



Configuring Git to handle line endings

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To avoid problems in your diffs, you can configure Git to properly handle line endings.

Mac Windows Linux

About line endings &

Every time you press return on your keyboard you insert an invisible character called a line ending. Different operating systems handle line endings differently.

When you're collaborating on projects with Git and GitHub Enterprise Server, Git might produce unexpected results if, for example, you're working on a Windows machine, and your collaborator has made a change in macOS.

You can configure Git to handle line endings automatically so you can collaborate effectively with people who use different operating systems.

Global settings for line endings @

The git config core.autocrlf command is used to change how Git handles line endings. It takes a single argument.

On macOS, you simply pass input to the configuration. For example:

```
$ git config --global core.autocrlf input
# Configure Git to ensure line endings in files you checkout are correct for
macOS
```

On Windows, you simply pass true to the configuration. For example:

```
$ git config --global core.autocrlf true
# Configure Git to ensure line endings in files you checkout are correct for
Windows.
# For compatibility, line endings are converted to Unix style when you commit
files.
```

On Linux, you simply pass input to the configuration. For example:

```
$ git config --global core.autocrlf input
# Configure Git to ensure line endings in files you checkout are correct for
```

Per-repository settings &

Optionally, you can configure a .gitattributes file to manage how Git reads line endings in a specific repository. When you commit this file to a repository, it overrides the core.autocrlf setting for all repository contributors. This ensures consistent behavior for all users, regardless of their Git settings and environment.

The __gitattributes file must be created in the root of the repository and committed like any other file.

A .gitattributes file looks like a table with two columns:

- On the left is the file name for Git to match.
- On the right is the line ending configuration that Git should use for those files.

Example @

Here's an example .gitattributes file. You can use it as a template for your repositories:

- # Set the default behavior, in case people don't have core.autocrlf set.
- * text=auto
- # Explicitly declare text files you want to always be normalized and converted
- # to native line endings on checkout.
- *.c text
- *.h text
- # Declare files that will always have CRLF line endings on checkout.
- *.sln text eol=crlf
- # Denote all files that are truly binary and should not be modified.
- *.png binary
- *.jpg binary

You'll notice that files are matched— *.c, *.sln, *.png—, separated by a space, then given a setting— text, text eol=crlf, binary. We'll go over some possible settings below.

- text=auto Git will handle the files in whatever way it thinks is best. This is a good default option.
- text eol=crlf Git will always convert line endings to CRLF on checkout. You should use this for files that must keep CRLF endings, even on OSX or Linux.
- text eol=lf Git will always convert line endings to LF on checkout. You should use this for files that must keep LF endings, even on Windows.
- binary Git will understand that the files specified are not text, and it should not try to change them. The binary setting is also an alias for -text -diff.

Refreshing a repository after changing line endings



After you set the <code>core.autocrlf</code> option or commit a <code>.gitattributes</code> file, Git automatically changes line endings to match your new configuration. You may find that Git reports changes to files that you have not modified.

To ensure that all the line endings in your repository match your new configuration, back up your files with Git, then remove and restore all of the files to normalize the line endings.

- Before adding or committing any changes, verify that Git has applied the configuration correctly. For example, Git automatically determines whether files in a repository are text or binary files. To avoid corruption of binary files in your repository, we recommend that you explicitly mark files as binary in .gitattributes . For more information, see gitattributes Defining attributes per path in the Git documentation.
- 2 To avoid losing any local changes to files in the repository, add and commit any outstanding changes by running the following commands.

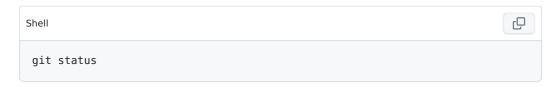
```
Shell

git add . -u
git commit -m "Saving files before refreshing line endings"
```

3 To update all files on the current branch to reflect the new configuration, run the following commands.

```
git rm -rf --cached .
git reset --hard HEAD
```

4 To display the rewritten, normalized files, run the following command.



5 Optionally, to commit any outstanding changes in your repository, run the following command.

```
Shell

git commit -m "Normalize all the line endings"
```

Further reading @

- Customizing Git Git Attributes in the Pro Git book
- git-config in the man pages for Git
- Getting Started First-Time Git Setup in the Pro Git book
- Mind the End of Your Line by Tim Clem

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