

Utility for backing up/archiving to DVD-R? [REPOST]

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From: John Stumbles (*postmaster_at_127.0.0.1*)

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[Sorry for repost*]

I'm looking for ways to back up and archive data to DVD-R and CD-R[W]. I have more data (including 10s of Gigs of audio and digicam files) than will fit on a single DVD-R, so they need to be split over multiple disks. The data keeps growing :-)) but since DVD-R doesn't seem to support multisession in the way that CD-R does (haven't tried with DVD+R yet) it might be better to make incremental backups to CD-RWs until there are enough to fill another DVD-R (could do that bit manually).

I would prefer the data on the DVDs/CDs to be plain files so they can be extracted or accessed directly from the disks without the use of any special restore tools. (I could live with having to look up the name(s) of the file(s) I want from a table[1]).

I also want to record the state of (all or part of) the filesystem I'm backing up so that I can restore it (using some special restore tool) to a given state (probably the state at the last backup, but possibly the state at the backup before the disastrous oops which silently corrupted half the files :-))

I'd like the system to be automatic (e.g. run from cron) so the backups do get done. I accept that I may have to manually put blank disks into the drive :-))

A quick STFW throws up [dar tp://dar.linux.free.fr/](http://dar.linux.free.fr/)
Does anyone have any experience of this, or other tools they can suggest?

Also for some of the data sets I want to be able to make separate copies on DVDs or CDs, which will also have to be split over multiple disks. These I want to be snapshots of their source filesystems (I want to have copies on DVD of pictures etc from the home machine that I can take with my laptop). Since the main backup/archiving tool will also have to be able to split files over multiple disks it seems sensible to divide the tools into:

comp.os.linux.misc: Utility for backing up/archiving to DVD-R? [REPOST]

- a) one for divvying up files into groups to fit onto given-size disks, and keeping track of which have to go onto each next disk
- b) another tool for keeping track of the filesystem(s) to be backed up and deciding which files need to be archived and what metadata needs to be saved to allow restoration of the filesystem.

I'd also like some way of doing a 'bare metal' (as I believe it's called) backup/restore of my machine (SuSE 9.1). What I'm after here is that if I do something silly and, say, trash the partition table or MBR on the machine, then I could restore it. Also that if (or when) the HDD dies I can restore to a new drive (though some of the partition sizes would probably have to be different).

Apart from the actual files needed to put back to the / partition I'd need copies of the partition table and perhaps boot sector, and tools for partitioning and setting up the boot manager (e.g. grub) all on a bootable DVD. The flexibility to restore to different partitions (editing /etc/fstab etc as one restores) would be nice, too.

Again, can anyone suggest appropriate tools that already exist for this?

[1] Thinking of how I might implement such a utility myself I was considering taking the MD5 of each file as it is stored on the DVD so that if/when I move files around between directories the archiver only needs to recognise that the file is the same as the one it has already archived and record its new location. One could use the MD5s as filenames. Then to retrieve a particular file you'd look at a table e.g.

/foo/bar/able	f683b5345259951a2f700019fd086e8a
/foo/bar/baker	659a76bd33cc704480f11c81d225a7db

... etc...

(of course you'd also want to record to u/gid, mode, c/m/atime etc for each file)

[* I seem to have had finger trouble with the newsgroups line in the original: it shows up in groups.google but not on either of my newsservers (ntlworld and news.individual.net), so I'm guessing many/most readers won't have seen it either.]