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 (default) 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 $ 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 – run “hostname; echo foo/bar” on server1 and server2
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 starting with “>” and grep for foobar
parallel --pipepart -a bigfile --block -1 --restart ">" grep foobar

Learn more – Your command line will love you for it
parallel --help; man parallel; man parallel tutorial; www.pi.dk/1