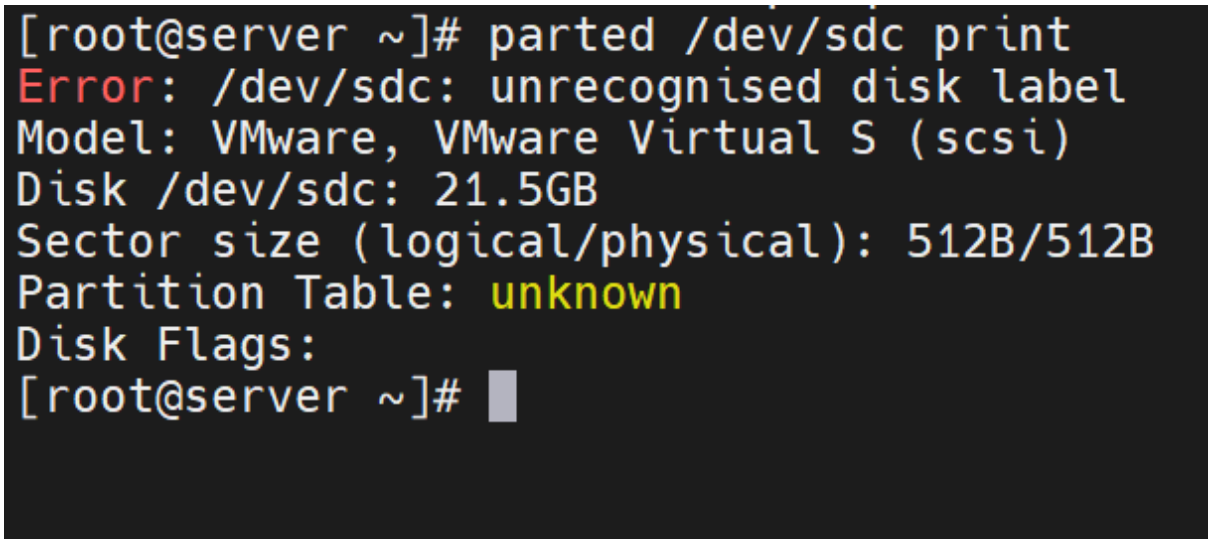
Parted

- Administrators can use the parted partition editor for both the MBR and the GPT partitioning scheme.
- The parted command takes the whole disk device name as the first argument, followed by subcommands.



By default, the parted command displays sizes in powers of 10 (KB, MB, GB). You can change the

unit size with the unit parameter, which accepts the following values:

• **s** for sector

• **B** for byte

• **MiB** , **GiB** , or **TiB** (powers of 2)

• **MB** , **GB** , or **TB** (powers of 10)

```
[root@server ~]# parted /dev/sdc unit s print
Error: /dev/sdc: unrecognised disk label
Model: VMware, VMware Virtual S (scsi)
Disk /dev/sdc: 41943040s
Sector size (logical/physical): 512B/512B
Partition Table: unknown
Disk Flags:
[root@server ~]# parted /dev/sdc unit MB print
Error: /dev/sdc: unrecognised disk label
Model: VMware, VMware Virtual S (scsi)
Disk /dev/sdc: 21475MB
Sector size (logical/physical): 512B/512B
Partition Table: unknown
Disk Flags:
[root@server ~]# parted /dev/sdc unit GB print
Error: /dev/sdc: unrecognised disk label
Model: VMware, VMware Virtual S (scsi)
Disk /dev/sdc: 21.5GB
Sector size (logical/physical): 512B/512B
Partition Table: unknown
Disk Flags:
[root@server ~]#
```

Write the Partition Table on a New Disk

To partition a new drive, first write a disk label.

The disk label indicates which partitioning scheme to use.

Use parted to write an MBR disk label or a GPT disk label.

```
[root@server ~]# parted /dev/sdc mklabel msdos
Information: You may need to update /etc/fstab.

[root@server ~]# parted /dev/sdc mklabel gpt
Warning: The existing disk label on /dev/sdc 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.

[root@server ~]#
```

Create MBR Partitions

The following instructions create an MBR disk partition. Specify the disk device to create the partition on.

Run the parted command and specify the disk device name as an argument, to start in interactive mode.

The session displays (parted) as a subcommand prompt.

```
[root@server ~]# parted /dev/sdc
GNU Parted 3.1
Using /dev/sdc
Welcome to GNU Parted! Type 'help' to view a list of commands.
(parted)
```

Use the mkpart subcommand to create a primary or extended partition

```
[root@server ~]# parted /dev/sdc
GNU Parted 3.1
Using /dev/sdc
Welcome to GNU Parted! Type 'help' to view a list of commands.
(parted) mkpart
Partition name?  []? sdcpart
File system type?  [ext2]? xfs
Start? 2048s
End? 1000MB
(parted) quit
Information: You may need to update /etc/fstab.

[root@server ~]#
```

When you provide the end position, the parted command updates the partition table on the disk with the new partition details.

Run the udevadm settle command.

This command waits for the system to detect the new partition and to create the associated device file under the /dev directory. The prompt returns when the task is done.

```
[root@server ~]# udevadm settle
```

Create GPT Partitions

The GPT scheme also uses the parted command to create partitions. Specify the disk device to create the partition on.

```
[root@server ~]# parted /dev/sdc
GNU Parted 3.1
Using /dev/sdc
Welcome to GNU Parted! Type 'help' to view a list of commands.
(parted) mkpart
Partition name?  []? userdata
File system type?  [ext2]? xfs
Start? 2048s
End? 1000MB
Warning: You requested a partition from 1049kB to 1000MB (sectors 2048..1953125).
The closest location we can manage is 1048kB to 1048kB (sectors 2047..2047).
Is this still acceptable to you?
Yes/No? yes
Warning: The resulting partition is not properly aligned for best performance.
Ignore/Cancel? Ignore
(parted) quit
Information: You may need to update /etc/fstab.

[root@server ~]# udevadm settle
[root@server ~]#
```

Delete Partitions

The following instructions apply for both the MBR and GPT partitioning schemes.

Specify the disk that contains the partition to remove.

```
Using /dev/sdc
Welcome to GNU Parted! Type 'help' to view a list of commands.
(parted) print
Model: VMware, VMware Virtual S (scsi)
Disk /dev/sdc: 21.5GB
Sector size (logical/physical): 512B/512B
Partition Table: gpt
Disk Flags:

Number  Start   End     Size   File system  Name      Flags
 2      1048kB  1049kB  512B                userdata
 1      1049kB  1000MB  999MB               sdcpart

(parted) rm 1
(parted) quit
Information: You may need to update /etc/fstab.

[root@server ~]# parted /dev/sdc
GNU Parted 3.1
Using /dev/sdc
Welcome to GNU Parted! Type 'help' to view a list of commands.
(parted) print
Model: VMware, VMware Virtual S (scsi)
Disk /dev/sdc: 21.5GB
Sector size (logical/physical): 512B/512B
Partition Table: gpt
Disk Flags:

Number  Start   End     Size  File system  Name      Flags
 2      1048kB  1049kB  512B               userdata

(parted)
```

Create File Systems

After a block device is created, the next step is to add a file system to it.

Red Hat Enterprise Linux supports multiple file-system types, and XFS is the recommended default.

```
[root@server ~]# mkfs.xfs /dev/sdc
sdc   sdc2
[root@server ~]# mkfs.xfs /dev/sdc
mkfs.xfs: /dev/sdc appears to contain a partition table (gpt).
mkfs.xfs: Use the -f option to force overwrite.
[root@server ~]#
```

Mount File Systems

After you add the file system, the last step is to mount the file system to a directory in the directory structure.

When you mount a file system onto the directory hierarchy, user-space utilities can access or write files on the device.

```
[root@server ~]# mount /dev/sdc2 /mnt/
mount: /dev/sdc2 is write-protected, mounting read-only
mount: unknown filesystem type '(null)'
[root@server ~]# mount |grep sdc2
```

Persistently Mount File Systems

To configure the system to automatically mount the file system during system boot, add an entry to the /etc/fstab file.

This configuration file lists the file systems to mount at system boot.