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

\$ man kernel-install.8

KERNEL-INSTALL(8) kernel-install KERNEL-INSTALL(8)

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 this file specifies the machine identification MACHINE-ID. If it cannot read /etc/machine-id, kernel-install will use "Linux" as the machine ID instead.

/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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