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## *Red Hat Enterprise Linux Release 9.2 Manual Pages on 'vgchange.8' command*

***$ man vgchange.8***

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

NAME

vgchange ? Change volume group attributes

SYNOPSIS

vgchange option_args position_args

[ option_args ]

[ position_args ]

-a|--activate y|n|ay

--activationmode partial|degraded|complete

--addtag Tag

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

--autoactivation String

-A|--autobackup y|n

--commandprofile String

--config String

-d|--debug

--deltag Tag

--detachprofile

--devices PV

--devicesfile String

--driverloaded y|n

-f|--force

-h|--help

-K|--ignoreactivationskip

--ignorelockingfailure

--ignoremonitoring

--journal String

--lockopt String

--lockstart

--lockstop

--locktype sanlock|dlm|none

-l|--logicalvolume Number

--longhelp

-p|--maxphysicalvolumes Number

--metadataprofile String

--monitor y|n

--nohints

--nolocking

--noudevsync

-P|--partial

-s|--physicalextentsize Size[m|UNIT]

--poll y|n

--profile String

--pvmetadatacopies 0|1|2

-q|--quiet

--readonly

--refresh

--reportformat basic|json|json_std

-x|--resizeable y|n

-S|--select String

--setautoactivation y|n

--sysinit

--systemid String

-t|--test

-u|--uuid

-v|--verbose

--version

--[vg]metadatacopies all|unmanaged|Number

-y|--yes

DESCRIPTION

vgchange changes VG attributes, changes LV activation in the kernel, and includes other utilities for VG maintenance.

USAGE

Change a general VG attribute.

For options listed in parentheses, any one is required, after which the others are optional.

vgchange

( -l|--logicalvolume Number

-p|--maxphysicalvolumes Number

-u|--uuid

-s|--physicalextentsize Size[m|UNIT]

-x|--resizeable y|n

--addtag Tag

--deltag Tag

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

--pvmetadatacopies 0|1|2

--[vg]metadatacopies all|unmanaged|Number

--profile String

--detachprofile

--metadataprofile String

--setautoactivation y|n )

[ -A|--autobackup y|n ]

[ -S|--select String ]

[ -f|--force ]

[ --poll y|n ]

[ --ignoremonitoring ]

[ --noudevsync ]

[ --reportformat basic|json|json_std ]

[ COMMON_OPTIONS ]

[ VG|Tag|Select ... ]

?

Start or stop monitoring LVs from dmeventd.

vgchange --monitor y|n

[ -A|--autobackup y|n ]

[ -S|--select String ]

[ -f|--force ]

[ --sysinit ]

[ --ignorelockingfailure ]

[ --poll y|n ]

[ --ignoremonitoring ]

[ --noudevsync ]

[ --reportformat basic|json|json_std ]

[ COMMON_OPTIONS ]

[ VG|Tag|Select ... ]

?

Start or stop processing LV conversions.

vgchange --poll y|n

[ -A|--autobackup y|n ]

[ -S|--select String ]

[ -f|--force ]

[ --ignorelockingfailure ]

[ --ignoremonitoring ]

[ --noudevsync ]

[ --reportformat basic|json|json_std ]

[ COMMON_OPTIONS ]

[ VG|Tag|Select ... ]

?

Activate or deactivate LVs.

vgchange -a|--activate y|n|ay

[ -K|--ignoreactivationskip ]

[ -P|--partial ]

[ -A|--autobackup y|n ]

[ -S|--select String ]

[ -f|--force ]

[ --activationmode partial|degraded|complete ]

[ --sysinit ]

[ --readonly ]

[ --ignorelockingfailure ]

[ --monitor y|n ]

[ --poll y|n ]

[ --autoactivation String ]

[ --ignoremonitoring ]

[ --noudevsync ]

[ --reportformat basic|json|json_std ]

[ COMMON_OPTIONS ]

[ VG|Tag|Select ... ]

?

Reactivate LVs using the latest metadata.

vgchange --refresh

[ -A|--autobackup y|n ]

[ -S|--select String ]

[ -f|--force ]

[ --sysinit ]

[ --ignorelockingfailure ]

[ --poll y|n ]

[ --ignoremonitoring ]

[ --noudevsync ]

[ --reportformat basic|json|json_std ]

[ COMMON_OPTIONS ]

[ VG|Tag|Select ... ]

?

Change the system ID of a VG.

vgchange --systemid String VG|Tag|Select

[ -S|--select String ]

[ COMMON_OPTIONS ]

?

Start the lockspace of a shared VG in lvmlockd.

vgchange --lockstart

[ -S|--select String ]

[ COMMON_OPTIONS ]

[ VG|Tag|Select ... ]

?

Stop the lockspace of a shared VG in lvmlockd.

vgchange --lockstop

[ -S|--select String ]

[ COMMON_OPTIONS ]

[ VG|Tag|Select ... ]

?

Change the lock type for a shared VG.

vgchange --locktype sanlock|dlm|none VG

[ COMMON_OPTIONS ]

?

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

-a|--activate y|n|ay

Change the active state of LVs. An active LV can be used through a block device, allowing data on the LV to be accessed. y makes LVs active, or available. n makes LVs inactive, or un? available. The block device for the LV is added or removed from the system using device-mapper in the kernel. A symbolic link /dev/VGName/LVName pointing to the device node is also added/re? moved. All software and scripts should access the device through the symbolic link and present this as the name of the device. The location and name of the underlying device node may depend on the distribution, configuration (e.g. udev), or re? lease version. ay specifies autoactivation, which is used by system-generated activation commands. By default, LVs are au? toactivated. An autoactivation property can be set on a VG or LV to disable autoactivation, see --setautoactivation y|n in vgchange, lvchange, vgcreate, and lvcreate. Display the proper? ty with vgs or lvs "-o autoactivation". The lvm.conf(5) au? to_activation_volume_list includes names of VGs or LVs that should be autoactivated, and anything not listed is not autoac? tivated. When auto_activation_volume_list is undefined (the de? fault), it has no effect. If auto_activation_volume_list is de? fined and empty, no LVs are autoactivated. Items included by auto_activation_volume_list will not be autoactivated if the au? toactivation property has been disabled. See lvmlockd(8) for more information about activation options ey and sy for shared VGs.

--activationmode partial|degraded|complete

Determines if LV activation is allowed when PVs are missing, e.g. because of a device failure. complete only allows LVs with

no missing PVs to be activated, and is the most restrictive mode. degraded allows RAID LVs with missing PVs to be activat? ed. (This does not include the "mirror" type, see "raid1" in? stead.) partial allows any LV with missing PVs to be activated, and should only be used for recovery or repair. For default, see lvm.conf(5) activation_mode. See lvmraid(7) for more infor? mation.

--addtag Tag

Adds a tag to a PV, VG or LV. This option can be repeated to add multiple tags at once. See lvm(8) for information about tags.

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

Determines the allocation policy when a command needs to allo? cate 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. in? herit 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 infor? mation about allocation.

--autoactivation String

Specify if autoactivation is being used from an event. This al? lows the command to apply settings that are specific to event activation, such as device scanning optimizations using pvs_on? line files created by event-based pvscans.

-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) set? tings. The String arg uses the same format as lvm.conf(5), or may use section/field syntax. See lvm.conf(5) for more informa? tion 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).

--deltag Tag

Deletes a tag from a PV, VG or LV. This option can be repeated to delete multiple tags at once. See lvm(8) for information about tags.

--detachprofile

Detaches a metadata profile from a VG or LV. See lvm.conf(5) for more information about profiles.

--devices PV

Restricts the devices that are visible and accessible to the command. Devices not listed will appear to be missing. This op? tion can be repeated, or accepts a comma separated list of de? vices. 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 lvmdevices(8) com? mand. 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.

-f|--force ...

Override various checks, confirmations and protections. Use with extreme caution.

-h|--help

Display help text.

-K|--ignoreactivationskip

Ignore the "activation skip" LV flag during activation to allow LVs with the flag set to be activated.

--ignorelockingfailure

Allows a command to continue with read-only metadata operations after locking failures.

--ignoremonitoring

Do not interact with dmeventd unless --monitor is specified. Do not use this if dmeventd is already monitoring a device.

--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. out? put: record the default command output. debug: record full com? mand debugging.

--lockopt String

Used to pass options for special cases to lvmlockd. See lvm? lockd(8) for more information.

--lockstart

Start the lockspace of a shared VG in lvmlockd. lvmlockd locks becomes available for the VG, allowing LVM to use the VG. See lvmlockd(8) for more information.

--lockstop

Stop the lockspace of a shared VG in lvmlockd. lvmlockd locks become unavailable for the VG, preventing LVM from using the VG. See lvmlockd(8) for more information.

--locktype sanlock|dlm|none

Change the VG lock type to or from a shared lock type used with lvmlockd. See lvmlockd(8) for more information.

-l|--logicalvolume Number

Sets the maximum number of LVs allowed in a VG.

--longhelp

Display long help text.

-p|--maxphysicalvolumes Number

Sets the maximum number of PVs that can belong to the VG. The value 0 removes any limitation. For large numbers of PVs, also see options --pvmetadatacopies, and --vgmetadatacopies for im? proving performance.

--metadataprofile String

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

--monitor y|n

Start (yes) or stop (no) monitoring an LV with dmeventd. dmeventd monitors kernel events for an LV, and performs automat? ed maintenance for the LV in reponse to specific events. See dmeventd(8) for more information.

--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 pro? duce incorrect results.

--noudevsync

Disables udev synchronisation. The process will not wait for no? tification from udev. It will continue irrespective of any pos? sible udev processing in the background. Only use this if udev is not running or has rules that ignore the devices LVM creates.

-P|--partial

Commands will do their best to activate LVs with missing PV ex? tents. Missing extents may be replaced with error or zero seg?

ments according to the missing_stripe_filler setting. Metadata may not be changed with this option.

-s|--physicalextentsize Size[m|UNIT]

Sets the physical extent size of PVs in the VG. The value must be either a power of 2 of at least 1 sector (where the sector size is the largest sector size of the PVs currently used in the VG), or at least 128 KiB. Once this value has been set, it is difficult to change without recreating the VG, unless no extents need moving. Before increasing the physical extent size, you might need to use lvresize, pvresize and/or pvmove so that ev? erything fits. For example, every contiguous range of extents used in a LV must start and end on an extent boundary.

--poll y|n

When yes, start the background transformation of an LV. An in? complete transformation, e.g. pvmove or lvconvert interrupted by reboot or crash, can be restarted from the last checkpoint with --poll y. When no, background transformation of an LV will not occur, and the transformation will not complete. It may not be appropriate to immediately poll an LV after activation, in which case --poll n can be used to defer polling until a later --poll y command.

--profile String

An alias for --commandprofile or --metadataprofile, depending on the command.

--pvmetadatacopies 0|1|2

The number of metadata areas to set aside on a PV for storing VG metadata. When 2, one copy of the VG metadata is stored at the front of the PV and a second copy is stored at the end. When 1, one copy of the VG metadata is stored at the front of the PV. When 0, no copies of the VG metadata are stored on the given PV. This may be useful in VGs containing many PVs (this places limi? tations on the ability to use vgsplit later.)

-q|--quiet ...

Suppress output and log messages. Overrides --debug and --ver?
bose. Repeat once to also suppress any prompts with answer
'no'.

--readonly

Run the command in a special read-only mode which will read on-
disk metadata without needing to take any locks. This can be
used to peek inside metadata used by a virtual machine image
while the virtual machine is running. No attempt will be made to
communicate with the device-mapper kernel driver, so this option
is unable to report whether or not LVs are actually in use.

--refresh

If the LV is active, reload its metadata. This is not necessary
in normal operation, but may be useful if something has gone
wrong, or if some form of manual LV sharing is being used.

--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.

-x|--resizeable y|n

Enables or disables the addition or removal of PVs to/from a VG
(by vgextend/vgreduce).

-S|--select String

Select objects for processing and reporting based on specified
criteria. The criteria syntax is described by --select help and
lvmreport(7). For reporting commands, one row is displayed for
each object matching the criteria. See --options help for se?
lectable object fields. Rows can be displayed with an addition?
al "selected" field (-o selected) showing 1 if the row matches

the selection and 0 otherwise. For non-reporting commands which process LVM entities, the selection is used to choose items to process.

--setautoactivation y|n

Set the autoactivation property on a VG or LV. Display the property with vgs or lvs "-o autoactivation". When the autoac? tivation property is disabled, the VG or LV will not be activat? ed by a command doing autoactivation (vgchange, lvchange, or pvscan using -aay.) If autoactivation is disabled on a VG, no LVs will be autoactivated in that VG, and the LV autoactivation property has no effect. If autoactivation is enabled on a VG, autoactivation can be disabled for individual LVs.

--sysinit

Indicates that vgchange/lvchange is being invoked from early system initialisation scripts (e.g. rc.sysinit or an initrd), before writable filesystems are available. As such, some func? tionality needs to be disabled and this option acts as a short? cut which selects an appropriate set of options. Currently, this is equivalent to using --ignorelockingfailure, --ignoremonitor? ing, --poll n, and setting env var LVM_SUPPRESS_LOCKING_FAIL? URE_MESSAGES. vgchange/lvchange skip autoactivation, and defer to pvscan autoactivation.

--systemid String

Changes the system ID of the VG. Using this option requires caution because the VG may become foreign to the host running the command, leaving the host unable to access it. See lvmsys? temid(7) for more information.

-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 un? usual error messages in multi-stage operations if a tool relies on reading back metadata it believes has changed but hasn't.

-u|--uuid

Generate new random UUID for specified VGs.

-v|--verbose ...

Set verbose level. Repeat from 1 to 4 times to increase the de?

tail of messages sent to stdout and stderr.

--version

Display version information.

--[vg]metadatacopies all|unmanaged|Number

Number of copies of the VG metadata that are kept. VG metadata is kept in VG metadata areas on PVs in the VG, i.e. reserved space at the start and/or end of the PVs. Keeping a copy of the VG metadata on every PV can reduce performance in VGs containing a large number of PVs. When this number is set to a non-zero value, LVM will automatically choose PVs on which to store meta? data, using the metadataignore flags on PVs to achieve the spec? ified number. The number can also be replaced with special string values: unmanaged causes LVM to not automatically manage the PV metadataignore flags. all causes LVM to first clear the metadataignore flags on all PVs, and then to become unmanaged.

-y|--yes

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

VARIABLES

VG Volume Group name. See lvm(8) for valid names.

Tag Tag name. See lvm(8) for information about tag names and using tags in place of a VG, LV or PV.

Select Select indicates that a required positional parameter can be omitted if the --select option is used. No arg appears in this position.

String See the option description for information about the string con? tent.

Size[UNIT]

Size is an input number that accepts an optional unit. Input units are always treated as base two values, regardless of capi? talization, e.g. 'k' and 'K' both refer to 1024. The default input unit is specified by letter, followed by |UNIT. UNIT rep? resents 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 lvm(8) for information about environment variables used by lvm. For example, LVM_VG_NAME can generally be substituted for a required VG parameter.

NOTES

If vgchange recognizes COW snapshot LVs that were dropped because they ran out of space, it displays a message informing the administrator that the snapshots should be removed.

EXAMPLES

Activate all LVs in all VGs on all existing devices.

vgchange -a y

Change the maximum number of LVs for an inactive VG.

vgchange -l 128 vg00

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)