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/.