

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 |
| {#} | <i>The sequence number of the job</i> |
| {%} | <i>The job slot number</i> |
| {2} | <i>Value from the second input source</i> |
| {2.} {2/} {2//} {2/.} | <i>Combination of {2} and {.} {/} {//} {/.}</i> |
| {= perl expression =} | <i>Change \$_ with perl expression</i> |

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 parallel_tutorial; www.pi.dk/1
```

GNU Parallel 2018 <https://doi.org/10.5281/zenodo.1146014>