NAME

mondoarchive – a backup / disaster–recovery tool.

SYNOPSIS

mondoarchive –O [*options*] : backup your PC
mondoarchive –V [*options*] : verify your backup

DESCRIPTION

mondoarchive backs up a subset of your files, your entire filesystem, or even images of non-Linux filesystems to CD's, tape, ISO images or an NFS mount. In the event of catastrophic data loss, you will be able to restore everything, taking a PC from bare metal to its original state if necessary.

With **–O**, it backs up your filesystem to CD, tape, ISO images or NFS share. Boot media or a special boot CD will be created to allow you to restore from bare metal if necessary.

With **–V**, it verifies the backup against the live filesystem. This option may be used in combination with **–O** to verify a backup after its creation, or on its own to see how much the live filesystem has changed since the backup was made.

Call mondoarchive **without flags** to make it auto-detect as many settings as possible, ask you politely for the rest, and then backup and verify your OS or a subset thereof.

To restore data, either run *mondorestore* from the command line or boot from the emergency media generated during the backup process. The latter will come in handy if a gremlin wipes your hard disk.

BACKUP MEDIA

You must specify one of the following:-

–c *speed*
Use CD-R drive as backup device and its (write-once) disks as backup media.

–w *speed*
Use CD-RW drive as backup device and its (write/rewrite) disks as backup media. Mondo will wipe media before writing to them.

–r
Use DVD drive as backup device and its disks as backup media. Growisofs decides on the best speed for your drive. Note that calling mondoarchive **using sudo when writing to DVDs will fail** because growisofs does not support this – see the growisofs manpage for details.

–C *speed*
Use CD-R drive as a streaming device, almost like a tape streamer. Use write-once disks as backup media. **Experimental.**

–p *prefix*
Use **prefix** to generate the name of your ISO images. By default, mondoarchive names images mondorescue-1.iso, mondorescue-2.iso, ... Using **–p machine** will name your images machine-1.iso, machine-2.iso, ...

–i
Use ISO files (CD images) as backup media. This is good for backing up your system to a spare hard drive. The **–n** switch is a wiser choice if you plan to restore from a remote filesystem.

−n *mount* Use files residing on a remote share as backup media. *mount* is the remote mount-point, e.g. 'nfs://192.168.1.3/home/nfs' for my file server. If not mounted, mondoarchive will do it for you. So nice ;-) If your NFS server only accept write from a backup user, you may specify it with the syntax: **nfs://user@machine/mount/path** and mondoarchive will try to do its best to support it. Other protocols are available such as sshfs for fuse SSH based filesystem mount, with the same syntax e.g. 'sshfs://user@192.168.1.3/home/nfs' and smbfs (aka cifs) for SaMBa or Windows based filesystem mount.

−t Use tape streamer as backup device and its tapes as backup media.

−U Use a generic USB device as backup device. Use this if you want to write your backup to a USB key or USB disk, which will be make bootable. The USB device should be attached to the system in order for this to work and its device name passed to the **−d** option. Do not use the partition name, but the raw device name (/dev/sda e.g.) **WARNING: All the data on the related device will be removed.**

−u Use a generic streaming device as backup device. Use this if you want to write your backup to a device that is not directly support by mondoarchive. This will send the data directly to a raw device. **For experienced users only.**

MAJOR OPTIONS

−D Make a differential backup: examine the filesystem and find which files have changed since the last full backup was carried out. Backup only those files.

−E "*dir*|..." Exclude dir(s) from backup. The dirs should be separated with a pipe and surrounded by quotes. This is the prefered and recommended option when doing partial archiving. Note that mondo automatically excludes removable media (/mnt/floppy, /mnt/cdrom, /proc, /sys, /run, /tmp). For example, if you are backing up to an NFS mount but you do not want to include the contents of the mount in a backup, exclude your local mount-point with this switch. It will also work with partitions, e.g. /dev/sdd4 if you have a peculiar SCSI zip drive which insists on showing up in the mountlist. NB: If you exclude /dev/sdd4 then the /dev entry itself will still be backed up, even though the mountlist entry will be suppressed. N.B.: If you specify a directory with a final / its content will be archived so it won't do what you expect. You may also specify full disk device to this option as with −E "/dev/sda|/dev/cciss/c0d0" N.B.: If for example you have a disk /dev/mapper/vgsan-lvdir mounted on a /mnt mountpoint excluding the /dev/mapper/vgsan-lvdir device prevents mondorestore to touch the LVM structure of this device at restore time (no pv|vg|lvcreate will occur). However, if you exclude the mount point /mnt, the LVM structure will be recreated at restore time. ALL DATA WILL THEN BE LOST ON THIS DEVICE. Use what is required for your configuration.

−I "*dir*|..." Include dirs(s) in backup. The dirs should be separated with a pipe and surrounded by quotes. This option is mainly used to perform tests in order to reduce the time taken by the archiving operation. The default backup dir is "/" but you may specify alternatives, e.g. −I "/home|/etc" to override that. You may also specify full disk device to this option as with −I "/dev/sda|/dev/cciss/c0d0" N.B.: When using the **−I** option with the **−E** option, the −E content should be subdirectories of those mentioned in the −I only, as −I takes precedence.

−J *file* Specify an explicit list of files and directories to include in a plain text file, one item (file or directory) per line. Beware that directories placed in that file are not managed recursively contrary to what is done with the −I option.

−N Exclude all mounted network filesystems. This currently means NFS, SMB, Coda, MVFS, AFS OCFS and Netware. In other words, only backup the local hard disk(s).

−d *dev|dir* Specify the backup device (CD/tape/USB) or directory (NFS/ISO). For CD-R[W] drives, this is the SCSI node where the drive may be found, e.g. '0,1,0'. For tape users, this is the tape streamers /dev entry, e.g. '/dev/st0'. For USB users, this is the device name of your key or external disk. For ISO users, this is the directory where the ISO images are stored. For NFS users, this is the subdirectory under the NFS mount where the backups are stored. The default for ISO and NFS is '/var/cache/mondo'.

−g GUI mode. Without this switch, the screen output of mondoarchive is suitable for processing by an 'expect' wrapper, enabling the user to backup nightly via a cron job. However, if you want to run this program with an attractive but non-cron-friendly interface then use '−g'.

−k *path* Full path name of the kernel to use. Generally your native kernel should be found and work appropriately. Otherwise, you may use this option to point to another one. E.g. '−k /boot/myvmlinuz'.

−m Manual (not self-retracting) CD trays are often found on laptops. If you are a laptop user, your CD burner has BurnProof technology or you experience problems with mondo then please call mondoarchive with this switch.

−o Use OBDR (One Button Disaster Recovery) type of tapes. By default, tapes are not bootable. With this flag, tape will be made bootable following the OBDR format.

−s *size* How much can each of your backup media hold? You may use 'm' and 'g' on the end of the number, e.g. '700m' for an extra-large CD-R. You no longer need to specify the size of your cartridges if you are backing up to tape.

−x *'dev ...'* Specify non-Linux partitions which you want to backup, e.g. NTFS or BeOS.

MINOR OPTIONS

−[0-9] Specify the compression level. Default is 3. No compression is 0.

−A *command* This command will be called after each CD/NFS/ISO file is written. It is useful if you want to do something with an ISO after creating it, e.g. write it to a CD burner using a non-standard command. **−A** understands two tokens − _ISO_ and _CD#_ - which will be translated into the ISO's filename and its index number (1, 2, ...) respectively. So, you could use *−A 'foobackup _ISO_; rm −f _ISO_'* to feed each ISO to some magical new backup tool.

-B *command* This command will be called before each CD/NFS/ISO file is written. See **−A** for more information.

−F Do not retry when a command failed but just exits. This is useful for an automated mode launched from cron where you want to avoid filling your logs due to an answer which is impossible to give.

−G Use gzip, the standard and quicker Linux compression engine, instead of bzip2.

−H When you boot from the tape/CD, your hard drive will be wiped and the archives will be restored. Your decision to boot from the tape/CD will be taken as consent. No further permission will be sought. **Use with caution.**

−L Use lzo, a fast compression engine, instead of bzip2. You may find lzo on Mondo's website or via FreshMeat. WARNING! Some versions of LZO are unstable.

−M *max-size* Gives the maximum size of a biggie file (by default 64 MB). The value should be given in kB. Example use −M 128000 to have biggie being more than 128 MB.

−Y Use lzma, the new quicker and optimized Linux compression engine, instead of bzip2.

−R Star is an alternative to afio. Can be useful for distributions considering that afio is not free enough due to its age and old licenses (wrongly in our opinion). Star can be used to have a better support of sparse file compared to afio. Also star supports natively POSIX ACLs, whereas afio requires a special additional handlling.

−P *tarball* Post-nuke tarball. If you boot into Nuke Mode and everything is restored successfully then the *post-nuke* script will be sought and executed if found. This is useful for post-restore customization. It is assumed that the tarball (.tar.gz format) will contain not just the *post-nuke* script (or binary, or whatever it is) but also any files it requires.

−S *path* Specify the full pathname of the scratchdir, the directory where ISO images are built before being archived. If you have plenty of RAM and want to use a ramdisk for scratch space, specify its path here.

−T *path* Specify the full pathname of the tempdir, the directory where temporary files (other than ISO images being assembled) are stored. See **−S**

−W Don't make your backup self-booting. This is a really bad idea, IMO. Don't do this unless you have really great boot disks in your hand and you are an anally retentive SOB who can't wait 2 minutes for Mindi to run in the background. If you use −W then you'd better know what the hell you're doing, okay?

−b Specify the internal block size used by the tape drive. This is usually 32K but some drives just don't like that. They should but they don't. That's what happens when tape drive vendors don't talk to kernel driver writers. Try 512 or 16384.

−e Don't eject the CD or tape when backing up...

−f *device* Specify the drive on which your Master Boot Record lives. Usually, this is discovered automatically. A good use case may be when you have software RAID.

−l *GRUB|LILO|ELILO|RAW*
Specify the boot loader. By default, your environment is examined and the boot loader can usually be discovered. If you specify RAW then the MBR will be backed up and restored byte-for-byte without any analysis. It is likely that you will also need to specify the boot

device with −f <dev>. ELILO is mandatory for IA64 machines. GRUB is mandatory for now for UEFI systems.

−Q Give more detailed information about the boot loader.

−K *loglevel* Specify the loglevel. Use 99 for full debug. Standard debug level is 4.

−v Gives mondoarchive version.

−z Use extended attributes and acl for each file and store them in the backup media. Use this option if you use SElinux e.g. but it will slow down backup and restore time of course.

DIAGNOSTICS

Mondo generates one additional, and extremely important file: **/var/log/mondoarchive.log.** When seeking technical support, attach this file to your email.

FILES

/var/log/mondoarchive.log This log contains important information required to analyse mondoarchive problem reports. Did I already said that it's highly recommended to send this file with support questions.

ENVIRONMENT VARIABLES

ARCH This variable is passed to the environment by mondoarchive so that other tools are aware of the underlying hardware architecture.

MONDO_SHARE This variable is passed to the environment by mondoarchive so that mindi is aware that it's called from it and act accordingly. It contains the shared directory for the mondo package.

PATH This variable is modified internally by mondoarchive so that /sbin:/usr/sbin:/usr/local/sbin are appended to it systematically in order to find the required tools.

TMPDIR This variable is used, if defined, as the target directory to create all the temporary files needed during the operation (not the scratch files)

MRTMP This variable is used, if defined and if TMPDIR is not defined, as the target directory to create all the temporary files needed during the operation (not the scratch files)

With none of these variables defined, nor the -T option on the CLI then /tmp is used for temporary files.

MRSCRATCH This variable is used, if defined, as the target directory to create all the scratch files needed during the operation such as the archives (not the temp files). If this variable is not defined, /tmp is used for scratch files if using the CLI without -S option specified, and the largest partition available is proposed in the GUI if that one is used.

NOTES

A link to Mondo's HTML-based manual (by Bruno Cornec, Mikael Hultgren, Cafeole, Randy Delphs, Stan Benoit, and Hugo Rabson) may be found at *http://www.mondorescue.org/docs.shtml* − or in */usr/share/doc/mondo-x.xx* on your hard drive.

BUGS

It is recommend that your system has more than 64 MB ram. SCSI device order change with nuke can have unexpected results. It is recommended you use expert mode with drastic hardware reconfigurations.

EXAMPLES

ISO: Backup to a directory; note that /mnt/foo's contents will be backed up except for its ISO's unless you exclude it, as follows:
mondoarchive -Oi -d /mnt/foo -E '/mnt/foo|/mnt/foo2' -p `hostname`-`date +%Y-%m-%d`

Backup to ISO's non-interactively, e.g. as a job running in /etc/cron.daily:
mkdir -p /bkp/`date +%A`; mondoarchive -Oi -9 -d /bkp/`date +%A` -E /bkp

DVD: Backup PC using DVD Media:
mondoarchive -OVr -d /dev/scd0 -gF -s 4480m

TAPE: Backup to tape, using lzo compression (WARNING - can be unstable):
mondoarchive -Ot -d /dev/st0 -L

Verify existing tape backup which was made with lzo compression:-
mondoarchive -Vt -d /dev/st0 -L -g

Backup to tape, using max compression:
mondoarchive -Ot -9 -d /dev/st0

CD-R: Backup to 700MB CD-R disks using a 16x CD burner:
mondoarchive -Oc 16 -s 700m -g

Verify existing CD-R or CD-RW backup (works for either):-
mondoarchive -Vc 16

CD-RW: Backup to 650MB CD-RW disks using a 4x CD ReWriter:
mondoarchive -Ow 4

Backup just your /home and /etc directory to 650MB CD-RW disks using a 4x CD ReWriter:
mondoarchive -Ow 4 -I "/home|/etc"

NFS: Backup to an NFS mount:
mondoarchive -On nfs://192.168.1.2/home/nfs -d /Monday -E /mnt/nfs

Verify existing NFS backup:-
mondoarchive -Vn nfs://192.168.1.2/home/nfs -d /Monday

USB: Backup to your 4GB USB key, using gzip compression:
mondoarchive -OU -d /dev/sda -s 4g -G

RAID: Backup PC to a Software Raid mount point, iso size 700mb:
mondoarchive -O -s 700m -d /mnt/raid

SEE ALSO

afio(1), bzip2(1), find(1), mindi(8), mondorestore(8).

AUTHORS

Bruno Cornec (lead-development) *bruno_at_mondorescue.org*
Andree Leidenfrost (co-developer) *aleidenf_at_bigpond.net.au*

ORIGINAL AUTHORS

Hugo Rabson (original author) *hugo.rabson_at_mondorescue.org*
Jesse Keating (original RPM packager) *hosting_at_j2solutions.net*
Stan Benoit (testing) *troff_at_nakedsoul.org*
Mikael Hultgren (docs) *mikael_hultgren_at_gmx.net*
See mailing list at http://www.mondorescue.org for technical support.