

**NAME**

mkswap – set up a Linux swap area

**SYNOPSIS**

**mkswap** [options] *device* [*size*]

**DESCRIPTION**

**mkswap** sets up a Linux swap area on a device or in a file.

The *device* argument will usually be a disk partition (something like */dev/sdb7*) but can also be a file. The Linux kernel does not look at partition IDs, but many installation scripts will assume that partitions of hex type 82 (LINUX\_SWAP) are meant to be swap partitions. (**Warning: Solaris also uses this type. Be careful not to kill your Solaris partitions.**)

The *size* parameter is superfluous but retained for backwards compatibility. (It specifies the desired size of the swap area in 1024-byte blocks. **mkswap** will use the entire partition or file if it is omitted. Specifying it is unwise – a typo may destroy your disk.)

After creating the swap area, you need the **swapon** command to start using it. Usually swap areas are listed in */etc/fstab* so that they can be taken into use at boot time by a **swapon -a** command in some boot script.

**WARNING**

The swap header does not touch the first block. A boot loader or disk label can be there, but it is not a recommended setup. The recommended setup is to use a separate partition for a Linux swap area.

**mkswap**, like many others mkfs-like utils, **erases the first partition block to make any previous filesystem invisible.**

However, **mkswap** refuses to erase the first block on a device with a disk label (SUN, BSD, ...).

**OPTIONS**

**-c, --check**

Check the device (if it is a block device) for bad blocks before creating the swap area. If any bad blocks are found, the count is printed.

**-f, --force**

Go ahead even if the command is stupid. This allows the creation of a swap area larger than the file or partition it resides on.

Also, without this option, **mkswap** will refuse to erase the first block on a device with a partition table.

**-L, --label *label***

Specify a *label* for the device, to allow **swapon** by label.

**-p, --pagesize *size***

Specify the page *size* (in bytes) to use. This option is usually unnecessary; **mkswap** reads the size from the kernel.

**-U, --uuid *UUID***

Specify the *UUID* to use. The default is to generate a UUID.

**-v, --swapversion *1***

Specify the swap-space version. (This option is currently pointless, as the old **-v 0** option has become obsolete and now only **-v 1** is supported. The kernel has not supported v0 swap-space format since 2.5.22 (June 2002). The new version v1 is supported since 2.1.117 (August 1998).)

- h, --help**  
Display help text and exit.
- V, --version**  
Display version information and exit.

## NOTES

The maximum useful size of a swap area depends on the architecture and the kernel version.

The maximum number of the pages that is possible to address by swap area header is 4294967295 (32-bit unsigned int). The remaining space on the swap device is ignored.

Presently, Linux allows 32 swap areas. The areas in use can be seen in the file */proc/swaps*

**mkswap** refuses areas smaller than 10 pages.

If you don't know the page size that your machine uses, you may be able to look it up with "cat */proc/cpuinfo*" (or you may not – the contents of this file depend on architecture and kernel version).

To set up a swap file, it is necessary to create that file before initializing it with **mkswap**, e.g. using a command like

```
# dd if=/dev/zero of=swapfile bs=1MiB count=$((8*1024))
```

to create 8GiB swapfile.

Please read notes from **swapon(8)** about **the swap file use restrictions** (holes, preallocation and copy-on-write issues).

## ENVIRONMENT

**LIBBLKID\_DEBUG=all**  
enables libblkid debug output.

## SEE ALSO

**fdisk(8)**, **swapon(8)**

## AVAILABILITY

The **mkswap** command is part of the **util-linux** package and is available from <https://www.kernel.org/pub/linux/utils/util-linux/>.