



Rocky Enterprise Linux 9.2 Manual Pages on command 'kernel-install.8'

C:\>man kernel-install.8

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NAME

kernel-install - Add and remove kernel and initramfs images to and from /boot

SYNOPSIS

kernel-install COMMAND [OPTIONS...] KERNEL-VERSION KERNEL-IMAGE [INITRD-FILE...]

DESCRIPTION

kernel-install is used to install and remove kernel and initramfs images to and from the boot loader partition, referred to as \$BOOT here. It will usually be one of /boot, /efi, or /boot/efi, see below.

kernel-install will execute the files located in the directory /usr/lib/kernel/install.d/ and the local administration directory /etc/kernel/install.d/. All files are collectively sorted and executed in lexical order, regardless of the directory in which they live. However, files with identical filenames replace each other. Files in /etc/kernel/install.d/ take precedence over files with the same name in /usr/lib/kernel/install.d/. This can be used to override a system-supplied executables with a local file if needed; a symbolic link in /etc/kernel/install.d/ with the same name as an executable in /usr/lib/kernel/install.d/, pointing to /dev/null, disables the executable entirely. Executables must have the extension ".install"; other extensions are ignored.

An executable should return 0 on success. It may also return 77 to cause the whole operation to terminate (executables later in lexical order will be skipped).

COMMANDS

The following commands are understood:

```
add KERNEL-VERSION KERNEL-IMAGE [INITRD-FILE ...]
```

This command expects a kernel version string and a path to a kernel image file

as arguments. kernel-install calls the executables from

/usr/lib/kernel/install.d/*.install and /etc/kernel/install.d/*.install with

the following arguments:

```
add KERNEL-VERSION $BOOT/MACHINE-ID/KERNEL-VERSION/ KERNEL-IMAGE [INITRD-FILE ...]
```

Three default plugins execute the following operations in this case:

? 00-entry-directory.install creates the directory

\$BOOT/MACHINE-ID/KERNEL-VERSION/ if \$BOOT/MACHINE-ID/ already exists.

? 50-depmod.install runs depmod(8) for the KERNEL-VERSION.

? 90-loaderentry.install copies KERNEL-IMAGE to

\$BOOT/MACHINE-ID/KERNEL-VERSION/linux. If an INITRD-FILE is provided, it

also copies INITRD-FILE to \$BOOT/MACHINE-ID/KERNEL_VERSION/INITRD-FILE. It

also creates a boot loader entry according to the Boot Loader

Specification[1] in \$BOOT/loader/entries/MACHINE-ID-KERNEL-VERSION.conf.

The title of the entry is the PRETTY_NAME parameter specified in

/etc/os-release or /usr/lib/os-release (if the former is missing), or

"Linux KERNEL-VERSION", if unset.

If the entry directory \$BOOT/MACHINE-ID/KERNEL-VERSION/ does not exist,

this plugin does nothing.

```
remove KERNEL-VERSION
```

This command expects a kernel version string as single argument. This calls

executables from /usr/lib/kernel/install.d/*.install and

/etc/kernel/install.d/*.install with the following arguments:

```
remove KERNEL-VERSION $BOOT/MACHINE-ID/KERNEL-VERSION/
```

Afterwards, kernel-install removes the directory

\$BOOT/MACHINE-ID/KERNEL-VERSION/ and its contents.

Two default plugins execute the following operations in this case:

? 50-depmod.install removes the files generated by depmod for this kernel

again.

? 90-loaderentry.install removes the file

`$BOOT/loader/entries/MACHINE-ID-KERNEL-VERSION.conf`.

THE \$BOOT PARTITION

The partition where the kernels and Boot Loader Specification[1] snippets are located is called `$BOOT`. `kernel-install` determines the location of this partition by checking `/efi/`, `/boot/`, and `/boot/efi` in turn. The first location where `$BOOT/loader/entries/` or `$BOOT/$MACHINE_ID/` exists is used.

OPTIONS

The following options are understood:

`-v, --verbose`

Output additional information about operations being performed.

`-h, --help`

Print a short help text and exit.

ENVIRONMENT VARIABLES

If `--verbose` is used, `$KERNEL_INSTALL_VERBOSE=1` will be set for the plugins. They may output additional logs in this case.

EXIT STATUS

If every executable returns 0 or 77, 0 is returned, and a non-zero failure code otherwise.

FILES

`/usr/lib/kernel/install.d/*.install` `/etc/kernel/install.d/*.install`

Drop-in files which are executed by `kernel-install`.

`/etc/kernel/cmdline` `/proc/cmdline`

Read by `90-loaderentry.install`. The content of the file `/etc/kernel/cmdline` specifies the kernel command line to use. If that file does not exist, `/proc/cmdline` is used.

`/etc/kernel/tries`

Read by `90-loaderentry.install`. If this file exists a numeric value is read from it and the naming of the generated entry file is slightly altered to include it as `$BOOT/loader/entries/MACHINE-ID-KERNEL-VERSION+TRIES.conf`. This is useful for boot loaders such as `systemd-boot(7)` which implement boot attempt counting with a counter embedded in the entry file name.

`/etc/machine-id`

The content of the file specifies the machine identification `MACHINE-ID`.

/etc/os-release /usr/lib/os-release

The content of the file specifies the operating system title PRETTY_NAME.

SEE ALSO

machine-id(5), os-release(5), depmod(8), systemd-boot(7), Boot Loader

Specification[1]

NOTES

1. Boot Loader Specification

https://systemd.io/BOOT_LOADER_SPECIFICATION

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