

# Welcome to MaCEr

These pages contain a few brief notes.

.bashrc is preloaded with two helpful utilities:

- 'Opaste' for pasting output:  
echo "Hello, World!" | Opaste
- 'tempload' for temporary file uploads:  
tempload ./Hello.md5

These tools and more are included:

- ventoy
- ext4magic
- ddrescue
- testdisk
- foremost
- sleuthkit
- parted
- fsarchiver
- partclone
- wipe
- hexedit
- lynx
- warpinator
- rclone

See the following pages for more ..

# System Tools

These pages tell you more about the important programs that come with this system rescue distribution and which tools can be used for common tasks.

Please use the man command in a terminal to get more details about these programs.

## Offline Resources

The handy “Offline Resources” launcher on the desktop will allow fuzzy searches of manual and wiki pages from both the Arch and Gentoo linux distributions.

## Packages

As MaCEr is based on Manjaro pacman can be used to install additional packages with a command such as `pacman -Syu <package>`

## Storage and disk partitioning

- The tools `lsblk` and `blkid` can be run in the terminal to identify block devices
- GParted is a graphical partition editor which displays, checks, resizes, copies, moves, creates, formats, deletes, and modifies disk partitions.
- GNU Parted can also be used to manipulate partitions and it can be run from the `parted` command in the terminal.
- GNU `ddrescue` can copy data from and to block devices just like the standard `dd` program and it is optimized to deal with disks with bad blocks.
- `fsarchiver` and `partclone` allow saving and restoring the contents of file systems to/from a compressed archive file. They can be run using the terminal command line.
- `fdisk`, `gdisk` and `cfdisk` can edit MBR and GPT partition tables in the terminal.
- `sfdisk` is a tool to save and restore partition tables to/from a file.
- You can use `growpart` in order to grow a partition so it uses all the space available on the block storage. You normally need this command after you have extended the disk of a virtual machine and need to make the additional space usable.
- The `lvm` package provides all tools required to access Linux logical volumes.
- Use `qemu-img` and `qemu-nbd` to access, convert and mount disk images in common virtualization formats like `qcow2`, `vhdx` and `vmdk`.

# System Tools

## Network tools

- You can configure the network (Ethernet or wifi) very easily using the Network-Manager icon located next to the clock at the bottom of the screen.
- You can also configure the network using traditional Linux commands from a terminal. The following commands are available: nmcli, ip, dhclient.
- You can use tcpdump if you need to see network packets being transmitted.
- OpenBSD netcat allows transferring data via network connections.
- You can connect to VPNs using OpenVPN, WireGuard, and openconnect.

## File system tools

- Tools for the most common linux file systems are included and allow creation of new file systems, or administration of these (check consistency, repair, resize, ...). Such as e2fsprogs, xfsprogs, btrfs-progs, ...
- You can use ntfs-3g if you need to access NTFS file systems and dosfstools if you need to work with FAT file systems.

## Recovery tools

- testdisk is a popular disk recovery software. It recovers lost partitions and repairs unbootable systems by repairing boot sectors. It can also be used to recover deleted files from FAT, NTFS and ext4 filesystems.
- photorec is a data recovery software focused on lost files including video, photos, documents and archives.

## Secure deletion

- Wipe is available to securely delete data. Be careful as this tool is destructive.

# System Tools

## Security

- GnuPG is the most common command to perform encryption and decryption of files. It can be executed via the gpg command from a terminal.
- KeePassXC is a very good tool for securely storing your passwords in a file which is encrypted using a master password.
- The cryptsetup command is available if you need to access Linux encrypted disks.
- The chntpw command can be used to reset Windows passwords by accessing the disk where Windows is installed.

## Remote control

- You can run an OpenSSH client by using the ssh or sftp commands from a terminal.
- You can also connect from another machine to the OpenSSH server running on MaCEr via the sshd service. You will need to set a root password and update firewall rules to be able to connect.
- You can run krdc from the menu if you need to connect to another machine via VNC or NX, and rdesktop from a terminal to connect to remote Windows machines over RDP.
- You can use screen in order to connect to a serial console.

## Web Browsers and Internet

- Firefox is available via an icon in the taskbar if you need to search for additional information from internet while you are using MaCEr.
- You can also use lynx from a terminal if you prefer a text mode browser.
- Both curl and wget allow you to download files from the command line
- Filezilla is provided as an FTP client.

## File managers

- nnn is a text based file manager that you can run from the terminal.
- Dolphin is a graphical file manager provided as part of the KDE environment.

# System Tools

## Hardware information

- The `lspci` and `lsusb` commands are useful to list PCI and USB devices connected your system, and they can display the exact hardware IDs of these devices that are used to find the right drivers.
- The `lscpu` command displays information about the CPU.
- `hwinfo` and `inxi` can be run from the terminal and display detailed reports.

## Hardware testing

- You can run Memtest86+ from the boot menu, both in BIOS/Legacy and UEFI mode.

## Boot loader and UEFI

- The Grub bootloader programs can be used if you need to repair the boot loader of your Linux distribution.
- You will need `efibootmgr` if you want to change the definitions or the order of the UEFI boot entries on your computer.

## Archival and file transfer

- The `tar` command is often used to create and extract unix file archives from the command line.
- The system comes with all the common compression programs such as `gzip`, `xz`, `zstd`, `lz4`, `bzip2`, `pigz`, `lzop`.
- You can also use the `zip` and `unzip` commands for manipulate ZIP archives
- Also `p7zip` is available using the `7z` command in the terminal if you need to work with 7zip files.
- The `rsync` utility is very powerful for copying files either locally or remotely over an SSH connection. You can also use `grsync` if you prefer a graphical interface.
- `rclone` allows to transfer and sync files to or from a wide variety of network and cloud storage systems, including S3, Ceph and WebDAV.

# System Tools

## Text editors

- You can use graphical text editors such as kate.
- You can use text editors such as vim, nano and micro from the terminal.
- If you need an hexadecimal editor then you can use hexedit from the terminal.

## CD/DVD utilities

- You can use CD/DVD command line utilities such as cdrecord and mkisofs if you need to work with ISO images and need to burn CD/DVD medias from the system.
- udftools is available to manipulate UDF filesystems.

## Scripting languages

- You can use bash for running scripts as well as Perl, Python and Ruby dynamic languages which are all available.

## Miscellaneous

- flashrom is an utility for reading, writing, erasing and verifying flash ROM chips.
- nvme is a tool for manipulating NVM-Express disks.