

Re: DD not working--SUCCESS!

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Hi Jacques, I used the drive I was cloning. That way I could keep using the Internet and write things.

A live CD such as Knoppix or Helix or many other such distros would allow you to do the same (especially easy if you have your router authenticating for your cable/DSL connection with DHCP activated on it).

If you booted from the hard drive and then cloned it while booted from it that would explain some of the quirky issues you may have faced afterwards.

I do not think that is true. Most of the quirky issues were the result of my stupidity. And they were expected results if you understood.

Doing a dd of a live, running system is a potential problem. Your system is in constant state of change. Granted if you are doing nothing else with the system at the time and booted in run level 3 you minimize this impact. But in an X Windows environment with applets running in the background chances are something is always happening in the back ground, some of which could cause writes to the hard drive (especially where you mentioned you wanted Internet access to keep writing things and such – lots of disk activity resulting from that). Imagine when you start the copy and dd reads the partition information, the superblock, and inode table near the beginning of the drive and writes it to the new drive. Part way through the process writes take place on the source drive thereby potentially altering superblock information, block groups, and inodes.

I haven't looked at file system stuff in about 6 months and I'm not the primary resource for that topic so I'm not fluent enough to fully explain the issues. But I do know enough about it to know imaging a live system could cause (and likely will cause) issues.

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It is far safer to boot from a live CD without either drives mounted (only connected) and then dd from one to the other.

Because the clone would be of a running system. So booting from it would be comparable to booting from a system that crashed (I'm making an educated guess at that one).

Not a good guess. To use DD you need a computer with dd and a fast cpu. I did top while dd was working and it was taking 70% of the cpu's time :-P

dd is a standard binary on any Linux distros I've ever known. So you'd have access to dd with any of the mainstream live CDs out there (perhaps some very specific ones may exclude it but that would be the exception rather than the rule). In the event you hit one that didn't have it (very unlikely) you could either download one that does (Knoppix, Helix, Slax, Phlax, and if I dig through my material I could find many other live CDs that have dd) or download and install dd in the live environment (again - very unlikely it would come to that).

dd will use lots of CPU time. There are a number of bottle necks in the process - hard drive speed, motherboard/hard drive controller, cables, available RAM, and no doubt a number of others. The CPU is not likely your bottle neck. Chances are it's the reading & writing to the hard drive. So dd would not need 100% of CPU if it fills up the RAM quicker than it can read/write. How much CPU time dd uses will vary from scenario to scenario (all factors noted previously and many others being considered). Running it off a live CD would impact its performance seeing you are using some of the RAM for the live CD. But the stability it affords you vs doing it on a live system is worth it.

When you were mentioning rescue CD I was under the impression you were doing it from that environment. Or you were booting from a different machine where you had your source and target connected (and not mounted). Where I've always done such tasks from a live CD environment or with another box depending on my situation I incorrectly assumed that others would automatically do likewise.

My advice is to boot from a live CD with both drives connected (not mounted - don't need to be mounted - actually greater assurance of integrity if not mounted). dd the source drive onto the target drive. Then remove the source drive and boot with the target drive only (remember that initially they will be master/slave unless you put them on two different IDE chains so you will have to then ensure that your new drive is master or cable select and at the end of the IDE ribbon cable - I'm assuming you have PATA and not SATA drives). It will boot

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just like the original because it will be an exact copy of the original. If you want both drives connected at the same time then you will have to change the label on one of them. You can do that from the live CD environment after dd is finished, or you can do it after rebooting with the single drive and changing the label on that drive, shutting down, and then connecting the other and rebooting with both drives now having unique labels.

Jacques B.

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