

**NAME**

lvreduce – Reduce the size of a logical volume

**SYNOPSIS**

```
lvreduce option_args position_args
[ option_args ]
```

**DESCRIPTION**

lvreduce reduces the size of an LV. The freed logical extents are returned to the VG to be used by other LVs. A copy-on-write snapshot LV can also be reduced if less space is needed to hold COW blocks. Use **lvconvert**(8) to change the number of data images in a RAID or mirrored LV.

Be careful when reducing an LV's size, because data in the reduced area is lost. Ensure that any file system on the LV is resized **before** running lvreduce so that the removed extents are not in use by the file system.

Sizes will be rounded if necessary. For example, the LV size must be an exact number of extents, and the size of a striped segment must be a multiple of the number of stripes.

In the usage section below, **—size** *Size* can be replaced with **—extents** *Number*. See both descriptions the options section.

**USAGE**

```
lvreduce -L|--size [-]Size[m|UNIT] LV
[ -l|--extents [-]Number[PERCENT] ]
[ -A|--autobackup y|n ]
[ -f|--force ]
[ -n|--nofsck ]
[ -r|--resizefs ]
[ --noudevsync ]
[ --reportformat basic|json ]
[ COMMON_OPTIONS ]
```

Common options for lvm:

```
[ -d|--debug ]
[ -h|--help ]
[ -q|--quiet ]
[ -t|--test ]
[ -v|--verbose ]
[ -y|--yes ]
[ --commandprofile String ]
[ --config String ]
[ --driverloaded y|n ]
[ --lockopt String ]
[ --longhelp ]
[ --nolocking ]
[ --profile String ]
[ --version ]
```

**OPTIONS**

**-A|--autobackup y|n**

Specifies if metadata should be backed up automatically after a change. Enabling this is strongly advised! See **vgcfgbackup**(8) for more information.

**—commandprofile** *String*

The command profile to use for command configuration. See **lvm.conf**(5) for more information about profiles.

- config** *String*  
Config settings for the command. These override `lvm.conf` settings. The *String* arg uses the same format as `lvm.conf`, or may use section/field syntax. See **lvm.conf**(5) for more information about config.
- d|--debug** ...  
Set debug level. Repeat from 1 to 6 times to increase the detail of messages sent to the log file and/or syslog (if configured).
- driverloaded** *y|n*  
If set to no, the command will not attempt to use device-mapper. For testing and debugging.
- l|--extents** [*-*]*Number*[PERCENT]  
Specifies the new size of the LV in logical extents. The **—size** and **—extents** options are alternate methods of specifying size. The total number of physical extents used will be greater when redundant data is needed for RAID levels. An alternate syntax allows the size to be determined indirectly as a percentage of the size of a related VG, LV, or set of PVs. The suffix **%VG** denotes the total size of the VG, the suffix **%FREE** the remaining free space in the VG, and the suffix **%PVS** the free space in the specified PVs. For a snapshot, the size can be expressed as a percentage of the total size of the origin LV with the suffix **%ORIGIN** (**100%ORIGIN** provides space for the whole origin). When expressed as a percentage, the size defines an upper limit for the number of logical extents in the new LV. The precise number of logical extents in the new LV is not determined until the command has completed. When the plus + or minus – prefix is used, the value is not an absolute size, but is relative and added or subtracted from the current size.
- f|--force** ...  
Override various checks, confirmations and protections. Use with extreme caution.
- h|--help**  
Display help text.
- lockopt** *String*  
Used to pass options for special cases to `lvmlockd`. See **lvmlockd**(8) for more information.
- longhelp**  
Display long help text.
- n|--nofsck**  
Do not perform fsck before resizing filesystem when filesystem requires it. You may need to use **—force** to proceed with this option.
- nolocking**  
Disable locking.
- noudevsync**  
Disables udev synchronisation. The process will not wait for notification from udev. It will continue irrespective of any possible udev processing in the background. Only use this if udev is not running or has rules that ignore the devices LVM creates.
- profile** *String*  
An alias for **—commandprofile** or **—metadataprofile**, depending on the command.
- q|--quiet** ...  
Suppress output and log messages. Overrides **—debug** and **—verbose**. Repeat once to also suppress any prompts with answer 'no'.
- reportformat** **basic|json**  
Overrides current output format for reports which is defined globally by the `report/output_format` setting in `lvm.conf`. **basic** is the original format with columns and rows. If there is more than one report per command, each report is prefixed with the report name for identification. **json** produces report output in JSON format. See **lvmreport**(7) for more information.

**-r|--resizefs**

Resize underlying filesystem together with the LV using `fsadm(8)`.

**-L|--size [-]Size[m|UNIT]**

Specifies the new size of the LV. The `--size` and `--extents` options are alternate methods of specifying size. The total number of physical extents used will be greater when redundant data is needed for RAID levels. When the plus+ or minus - prefix is used, the value is not an absolute size, but is relative and added or subtracted from the current size.

**-t|--test**

Run in test mode. Commands will not update metadata. This is implemented by disabling all metadata writing but nevertheless returning success to the calling function. This may lead to unusual error messages in multi-stage operations if a tool relies on reading back metadata it believes has changed but hasn't.

**-v|--verbose ...**

Set verbose level. Repeat from 1 to 4 times to increase the detail of messages sent to stdout and stderr.

**--version**

Display version information.

**-y|--yes**

Do not prompt for confirmation interactively but always assume the answer yes. Use with extreme caution. (For automatic no, see `--qq`.)

**VARIABLES***LV*

Logical Volume name. See `lvm(8)` for valid names. An LV positional arg generally includes the VG name and LV name, e.g. VG/LV.

*String*

See the option description for information about the string content.

*Size[UNIT]*

Size is an input number that accepts an optional unit. Input units are always treated as base two values, regardless of capitalization, e.g. 'k' and 'K' both refer to 1024. The default input unit is specified by letter, followed by |UNIT. UNIT represents other possible input units: **bBsSkKmMgGtTpPeE**. b|B is bytes, s|S is sectors of 512 bytes, k|K is KiB, m|M is MiB, g|G is GiB, t|T is TiB, p|P is PiB, e|E is EiB. (This should not be confused with the output control `--units`, where capital letters mean multiple of 1000.)

**ENVIRONMENT VARIABLES**

See `lvm(8)` for information about environment variables used by lvm. For example, `LVM_VG_NAME` can generally be substituted for a required VG parameter.

**EXAMPLES**

Reduce the size of an LV by 3 logical extents:

```
lvreduce -l -3 vg00/lvol1
```

**SEE ALSO**

`lvm(8)` `lvm.conf(5)` `lvmconfig(8)`

`pvchange(8)` `pvck(8)` `pvcreate(8)` `pvdisplay(8)` `pvmove(8)` `pvremove(8)` `pvresize(8)` `pvs(8)` `pvscan(8)`

`vgcfgbackup(8)` `vgcfgrestore(8)` `vgchange(8)` `vgck(8)` `vgcreate(8)` `vgconvert(8)` `vgdisplay(8)` `vgexport(8)` `vgextend(8)` `vgimport(8)` `vgimportclone(8)` `vgmerge(8)` `vgmknodes(8)` `vgreduce(8)` `vgremove(8)` `vgrename(8)` `vgs(8)` `vgscan(8)` `vgsplit(8)`

`lvcreate(8)` `lvchange(8)` `lvconvert(8)` `lvdisplay(8)` `lvextend(8)` `lvreduce(8)` `lvremove(8)` `lvrename(8)` `lvresize(8)` `lvs(8)` `lvscan(8)`

**lvm-fullreport(8) lvm-lvpoll(8) lvm2-activation-generator(8) blkdeactivate(8) lvmdump(8)**

**dmeventd(8) lvmpolld(8) lvmlockd(8) lvmlockctl(8) cmirrord(8) lvmdbusd(8)**

**lvmsystemid(7) lvmreport(7) lvmraid(7) lvmthin(7) lvmcache(7)**