

Here's a Linux Parted Cheat Sheet covering the essential commands and concepts for managing partitions using the parted tool.

Linux Parted Cheat Sheet

GNU Parted is a command-line tool used for creating, resizing, and managing partitions on Linux.

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Basic Commands

| Command | Description |
|---|---|
| <code>sudo parted -l</code> | List all partitions and disks. |
| <code>sudo parted /dev/sdX</code> | Start parted for disk /dev/sdX. |
| <code>sudo parted /dev/sdX print</code> | Show partition table for /dev/sdX. |
| <code>sudo parted /dev/sdX mklabel gpt</code> | Create a GPT partition table (use msdos for MBR). |
| <code>sudo parted /dev/sdX unit GB print</code> | Display partitions in GB instead of sectors. |
| <code>quit</code> | Exit parted. |

Creating a New Partition

Start parted on a specific disk

```
sudo parted /dev/sdX
```

Create a new partition (Example: 10GB ext4 starting at 1MB)

```
mkpart primary ext4 1MiB 10GB
```

Check changes

```
print
```

Format the partition (outside parted)

```
sudo mkfs.ext4 /dev/sdX1
```

Resizing a Partition

Unmount the partition before resizing

```
sudo umount /dev/sdX1
```

Resize the partition (Example: Resize to 20GB)

```
sudo parted /dev/sdX resizepart 1 20GB
```

Expand the filesystem (For ext4)

```
sudo resize2fs /dev/sdX1
```

Deleting a Partition

List partitions

```
sudo parted /dev/sdX print
```

Delete partition #1

```
sudo parted /dev/sdX rm 1
```

Converting Partition Tables

- Convert MBR to GPT (WARNING: This erases all data!)

```
sudo parted /dev/sdX mklabel gpt
```

- Convert GPT to MBR

```
sudo parted /dev/sdX mklabel msdos
```

Aligning Partitions (Performance Optimization)

Check alignment:

```
sudo parted /dev/sdX align-check optimal 1
```

Returns “1 aligned” if aligned correctly.

Other Useful Commands

| Command | Description |
|--|-------------------------------------|
| <code>sudo parted /dev/sdX print free</code> | Show free space on the disk. |
| <code>sudo parted /dev/sdX set 1 boot on</code> | Mark partition 1 as bootable. |
| <code>sudo parted /dev/sdX name 1 "MyPartition"</code> | Name partition 1. |
| <code>sudo parted /dev/sdX rescue 100MB 500MB</code> | Attempt to recover lost partitions. |

Example: Create and Format a Partition

```
sudo parted /dev/sdX mklabel gpt
sudo parted /dev/sdX mkpart primary ext4 1MiB 50GB
sudo mkfs.ext4 /dev/sdX1
```

Now, /dev/sdX1 is a 50GB ext4 partition ready to use!

This Linux Parted Cheat Sheet covers the essentials for managing partitions efficiently using parted.