

Linux Utils Cheatsheet

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Contents

Finding files with find	4
Remove files by modification date	4
Move old files to another directory	4
Find files by permission	4
Find large files	4
Use ncd	5
Scan all files	5
Use cat	6
Show file contents	6
Show whitespace	6
Use tail	7
Use sed	8
Remove lines from output	8
Extract lines	8
Sort lines with sort	9
Using date	10
Epoch	10
Using rsync	11
Copy files instead of symlinks	11
Sync only files with a certain extension from one directory tree to another	11
Using ip	12
Show network interfaces	12
Add IP address	12
IPv6	12
Using lsof	13
Open files	13
Network connections	13
See also	13
Using ncat	14
Using lftp	15
Mirroring	15
SSL	15
Using curl	16

Using wget	17
Using convert	18
Reduce file size of a JPG image	18
Rotate image clockwise	18
Combine images into a PDF file	18
Convert SVG file to PNG with transparency	18
Using pdftjam	19
Using pdfScale	20
Using zip	21
Create password protected archive	21
Using timeout	22
Encryption with GnuPG	23
Environment variables	23
GNUPGHOME	23

Finding files with find

Remove files by modification date

This example shows how to remove all files with a modification date before 2016:

```
find -type f -not -newermt 20160101 | xargs rm
```

Move old files to another directory

This example shows how to move a large number of files to another directory:

```
find /var/www/userpics -name '*.jpg' -mtime +31 -print0 | xargs --null mv --target-directory=/backups
```

Find files by permission

Exact permission (read,write,execute for owner only):

```
find -perm 700
```

Find large files

```
$ du -sh -t 20M $(find /tmp/ -type f)
30M   /tmp/0F0dXjBgX3/0207.zip
56M   /tmp/1YZN01PD09/0703.zip
29M   /tmp/aF_jPhgvwD/0307.zip
```

Use ncd

ncdu: NCurses Disk Usage

Scan all files

```
$ ncd /
```

Use cat

Show file contents

```
$ cat /etc/os-release
PRETTY_NAME="Debian GNU/Linux 11 (bullseye)"
NAME="Debian GNU/Linux"
VERSION_ID="11"
VERSION="11 (bullseye)"
VERSION_CODENAME=bullseye
ID=debian
HOME_URL="https://www.debian.org/"
SUPPORT_URL="https://www.debian.org/support"
BUG_REPORT_URL="https://bugs.debian.org/"
```

This file should be present on any modern Linux distribution.

Show whitespace

```
$ cat -vet
```

Use tail

Show file content without the first line:

```
$ tail -n +2 test.csv
```

Use sed

Remove lines from output

Remove single line:

```
$ sed '1d' file
```

Remove range of lines:

```
$ sed '1,5d' file
```

Extract lines

Extract a single line for a file:

```
$ sed '123q;d' file
```

The q stops processing the file when the line is reached.

If you want to see a couple of lines from a CSV alongside with the header:

```
$ sed -n -e '1p' -e '809,820p' my.csv
```


Sort lines with sort

Sort by a column:

```
~# sort -k 1 myfile
```

Sort numeric:

```
~# sort -n myfile
```

Sort reverse:

```
~# sort -r myfile
```

Using date

Display date a month ago:

```
~# date -d "-1 month" +%Y-%m-%d
```

It automatically adjusts the day if the resulting date would be invalid.

Set time:

```
~# date +%T -s "12:12:00"
```

Epoch

Display epoch

```
$ date +%s  
1626247585
```

Convert epoch to a date

```
$ date -d @1626247585  
Wed 14 Jul 09:26:25 CEST 2021
```

Using rsync

Copy files instead of symlinks

```
rsync -L /etc/letsencrypt/live/wildcard.linuxia.de/*.pem root@extern.linuxia.de:/etc/letsencrypt/li
```

Sync only files with a certain extension from one directory tree to another

```
rsync -av --include="*/" --include='*.status' --exclude='*' /samba/. .
```

Using ip

Show network interfaces

```
$ ip -a
```

Add IP address

```
$ sudo ip a add 192.168.36.11/24 dev eth0
```

IPv6

Show global reachable addresses:

```
$ ip -6 addr show scope global
```

Using lsof

Open files

Show open files in a directory:

```
$ lsof /mnt/backup  
...
```

Network connections

```
$ lsof -i :80  
COMMAND  PID      USER   FD   TYPE    DEVICE  SIZE/OFF  NODE NAME  
nginx    431729   root   6u   IPv4    7170923      0t0  TCP *:http (LISTEN)  
nginx    431729   root   7u   IPv6    7170924      0t0  TCP *:http (LISTEN)  
nginx    431730   www-data 6u   IPv4    7170923      0t0  TCP *:http (LISTEN)  
nginx    431730   www-data 7u   IPv6    7170924      0t0  TCP *:http (LISTEN)
```

It works with service as well, e.g. `lsof -i:ntp`.

See also

An lsof Primer

Using ncat

Retrieve CheckMK agent output:

```
$ ncat agent.example.org 6556 < /dev/null
```

Using lftp

Mirroring

Mirror from remote FTP server to local server

```
mirror -c source target
```

Please note that doesn't mirror dot files like `.htaccess`. To include these, adjust the default listing options:

```
set ftp:list-options -a
```

SSL

In case you really need to disable SSL (**not recommended**), use the following command:

```
set ftp:ssl-allow false
```

Using curl

Display the headers:

```
$ curl --head https://example.org
```

Skip certificate check:

```
# Shortcut: -k
```

```
$ curl --insecure https://example.org
```

Connect without DNS:

```
$ curl https://example.org --connect-to example.org:93.184.216.34
```


Using wget

Display the headers:

```
$ wget --server-response https://example.org
```

Using convert

Reduce file size of a JPG image

```
$ convert photo-large.jpg -quality 82 photo-small.jpg
```

Rotate image clockwise

```
$ convert image.jpg -rotate 90 image2.jpg
```

Combine images into a PDF file

```
$ convert 20220518_1450*.jpg photos.pdf
```

Convert SVG file to PNG with transparency

```
$ convert -background none image.svg image.png
```

Using pdfjam

Produce PDF from image and convert to A4 format:

```
$ convert image.jpg image.pdf
```

```
$ pdfjam --paper a4paper --outfile image-a4.pdf image.pdf
```

Using pdfScale

Scale Ebay shipping label:

```
$ pdfScale.sh -v -r a4 --hor-align left --vert-align top -s 'eBay label 26-12806-75319_250314_124842'
```

Homepage: <https://github.com/tavinus/pdfScale>

Using zip

Create password protected archive

```
$ zip -e sccl2.zip sccl2_2.9-4_all.deb sccl2-2.9-4.noarch.rpm
Enter password:
Verify password:
  adding: sccl2_2.9-4_all.deb (deflated 0%)
  adding: sccl2-2.9-4.noarch.rpm (deflated 26%)
```

Using timeout

Run `dhclient` with a time limit:

```
$ timeout 10 dhclient -6
```

Encryption with GnuPG

Environment variables

GNUPGHOME

Select alternative home directory for GPG configuration and keys:

```
export GNUPGHOME=~/.gnupg-old/
```

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