

RHEL: GPT/MBR partition tables (using disks larger than 2 TiB)

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Tested on RHEL 6 & 7

Up to now the default type of the partition table of a hard disk is MBR (msdos). This

old method presents some problems like the limitation of having a maximum of four primary

partitions but the main problem is that we can't go beyond the first 2 TiB of the disk.

Nowadays physical disks are growing in size quickly. A way of solving this problem is

by switching to GPT (GUID Partition Table) partitioning scheme.

To partition a disk using GPT we first have to write a GPT label to it. The way to do

it is the following:

parted /dev/<sde> mklabel gpt

Warning: The existing disk label on /dev/sde will be destroyed and all data on this disk will be

lost. Do you want to continue?

Yes/No? Yes

Information: You may need to update /etc/fstab.

```
# If we want to make the disk usable by LVM, first we have to
partition the disk and mark
# the new partitions with the "LVM label" so let's create a new
partition and change
# its name and flags
```

parted /dev/sde

```
GNU Parted 3.1
Using /dev/sde
Welcome to GNU Parted! Type 'help' to view a list of commands.
(parted) mkpart primary 1M 500M
(parted) name 1 mypart
(parted) p
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sde: 4295MB
Sector size (logical/physical): 512B/512B
Partition Table: gpt
Disk Flags:
```

Number	Start	End	Size	File system	Name	Flags
1	1049kB	500MB	499MB		mypart	

```
(parted) set 1 lvm on
(parted) p
Model: ATA VBOX HARDDISK (scsi)
Disk /dev/sde: 4295MB
Sector size (logical/physical): 512B/512B
Partition Table: gpt
Disk Flags:
```

Number	Start	End	Size	File system	Name	Flags
1	1049kB	500MB	499MB		mypart	lvm

```
(parted) q
Information: You may need to update /etc/fstab.
```

On RHEL 6, '**fdisk**' is not able to manage disk partition table anymore:

```
myrhel6:/root#> fdisk -l /dev/sde
```

```
WARNING: GPT (GUID Partition Table) detected on '/dev/sde'! The
util fdisk doesn't support GPT. Use GNU Parted.
[...]
```

On RHEL 7, we get a message indicating that '**fdisk**' support is in experimental phase:

```
myrhel7:/root#> fdisk -l /dev/sde
```

```
WARNING: fdisk GPT support is currently new, and therefore in an
experimental phase. Use at your own discretion.
[...]
```

To switch back to MBR partition table, do the the following:

```
parted /dev/<sde> mklabel msdos
```

```
Warning: The existing disk label on /dev/sde will be destroyed and
all data on this disk will be
lost. Do you want to continue?
Yes/No? Yes
```

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