



Rocky Enterprise Linux 9.2 Manual Pages on command 'cryptsetup-refresh.8'

\$ man cryptsetup-refresh.8

CRYPTSETUP-REFRESH(8) Maintenance Commands CRYPTSETUP-REFRESH(8)

NAME

cryptsetup-refresh - refresh parameters of an active mapping

SYNOPSIS

cryptsetup refresh [<options>] <name>

DESCRIPTION

Refreshes parameters of active mapping <name>.

Updates parameters of active device <name> without the need to deactivate the device (and umount filesystem). Currently, it supports parameters refresh on following devices: LUKS1, LUKS2 (including authenticated encryption), plain crypt and loop-AES.

Mandatory parameters are identical to those of an open action for the respective device type.

You may change following parameters on all devices

--perf-same_cpu_crypt, --perf-submit_from_crypt_cpus,
--perf-no_read_workqueue, --perf-no_write_workqueue and
--allow-discards.

Refreshing the device without any optional parameter will refresh the

device with default setting (respective to device type).

LUKS2 only:

The `--integrity-no-journal` parameter affects only LUKS2 devices with the underlying dm-integrity device.

Adding option `--persistent` stores any combination of device parameters above in LUKS2 metadata (only after successful refresh operation).

The `--disable-keyring` parameter refreshes a device with volume key passed in dm-crypt driver.

<options> can be [`--allow-discards`, `--perf-same_cpu_crypt`, `--perf-submit_from_crypt_cpus`, `--perf-no_read_workqueue`, `--perf-no_write_workqueue`, `--header`, `--disable-keyring`, `--disable-locks`, `--persistent`, `--integrity-no-journal`].

OPTIONS

`--allow-discards`

Allow the use of discard (TRIM) requests for the device. This is also not supported for LUKS2 devices with data integrity protection.

WARNING: This command can have a negative security impact because it can make filesystem-level operations visible on the physical device. For example, information leaking filesystem type, used space, etc. may be extractable from the physical device if the discarded blocks can be located later. If in doubt, do not use it.

A kernel version of 3.1 or later is needed. For earlier kernels, this option is ignored.

`--perf-same_cpu_crypt`

Perform encryption using the same cpu that IO was submitted on. The default is to use an unbound workqueue so that encryption work is automatically balanced between available CPUs.

NOTE: This option is available only for low-level dm-crypt performance tuning, use only if you need a change to default dm-crypt behaviour. Needs kernel 4.0 or later.

`--perf-submit_from_crypt_cpus`

Disable offloading writes to a separate thread after encryption.

There are some situations where offloading write bios from the encryption threads to a single thread degrades performance significantly. The default is to offload write bios to the same thread.

NOTE: This option is available only for low-level dm-crypt performance tuning, use only if you need a change to default dm-crypt behaviour. Needs kernel 4.0 or later.

`--perf-no_read_workqueue, --perf-no_write_workqueue`

Bypass dm-crypt internal workqueue and process read or write requests synchronously.

NOTE: These options are available only for low-level dm-crypt performance tuning, use only if you need a change to default dm-crypt behaviour. Needs kernel 5.9 or later.

`--header <device or file storing the LUKS header>`

Use a detached (separated) metadata device or file where the LUKS header is stored. This option allows one to store ciphertext and LUKS header on different devices.

For commands that change the LUKS header (e.g. `luksAddKey`), specify the device or file with the LUKS header directly as the LUKS device.

`--disable-locks`

Disable lock protection for metadata on disk. This option is valid only for LUKS2 and ignored for other formats.

WARNING: Do not use this option unless you run `cryptsetup` in a restricted environment where locking is impossible to perform (where `/run` directory cannot be used).

`--disable-keyring`

Do not load volume key in kernel keyring and store it directly in the dm-crypt target instead. This option is supported only for the LUKS2 type.

`--persistent`

If used with LUKS2 devices and activation commands like `open` or `refresh`, the specified activation flags are persistently written

into metadata and used next time automatically even for normal activation. (No need to use crypttab or other system configuration files.)

If you need to remove a persistent flag, use `--persistent` without the flag you want to remove (e.g. to disable persistently stored discard flag, use `--persistent` without `--allow-discards`).

Only `--allow-discards`, `--perf-same_cpu_crypt`, `--perf-submit_from_crypt_cpus`, `--perf-no_read_workqueue`, `--perf-no_write_workqueue` and `--integrity-no-journal` can be stored persistently.

`--integrity-no-journal`

Activate device with integrity protection without using data journal (direct write of data and integrity tags). Note that without journal power fail can cause non-atomic write and data corruption. Use only if journalling is performed on a different storage layer.

`--batch-mode, -q`

Suppresses all confirmation questions. Use with care!

If the `--verify-passphrase` option is not specified, this option also switches off the passphrase verification.

`--debug` or `--debug-json`

Run in debug mode with full diagnostic logs. Debug output lines are always prefixed by #.

If `--debug-json` is used, additional LUKS2 JSON data structures are printed.

`--version, -V`

Show the program version.

`--usage`

Show short option help.

`--help, -?`

Show help text and default parameters. == REPORTING BUGS

Report bugs at cryptsetup mailing list <cryptsetup@lists.linux.dev> or in Issues project section

<<https://gitlab.com/cryptsetup/cryptsetup/-/issues/new>>.

Please attach output of the failed command with --debug option added.

SEE ALSO

Cryptsetup FAQ

<<https://gitlab.com/cryptsetup/cryptsetup/wikis/FrequentlyAskedQuestions>>

cryptsetup(8), integritysetup(8) and veritysetup(8)

CRYPTSETUP

Part of cryptsetup project <<https://gitlab.com/cryptsetup/cryptsetup/>>.

cryptsetup 2.6.0 2022-12-14 CRYPTSETUP-REFRESH(8)