If you have ever had a system crash you know the pain of loosing data, system configuration, pictures, data etc. Loosing a hard drive can be a traumatic experience .... unless you have a backup plan. Most of us know you can re-install the operating system, all the apps etc but there is an easier and faster way. There are commercial programs like Ghost, Altaris etc that will backup bit for bit all the data on your hard drives. We have found a free GPL package that can be used to clone/backup almost any Operating system Linux, Unix, Mac etc. When you restore your system the data is put back bit for bit so it is as if you never lost your system at all. The beauty of this is that you can do this over a network. So one computer can be used to backup all the systems you own. Other advantages include:

1. No need to have OS disks. All of the OS info is on the backup. When you restore the system it is configured exactly like you left it.
2. No need to have any OS loaded at all on the system being restored. The software is used to boot and reload the hard drive.
3. Free software you can use on any OS
4. Many operating systems can be supported with the same system

The Cloning package is called CLONEZILLA .

Here are some of the features of Clonezilla:

- Free (GPL) Software.
- Filesystem supported: (1) ext2, ext3, ext4, reiserfs, reiser4, xfs, jfs of GNU/Linux, (2) FAT, NTFS of MS Windows, (3) HFS+ of Mac OS, (4) UFS of FreeBSD, NetBSD, and OpenBSD, and (5) VMFS of VMWare ESX. Therefore you can clone GNU/Linux, MS windows, Intel-based Mac OS, and FreeBSD, NetBSD, and OpenBSD, no matter it's 32-bit (x86) or 64-bit (x86-64) OS. For these file systems, only used blocks in partition are saved and restored. For unsupported file system, sector-to-sector copy is done by dd in Clonezilla.
- LVM2 (LVM version 1 is not) under GNU/Linux is supported.
- Grub (version 1 and version 2) is supported.
- Multicast is supported in Clonezilla SE, which is suitable for massively clone. You can also remotely use it to save or restore a bunch of computers if PXE and Wake-on-LAN are supported in your clients.
- Based on Partclone (default), Partimage (optional), ntfsclone (optional), or dd to image or clone a partition. However, Clonezilla, containing some other programs, can save and restore

not only partitions, but also a whole disk.

  - By using another free software drbl-winroll, which is also developed by us, the hostname, group, and SID of cloned MS windows machine can be automatically changed.

There are some limitations as well:

  - The destination partition must be equal or larger than the source one.
  - Differential/incremental backup is not implemented yet.
  - Online imaging/cloning is not implemented yet. The partition to be imaged or cloned has to be unmounted.
  - Software RAID/fake RAID is not supported by default. It's can be done manually only.
  - Due to the image format limitation, the image can not be explored or mounted. You can _NOT_ recovery single file from the image. However, you still have workaround to make it, read this.
  - Recovery Clonezilla live with multiple CDs or DVDs is not implemented yet. Now all the files have to be in one CD or DVD if you choose to create the recovery iso file.

There are two versions available one is a Live version to be used from a Boot CD/DVD/USB the other is server based.

  Clonezilla Live : Clonezilla live allows you to use CD/DVD or USB flash drive to boot and run clonezilla (Unicast only)
  Clonezilla SE : Clonezilla SE is included in DRBL, therefore a DRBL server must first be set up in order to use Clonezilla to do massively clone (unicast, broadcast and multicast are supported)
  If you have never used cloning software before you should give it a try. Save yourself the pain of loosing your system!