

diff Cheatsheet

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Quick reference for the diff command: compare files, output formats, filtering, and patch workflow

diff compares two files or directories line by line and shows the differences. This cheatsheet covers output formats, filtering options, directory comparison, and patch creation.

Basic Usage

Compare files and save output.

<code>diff file1 file2</code>	Compare two files (normal format)
<code>diff -u file1 file2</code>	Unified format (most common)
<code>diff -c file1 file2</code>	Context format
<code>diff -y file1 file2</code>	Side-by-side format
<code>diff file1 file2 > file.patch</code>	Save diff to a patch file

Output Symbols

What each symbol means in the diff output.

<	Line from file1 (removed) normal
>	Line from file2 (added) normal
-	Line removed unified/context
+	Line added unified/context
!	Line changed context
@@	Hunk header with line numbers unified

Directory Comparison

Compare entire directory trees.

<code>diff -r dir1 dir2</code>	Compare directories recursively
<code>diff -rq dir1 dir2</code>	Only report which files differ
<code>diff -rN dir1 dir2</code>	Treat absent files as empty
<code>diff -rNu dir1 dir2</code>	Unified recursive diff (for patches)

Filtering

Ignore specific types of differences.

<code>-i</code>	Ignore case differences
<code>-w</code>	Ignore all whitespace
<code>-b</code>	Ignore changes in whitespace amount
<code>-B</code>	Ignore blank lines
<code>--strip-trailing-cr</code>	Ignore Windows carriage returns

Common Options

<code>-u</code>	Unified format
<code>-c</code>	Context format
<code>-y</code>	Side-by-side format
<code>-U n</code>	Show n lines of context (default: 3)
<code>-C n</code>	Show n lines of context (context format)
<code>-W n</code>	Set column width for side-by-side
<code>-s</code>	Report when files are identical
<code>--color</code>	Colorize output
<code>-q</code>	Brief output (only whether files differ)

Patch Workflow

Create and apply patches with `diff` and `patch`.

<code>diff -u file1 file2 > file.patch</code>	Create a patch for a single file
<code>diff -rNu dir1 dir2 > dir.patch</code>	Create a patch for a directory
<code>patch file1 < file.patch</code>	Apply patch to file1
<code>patch -p1 < dir.patch</code>	Apply directory patch
<code>patch -R file1 < file.patch</code>	Reverse (undo) a patch