Backup Tools I use

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Tool	Purpose	Difficulty
timeshift	snapshot root for quick recovery	Easy
back in time	easy to use backup for data	Easy
fsarchiver	full image backup encrypted	Advanced
clonezilla	copy drive to image / clone drives	Intermediate

Tool	Purpose	Difficulty
backup gem	daily data backups for all my servers	Advanced

Overview

- I backup about 2TB in total of data.
- I don't use tape backup
- Backups are sent over the internet
- Once a year on USB stored remotely
- All backups are tested

Timeshift

https://github.com/teejee2008/timeshift

Snapshots your root and /home (settings only not data) using either Rsync or Btrfs
https://github.com/teejee2008/timeshift

Installing

```
sudo apt install timeshift
```

Backup

- Snapshot

```
sudo timeshift --create --comments "Before upgrade"
```

- List snapshots

```
sudo timeshift --list
```

Restore

```
sudo timeshift --restore --snapshot '2019-07-04_12-58-23' --target /dev
```

Use cases

- Before upgrading
- Configuring something risky which could break things
- Playing around with GRUB or boot loading

Pros

- Great support
- Easy install & use (backup & restore)
- CLI & GUI installed
- Can browse backups using a standard file manager
- Built in schedule (hourly,daily,weekly,monthly,boot)
- Multiple snapshots can be kept
- Can restore from a LIVE CD / real system

Cons

- ?

back in time

https://backintime.readthedocs.io/en/latest/
https://github.com/bit-team/backintime
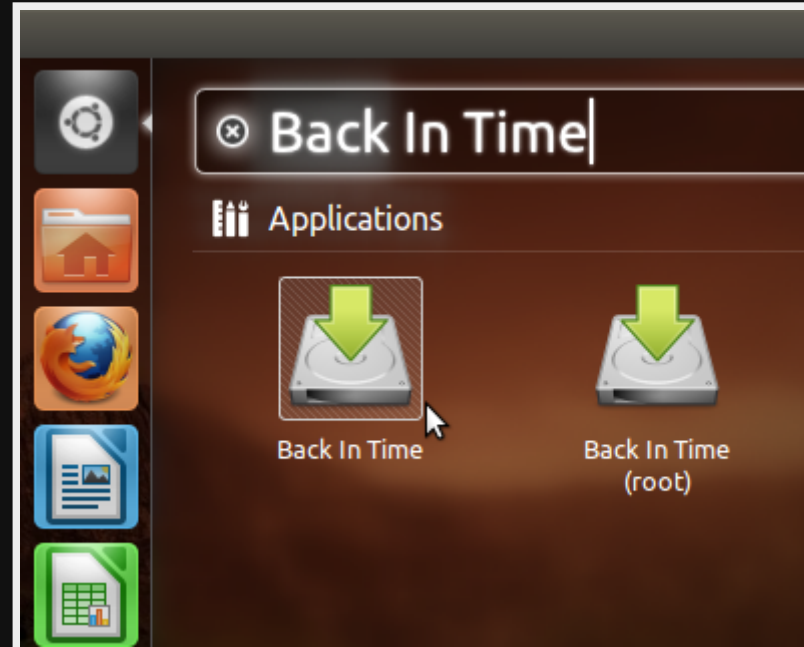
Simple backup solution for backing up data either locally or remotely using rsync.

Installing

```
sudo apt install backintime-gnome
```

Backup

`backintime backup`

Restore

`backintime restore`

Use cases

- Backup/Restore data easily
- Backup remotely
- Keep multiple snapshots of your data

Pros

- Easy setup and management
- CLI for scripts
- Ability to backup remotely
- Quick setup
- Encrypted transfer
- Flexible scheduler (1 per day not a fixed time)

Cons

- No email notification system

clonezilla

https://clonezilla.org/

Disk imaging program (like Norton Ghost).

Installing

Boot from USB / CD. Refer to my USB Multi-boot talk '20190325-usb$_{multiboot.pdf}$'

Backup

1. Boot clonezilla
2. Select device-image
3. Select where you want to store the image (local/ssh/samba/nfs)
4. Select what to save or restore (disk/partition)

Restore

Same procedure as Backup except in step 4 you select you want to restore from image instead of backup to image.

Use cases

- Disk cloning locally
- Backup full system with Grub included
- Mass roll-outs of the same image

Pros

- Supports everything
- Easy to use
- Can script
- Re-installs Grub1,2 & syslinux
- Multicast support for mass roll-outs
- Remote backup support
  (ssh/samba/nfs/webDAV)
- Encryption

Cons

- Have to shutdown machine You should do this anyway when taking an image.
- Destination should be equal or greater in size
- Cannot explore image

fsarchiver

Save filesystems (data only not sector) to a compressed encrypted archive. Images can be restored to a smaller drive.

Installing

```
sudo apt install fsarchiver
```

Backup

```
time fsarchiver savefs -z7 -cpassword -v -A -j12 /media/map7/backup/mi
```

-z7	Compression level 7
-v	Verbose
-A	Live system work off a snapshot
-j12	Use 12 threads

Restore

```
time fsarchiver restfs -c<password> -j<threads> /mnt/archive_name.fsa
```

Use cases

- Backup a full system
- Good for offsite backups

Pros

- Encryption
- Compression
- Multiple filesystem support (Ext2/3/4, xfs, btrfs, reiserfs, FAT, NTFS)
- Continues if corrupted
- Multi-threaded
- Split archives into small sizes
- Can run on a live system

Cons

- Doesn't support FreeBSD UFS2 or ZSH filesystems
- Doesn't install GRUB
- Cannot explore image

backup gem

https://github.com/backup/backup

Backup which is flexible for backing up webservers including databases, etc.

Installing

```
gem install backup
```

Backup

```
backup perform -t mybackup
```

Restore

```
tar xvf mybackup
```

Use cases

- Backup data
- Great for webservers as it has configs for database dumps etc.

Pros

- Easy to setup
- Heaps of notification options
- Can sync
- Compressed
- Encrypted

Cons

- Not good for backup to USB, but who does this nowadays.

Next

- Find/build a backup monitor to validate that backups are running
- Find one tool which does the lot

Must have Features

- Open Source
- Encryption
- Snapshots
- Access to files within the image
- Backup over network
- Easy restore
- Whole system backups
- Data backups
- Linux/FreeBSD/Windows

References

- https://linuxhint.com/11_best_backup_tools_linu

Questions

Email	map7777@gmail.com
Twitter	@map7
Github	github: map7