



Rocky Enterprise Linux 9.2 Manual Pages on command 'lvresize.8'

\$ man lvresize.8

LVRESIZE(8) System Manager's Manual LVRESIZE(8)

NAME

lvresize ? Resize a logical volume

SYNOPSIS

lvresize option_args position_args

[option_args]

[position_args]

--alloc contiguous|cling|cling_by_tags|normal|anywhere|inherit

-A|--autobackup y|n

--commandprofile String

--config String

-d|--debug

--devices PV

--devicesfile String

--driverloaded y|n

-l|--extents [+|-]Number[PERCENT]

-f|--force

--fs String

--fsmode String
 -h|--help
 --journal String
 --lockopt String
 --longhelp
 -n|--nofsck
 --nohints
 --nolocking
 --nosync
 --noudevsync
 --poolmetadatasize [+]*Size*[*m*|UNIT]
 --profile String
 -q|--quiet
 --reportformat basic|json|json_std
 -r|--resizefs
 -L|--size [+]*Size*[*m*|UNIT]
 -i|--stripes *Number*
 -l|--stripesize *Size*[*k*|UNIT]
 -t|--test
 --type linear|striped|snapshot|raid|mirror|thin|thin-pool|vdo|
 vdo-pool|cache|cache-pool|writecache
 -v|--verbose
 --version
 -y|--yes

DESCRIPTION

lvresize resizes an LV in the same way as lvextend and lvreduce. See lvextend(8) and lvreduce(8) for more information.

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

USAGE

Resize an LV by a specified size.

lvresize -L|--size [+]*Size*[*m*|UNIT] *LV*

[-l|--extents [+]*Number*[PERCENT]]

[-r|--resizefs]
[--poolmetadatasize [+]*Size*[*m*|UNIT]]
[--fs String]
[--fsmode String]
[COMMON_OPTIONS]
[PV ...]

?

Resize an LV by specified PV extents.

lvresize LV PV ...

[-r|--resizefs]
[--fs String]
[--fsmode String]
[COMMON_OPTIONS]

?

Resize a pool metadata SubLV by a specified size.

lvresize --poolmetadatasize [+]*Size*[*m*|UNIT] LV1

[COMMON_OPTIONS]
[PV ...]

LV1 types: thinpool

?

Common options for command:

[-A|--autobackup *y*|*n*]
[-f|--force]
[-n|--nofsck]
[-i|--stripes *Number*]
[-l|--stripesize *Size*[*k*|UNIT]]
[--alloc contiguous|cling|cling_by_tags|normal|anywhere|inherit
]
[--nosync]
[--noudevsync]
[--reportformat basic|json|json_std]
[--type linear|striped|snapshot|raid|mirror|thin|thin-pool|vdo|
vdo-pool|cache|cache-pool|writecache]

Common options for lvm:

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

OPTIONS

--alloc contiguous|cling|cling_by_tags|normal|anywhere|inherit

Determines the allocation policy when a command needs to allocate Physical Extents (PEs) from the VG. Each VG and LV has an allocation policy which can be changed with `vgchange/lvchange`, or overridden on the command line. `normal` applies common sense rules such as not placing parallel stripes on the same PV. `inherit` applies the VG policy to an LV. `contiguous` requires new PEs be placed adjacent to existing PEs. `cling` places new PEs on the same PV as existing PEs in the same stripe of the LV. If there are sufficient PEs for an allocation, but `normal` does not use them, `anywhere` will use them even if it reduces performance, e.g. by placing two stripes on the same PV. Optional positional PV args on the command line can also be used to limit which PVs

the command will use for allocation. See `lvm(8)` for more information about allocation.

`-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(5)` settings. The String arg uses the same format as `lvm.conf(5)`, 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).

`--devices PV`

Restricts the devices that are visible and accessible to the command. Devices not listed will appear to be missing. This option can be repeated, or accepts a comma separated list of devices. This overrides the devices file.

`--devicesfile String`

A file listing devices that LVM should use. The file must exist in `/etc/lvm/devices/` and is managed with the `lvmdisks(8)` command. This overrides the `lvm.conf(5)` `devices/devicesfile` and `devices/use_devicesfile` settings.

`--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.

`--fs String`

Control file system resizing when resizing an LV. `checksize:` Check the fs size and reduce the LV if the fs is not using the reduced space (fs reduce is not needed.) If the reduced space is used by the fs, then do not resize the fs or LV, and return an error. (`checksize` only applies when reducing, and does nothing for extend.) `resize:` Resize the fs by calling the fs-specific `resize` command. This may also include mounting, unmounting, or running `fsck`. See `--fsmode` to control mounting behavior, and `--nofsck` to disable `fsck`. `resize_fsadm:` Use the old method of calling `fsadm` to handle the fs (deprecated.) Warning: this operation does not prevent `lvreduce` from destroying file systems that are unmounted (or mounted if prompts are skipped.) `ignore:` Resize the LV without checking for or handling a file system.

Warning: using `ignore` when reducing the LV size may destroy the

file system.

`--fsmode String`

Control file system mounting behavior for `fs` `resize`. `manage`: Mount or unmount the `fs` as needed to resize the `fs`, and attempt to restore the original mount state at the end. `nochange`: Do not mount or unmount the `fs`. If mounting or unmounting is required to resize the `fs`, then do not resize the `fs` or the `LV` and fail the command. `offline`: Unmount the `fs` if it is mounted, and resize the `fs` while it is unmounted. If mounting is required to resize the `fs`, then do not resize the `fs` or the `LV` and fail the command.

`-h|--help`

Display help text.

`--journal String`

Record information in the `systemd` journal. This information is in addition to information enabled by the `lvm.conf log/journal` setting. `command`: record information about the command. `output`: record the default command output. `debug`: record full command debugging.

`--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` when resizing the file system with `--resizefs`.

`--nohints`

Do not use the hints file to locate devices for `PVs`. A command may read more devices to find `PVs` when hints are not used. The command will still perform standard hint file invalidation where appropriate.

`--nolocking`

Disable locking. Use with caution, concurrent commands may produce incorrect results.

`--nosync`

Causes the creation of mirror, raid1, raid4, raid5 and raid10 to skip the initial synchronization. In case of mirror, raid1 and raid10, any data written afterwards will be mirrored, but the original contents will not be copied. In case of raid4 and raid5, no parity blocks will be written, though any data written afterwards will cause parity blocks to be stored. This is useful for skipping a potentially long and resource intensive initial sync of an empty mirror/raid1/raid4/raid5 and raid10 LV. This option is not valid for raid6, because raid6 relies on proper parity (P and Q Syndromes) being created during initial synchronization in order to reconstruct proper user data in case of device failures. raid0 and raid0_meta do not provide any data copies or parity support and thus do not support initial synchronization.

`--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.

`--poolmetadatasize [+]Size[m|UNIT]`

Specifies the new size of the pool metadata LV. The plus prefix + can be used, in which case the value is added to the current size.

`--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|json_std`

Overrides current output format for reports which is defined globally by the `report/output_format` setting in `lvm.conf(5)`. `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. `json_std` produces report output in JSON format which is more compliant with JSON standard. See `lvmreport(7)` for more information.

`-r|--resizefs`

Resize the fs using the fs-specific resize command. May include mounting, unmounting, or running `fsck`. See `--fsmode` to control mounting behavior, and `--nofsck` to disable `fsck`. See `--fs` for more options (`--resizefs` is equivalent to `--fs resize`.)

`-L|--size [+|-]Size[m|UNIT]`

Specifies the new size of the LV. The `--size` and `--extents op?` tions 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.

`-i|--stripes Number`

Specifies the number of stripes in a striped LV. This is the number of PVs (devices) that a striped LV is spread across. Data that appears sequential in the LV is spread across multiple devices in units of the stripe size (see `--stripesize`). This does not change existing allocated space, but only applies to space being allocated by the command. When creating a RAID 4/5/6 LV, this number does not include the extra devices that are required for parity. The largest number depends on the RAID type (`raid0`: 64, `raid10`: 32, `raid4/5`: 63, `raid6`: 62), and when unspecified, the default depends on the RAID type (`raid0`: 2, `raid10`: 2, `raid4/5`: 3, `raid6`: 5.) To stripe a new raid LV across all PVs

by default, see `lvm.conf(5)` `allocation/raid_stripe_all_devices`.

`-l|--stripesize Size[k|UNIT]`

The amount of data that is written to one device before moving to the next in a striped LV.

`-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.

`--type linear|striped|snapshot|raid|mirror|thin|thin-pool|vdo|vdo-pool|cache|cache-pool|writecache`

The LV type, also known as "segment type" or "segtype". See usage descriptions for the specific ways to use these types. For more information about redundancy and performance (`raid<N>`, `mirror`, `striped`, `linear`) see `lvraid(7)`. For thin provisioning (`thin`, `thin-pool`) see `lvthin(7)`. For performance caching (`cache`, `cache-pool`) see `lvmcache(7)`. For copy-on-write snapshots (`snapshot`) see usage definitions. For VDO (`vdo`) see `lvmdo(7)`. Several commands omit an explicit type option because the type is inferred from other options or shortcuts (e.g. `--stripes`, `--mirrors`, `--snapshot`, `--virtualsize`, `--thin`, `--cache`, `--vdo`). Use inferred types with care because it can lead to unexpected results.

`-v|--verbose ...`

Set verbose level. Repeat from 1 to 4 times to increase the default tail 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 `lvmdiskd(8)` for valid names. An LV positional arg generally includes the VG name and LV name, e.g. `VG/LV`. `LV1` indicates the LV must have a specific type, where the accepted LV types are listed. (`raid` represents `raid<N>` type).

PV Physical Volume name, a device path under `/dev`. For commands managing physical extents, a PV positional arg generally accepts a suffix indicating a range (or multiple ranges) of physical extents (PEs). When the first PE is omitted, it defaults to the start of the device, and when the last PE is omitted it defaults to end. Start and end range (inclusive): `PV[:PE-PE]...` Start and length range (counting from 0): `PV[:PE+PE]...`

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: 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 `lvmdiskd(8)` for information about environment variables used by `lvmdiskd`.

For example, `LVM_VG_NAME` can generally be substituted for a required VG parameter.

EXAMPLES

Extend an LV by 16MB using specific physical extents.

```
lvresize -L+16M vg1/lv1 /dev/sda:0-1 /dev/sdb:0-1
```

Resize an LV to use 50% of the size volume group.

lvresize -l50%VG vg1/lv1

SEE ALSO

lvm(8), lvm.conf(5), lvmconfig(8), lvmdevices(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), vgimportdevices(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), blkdeactivate(8), lvmdump(8),
dmeventd(8), lvmpolld(8), lvmlockd(8), lvmlockctl(8), cmirrord(8),
lvmdbusd(8), fsadm(8),
lvmsystemid(7), lvmreport(7), lvmraid(7), lvmthin(7), lvmcache(7)

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