

# Module Versioning: Whitespace

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# Background

In current YANG, modules versions are identified by date.

- No semantic meaning attached to date

```
revision 2020-12-14 { description "Changed X, Y, added Z."; }
```

With YANG semantic versioning, changes are categorized into

- Non-backwards compatible changes (step first digit)
- Backwards compatible changes (step second digit)
- Editorial changes with no functional difference (step third digit)

```
semver:module-version "2.2.1";
```

# Open Question

How should changes to "insignificant whitespace" be categorized?

- A: Like any other editorial change (step third digit)
- B: Versioning should not detect such changes (don't step any digit)

If B, define "insignificant whitespace":

- Only outside YANG literals "... " and '... '?
- Indentation? Blank lines? UTF8 characters with whitespace attribute?
- Are YANG comments whitespace?

# Why Care? Checksums!

Module (and package) checksum concept introduced by YANG Packages Draft.

In order to compute stable checksums, definition of "version" needs to be clear.

Three main alternatives:

- Checksums using existing tools
- Checksums over whitespace-normalized YANG representation
- No checksums

# Checksums using existing tools

## Implications

- Treat modules as binary files
- Any change at all is a new (possibly editorial) version

## Advantages

- People understand checksums, file size can be used to quickly identify diffs
- Existing checksum tools work
- Easy to identify the most up to date module, even if only whitespace or comments differ

# Checksums over whitespace-normalized YANG representation

## Implications

- Treat modules as text files
- Exact whitespace normalization procedure needs to be specified and developed

## Advantages

- Modules can be transferred as text files over FTP, some development environments with legacy line ending conventions will become usable for publishing modules

# No checksums

## Implications

- No need to specify whether whitespace matters or not
- Drop checksums from YANG Packages

## Advantages

- Less standardization work