statements

<https://github.com/netmod-wg/yang-ver-dt/issues/12>

Adding, changing or removing an extension statement has an impact which may be editorial, BC or NBC

The impact depends on the actual extension statement in question

Authors, when creating new extension statements, SHOULD mention in the description the impact of adding, changing or deleting the extension statement

For implementations which do not understand a particular extension statement , behaviour is as specified in section 6.3.1 of RFC7950

When can we add *nbc-changes* sub-statement?

<https://github.com/netmod-wg/yang-ver-dt/issues/83>

As per section 3.2, the “*nbc-changes*” extension is used to indicate YANG module changes that contain NBC changes (it is a sub-statement of the revision statement)

An author **MUST** add the extension if there is an NBC change.

An author SHOULD NOT add the extension if all changes are BC.

vs

An author MUST NOT add the extension if they are certain that all changes are BC.

Impact of allowing “*nbc-changes*” extension when changes are BC:

- Pro: added flexibility (e.g. strictly speaking a change to a “config false” node is BC but author wants to tag the changes as significant to help out clients)
- Con: triggers module consumers to examine a module for NBC changes when there may be no need

Rename *nbc-changes* extension?

<https://github.com/netmod-wg/yang-ver-dt/issues/83>

In SemVer terminology NBC means **Non-Breaking Change**

To be clearer and avoid confusion, rename the extension to “non-backwards-compatible”

Next Steps

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- Resolve last outstanding issues right after IETF110