# **Configuring Rustfmt**

Rustfmt is designed to be very configurable. You can create a TOML file called <code>rustfmt.toml</code> or <code>.rustfmt.toml</code>, place it in the project or any other parent directory and it will apply the options in that file. If none of these directories contain such a file, both your home directory and a directory called <code>rustfmt</code> in your <code>global config directory</code> (e.g. <code>.config/rustfmt/</code>) are checked as well.

A possible content of rustfmt.toml or .rustfmt.toml might look like this:

```
indent_style = "Block"
reorder_imports = false
```

Each configuration option is either stable or unstable. Stable options can be used directly, while unstable options are opt-in. To enable unstable options, set unstable\_features = true in rustfmt.toml or pass -- unstable-features to rustfmt.

# **Configuration Options**

Below you find a detailed visual guide on all the supported configuration options of rustfmt:

## array\_width

Maximum width of an array literal before falling back to vertical formatting.

- Default value: 60
- Possible values: any positive integer that is less than or equal to the value specified for max width
- Stable: Yes

By default this option is set as a percentage of <a href="max\_width">max\_width</a> provided by <a href="max\_width">use small heuristics</a>, but a value set directly for <a href="max\_array">array</a> width will take precedence.

```
See also max_width and use_small_heuristics
```

```
attr fn like width
```

Maximum width of the args of a function-like attributes before falling back to vertical formatting.

- Default value: 70
- Possible values: any positive integer that is less than or equal to the value specified for <a href="max\_width">max\_width</a>
- Stable: Yes

By default this option is set as a percentage of  $\underline{\mathtt{max\ width}}$  provided by  $\underline{\mathtt{use\ small\ heuristics}}$ , but a value set directly for  $\underline{\mathtt{attr}\ fn\ like\ width}$  will take precedence.

```
See also max width and use small heuristics
```

### binop separator

Where to put a binary operator when a binary expression goes multiline.

```
Default value: "Front"
Possible values: "Front", "Back"
Stable: No (tracking issue: #3368)
```

#### "Front" (default):

#### "Back":

# blank\_lines\_lower\_bound

Minimum number of blank lines which must be put between items. If two items have fewer blank lines between them, additional blank lines are inserted.

- Default value: 0
- Possible values: unsigned integer
- Stable: No (tracking issue: #3382)

### **Example**

Original Code (rustfmt will not change it with the default value of 0):

```
#![rustfmt::skip]

fn foo() {
    println!("a");
}
```

```
fn bar() {
    println!("b");
    println!("c");
}
```

1

```
fn foo() {
    println!("a");
}

fn bar() {
    println!("b");
    println!("c");
}
```

# blank\_lines\_upper\_bound

Maximum number of blank lines which can be put between items. If more than this number of consecutive empty lines are found, they are trimmed down to match this integer.

• Default value: 1

• Possible values: any non-negative integer

• **Stable**: No (tracking issue: #3381)

### **Example**

Original Code:

```
#![rustfmt::skip]

fn foo() {
    println!("a");
}

fn bar() {
    println!("b");

    println!("c");
}
```

# 1 (default):

```
fn foo() {
    println!("a");
}

fn bar() {
    println!("b");

    println!("c");
}
```

2:

```
fn foo() {
    println!("a");
}

fn bar() {
    println!("b");

    println!("c");
}
```

See also: blank lines lower bound

# brace\_style

Brace style for items

- **Default value**: "SameLineWhere"
- Possible values: "AlwaysNextLine", "PreferSameLine", "SameLineWhere"
- **Stable**: No (tracking issue: #3376)

### **Functions**

"SameLineWhere" (default):

```
fn lorem() {
    // body
}

fn lorem(ipsum: usize) {
    // body
}

fn lorem<T>(ipsum: T)
where
    T: Add + Sub + Mul + Div,
{
```

```
// body
}
```

### "AlwaysNextLine":

```
fn lorem()
{
    // body
}

fn lorem(ipsum: usize)
{
    // body
}

fn lorem<T>(ipsum: T)
where
    T: Add + Sub + Mul + Div,
{
     // body
}
```

### "PreferSameLine":

```
fn lorem() {
    // body
}

fn lorem(ipsum: usize) {
    // body
}

fn lorem<T>(ipsum: T)
where
    T: Add + Sub + Mul + Div, {
    // body
}
```

### **Structs and enums**

### "SameLineWhere" (default):

```
struct Lorem {
    ipsum: bool,
}

struct Dolor<T>
where
    T: Eq,
```

```
{
    sit: T,
}
```

#### "AlwaysNextLine":

```
struct Lorem
{
    ipsum: bool,
}

struct Dolor<T>
where
    T: Eq,
{
    sit: T,
}
```

#### "PreferSameLine":

```
struct Lorem {
    ipsum: bool,
}

struct Dolor<T>
where
    T: Eq, {
    sit: T,
}
```

# chain\_width

Maximum width of a chain to fit on one line.

- Default value: 60
- Possible values: any positive integer that is less than or equal to the value specified for max width
- Stable: Yes

By default this option is set as a percentage of  $\underline{\mathtt{max\_width}}$  provided by  $\underline{\mathtt{use\_small\_heuristics}}$ , but a value set directly for  $\mathtt{chain\_width}$  will take precedence.

See also max\_width and use\_small\_heuristics

## color

Whether to use colored output or not.

- Default value: "Auto"
- Possible values: "Auto", "Always", "Never"

• **Stable**: No (tracking issue: #3385)

# combine\_control\_expr

Combine control expressions with function calls.

Default value: true
 Possible values: true , false
 Stable: No (tracking issue: #3369)

# true (default):

```
fn example() {
   // If
   foo!(if x {
     foo();
   } else {
     bar();
   });
   // IfLet
   foo!(if let Some(..) = x \in 
     foo();
   } else {
      bar();
   });
   // While
   foo! (while x {
     foo();
      bar();
   });
   // WhileLet
   foo!(while let Some(..) = x {
      foo();
      bar();
   });
   // ForLoop
   foo!(for x in y {
      foo();
      bar();
   });
   // Loop
   foo!(loop {
      foo();
      bar();
   });
}
```

#### false:

```
fn example() {
 // If
  foo!(
   if x {
     foo();
   } else {
    bar();
   }
  );
  // IfLet
  foo!(
   if let Some(..) = x {
    foo();
} else {
   bar();
  );
  // While
  foo!(
   while x {
   foo();
bar();
  );
  // WhileLet
  foo!(
   while let Some(..) = x {
    foo();
   }
       bar();
  );
  // ForLoop
  foo!(
   for x in y {
     foo();
bar();
   }
  );
  // Loop
  foo!(
   loop {
     foo();
       bar();
    }
```

```
);
}
```

# comment\_width

 $\label{lem:maximum length of comments. No effect unless \verb|wrap_comments| = true|.$ 

- Default value: 80
- Possible values: any positive integer
- **Stable**: No (tracking issue: #3349)

**Note:** A value of 0 results in <u>wrap\_comments</u> being applied regardless of a line's width.

80 (default; comments shorter than <code>comment\_width</code> ):

```
// Lorem ipsum dolor sit amet, consectetur adipiscing elit.
```

60 (comments longer than comment\_width ):

```
// Lorem ipsum dolor sit amet,
// consectetur adipiscing elit.
```

See also <a href="wrap comments">wrap comments</a>.

# condense wildcard suffixes

Replace strings of \_ wildcards by a single .. in tuple patterns

- Default value: false
- Possible values: true , false
- Stable: No (tracking issue: #3384)

### false (default):

```
fn main() {
   let (lorem, ipsum, _, _) = (1, 2, 3, 4);
   let (lorem, ipsum, ..) = (1, 2, 3, 4);
}
```

### true:

```
fn main() {
   let (lorem, ipsum, ..) = (1, 2, 3, 4);
}
```

# control\_brace\_style

Brace style for control flow constructs

- **Default value**: "AlwaysSameLine"
- Possible values: "AlwaysNextLine", "AlwaysSameLine", "ClosingNextLine"
- **Stable**: No (tracking issue: #3377)

### "AlwaysSameLine" (default):

```
fn main() {
    if lorem {
        println!("ipsum!");
    } else {
        println!("dolor!");
    }
}
```

#### "AlwaysNextLine":

```
fn main() {
    if lorem
    {
        println!("ipsum!");
    }
    else
    {
        println!("dolor!");
    }
}
```

### "ClosingNextLine":

```
fn main() {
    if lorem {
        println!("ipsum!");
    }
    else {
        println!("dolor!");
    }
}
```

# disable\_all\_formatting

Don't reformat anything.

Note that this option may be soft-deprecated in the future once the <u>ignore</u> option is stabilized. Nightly toolchain users are encouraged to use <u>ignore</u> instead when possible.

- Default value: false
- Possible values: true , false

• Stable: Yes

### edition

Specifies which edition is used by the parser.

Default value: "2015"Possible values: "2015" , "2018" , "2021"

• Stable: Yes

Rustfmt is able to pick up the edition used by reading the <code>Cargo.toml</code> file if executed through the Cargo's formatting tool <code>cargo fmt</code>. Otherwise, the edition needs to be specified in your config file:

```
edition = "2018"
```

# empty\_item\_single\_line

Put empty-body functions and impls on a single line

• **Default value**: true

Possible values: true, false
 Stable: No (tracking issue: #3356)

#### true (default):

```
fn lorem() {}
impl Lorem {}
```

### false:

```
fn lorem() {
}
impl Lorem {
}
```

See also brace\_style, control\_brace\_style.

# $\verb"enum_discrim_align_threshold"$

The maximum length of enum variant having discriminant, that gets vertically aligned with others. Variants without discriminants would be ignored for the purpose of alignment.

Note that this is not how much whitespace is inserted, but instead the longest variant name that doesn't get ignored when aligning.

• Default value : 0

• Possible values: any positive integer

• Stable: No (tracking issue: #3372)

#### 0 (default):

```
enum Bar {
    A = 0,
    Bb = 1,
    RandomLongVariantGoesHere = 10,
    Ccc = 71,
}

enum Bar {
    VeryLongVariantNameHereA = 0,
    VeryLongVariantNameHereBb = 1,
    VeryLongVariantNameHereCcc = 2,
}
```

#### 20:

```
enum Foo {
    A = 0,
    Bb = 1,
    RandomLongVariantGoesHere = 10,
    Ccc = 2,
}

enum Bar {
    VeryLongVariantNameHereA = 0,
    VeryLongVariantNameHereBb = 1,
    VeryLongVariantNameHereCcc = 2,
}
```

# error\_on\_line\_overflow

Error if Rustfmt is unable to get all lines within <code>max\_width</code> , except for comments and string literals. If this happens, then it is a bug in Rustfmt. You might be able to work around the bug by refactoring your code to avoid long/complex expressions, usually by extracting a local variable or using a shorter name.

```
    Default value: false
    Possible values: true, false
    Stable: No (tracking issue: #3391)

See also <a href="max.width">max.width</a>.
```

# error\_on\_unformatted

Error if unable to get comments or string literals within max width, or they are left with trailing whitespaces.

```
Default value: false
Possible values: true , false
Stable: No (tracking issue: #3392)
```

# fn\_args\_layout

Control the layout of arguments in a function

- Default value: "Tall"Possible values: "Compressed", "Tall", "Vertical"
- Stable: Yes

#### "Tall" (default):

```
trait Lorem {
   fn lorem(ipsum: Ipsum, dolor: Dolor, sit: Sit, amet: Amet);
   fn lorem(ipsum: Ipsum, dolor: Dolor, sit: Sit, amet: Amet) {
      // body
   fn lorem(
       ipsum: Ipsum,
       dolor: Dolor,
      sit: Sit,
       amet: Amet,
       consectetur: Consectetur,
       adipiscing: Adipiscing,
       elit: Elit,
   );
    fn lorem(
       ipsum: Ipsum,
       dolor: Dolor,
       sit: Sit,
       amet: Amet,
       consectetur: Consectetur,
       adipiscing: Adipiscing,
       elit: Elit,
   ) {
       // body
}
```

#### "Compressed":

```
trait Lorem {
    fn lorem(ipsum: Ipsum, dolor: Dolor, sit: Sit, amet: Amet);

    fn lorem(ipsum: Ipsum, dolor: Dolor, sit: Sit, amet: Amet) {
        // body
    }

    fn lorem(
```

```
ipsum: Ipsum, dolor: Dolor, sit: Sit, amet: Amet, consectetur: Consectetur,
    adipiscing: Adipiscing, elit: Elit,
);

fn lorem(
    ipsum: Ipsum, dolor: Dolor, sit: Sit, amet: Amet, consectetur: Consectetur,
    adipiscing: Adipiscing, elit: Elit,
) {
    // body
}
```

#### "Vertical":

```
trait Lorem {
   fn lorem(
       ipsum: Ipsum,
      dolor: Dolor,
      sit: Sit,
       amet: Amet,
   );
   fn lorem(
       ipsum: Ipsum,
      dolor: Dolor,
      sit: Sit,
       amet: Amet,
   ) {
       // body
   }
    fn lorem(
       ipsum: Ipsum,
       dolor: Dolor,
       sit: Sit,
       amet: Amet,
       consectetur: Consectetur,
       adipiscing: Adipiscing,
       elit: Elit,
   );
   fn lorem(
       ipsum: Ipsum,
       dolor: Dolor,
       sit: Sit,
       amet: Amet,
       consectetur: Consectetur,
       adipiscing: Adipiscing,
       elit: Elit,
   ) {
       // body
```

```
}
```

# fn\_call\_width

Maximum width of the args of a function call before falling back to vertical formatting.

- Default value: 60
- Possible values: any positive integer that is less than or equal to the value specified for max width
- Stable: Yes

By default this option is set as a percentage of  $\underline{\mathtt{max\_width}}$  provided by  $\underline{\mathtt{use\_small\_heuristics}}$ , but a value set directly for  $\underline{\mathtt{fn\_call\_width}}$  will take precedence.

See also max\_width and use\_small\_heuristics

# fn\_single\_line

Put single-expression functions on a single line

- **Default value**: false
- Possible values: true , false
- **Stable**: No (tracking issue: #3358)

### false (default):

```
fn lorem() -> usize {
     42
}

fn lorem() -> usize {
    let ipsum = 42;
     ipsum
}
```

#### true:

```
fn lorem() -> usize { 42 }

fn lorem() -> usize {
   let ipsum = 42;
   ipsum
}
```

See also control brace style .

# force\_explicit\_abi

Always print the abi for extern items

• Default value: true

• Possible values: true , false

• Stable: Yes

Note: Non-"C" ABIs are always printed. If false then "C" is removed.

### true (default):

```
extern "C" {
   pub static lorem: c_int;
}
```

#### false:

```
extern {
    pub static lorem: c_int;
}
```

# force\_multiline\_blocks

Force multiline closure and match arm bodies to be wrapped in a block

• **Default value**: false

Possible values: false, true
 Stable: No (tracking issue: #3374)

#### false (default):

```
fn main() {
    result.and_then(|maybe_value| match maybe_value {
        None => foo(),
        Some(value) => bar(),
    });

match lorem {
        None => |ipsum| {
            println!("Hello World");
        },
        Some(dolor) => foo(),
    }
}
```

### true:

```
}
});

match lorem {
    None => {
        |ipsum| {
            println!("Hello World");
        }
    }
    Some(dolor) => foo(),
}
```

# format\_code\_in\_doc\_comments

Format code snippet included in doc comments.

Default value: false
Possible values: true, false
Stable: No (tracking issue: #3348)

#### false (default):

# true

```
/// Adds one to the number given.
///
/// # Examples
///
/// ```rust
/// let five = 5;
```

# format\_generated\_files

Format generated files. A file is considered generated if any of the first five lines contain a <code>@generated</code> comment marker. By default, generated files are reformatted, i. e. <code>@generated</code> marker is ignored. This option is currently ignored for stdin ( <code>@generated</code> in stdin is ignored.)

Default value: true
Possible values: true , false
Stable: No (tracking issue: #5080)

## format\_macro\_matchers

Format the metavariable matching patterns in macros.

Default value: false
 Possible values: true, false
 Stable: No (tracking issue: #3354)

### false (default):

```
macro_rules! foo {
    ($a: ident : $b: ty) => {
        $a(42): $b;
    };
    ($a: ident $b: ident $c: ident) => {
        $a = $b + $c;
    };
}
```

#### true:

```
macro_rules! foo {
    ($a:ident : $b:ty) => {
        $a(42): $b;
    };
    ($a:ident $b:ident $c:ident) => {
        $a = $b + $c;
    };
}
```

See also <u>format macro bodies</u>.

# format\_macro\_bodies

Format the bodies of macros.

Default value: truePossible values: true , false

• **Stable**: No (tracking issue: #3355)

# true (default):

```
macro_rules! foo {
    ($a: ident : $b: ty) => {
        $a(42): $b;
    };
    ($a: ident $b: ident $c: ident) => {
        $a = $b + $c;
    };
}
```

#### false:

```
macro_rules! foo {
    ($a: ident : $b: ty) => { $a(42): $b; };
    ($a: ident $b: ident $c: ident) => { $a=$b+$c; };
}
```

See also format macro matchers.

# format\_strings

Format string literals where necessary

Default value: false

Possible values: true, false
 Stable: No (tracking issue: #3353)

### false (default):

```
fn main() {
    let lorem = "ipsum dolor sit amet consectetur adipiscing elit lorem ipsum dolor
    sit amet consectetur adipiscing";
}
```

#### true:

```
fn main() {
   let lorem = "ipsum dolor sit amet consectetur adipiscing elit lorem ipsum dolor
```

See also max\_width .

# hard\_tabs

Use tab characters for indentation, spaces for alignment

• **Default value**: false

• Possible values: true , false

• Stable: Yes

#### false (default):

```
fn lorem() -> usize {
    42 // spaces before 42
}
```

#### true:

```
fn lorem() -> usize {
    42 // tabs before 42
}
```

See also: <u>tab\_spaces</u>.

# hex\_literal\_case

Control the case of the letters in hexadecimal literal values

• Default value: Preserve

• Possible values: Upper , Lower

• Stable: No (tracking issue: #5081)

# hide\_parse\_errors

Do not show parse errors if the parser failed to parse files.

• Default value: false

• Possible values: true , false

• Stable: No (tracking issue: #3390)

### ignore

Skip formatting files and directories that match the specified pattern. The pattern format is the same as <u>.gitignore</u>. Be sure to use Unix/forwardslash / style paths. This path style will work on all platforms. Windows style paths with backslashes \ are not supported.

• Default value: format every file

• Possible values: See an example below

• Stable: No (tracking issue: #3395)

## **Example**

If you want to ignore specific files, put the following to your config file:

```
ignore = [
    "src/types.rs",
    "src/foo/bar.rs",
]
```

If you want to ignore every file under <code>examples/</code> , put the following to your config file:

```
ignore = [
    "examples",
]
```

If you want to ignore every file under the directory where you put your rustfmt.toml:

```
ignore = ["/"]
```

# imports\_indent

Indent style of imports

Default Value: "Block"

• Possible values: "Block", "Visual"

• **Stable**: No (tracking issue: #3360)

### "Block" (default):

#### "Visual":

See also: imports layout .

## imports layout

Item layout inside a imports block

- Default value: "Mixed"
- Possible values: "Horizontal", "HorizontalVertical", "Mixed", "Vertical"
- **Stable**: No (tracking issue: #3361)

### "Mixed" (default):

#### "Horizontal":

 $\textbf{Note} \hbox{: This option forces all imports onto one line and may exceed} \quad \verb|max_width| \ .$ 

```
use foo::{xxx, yyy, zzz};
use foo::{aaa, bbb, ccc, ddd, eee, fff};
```

#### "HorizontalVertical":

#### "Vertical":

```
use foo::{
    xxx,
    yyy,
    zzz,
};

use foo::{
    aaa,
    bbb,
    ccc,
    ddd,
    eee,
```

```
fff,
};
```

# indent\_style

Indent on expressions or items.

• Default value: "Block"

• Possible values: "Block", "Visual"

• **Stable**: No (tracking issue: #3346)

### **Array**

### "Block" (default):

```
fn main() {
    let lorem = vec![
        "ipsum",
        "dolor",
        "sit",
        "amet",
        "consectetur",
        "adipiscing",
        "elit",
    ];
}
```

### "Visual":

### **Control flow**

# "Block" (default):

```
fn main() {
   if lorem_ipsum
        && dolor_sit
        && amet_consectetur
        && lorem_sit
        && dolor_consectetur
```

```
&& amet_ipsum
   && lorem_consectetur
{
      // ...
}
```

### "Visual":

```
fn main() {
   if lorem_ipsum
        && dolor_sit
        && amet_consectetur
        && lorem_sit
        && dolor_consectetur
        && amet_ipsum
        && lorem_consectetur

        // ...
}
```

See also: control brace style.

# **Function arguments**

# "Block" (default):

```
fn lorem() {}

fn lorem(ipsum: usize) {}

fn lorem(
   ipsum: usize,
   dolor: usize,
   sit: usize,
   amet: usize,
   consectetur: usize,
   adipiscing: usize,
   elit: usize,
}

{
   // body
}
```

#### "Visual":

```
fn lorem() {}
fn lorem(ipsum: usize) {}
```

### **Function calls**

### "Block" (default):

```
fn main() {
    lorem(
        "lorem",
        "ipsum",
        "dolor",
        "sit",
        "amet",
        "consectetur",
        "adipiscing",
        "elit",
    );
}
```

#### "Visual":

# Generics

### "Block" (default):

```
fn lorem<
    Ipsum: Eq = usize,
    Dolor: Eq = usize,
    Sit: Eq = usize,</pre>
```

```
Amet: Eq = usize,
  Adipiscing: Eq = usize,
  Consectetur: Eq = usize,
  Elit: Eq = usize,

>(
   ipsum: Ipsum,
   dolor: Dolor,
   sit: Sit,
   amet: Amet,
   adipiscing: Adipiscing,
   consectetur: Consectetur,
   elit: Elit,
) -> T {
    // body
}
```

#### "Visual":

```
fn lorem<Ipsum: Eq = usize,</pre>
       Dolor: Eq = usize,
        Sit: Eq = usize,
        Amet: Eq = usize,
        Adipiscing: Eq = usize,
        Consectetur: Eq = usize,
       Elit: Eq = usize>(
   ipsum: Ipsum,
   dolor: Dolor,
   sit: Sit,
   amet: Amet,
   adipiscing: Adipiscing,
   consectetur: Consectetur,
   elit: Elit)
   -> T {
   // body
}
```

### Struct

### "Block" (default):

```
fn main() {
    let lorem = Lorem {
        ipsum: dolor,
        sit: amet,
    };
}
```

### "Visual":

See also: struct lit single line, indent style.

### Where predicates

### "Block" (default):

```
fn lorem<Ipsum, Dolor, Sit, Amet>() -> T
where
    Ipsum: Eq,
    Dolor: Eq,
    Sit: Eq,
    Amet: Eq,
{
    // body
}
```

#### "Visual":

```
fn lorem<Ipsum, Dolor, Sit, Amet>() -> T
   where Ipsum: Eq,
        Dolor: Eq,
        Sit: Eq,
        Amet: Eq
{
      // body
}
```

# inline\_attribute\_width

Write an item and its attribute on the same line if their combined width is below a threshold

- Default value: 0
- Possible values: any positive integer
- **Stable**: No (tracking issue: #3343)

### **Example**

### 0 (default):

```
#[cfg(feature = "alloc")]
use core::slice;
```

```
#[cfg(feature = "alloc")] use core::slice;
```

# license\_template\_path

Check whether beginnings of files match a license template.

- Default value: ""
- Possible values: path to a license template file
- Stable: No (tracking issue: #3352)

A license template is a plain text file which is matched literally against the beginning of each source file, except for {} -delimited blocks, which are matched as regular expressions. The following license template therefore matches strings like // Copyright 2017 The Rust Project Developers., // Copyright 2018 The Rust Project Developers., etc.:

```
// Copyright {\d+} The Rust Project Developers.
```

### match arm blocks

Controls whether arm bodies are wrapped in cases where the first line of the body cannot fit on the same line as the operator.

The Style Guide requires that bodies are block wrapped by default if a line break is required after the => , but this option can be used to disable that behavior to prevent wrapping arm bodies in that event, so long as the body does not contain multiple statements nor line comments.

- Default value: true
- Possible values: true , false
- Stable: No (tracking issue: #3373)

#### true (default):

#### false:

See also: match block trailing comma .

# match\_arm\_leading\_pipes

Controls whether to include a leading pipe on match arms

• **Default value**: Never

• Possible values: Always , Never , Preserve

• Stable: Yes

### Never (default):

```
// Leading pipes are removed from this:
// fn foo() {
// match foo {
      | "foo" | "bar" => {}
         | "baz"
         | "something relatively long"
         | "something really really really reallllllllllllllly long" => println!
("X"),
         | "qux" => println!("y"),
         _ => {}
// }
// }
// Becomes
fn foo() {
   match foo {
       "foo" | "bar" => {}
       | "something relatively long"
       | "something really really really reallllllllllllllllll long" => println!("x"),
```

```
"qux" => println!("y"),
_ => {}
}
```

#### Always:

```
// Leading pipes are emitted on all arms of this:
// fn foo() {
// match foo {
                                   "foo" | "bar" => {}
                                                 "baz"
                                               | "something relatively long"
                                                | "something really rea
("x"),
                                                 "qux" => println!("y"),
                                                 _ => {}
// }
// }
// Becomes:
fn foo() {
                 match foo {
                                 | "foo" | "bar" => {}
                                   | "baz"
                                     | "something relatively long"
                                       | "something really really really realllllllllllllllllll long" => println!("x"),
                                     | "qux" => println!("y"),
                                     | _ => {}
}
```

#### Preserve:

# match\_block\_trailing\_comma

Put a trailing comma after a block based match arm (non-block arms are not affected)

• **Default value**: false

• Possible values: true , false

• Stable: Yes

#### false (default):

```
fn main() {
    match lorem {
        Lorem::Ipsum => {
            println!("ipsum");
        }
        Lorem::Dolor => println!("dolor"),
    }
}
```

#### true:

```
fn main() {
    match lorem {
        Lorem::Ipsum => {
            println!("ipsum");
        },
        Lorem::Dolor => println!("dolor"),
    }
}
```

See also: <a href="mailto:trailing\_comma">trailing\_comma</a>, <a href="mailto:match\_arm\_blocks">match\_arm\_blocks</a>.

# max\_width

Maximum width of each line

• Default value: 100

• Possible values: any positive integer

• Stable: Yes

See also error on line overflow .

# merge\_derives

Merge multiple derives into a single one.

• Default value: true

• Possible values: true , false

• Stable: Yes

#### true (default):

```
#[derive(Eq, PartialEq, Debug, Copy, Clone)]
pub enum Foo {}
```

#### false:

```
#[derive(Eq, PartialEq, Debug, Copy, Clone)]
pub enum Bar {}

#[derive(Eq, PartialEq)]

#[derive(Debug)]

#[derive(Copy, Clone)]

pub enum Foo {}
```

# imports\_granularity

How imports should be grouped into use statements. Imports will be merged or split to the configured level of granularity.

```
    Default value: Preserve
    Possible values: Preserve , Crate , Module , Item , One
    Stable: No (tracking issue: #4991)
```

### Preserve (default):

Do not change the granularity of any imports and preserve the original structure written by the developer.

```
use foo::b;
use foo::b::{f, g};
use foo::{a, c, d::e};
use qux::{h, i};
```

#### Crate:

Merge imports from the same crate into a single use statement. Conversely, imports from different crates are split into separate statements.

```
use foo::{
    a, b,
    b::{f, g},
    c,
    d::e,
};
use qux::{h, i};
```

## Module:

Merge imports from the same module into a single use statement. Conversely, imports from different modules are split into separate statements.

```
use foo::b::{f, g};
use foo::d::e;
use foo::{a, b, c};
use qux::{h, i};
```

#### Item:

Flatten imports so that each has its own use statement.

```
use foo::a;
use foo::b;
use foo::b::f;
use foo::b::g;
use foo::c;
use foo::d::e;
use qux::h;
use qux::1;
```

#### One:

Merge all imports into a single use statement as long as they have the same visibility.

```
pub use foo::{x, y};
use {
    bar::{
        a,
        b::{self, f, g},
        c,
        d::e,
    },
    qux::{h, i},
};
```

### merge imports

This option is deprecated. Use <code>imports\_granularity = "Crate"</code> instead.

- Default value: false
- Possible values: true , false

### false (default):

```
use foo::{a, c, d};
use foo::{b, g};
use foo::{e, f};
```

#### true:

```
use foo::{a, b, c, d, e, f, g};
```

# newline\_style

Unix or Windows line endings

- Default value: "Auto"
- Possible values: "Auto", "Native", "Unix", "Windows"
- Stable: Yes

#### Auto (default):

The newline style is detected automatically on a per-file basis. Files with mixed line endings will be converted to the first detected line ending style.

#### Native

Line endings will be converted to  $\r \n$  on Windows and  $\n$  on all other platforms.

#### Unix

Line endings will be converted to  $\n$ .

### Windows

Line endings will be converted to  $\r \$ .

### normalize\_comments

Convert /\* \*/ comments to // comments where possible

- Default value: false
- Possible values: true , false
- **Stable**: No (tracking issue: #3350)

### false (default):

```
// Lorem ipsum:
fn dolor() -> usize {}

/* sit amet: */
fn adipiscing() -> usize {}
```

#### true:

```
// Lorem ipsum:
fn dolor() -> usize {}
```

```
// sit amet:
fn adipiscing() -> usize {}
```

# normalize\_doc\_attributes

Convert #![doc] and #[doc] attributes to //! and /// doc comments.

Default value: false

• Possible values: true , false

• **Stable**: No (tracking issue: #3351)

### false (default):

```
#![doc = "Example documentation"]
#[doc = "Example item documentation"]
pub enum Bar {}

/// Example item documentation
pub enum Foo {}
```

#### true:

```
//! Example documentation

/// Example item documentation
pub enum Foo {}
```

# overflow\_delimited\_expr

When structs, slices, arrays, and block/array-like macros are used as the last argument in an expression list, allow them to overflow (like blocks/closures) instead of being indented on a new line.

• Default value: false

• Possible values: true , false

• **Stable**: No (tracking issue: #3370)

### false (default):

```
fn example() {
    foo(ctx, |param| {
        action();
        foo(param)
    });

foo(
    ctx,
    Bar {
        x: value,
```

```
y: value2,
      },
   );
   foo(
      ctx,
       & [
          MAROON_TOMATOES,
          PURPLE POTATOES,
          ORGANE_ORANGES,
           GREEN_PEARS,
           RED_APPLES,
       ],
   );
   foo(
       ctx,
       vec![
          MAROON_TOMATOES,
          PURPLE_POTATOES,
           ORGANE ORANGES,
           GREEN_PEARS,
           RED_APPLES,
       ],
   );
}
```

### true:

```
fn example() {
   foo(ctx, |param| {
     action();
      foo(param)
   });
   foo(ctx, Bar {
      x: value,
      y: value2,
   });
   foo(ctx, &[
      MAROON TOMATOES,
       PURPLE_POTATOES,
       ORGANE ORANGES,
       GREEN_PEARS,
      RED_APPLES,
   ]);
   foo(ctx, vec![
      MAROON_TOMATOES,
       PURPLE_POTATOES,
```

```
ORGANE_ORANGES,

GREEN_PEARS,

RED_APPLES,

]);
}
```

# remove\_nested\_parens

Remove nested parens.

- Default value: true,
- Possible values: true , false
- Stable: Yes

### true (default):

```
fn main() {
    (foo());
}
```

#### false:

```
fn main() {
    (foo());

    ((((foo()))));
}
```

# reorder\_impl\_items

Reorder implitems. type and const are put first, then macros and methods.

- **Default value**: false
- Possible values: true , false
- Stable: No (tracking issue: #3363)

### false (default)

```
struct Dummy;

impl Iterator for Dummy {
    fn next(&mut self) -> Option<Self::Item> {
        None
    }

    type Item = i32;
}

impl Iterator for Dummy {
```

```
type Item = i32;

fn next(&mut self) -> Option<Self::Item> {
    None
}
```

true

```
impl Iterator for Dummy {
    type Item = i32;

    fn next(&mut self) -> Option<Self::Item> {
        None
    }
}
```

# reorder\_imports

Reorder import and extern crate statements alphabetically in groups (a group is separated by a newline).

• **Default value**: true

• Possible values: true , false

• Stable: Yes

### true (default):

```
use dolor;
use ipsum;
use lorem;
use sit;
```

### false:

```
use lorem;
use ipsum;
use dolor;
use sit;
```

# group\_imports

Controls the strategy for how imports are grouped together.

• **Default value**: Preserve

• Possible values: Preserve , StdExternalCrate , One

• **Stable**: No (tracking issue: #5083)

#### Preserve (default):

Preserve the source file's import groups.

```
use super::update::convert_publish_payload;
use chrono::Utc;

use alloc::alloc::Layout;
use juniper::{FieldError, FieldResult};
use uuid::Uuid;

use std::sync::Arc;

use broker::database::PooledConnection;

use super::schema::{Context, Payload};
use crate::models::Event;
use core::f32;
```

#### StdExternalCrate:

Discard existing import groups, and create three groups for:

- 1. std , core and alloc ,
- 2. external crates,
- 3. self, super and crate imports.

```
use alloc::alloc::Layout;
use core::f32;
use std::sync::Arc;

use broker::database::PooledConnection;
use chrono::Utc;
use juniper::{FieldError, FieldResult};
use uuid::Uuid;

use super::schema::{Context, Payload};
use super::update::convert_publish_payload;
use crate::models::Event;
```

### One:

Discard existing import groups, and create a single group for everything

```
use super::schema::{Context, Payload};
use super::update::convert_publish_payload;
use crate::models::Event;
use alloc::alloc::Layout;
use broker::database::PooledConnection;
use chrono::Utc;
use core::f32;
```

```
use juniper::{FieldError, FieldResult};
use std::sync::Arc;
use uuid::Uuid;
```

# reorder\_modules

Reorder mod declarations alphabetically in group.

• Default value: true

• Possible values: true , false

• Stable: Yes

#### true (default)

```
mod a;
mod b;

mod dolor;
mod ipsum;
mod lorem;
mod sit;
```

#### false

```
mod b;
mod a;

mod lorem;
mod ipsum;
mod dolor;
mod sit;
```

**Note** mod with #[macro\_export] will not be reordered since that could change the semantics of the original source code.

# report\_fixme

Report FIXME items in comments.

- Default value: "Never"
- Possible values: "Always", "Unnumbered", "Never"
- Stable: No (tracking issue: #3394)

Warns about any comments containing FIXME in them when set to "Always" . If it contains a #X (with X being a number) in parentheses following the FIXME , "Unnumbered" will ignore it.

See also  $\underline{\mathtt{report}}\underline{\mathtt{todo}}$  .

# report\_todo

Report TODO items in comments.

```
    Default value: "Never"
    Possible values: "Always", "Unnumbered", "Never"
    Stable: No (tracking issue: #3393)
```

Warns about any comments containing TODO in them when set to "Always" . If it contains a #X (with X being a number) in parentheses following the TODO, "Unnumbered" will ignore it.

```
See also report fixme.
```

### required\_version

Require a specific version of rustfmt. If you want to make sure that the specific version of rustfmt is used in your Cl, use this option.

```
    Default value: CARGO_PKG_VERSION
    Possible values: any published version (e.g. "0.3.8")
    Stable: No (tracking issue: #3386)
```

# short\_array\_element\_width\_threshold

The width threshold for an array element to be considered "short".

The layout of an array is dependent on the length of each of its elements. If the length of every element in an array is below this threshold (all elements are "short") then the array can be formatted in the mixed/compressed style, but if any one element has a length that exceeds this threshold then the array elements will have to be formatted vertically.

- Default value: 10
- Possible values: any positive integer that is less than or equal to the value specified for max width
- Stable: Yes

### 10 (default):

### 20:

```
1;
}
```

See also max\_width .

# skip\_children

Don't reformat out of line modules

```
    Default value: false
    Possible values: true, false
    Stable: No (tracking issue: #3389)
```

# single\_line\_if\_else\_max\_width

Maximum line length for single line if-else expressions. A value of 0 (zero) results in if-else expressions always being broken into multiple lines. Note this occurs when use small heuristics is set to Off.

• Default value: 50

• Possible values: any positive integer that is less than or equal to the value specified for max width

• Stable: Yes

By default this option is set as a percentage of <a href="max\_width">max\_width</a> provided by <a href="max\_use\_small\_heuristics">use\_small\_heuristics</a>, but a value set directly for single line if else max width will take precedence.

See also max\_width and use\_small\_heuristics

# space\_after\_colon

Leave a space after the colon.

Default value: true
Possible values: true , false
Stable: No (tracking issue: #3366)

### true (default):

```
fn lorem<T: Eq>(t: T) {
    let lorem: Dolor = Lorem {
        ipsum: dolor,
        sit: amet,
    };
}
```

#### false:

```
fn lorem<T:Eq>(t:T) {
   let lorem:Dolor = Lorem {
     ipsum:dolor,
     sit:amet,
```

```
};
}
```

See also: space\_before\_colon .

# space\_before\_colon

Leave a space before the colon.

Default value: falsePossible values: true , false

• **Stable**: No (tracking issue: #3365)

### false (default):

```
fn lorem<T: Eq>(t: T) {
   let lorem: Dolor = Lorem {
      ipsum: dolor,
      sit: amet,
   };
}
```

#### true:

```
fn lorem<T : Eq>(t : T) {
    let lorem : Dolor = Lorem {
        ipsum : dolor,
        sit : amet,
    };
}
```

See also: space after colon.

# spaces\_around\_ranges

Put spaces around the .., ..=, and ... range operators

Default value: false
Possible values: true, false
Stable: No (tracking issue: #3367)

### false (default):

```
fn main() {
   let lorem = 0..10;
   let ipsum = 0..=10;

match lorem {
     1..5 => foo(),
     _ => bar,
```

```
match lorem {
    1..=5 => foo(),
    _ => bar,
}

match lorem {
    1...5 => foo(),
    _ => bar,
}
```

#### true :

```
fn main() {
    let lorem = 0 .. 10;
    let ipsum = 0 .. = 10;

match lorem {
        1 .. 5 => foo(),
        _ => bar,
    }

match lorem {
        1 .. = 5 => foo(),
        _ => bar,
    }

match lorem {
        1 ... 5 => foo(),
        _ => bar,
    }
```

# struct\_field\_align\_threshold

The maximum diff of width between struct fields to be aligned with each other.

- Default value: 0
- Possible values: any non-negative integer
- **Stable**: No (tracking issue: #3371)

### 0 (default):

```
struct Foo {
    x: u32,
    yy: u32,
    zzz: u32,
}
```

#### 20:

```
struct Foo {
    x: u32,
    yy: u32,
    zzz: u32,
}
```

# struct\_lit\_single\_line

Put small struct literals on a single line

• Default value: true

• Possible values: true , false

• Stable: No (tracking issue: #3357)

### true (default):

```
fn main() {
   let lorem = Lorem { foo: bar, baz: ofo };
}
```

#### false:

```
fn main() {
    let lorem = Lorem {
        foo: bar,
        baz: ofo,
    };
}
```

See also: indent style.

# struct\_lit\_width

Maximum width in the body of a struct literal before falling back to vertical formatting. A value of 0 (zero) results in struct literals always being broken into multiple lines. Note this occurs when <code>use\_small\_heuristics</code> is set to <code>Off</code>.

- Default value: 18
- Possible values: any positive integer that is less than or equal to the value specified for max width
- Stable: Yes

By default this option is set as a percentage of  $\underline{\mathtt{max\_width}}$  provided by  $\underline{\mathtt{use\_small\_heuristics}}$ , but a value set directly for  $\underline{\mathtt{struct}}$  lit  $\underline{\mathtt{width}}$  will take precedence.

See also max width , use small heuristics , and struct lit single line

### struct\_variant\_width

Maximum width in the body of a struct variant before falling back to vertical formatting. A value of 0 (zero) results in struct literals always being broken into multiple lines. Note this occurs when <code>use\_small\_heuristics</code> is set to <code>Off</code>.

- Default value: 35
- Possible values: any positive integer that is less than or equal to the value specified for max width
- Stable: Yes

By default this option is set as a percentage of <a href="max\_width">max\_width</a> provided by <a href="max\_use\_small\_heuristics">use\_small\_heuristics</a>, but a value set directly for <a href="max\_struct">struct</a> variant <a href="width">width</a> will take precedence.

See also max\_width and use\_small\_heuristics

# tab\_spaces

Number of spaces per tab

- Default value: 4
- Possible values: any positive integer
- Stable: Yes
- 4 (default):

```
fn lorem() {
    let ipsum = dolor();
    let sit = vec![
        "amet consectetur adipiscing elit amet",
        "consectetur adipiscing elit amet consectetur.",
    ];
}
```

2:

```
fn lorem() {
  let ipsum = dolor();
  let sit = vec![
    "amet consectetur adipiscing elit amet",
    "consectetur adipiscing elit amet consectetur.",
  ];
}
```

See also: <a href="https://heart.nlm.nee.gov/">hard tabs</a>.

### trailing\_comma

How to handle trailing commas for lists

• Default value: "Vertical"

```
• Possible values: "Always", "Never", "Vertical"
```

• **Stable**: No (tracking issue: #3379)

### "Vertical" (default):

```
fn main() {
   let Lorem { ipsum, dolor, sit } = amet;
   let Lorem {
      ipsum,
      dolor,
      sit,
      amet,
      consectetur,
      adipiscing,
   } = elit;
}
```

### "Always":

```
fn main() {
    let Lorem { ipsum, dolor, sit, } = amet;
    let Lorem {
        ipsum,
        dolor,
        sit,
        amet,
        consectetur,
        adipiscing,
    } = elit;
}
```

#### "Never":

```
fn main() {
    let Lorem { ipsum, dolor, sit } = amet;
    let Lorem {
        ipsum,
        dolor,
        sit,
        amet,
        consectetur,
        adipiscing
    } = elit;
}
```

See also: match\_block\_trailing\_comma.

# trailing\_semicolon

Add trailing semicolon after break, continue and return

```
• Default value: true
```

- Possible values: true , false
- Stable: No (tracking issue: #3378)

#### true (default):

```
fn foo() -> usize {
   return 0;
}
```

#### false:

```
fn foo() -> usize {
   return 0
}
```

# type\_punctuation\_density

Determines if + or = are wrapped in spaces in the punctuation of types

- **Default value**: "Wide"
- Possible values: "Compressed", "Wide"
- **Stable**: No (tracking issue: #3364)

### "Wide" (default):

```
fn lorem<Ipsum: Dolor + Sit = Amet>() {
    // body
}
```

#### "Compressed":

```
fn lorem<Ipsum: Dolor+Sit=Amet>() {
    // body
}
```

# unstable\_features

Enable unstable features on the unstable channel.

```
    Default value: false
```

- Possible values: true , false
- **Stable**: No (tracking issue: #3387)

# use\_field\_init\_shorthand

Use field initialize shorthand if possible.

```
Default value: false
Possible values: true , false
Stable: Yes
```

### false (default):

```
struct Foo {
    x: u32,
    y: u32,
    z: u32,
}

fn main() {
    let x = 1;
    let y = 2;
    let z = 3;
    let a = Foo { x, y, z };
    let b = Foo { x: x, y: y, z: z };
}
```

#### true:

```
struct Foo {
    x: u32,
    y: u32,
    z: u32,
}

fn main() {
    let x = 1;
    let y = 2;
    let z = 3;
    let a = Foo { x, y, z };
}
```

# use\_small\_heuristics

This option can be used to simplify the management and bulk updates of the granular width configuration settings ( <a href="mailto:fn\_call\_width">fn\_call\_width</a>, <a href="mailto:attruct\_struct\_width">attruct\_struct\_width</a>, <a href="mailto:struct\_struct\_width">struct\_width</a>, <a href="mailto:struct\_width">struct\_wariant\_width</a>, <a href="mailto:attruct\_width">attruct\_wariant\_width</a>, <a href="mailto:struct\_width">struct\_wariant\_width</a>, <a href="mailto:attruct\_width">struct\_wariant\_width</a>, <a href="mailto:attruct\_width">struct\_wariant\_width</a>), that respectively control when formatted constructs are multi-lined/vertical based on width.

Note that explicitly provided values for the width configuration settings take precedence and override the calculated values determined by  $use\_small\_heuristics$ .

```
    Default value: "Default"
    Possible values: "Default", "Off", "Max"
    Stable: Yes
```

#### Default (default):

When use\_small\_heuristics is set to Default , the values for the granular width settings are calculated as a ratio of the value for max width .

The ratios are:

```
fn_call_width - 60%
attr_fn_like_width - 70%
struct_lit_width - 18%
struct_variant_width - 35%
array_width - 60%
chain_width - 60%
single_line_if_else_max_width - 50%
```

For example when max width is set to 100, the width settings are:

```
fn_call_width=60
attr_fn_like_width=70
struct_lit_width=18
struct_variant_width=35
array_width=60
chain_width=60
single_line_if_else_max_width=50
```

and when max width is set to 200:

```
fn_call_width=120
attr_fn_like_width=140
struct_lit_width=36
struct_variant_width=70
array_width=120
chain_width=120
single_line_if_else_max_width=100
```

```
enum Lorem {
    Ipsum,
    Dolor(bool),
    Sit { amet: Consectetur, adipiscing: Elit },
}

fn main() {
    lorem(
        "lorem",
        "ipsum",
        "dolor",
        "sit",
        "amet",
        "consectetur",
        "adipiscing",
    );
```

```
let lorem = Lorem {
    ipsum: dolor,
    sit: amet,
};
let lorem = Lorem { ipsum: dolor };

let lorem = if ipsum { dolor } else { sit };
}
```

#### Off:

When use\_small\_heuristics is set to Off , the granular width settings are functionally disabled and ignored. See the documentation for the respective width config options for specifics.

```
enum Lorem {
   Ipsum,
   Dolor(bool),
   Sit {
      amet: Consectetur,
       adipiscing: Elit,
   },
}
fn main() {
   lorem("lorem", "ipsum", "dolor", "sit", "amet", "consectetur", "adipiscing");
   let lorem = Lorem {
       ipsum: dolor,
       sit: amet,
   let lorem = if ipsum {
      dolor
    } else {
       sit
   };
}
```

#### Max

When  $use\_small\_heuristics$  is set to Max, then each granular width setting is set to the same value as  $max\_width$ .

So if  $\max\_width$  is set to 200 , then all the width settings are also set to 200 .

- fn call width=200
- attr fn like width=200
- struct lit width=200
- struct\_variant\_width=200
- array width=200

- chain width=200
- single line if else max width=200

```
enum Lorem {
    Ipsum,
    Dolor(bool),
    Sit { amet: Consectetur, adipiscing: Elit },
}

fn main() {
    lorem("lorem", "ipsum", "dolor", "sit", "amet", "consectetur", "adipiscing");

    let lorem = Lorem { ipsum: dolor, sit: amet };

    let lorem = if ipsum { dolor } else { sit };
}
```

### See also:

- max width
- fn\_call\_width
- attr fn like width
- struct\_lit\_width
- struct variant width
- <u>array\_width</u>
- chain\_width
- single line if else max width

# use\_try\_shorthand

Replace uses of the try! macro by the ? shorthand

- Default value: false
- Possible values: true , false
- Stable: Yes

### false (default):

```
fn main() {
    let lorem = ipsum.map(|dolor| dolor.sit())?;

let lorem = try!(ipsum.map(|dolor| dolor.sit()));
}
```

#### true:

```
fn main() {
   let lorem = ipsum.map(|dolor| dolor.sit())?;
}
```

#### version

Which version of the formatting rules to use. Version::One is backwards-compatible with Rustfmt 1.0. Other versions are only backwards compatible within a major version number.

Default value: One
 Possible values: One , Two
 Stable: No (tracking issue: #3383)

### **Example**

```
version = "Two"
```

# where\_single\_line

Forces the where clause to be laid out on a single line.

Default value: false
 Possible values: true, false
 Stable: No (tracking issue: #3359)

### false (default):

```
impl<T> Lorem for T
where
    Option<T>: Ipsum,
{
        // body
}
```

### true:

```
impl<T> Lorem for T
where Option<T>: Ipsum
{
    // body
}
```

See also brace\_style, control\_brace\_style.

### wrap\_comments

Break comments to fit on the line

Default value: false
Possible values: true, false
Stable: No (tracking issue: #3347)

# false (default):

```
// Lorem ipsum dolor sit amet, consectetur adipiscing elit,
// sed do eiusmod tempor incididunt ut labore et dolore
// magna aliqua. Ut enim ad minim veniam, quis nostrud
// exercitation ullamco laboris nisi ut aliquip ex ea
// commodo consequat.

// Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.
```

### true:

```
// Lorem ipsum dolor sit amet, consectetur adipiscing elit,
// sed do eiusmod tempor incididunt ut labore et dolore
// magna aliqua. Ut enim ad minim veniam, quis nostrud
// exercitation ullamco laboris nisi ut aliquip ex ea
// commodo consequat.
```

# **Internal Options**

### emit mode

Internal option

# make\_backup

Internal option, use --backup

# print\_misformatted\_file\_names

Internal option, use -1 or --files-with-diff