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# **yamllint**

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A linter for YAML files.

yamllint does not only check for syntax validity, but for weirdnesses like key repetition and cosmetic problems such as lines length, trailing spaces, indentation, etc.



## Screenshot

```
> ~ > yamllint file.yml other-file.yml
file.yml
 1:4      error    trailing spaces (trailing-spaces)
 4:4      error    wrong indentation: expected 4 but found 3 (indentation)
 5:4      error    duplication of key "id-00042" in mapping (key-duplicates)
 6:6      warning   comment not indented like content (comments-indentation)
12:6      error    too many spaces after hyphen (hyphens)
15:12     error    too many spaces before comma (commas)

other-file.yml
 1:1      warning   missing document start "---" (document-start)
 6:81     error    line too long (87 > 80 characters) (line-length)
10:1      error    too many blank lines (4 > 2) (empty-lines)
11:4      error    too many spaces inside braces (braces)
```

**Note:** The default output format is inspired by [eslint](#), a great linting tool for Javascript.





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### 2.1 Quickstart

#### 2.1.1 Installing yamllint

First, install yamllint. The easiest way is to use pip, the Python package manager:

```
sudo pip install yamllint
```

If you prefer installing from source, you can run, from the source directory:

```
python setup.py sdist
sudo pip install dist/yamllint-*.tar.gz
```

#### 2.1.2 Running yamllint

Basic usage:

```
yamllint file.yml other-file.yaml
```

You can also lint all YAML files in a whole directory:

```
yamllint .
```

The output will look like (colors are not displayed here):

```
file.yml
 1:4      error    trailing spaces (trailing-spaces)
 4:4      error    wrong indentation: expected 4 but found 3 (indentation)
 5:4      error    duplication of key "id-00042" in mapping (key-duplicates)
 6:6      warning  comment not indented like content (comments-indentation)
12:6      error    too many spaces after hyphen (hyphens)
15:12     error    too many spaces before comma (commas)

other-file.yaml
 1:1      warning  missing document start "---" (document-start)
 6:81     error    line too long (87 > 80 characters) (line-length)
10:1      error    too many blank lines (4 > 2) (empty-lines)
11:4      error    too many spaces inside braces (braces)
```

Add the `-f` parsable arguments if you need an output format parsable by a machine (for instance for [syntax highlighting in text editors](#)). The output will then look like:

```
file.yml:6:2: [warning] missing starting space in comment (comments)
file.yml:57:1: [error] trailing spaces (trailing-spaces)
file.yml:60:3: [error] wrong indentation: expected 4 but found 2 (indentation)
```

If you have a custom linting configuration file (see [how to configure yamllint](#)), it can be passed to yamllint using the `-c` option:

```
yamllint -c ~/myconfig file.yml
```

**Note:** If you have a `.yamllint` file in your working directory, it will be automatically loaded as configuration by yamllint.

---

## 2.2 Configuration

yamllint uses a set of *rules* to check sources files for problems. Each rule is independent from the others, and can be enabled, disabled or tweaked. All these settings can be gathered in a configuration file.

To use a custom configuration file, either name it `.yamllint` in your working directory, or use the `-c` option:

```
yamllint -c ~/myconfig file.yml
```

### 2.2.1 Default configuration

Unless told otherwise, yamllint uses its default configuration:

```
---
rules:
  braces:
    min-spaces-inside: 0
    max-spaces-inside: 0
  brackets:
    min-spaces-inside: 0
    max-spaces-inside: 0
  colons:
    max-spaces-before: 0
    max-spaces-after: 1
  commas:
    max-spaces-before: 0
    min-spaces-after: 1
    max-spaces-after: 1
  comments:
    level: warning
    require-starting-space: yes
    min-spaces-from-content: 2
  comments-indentation:
    level: warning
  document-end: disable
  document-start:
    level: warning
    present: yes
  empty-lines:
    max: 2
```

```

max-start: 0
max-end: 0
hyphens:
  max-spaces-after: 1
indentation:
  spaces: 2
  indent-sequences: yes
  check-multi-line-strings: no
key-duplicates: {}
line-length:
  max: 80
  allow-non-breakable-words: yes
new-line-at-end-of-file: {level: error}
new-lines:
  type: unix
trailing-spaces: {}

```

Details on rules can be found on [the rules page](#).

There is another pre-defined configuration named `relaxed`. As its name suggests, it is more tolerant.

It can be chosen using:

```
yamllint -d relaxed file.yml
```

## 2.2.2 Extending the default configuration

When writing a custom configuration file, you don't need to redefine every rule. Just extend the default configuration (or any already-existing configuration file).

For instance, if you just want to disable the `comments-indentation` rule, your file could look like this:

```

# This is my first, very own configuration file for yamllint!
# It extends the default conf by adjusting some options.

extends: default

rules:
  comments-indentation: disable # don't bother me with this rule

```

Similarly, if you want to set the `line-length` rule as a warning and be less strict on block sequences indentation:

```

extends: default

rules:
  # 80 chars should be enough, but don't fail if a line is longer
  line-length:
    max: 80
    level: warning

  # accept both      key:
  #                  - item
  #
  # and              key:
  #                  - item
indentation:
  indent-sequences: whatever

```

## 2.2.3 Custom configuration without a config file

It is possible – although not recommended – to pass custom configuration options to yamllint with the `-d` (short for `--config-data`) option.

Its content can either be the name of a pre-defined conf (example: `default` or `relaxed`) or a serialized YAML object describing the configuration.

For instance:

```
yamllint -d "{extends: relaxed, rules: {line-length: {max: 120}}}" file.yml
```

## 2.2.4 Errors and warnings

Problems detected by yamllint can be raised either as errors or as warnings.

In both cases, the script will output them (with different colors when using the `standard` output format), but the exit code can be different. More precisely, the script will exit with a failure code *only when* there is one or more error(s).

## 2.3 Rules

When linting a document with yamllint, a series of rules (such as `line-length`, `trailing-spaces`, etc.) are checked against.

A [configuration file](#) can be used to enable or disable these rules, to set their level (*error* or *warning*), but also to tweak their options.

This page describes the rules and their options.

### List of rules

- *braces*
- *brackets*
- *colons*
- *commas*
- *comments*
- *comments-indentation*
- *document-end*
- *document-start*
- *empty-lines*
- *hyphens*
- *indentation*
- *key-duplicates*
- *line-length*
- *new-line-at-end-of-file*
- *new-lines*
- *trailing-spaces*

### 2.3.1 braces

Use this rule to control the number of spaces inside braces (`{` and `}`).

## Options

- `min-spaces-inside` defines the minimal number of spaces required inside braces.
- `max-spaces-inside` defines the maximal number of spaces allowed inside braces.

## Examples

1. With braces: `{min-spaces-inside: 0, max-spaces-inside: 0}`

the following code snippet would **PASS**:

```
object: {key1: 4, key2: 8}
```

the following code snippet would **FAIL**:

```
object: { key1: 4, key2: 8 }
```

2. With braces: `{min-spaces-inside: 1, max-spaces-inside: 3}`

the following code snippet would **PASS**:

```
object: { key1: 4, key2: 8 }
```

the following code snippet would **PASS**:

```
object: { key1: 4, key2: 8 }
```

the following code snippet would **FAIL**:

```
object: {   key1: 4, key2: 8   }
```

the following code snippet would **FAIL**:

```
object: {key1: 4, key2: 8 }
```

## 2.3.2 brackets

Use this rule to control the number of spaces inside brackets (`[` and `]`).

### Options

- `min-spaces-inside` defines the minimal number of spaces required inside brackets.
- `max-spaces-inside` defines the maximal number of spaces allowed inside brackets.

### Examples

1. With brackets: `{min-spaces-inside: 0, max-spaces-inside: 0}`

the following code snippet would **PASS**:

```
object: [1, 2, abc]
```

the following code snippet would **FAIL**:

```
object: [ 1, 2, abc ]
```

2. With brackets: {min-spaces-inside: 1, max-spaces-inside: 3}  
the following code snippet would **PASS**:

```
object: [ 1, 2, abc ]
```

the following code snippet would **PASS**:

```
object: [ 1, 2, abc  ]
```

the following code snippet would **FAIL**:

```
object: [ 1, 2, abc  ]
```

the following code snippet would **FAIL**:

```
object: [1, 2, abc ]
```

### 2.3.3 colons

Use this rule to control the number of spaces before and after colons (:).

#### Options

- max-spaces-before defines the maximal number of spaces allowed before colons (use -1 to disable).
- max-spaces-after defines the maximal number of spaces allowed after colons (use -1 to disable).

#### Examples

1. With colons: {max-spaces-before: 0, max-spaces-after: 1}  
the following code snippet would **PASS**:

```
object:  
  - a  
  - b  
key: value
```

2. With colons: {max-spaces-before: 1}  
the following code snippet would **PASS**:

```
object :  
  - a  
  - b
```

the following code snippet would **FAIL**:

```
object  :  
  - a  
  - b
```

3. With colons: {max-spaces-after: 2}  
the following code snippet would **PASS**:

```
first: 1
second: 2
third: 3
```

the following code snippet would **FAIL**:

```
first: 1
2nd: 2
third: 3
```

### 2.3.4 commas

Use this rule to control the number of spaces before and after commas (,).

#### Options

- `max-spaces-before` defines the maximal number of spaces allowed before commas (use `-1` to disable).
- `min-spaces-after` defines the minimal number of spaces required after commas.
- `max-spaces-after` defines the maximal number of spaces allowed after commas (use `-1` to disable).

#### Examples

1. With `commas: {max-spaces-before: 0}`

the following code snippet would **PASS**:

```
strange var:
  [10, 20, 30, {x: 1, y: 2}]
```

the following code snippet would **FAIL**:

```
strange var:
  [10, 20 , 30, {x: 1, y: 2}]
```

2. With `commas: {max-spaces-before: 2}`

the following code snippet would **PASS**:

```
strange var:
  [10 , 20 , 30, {x: 1 , y: 2}]
```

3. With `commas: {max-spaces-before: -1}`

the following code snippet would **PASS**:

```
strange var:
  [10,
    20 , 30
  , {x: 1, y: 2}]
```

4. With `commas: {min-spaces-after: 1, max-spaces-after: 1}`

the following code snippet would **PASS**:

```
strange var:
  [10, 20,30, {x: 1, y: 2}]
```

the following code snippet would **FAIL**:

```
strange var:
  [10, 20,30, {x: 1, y: 2}]
```

5. With commas: {min-spaces-after: 1, max-spaces-after: 3}

the following code snippet would **PASS**:

```
strange var:
  [10, 20, 30, {x: 1, y: 2}]
```

6. With commas: {min-spaces-after: 0, max-spaces-after: 1}

the following code snippet would **PASS**:

```
strange var:
  [10, 20,30, {x: 1, y: 2}]
```

### 2.3.5 comments

Use this rule to control the position and formatting of comments.

#### Options

- Use `require-starting-space` to require a space character right after the `#`. Set to `yes` to enable, `no` to disable.
- `min-spaces-from-content` is used to visually separate inline comments from content. It defines the minimal required number of spaces between a comment and its preceding content.

#### Examples

1. With comments: {require-starting-space: yes}

the following code snippet would **PASS**:

```
# This sentence
# is a block comment
```

the following code snippet would **FAIL**:

```
#This sentence
#is a block comment
```

2. With comments: {min-spaces-from-content: 2}

the following code snippet would **PASS**:

```
x = 2 ^ 127 - 1 # Mersenne prime number
```

the following code snippet would **FAIL**:

```
x = 2 ^ 127 - 1 # Mersenne prime number
```

### 2.3.6 comments-indentation

Use this rule to force comments to be indented like content.



## Examples

1. With `comments-indentation: {}`

the following code snippet would **PASS**:

```
# Fibonacci
[0, 1, 1, 2, 3, 5]
```

the following code snippet would **FAIL**:

```
# Fibonacci
[0, 1, 1, 2, 3, 5]
```

the following code snippet would **PASS**:

```
list:
  - 2
  - 3
  # - 4
  - 5
```

the following code snippet would **FAIL**:

```
list:
  - 2
  - 3
#   - 4
  - 5
```

the following code snippet would **PASS**:

```
# This is the first object
obj1:
  - item A
  # - item B
# This is the second object
obj2: []
```

the following code snippet would **PASS**:

```
# This sentence
# is a block comment
```

the following code snippet would **FAIL**:

```
# This sentence
# is a block comment
```

### 2.3.7 document-end

Use this rule to require or forbid the use of document end marker (`...`).

#### Options

- Set `present` to `yes` when the document end marker is required, or to `no` when it is forbidden.

## Examples

1. With `document-end: {present: yes}`

the following code snippet would **PASS**:

```
---
this:
  is: [a, document]
...
---
- this
- is: another one
...
```

the following code snippet would **FAIL**:

```
---
this:
  is: [a, document]
---
- this
- is: another one
...
```

2. With `document-end: {present: no}`

the following code snippet would **PASS**:

```
---
this:
  is: [a, document]
---
- this
- is: another one
```

the following code snippet would **FAIL**:

```
---
this:
  is: [a, document]
...
---
- this
- is: another one
```

## 2.3.8 document-start

Use this rule to require or forbid the use of document start marker (---).

### Options

- Set `present` to `yes` when the document start marker is required, or to `no` when it is forbidden.

### Examples

1. With `document-start: {present: yes}`

the following code snippet would **PASS**:

```
---
this:
  is: [a, document]
---
- this
- is: another one
```

the following code snippet would **FAIL**:

```
this:
  is: [a, document]
---
- this
- is: another one
```

2. With `document-start: {present: no}`

the following code snippet would **PASS**:

```
this:
  is: [a, document]
...
```

the following code snippet would **FAIL**:

```
---
this:
  is: [a, document]
...
```

## 2.3.9 empty-lines

Use this rule to set a maximal number of allowed consecutive blank lines.

### Options

- `max` defines the maximal number of empty lines allowed in the document.
- `max-start` defines the maximal number of empty lines allowed at the beginning of the file. This option takes precedence over `max`.
- `max-end` defines the maximal number of empty lines allowed at the end of the file. This option takes precedence over `max`.

### Examples

1. With `empty-lines: {max: 1}`

the following code snippet would **PASS**:

```
- foo:
  - 1
  - 2

- bar: [3, 4]
```

the following code snippet would **FAIL**:

```
- foo:
  - 1
  - 2

- bar: [3, 4]
```

### 2.3.10 hyphens

Use this rule to control the number of spaces after hyphens (-).

#### Options

- `max-spaces-after` defines the maximal number of spaces allowed after hyphens.

#### Examples

1. With `hyphens: {max-spaces-after: 1}`

the following code snippet would **PASS**:

```
- first list:
  - a
  - b
- - 1
  - 2
  - 3
```

the following code snippet would **FAIL**:

```
- first list:
  - a
  - b
```

the following code snippet would **FAIL**:

```
- - 1
  - 2
  - 3
```

2. With `hyphens: {max-spaces-after: 3}`

the following code snippet would **PASS**:

```
- key
- key2
- key42
```

the following code snippet would **FAIL**:

```
- key
- key2
- key42
```

### 2.3.11 indentation

Use this rule to control the indentation.

#### Options

- `spaces` defines the indentation width, in spaces. Set either to an integer (e.g. 2 or 4, representing the number of spaces in an indentation level) or to `consistent` to allow any number, as long as it remains the same within the file.
- `indent-sequences` defines whether block sequences should be indented or not (when in a mapping, this indentation is not mandatory – some people perceive the – as part of the indentation). Possible values: `yes`, `no` and `whatever` (the latter means either indenting or not indenting block sequences is OK).
- `check-multi-line-strings` defines whether to lint indentation in multi-line strings. Set to `yes` to enable, `no` to disable.

#### Examples

1. With indentation: `{spaces: 1}`

the following code snippet would **PASS**:

```
history:
  - name: Unix
    date: 1969
  - name: Linux
    date: 1991
nest:
  recurse:
    - haystack:
      needle
```

2. With indentation: `{spaces: 4}`

the following code snippet would **PASS**:

```
history:
    - name: Unix
      date: 1969
    - name: Linux
      date: 1991
nest:
    recurse:
        - haystack:
            needle
```

the following code snippet would **FAIL**:

```
history:
  - name: Unix
    date: 1969
  - name: Linux
    date: 1991
nest:
  recurse:
    - haystack:
      needle
```

3. With indentation: {spaces: consistent}

the following code snippet would **PASS**:

```
history:
  - name: Unix
    date: 1969
  - name: Linux
    date: 1991
nest:
  recurse:
    - haystack:
      needle
```

the following code snippet would **FAIL**:

```
some:
  Russian:
    dolls
```

4. With indentation: {spaces: 2, indent-sequences: no}

the following code snippet would **PASS**:

```
list:
- flying
- spaghetti
- monster
```

the following code snippet would **FAIL**:

```
list:
  - flying
  - spaghetti
  - monster
```

5. With indentation: {spaces: 2, indent-sequences: whatever}

the following code snippet would **PASS**:

```
list:
- flying:
  - spaghetti
  - monster
- not flying:
  - spaghetti
  - sauce
```

6. With indentation: {spaces: 4, check-multi-line-strings: yes}

the following code snippet would **PASS**:

```
Blaise Pascal:
  Je vous écris une longue lettre parce que
  je n'ai pas le temps d'en écrire une courte.
```

the following code snippet would **PASS**:

```
Blaise Pascal: Je vous écris une longue lettre parce que
                je n'ai pas le temps d'en écrire une courte.
```

the following code snippet would **FAIL**:

Blaise Pascal: Je vous écris une longue lettre parce que  
je n'ai pas le temps d'en écrire une courte.

the following code snippet would **FAIL**:

```
C code:
void main() {
    printf("foo");
}
```

the following code snippet would **PASS**:

```
C code:
void main() {
    printf("bar");
}
```

### 2.3.12 key-duplicates

Use this rule to prevent multiple entries with the same key in mappings.

#### Examples

1. With `key-duplicates: {}`

the following code snippet would **PASS**:

```
- key 1: v
  key 2: val
  key 3: value
- {a: 1, b: 2, c: 3}
```

the following code snippet would **FAIL**:

```
- key 1: v
  key 2: val
  key 1: value
```

the following code snippet would **FAIL**:

```
- {a: 1, b: 2, b: 3}
```

the following code snippet would **FAIL**:

```
duplicated key: 1
"duplicated key": 2

other duplication: 1
? >-
  other
  duplication
: 2
```

### 2.3.13 line-length

Use this rule to set a limit to lines length.

### Options

- `max` defines the maximal (inclusive) length of lines.
- `allow-non-breakable-words` is used to allow non breakable words (without spaces inside) to overflow the limit. This is useful for long URLs, for instance. Use `yes` to allow, `no` to forbid.

### Examples

1. With `line-length: {max: 70}`

the following code snippet would **PASS**:

```
long sentence:
  Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do
  eiusmod tempor incididunt ut labore et dolore magna aliqua.
```

the following code snippet would **FAIL**:

```
long sentence:
  Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
  tempor incididunt ut labore et dolore magna aliqua.
```

2. With `line-length: {max: 60, allow-non-breakable-words: yes}`

the following code snippet would **PASS**:

```
this:
  is:
    - a:
        http://localhost/very/very/very/very/very/very/very/very/long/url

# this comment is too long,
# but hard to split:
# http://localhost/another/very/very/very/very/very/very/very/very/long/url
```

the following code snippet would **FAIL**:

```
- this line is waaaaaaaaaaaaaaaaay too long but could be easily splitted...
```

3. With `line-length: {max: 60, allow-non-breakable-words: no}`

the following code snippet would **FAIL**:

```
this:
  is:
    - a:
        http://localhost/very/very/very/very/very/very/very/very/long/url
```

### 2.3.14 new-line-at-end-of-file

Use this rule to require a new line character (`\n`) at the end of files.

The POSIX standard [requires the last line to end with a new line character](#). All UNIX tools expect a new line at the end of files. Most text editors use this convention too.



### 2.3.15 new-lines

Use this rule to force the type of new line characters.

#### Options

- Set `type` to `unix` to use UNIX-typed new line characters (`\n`), or `dos` to use DOS-typed new line characters (`\r\n`).

### 2.3.16 trailing-spaces

Use this rule to forbid trailing spaces at the end of lines.

#### Examples

1. With `trailing-spaces: {}`

the following code snippet would **PASS**:

```
this document doesn't contain
any trailing
spaces
```

the following code snippet would **FAIL**:

```
this document contains
trailing spaces
on lines 1 and 3
```

## 2.4 Development

yamllint provides both a script and a Python module. The latter can be used to write your own linting tools:

**class** `yamllint.linter.LintProblem` (*line*, *column*, *desc*='<no description>', *rule*=None)

Represents a linting problem found by yamllint.

**column** = None

Column on which the problem was found (starting at 1)

**desc** = None

Human-readable description of the problem

**line** = None

Line on which the problem was found (starting at 1)

**rule** = None

Identifier of the rule that detected the problem

`yamllint.linter.run` (*input*, *conf*)

Lints a YAML source.

Returns a generator of `LintProblem` objects.

#### Parameters

- **input** – buffer, string or stream to read from

- **conf** – yamllint configuration object

## 2.5 Integration with text editors

Most text editors support syntax checking and highlighting, to visually report syntax errors and warnings to the user. yamllint can be used to syntax-check YAML source, but a bit of configuration is required depending on your favorite text editor.

### 2.5.1 Vim

Assuming that the `syntastic` plugin is installed, add to your `.vimrc`:

```
let g:syntastic_yaml_checkers = ['yamllint']
```

### 2.5.2 Neovim

Assuming that the `neomake` plugin is installed, add to your `.config/nvim/init.vim`:

```
if executable('yamllint')
  let g:neomake_yaml_yamllint_maker = {
    \ 'args': ['-f', 'parsable'],
    \ 'errorformat': '%E%f:%l:%c: [error] %m,%W%f:%l:%c: [warning] %m' }
  let g:neomake_yaml_enabled_makers = ['yamllint']
endif
```

### 2.5.3 Other text editors

#### Help wanted!

Your favorite text editor is not listed here? Help us improve by adding a section (by opening a pull-request or issue on GitHub).

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