fdisk Disk partitioning

CONCEPTS

Triple-check the device name with lsblk before you write. Writing a partition table to the wrong disk destroys its data.

fdisk keeps every change in memory until you press w. q leaves without touching the disk.

Partition table fdisk / sfdisk
↓ partprobe
Partition /dev/sdb1
↓ mkfs
Filesystem ext4, xfs, swap
↓ mount
Mount point /mnt/data

MBR (dos) tops out at 2 TiB and 4 primary partitions. GPT has neither limit and is the default choice for new disks.

INSPECT

lsblk
Tree of disks and partitions

lsblk -f
Add filesystem type, label, UUID

sudo fdisk -l
List partition tables of all disks

sudo fdisk -l *<disk>*
List one disk's table

INTERACTIVE FDISK

sudo fdisk *<disk>*
Edit a disk's partition table

m
Show the command menu

p
Print the table as edited so far

g
New empty GPT table

o
New empty MBR (DOS) table

n
Add a partition

d
Delete a partition

INTERACTIVE FDISK (cont.)

t
Change partition type

w
Write changes and exit

q
Quit without saving

CREATING A PARTITION

n Enter Enter +*<size>*
Next number, first free sector, given size

n Enter Enter Enter
Use all remaining space

t *<n>* **linux**
Linux filesystem type (alias)

t *<n>* **lvm**
Linux LVM type

APPLY AND FORMAT

sudo partprobe *<disk>*
Tell the kernel about new partitions

sudo mkfs.ext4 *<part>*
Format as ext4

sudo mount *<part> <dir>*
Mount it

sudo blkid *<part>*
UUID for /etc/fstab

SFDISK (SCRIPTING)

sudo sfdisk -d *<disk>* **>** *<file>*
Dump the table to a file

sudo sfdisk *<disk> < <file>*
Restore or apply a layout

SAFETY AND CLEANUP

sudo wipefs *<disk>*
List signatures (no changes)

sudo wipefs -a *<disk>*
Erase all signatures

sudo umount *<part>*
Unmount before editing

fdisk will not stop you from deleting a mounted or used partition. Unmount first, and keep a table dump from sfdisk.