

GNU Parallel Cheat Sheet

GNU Parallel is a replacement for `xargs` and `for` loops. It can also split a file or a stream into blocks and pass those to commands running in parallel.

Examples

Compress all `*.html` files in parallel – 2 jobs per CPU thread in parallel

```
parallel --jobs 200% gzip :::: *.html
```

Convert all `*.wav` to `*.mp3` using `lame` – 1 job per CPU thread in parallel (default)

```
parallel lame {} -o {.}.mp3 :::: *.wav
```

Chop bigfile into 1MB blocks and grep for the string foobar

```
cat bigfile | parallel --pipe grep foobar
```

Input sources

```
parallel echo :::: cmd line input source
```

```
cat input_from_stdin | parallel echo
```

```
parallel echo :::: multiple input sources :::: with values
```

```
parallel -a input_from_file echo
```

```
parallel echo ::::: input_from_file
```

```
parallel echo ::::: input_from_file :::: and command line
```

Replacement string	Value if input is mydir/mysubdir/myfile.myext
{ }	mydir/mysubdir/myfile.myext
{ . }	mydir/mysubdir/myfile
{ / }, { // }, { /. }	myfile.myext, mydir/mysubdir, myfile
{ # }	The sequence number of the job
{ % }	The job slot number
{ 2 }	Value from the second input source
{ 2. } { 2 / } { 2 // } { 2 /. }	Combination of { 2 } and { . } { / } { // } { /. }
{= perl expression =}	Change <code>\$_</code> with perl expression

Control the output – keep the same order as the input, prepend with input value

```
parallel --keep-order --tag "sleep {}; echo {}" :::: 5 4 3 2 1
```

Control the execution

Run 2 jobs in parallel – command is a composed command

```
parallel --jobs 2 "sleep {}; echo {}" :::: 5 4 3 2 1
```

See what will be run

```
parallel --dryrun echo {2} {1} :::: bird flower fish :::: Red Green Blue
```

Remote execution

```
parallel -S server1 -S server2 "hostname; echo {}" :::: foo bar
```

Pipe mode

```
cat bigfile | parallel --pipe wc -l
```

Chop bigfile into one block per CPU thread and grep for foobar

```
parallel -a bigfile --pipepart --block -1 grep foobar
```

Read more – Your command line will love you for it

```
parallel --help; man parallel; man parallelTutorial; www.pi.dk/1
```

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