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Clone partition on Linux

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Making a clone of a disk partition is a great way to make a complete backup. This type of backup would preserve all your system and personal files on that particular partition. Cloning and restoring a disk partition is relatively easy, even if you are cloning the partition on to a completely different storage device.

There are a few applications built especially for this type of function, like Partimage and Clonezilla, but we can also use a simple, default command line tool such as `dd` . In this tutorial, we will take you through the step by step instructions to make a clone of a partition on a Linux system. You will learn three different methods below and can choose the one that you think fits your situation best.

In this tutorial you will learn:

- How to clone a disk partition with `dd` command
- How to clone a disk partition with Partimage
- How to clone a disk partition with Clonezilla

Clone partition on Linux

Software Requirements and Linux Command Line Conventions

Category	Requirements, Conventions or Software Version Used
System	Any Linux distro
Software	dd, Partimage, Clonezilla
Other	Privileged access to your Linux system as root or via the `sudo` command.
Conventions	**#** – requires given linux commands to be executed with root privileges either directly as a root user or by use of `sudo` command **$** – requires given linux commands to be executed as a regular non-privileged user

How to clone a disk partition on Linux step by step instructions

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If you do not wish to install extra software, and can clone your partition directly to the same device or another hard drive or solid state drive, the `dd` command is the recommended method for you to follow below. If you prefer to make a clone file of your installation, then the Partimage or Clonezilla options would be your best route.

Clone Partition With dd

`dd` can be used to clone your entire partition to another partition or disk. Everything will be copied, including partitioning information and all data present on the partition at the time of cloning.

The easiest way to use this tool is to insert your backup hard drive into your computer. You do not need to partition or format the backup disk in any way, as `dd` will write to it as a block device.

Once the hard disk has been inserted, execute the following command to clone your partition onto the backup disk:

```
$ sudo dd if=/dev/sdb1 of=/dev/sdX bs=64K conv=noerror,sync
```

- `if` (input file) is block device `/dev/sdb1`
- `of` (output file) is block device `/dev/sdX`
- `bs` (bit size) is 64K, as small chunks are less likely to encounter errors
- `conv` settings are noerror, and sync which will try again on error and synchronize input and output

In this example, `/dev/sdb1` is the disk that contains our partition that is being cloned. `/dev/sdX` is the backup disk which we are cloning to. You can use `fdisk -l` to obtain the device paths to your own hard drives, and then adapt the command above as needed.

After successfully running the command, you can pop your backup hard disk into any computer, and you can access the partition just as you would on the origina disk.

Clone Partition With Partimage

Keep in mind that Partimage can only clone unmounted partitions. So the partition you wish to clone can't be currently in use.
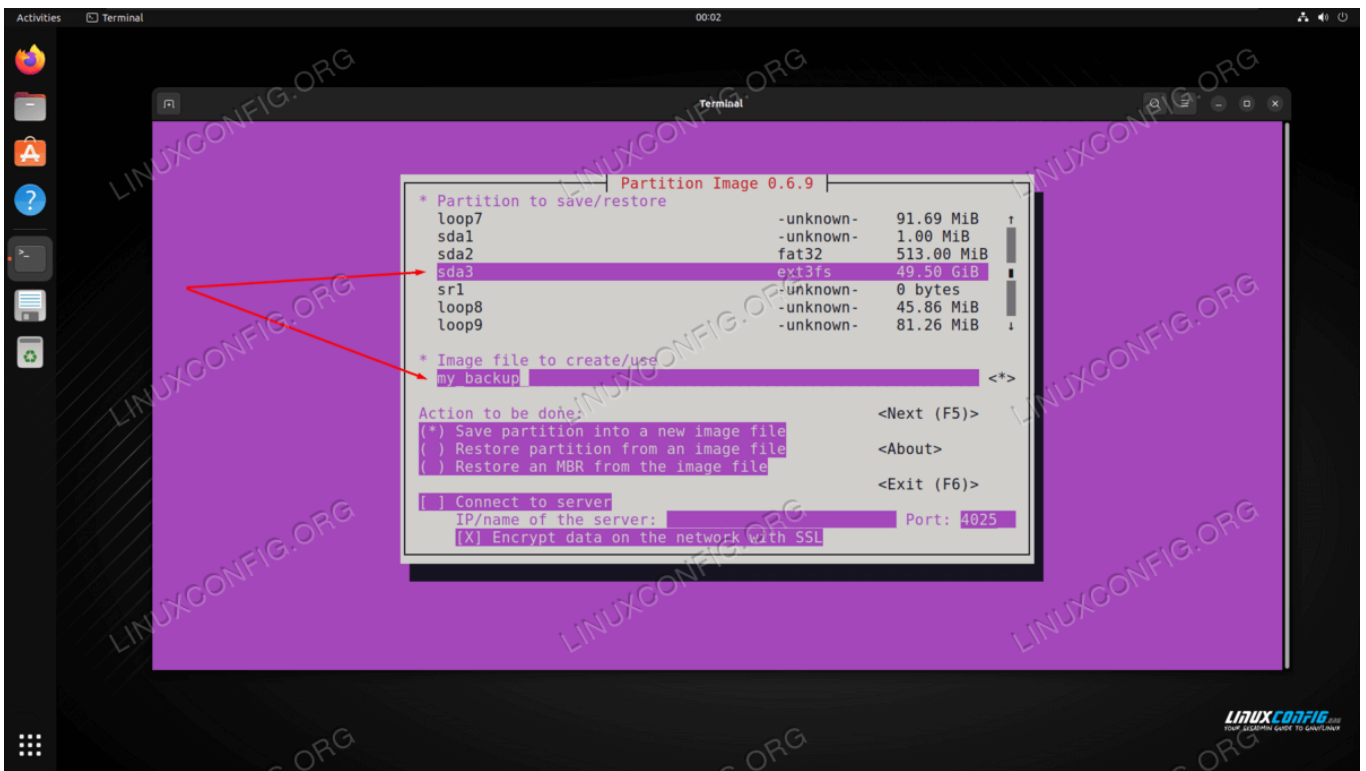
Step 1　The first step is to install Partimage:

```
$ sudo apt install partimage
```
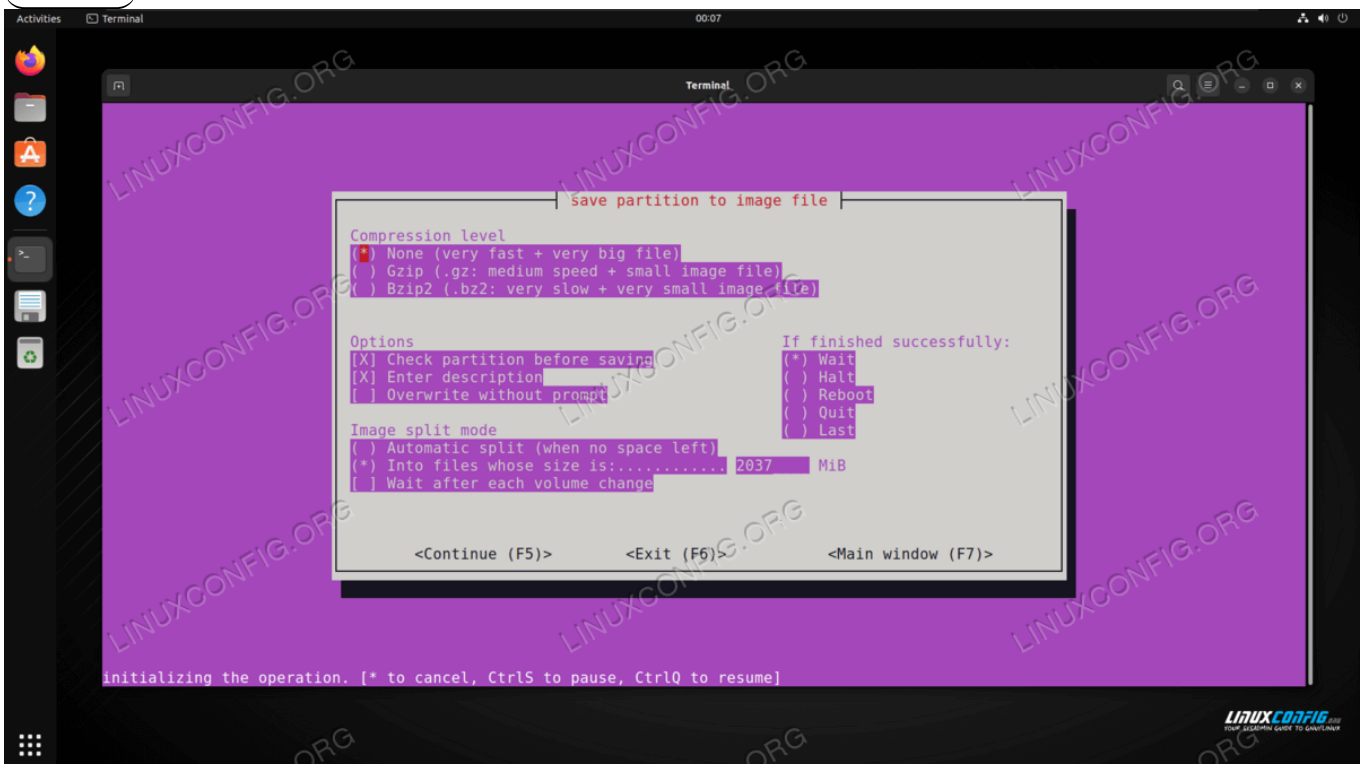
Step 2　Next, launch Partimage from command line:

```
$ sudo partimage
```

Step 3　Use the arrow keys on your keyboard to select the partition that you want to clone. Once it is highlighted, press `Tab` to move onto the next field. Pick a name for your clone, and then press `F5` to proceed to the next menu.
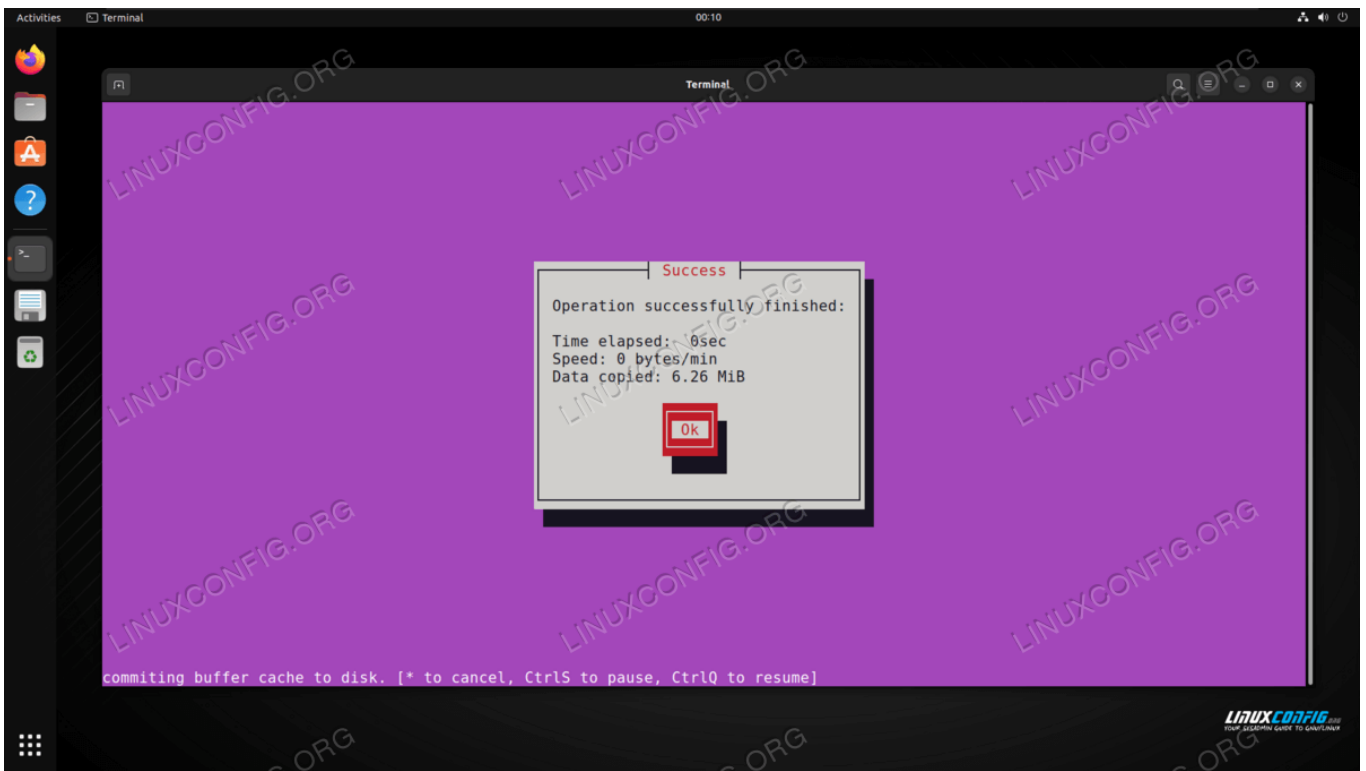
Select partition to clone, and fill out the desired image name

Step 4 Choose your desired compression settings, then hit `F5` to continue.

Choose compression settings for cloned image

Step 5 Partimage will then make a clone of your selected partition, and output it to the image file you specified.

Partimage is done creating our clone of the partition
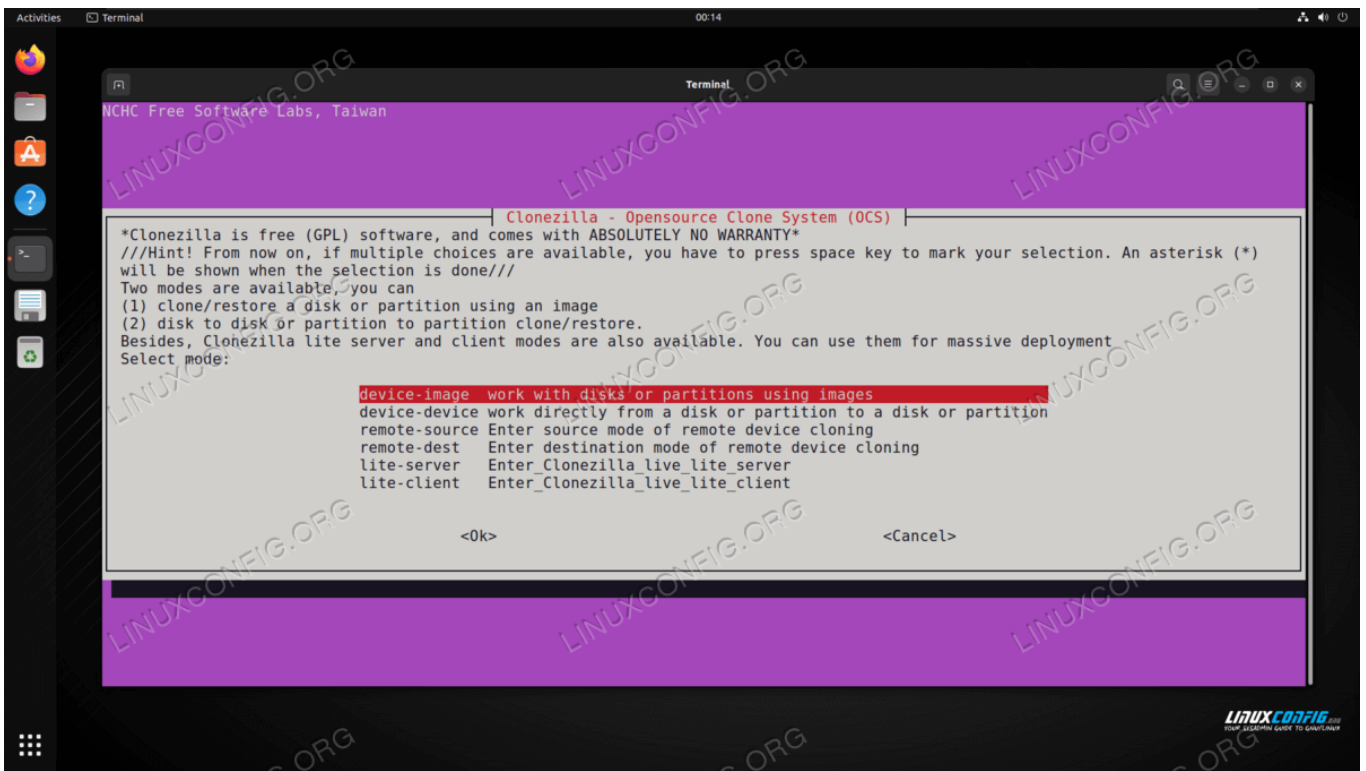
Clone Partition With Clonezilla

Step 1 The first step is to install Clonezilla:

```
$ sudo apt install clonezilla
```

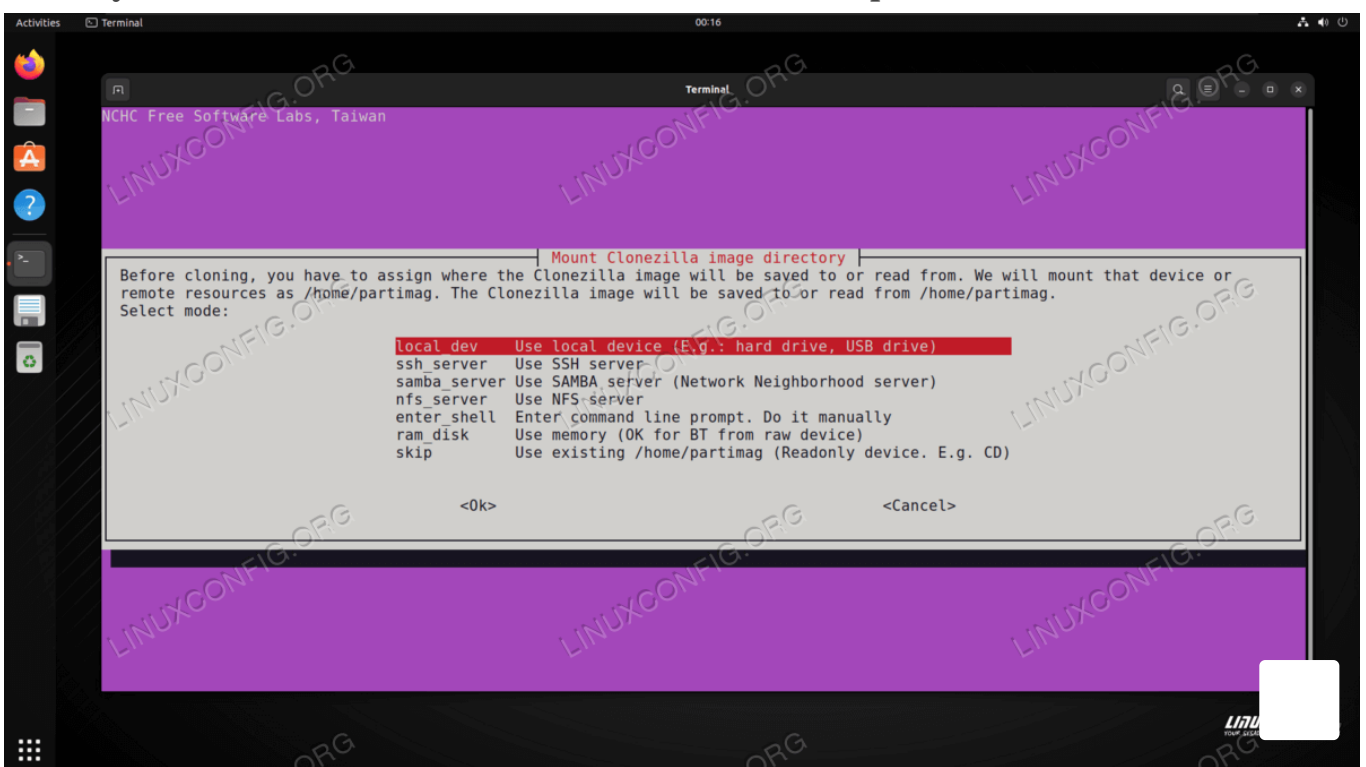**Step 2** Next, launch Clonezilla from command line:

```
$ sudo clonezilla
```

Step 3 Clonezilla will allow us to clone our disk's partition to an image file, or directly to another hard disk. Choose whichever one you desire, but we will go with image file in this example.
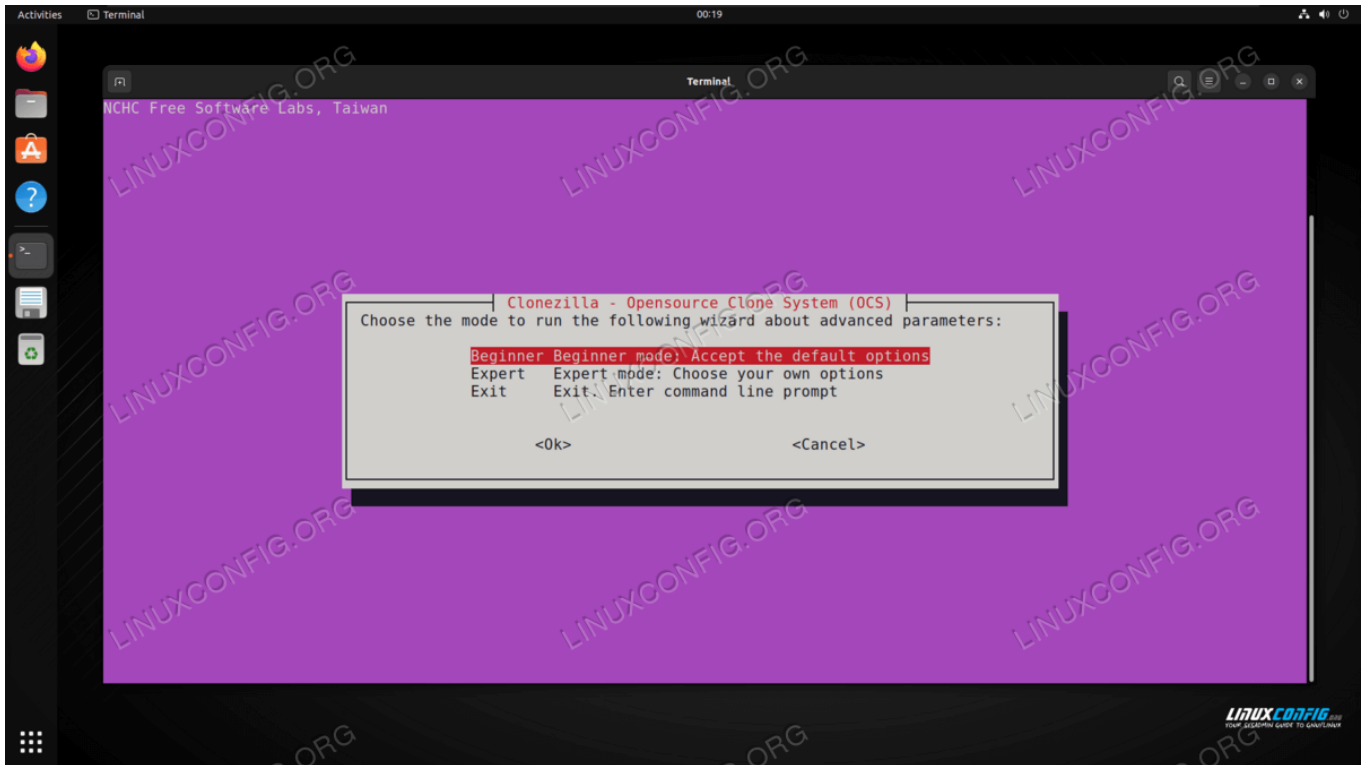
Choose whether to clone to image file, hard disk, or something else

Step 4 Next, choose to clone your local hard drive, unless you have some situation where you need to clone the disk from a different computer via the network.
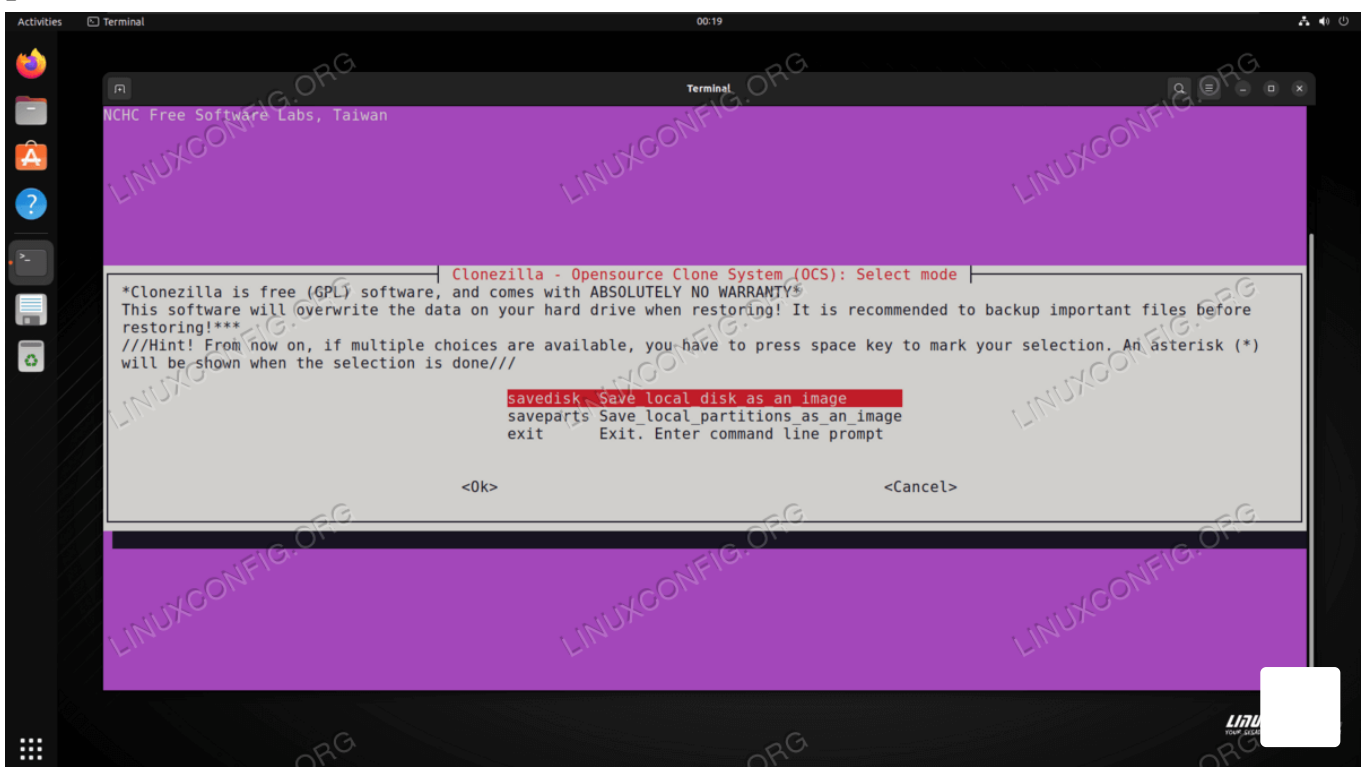
Select to clone the local disk

Step 5   Next, choose which mode you would like to use. Stick with beginner unless you have some specific settings you need to apply to your cloned image.
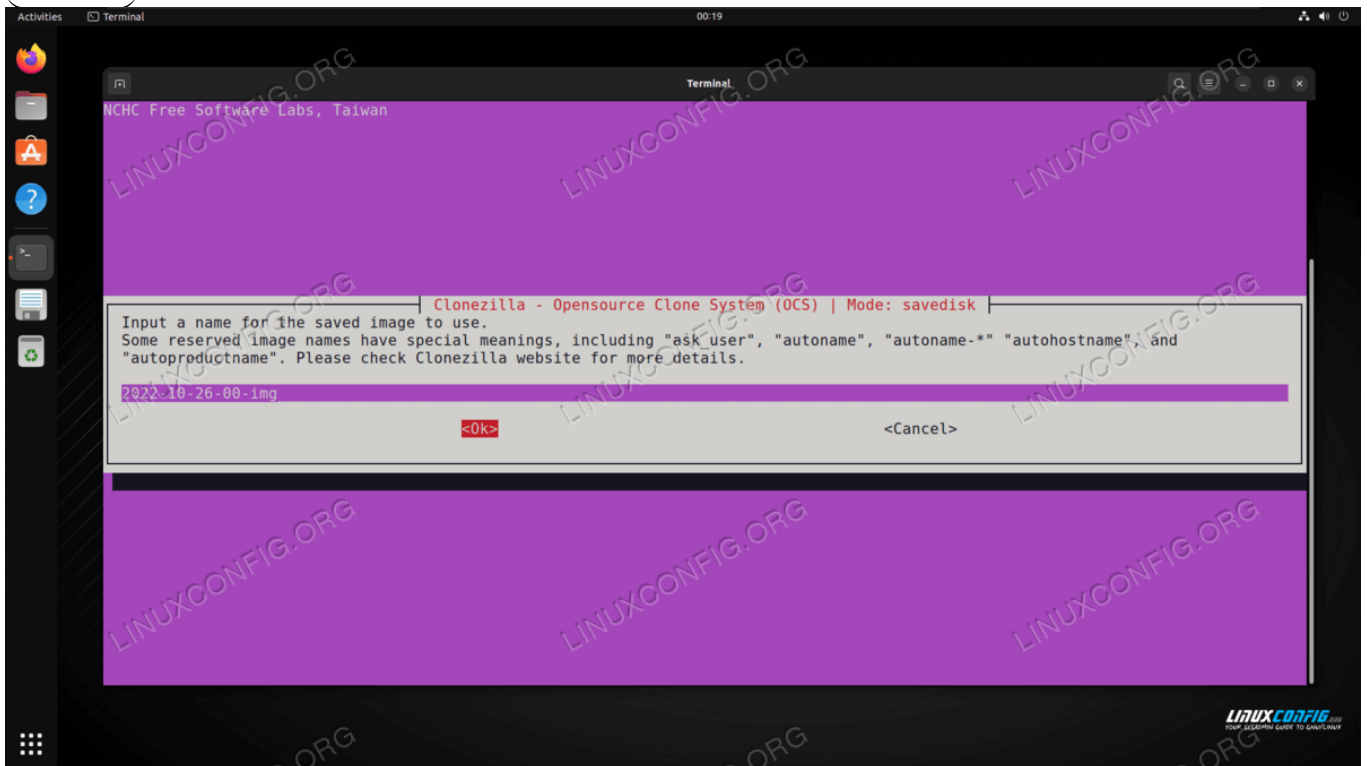

Choosing beginner mode

Step 6   Choose whether you want to save the entire disk image, or just that of a partition.

Save disk or partition image

Step 7 Lastly, choose a name for your cloned image.

Choose name

Clonezilla will then make a copy to your specified image. All done.

Closing Thoughts

In this tutorial, we saw how to clone a disk's partition on Linux. The stock `dd` tool suffices for the job, but extra applications are also available like Partimage, Clonezilla, and a slew of others that we did not cover here. Cloning your Linux partition is ideal for a backup solution and to load your same configuration onto a whole array of computers.

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