

NAME

virt-format – Erase and make a blank disk

SYNOPSIS

```
virt-format [--options] -a disk.img [-a disk.img ...]
```

WARNING

Using `virt-format` on live virtual machines, or concurrently with other disk editing tools, can be dangerous, potentially causing disk corruption. The virtual machine must be shut down before you use this command, and disk images must not be edited concurrently.

DESCRIPTION

Virt-format takes an existing disk file (or it can be a host partition, LV etc), **erases all data on it**, and formats it as a blank disk. It can optionally create partition tables, empty filesystems, logical volumes and more.

To create a disk containing data, you may be better to use **virt-make-fs**(1). If you are creating a blank disk to use in **guestfish**(1), you should instead use the `guestfish -N` option.

Normal usage would be something like this:

```
virt-format -a disk.qcow
```

or this:

```
virt-format -a /dev/VG/LV
```

`disk.qcow` or `/dev/VG/LV` must exist already. **Any data on these disks will be erased by these commands.** These commands will create a single empty partition covering the whole disk, with no filesystem inside it.

Additional parameters can be used to control the creation of partitions, filesystems, etc. The most commonly used options are:

--filesystem=[ext3|ntfs|vfat|...]

Create an empty filesystem (`ext3`, `ntfs` etc) inside the partition.

--lvm[=/dev/VG/LV]

Create a Linux LVM2 logical volume on the disk. When used with `--filesystem`, the filesystem is created inside the LV.

For more information about these and other options, see “OPTIONS” below.

The format of the disk is normally auto-detected, but you can also force it by using the `--format` option (q.v.). In situations where you do not trust the existing content of the disk, then it is advisable to use this option to avoid possible exploits.

OPTIONS

--help

Display brief help.

-a file

--add file

Add *file*, a disk image, host partition, LV, external USB disk, etc.

The format of the disk image is auto-detected. To override this and force a particular format use the `--format=.` option.

Any existing data on the disk is erased.

-a URI

--add URI

Add a remote disk. See “ADDING REMOTE STORAGE” in **guestfish**(1).

--blocksize=512

--blocksize=4096

--blocksize

This parameter sets the sector size of the disk image. It affects all explicitly added subsequent disks after this parameter. Using `--blocksize` with no argument switches the disk sector size to the default value which is usually 512 bytes. See also “`guestfs_add_drive_opts`” in **guestfs(3)**.

--filesystem=ext3|ntfs|vfat|...

Create an empty filesystem of the specified type. Many filesystem types are supported by libguestfs.

--filesystem=none

Create no filesystem. This is the default.

--format=raw|qcow2|..

--format

The default for the `-a` option is to auto-detect the format of the disk image. Using this forces the disk format for `-a` options which follow on the command line. Using `--format` with no argument switches back to auto-detection for subsequent `-a` options.

For example:

```
virt-format --format=raw -a disk.img
```

forces raw format (no auto-detection) for *disk.img*.

```
virt-format --format=raw -a disk.img --format -a another.img
```

forces raw format (no auto-detection) for *disk.img* and reverts to auto-detection for *another.img*.

If you have untrusted raw-format guest disk images, you should use this option to specify the disk format. This avoids a possible security problem with malicious guests (CVE-2010-3851).

--label=LABEL

Set the filesystem label.

--lvm=/dev/VG/LV

Create a Linux LVM2 logical volume called `/dev/VG/LV`. You can change the name of the volume group and logical volume.

--lvm

Create a Linux LVM2 logical volume with the default name (`/dev/VG/LV`).

--lvm=none

Create no logical volume. This is the default.

--partition

Create either an MBR or GPT partition covering the whole disk. MBR is chosen if the disk size is < 2 TB, GPT if ≥ 2 TB.

This is the default.

--partition=gpt

Create a GPT partition.

--partition=mbr

Create an MBR partition.

--partition=none

Create no partition table. Note that Windows may not be able to see these disks.

-v

--verbose

Enable verbose messages for debugging.

-V

--version

Display version number and exit.

--wipe

Normally virt-format does not wipe data from the disk (because that takes a long time). Thus if there is data on the disk, it is only hidden and partially overwritten by virt-format, and it might be recovered by disk editing tools.

If you use this option, virt-format writes zeroes over the whole disk so that previous data is not recoverable.

-x Enable tracing of libguestfs API calls.

EXIT STATUS

This program returns 0 on success, or 1 on failure.

SEE ALSO

guestfs(3), **guestfish**(1), **virt-filesystems**(1), **virt-make-fs**(1), **virt-rescue**(1), **virt-resize**(1), <http://libguestfs.org/>.

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BUGS

To get a list of bugs against libguestfs, use this link:
<https://bugzilla.redhat.com/buglist.cgi?component=libguestfs&product=Virtualization+Tools>

To report a new bug against libguestfs, use this link:
https://bugzilla.redhat.com/enter_bug.cgi?component=libguestfs&product=Virtualization+Tools

When reporting a bug, please supply:

- The version of libguestfs.
- Where you got libguestfs (eg. which Linux distro, compiled from source, etc)
- Describe the bug accurately and give a way to reproduce it.
- Run **libguestfs-test-tool**(1) and paste the **complete, unedited** output into the bug report.