

# Backup

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# tar

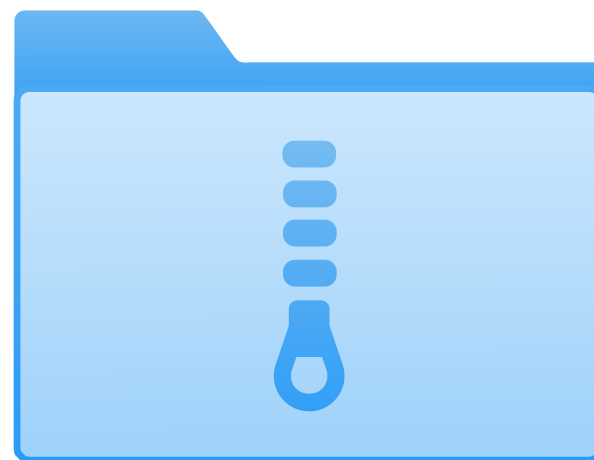


[“3M data cassettes, paper and data archive, Computer History Museum, Mountain View, California, USA”](#) by [Cory Doctorow](#) is licensed under [CC BY-SA 2.0](#)

- Tape Archive
- Oldest format, think zip without compression
- Often uses BSD style options  
`tar xvf`
- Creating a tar file:  
`tar cvf files.tar .`
- Extracting a tar file:  
`tar xvf files.tar`
- Let's take a look

# gzip/bzip2/xz

- Often used to compress a tar file
- Compression ratios  $xz > bzip2 > gzip$
- Do you really need compression?
- Should you be compressing *where* you are compressing?



[“Antu Folder-tar.svg”](#) by [Fabián Alexis](#) is licensed under [CC BY-SA 3.0](#)

The image shows the letters "SSH" in a large, white, sans-serif font, centered on a dark gray rectangular background.

[“Unofficial SSH Logo”](#) by [Jessie Kirk](#) is licensed under [CC BY 4.0](#)

- Transfer files to a remote more securely than FTP
- Can use keys so that you don't have to enter a password
- Can be *slow* especially if you are repeating yourself

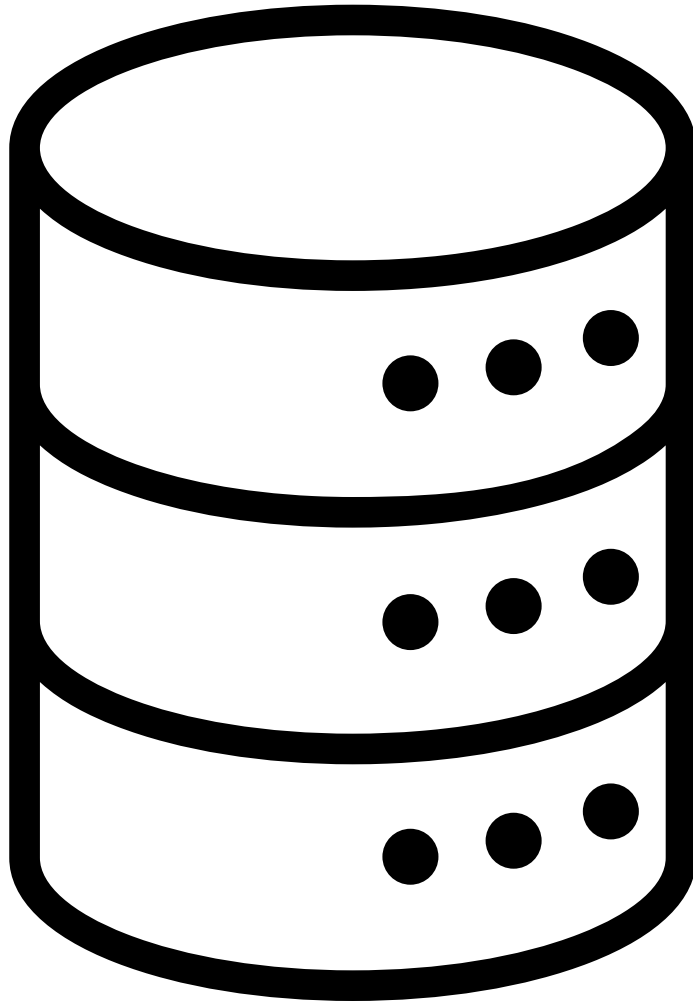
# rsync

- Don't repeat yourself! (DRY)
- If a file is already there and its hash is the same, don't re-upload it
- Typically gets buried in a cronjob or a script so frankly I don't remember all of the options
- [Ten Practical Examples of rsync](#)
- [Interesting improvement: CDC](#)



[rsync Logo](#) is used under fair use

# Databases

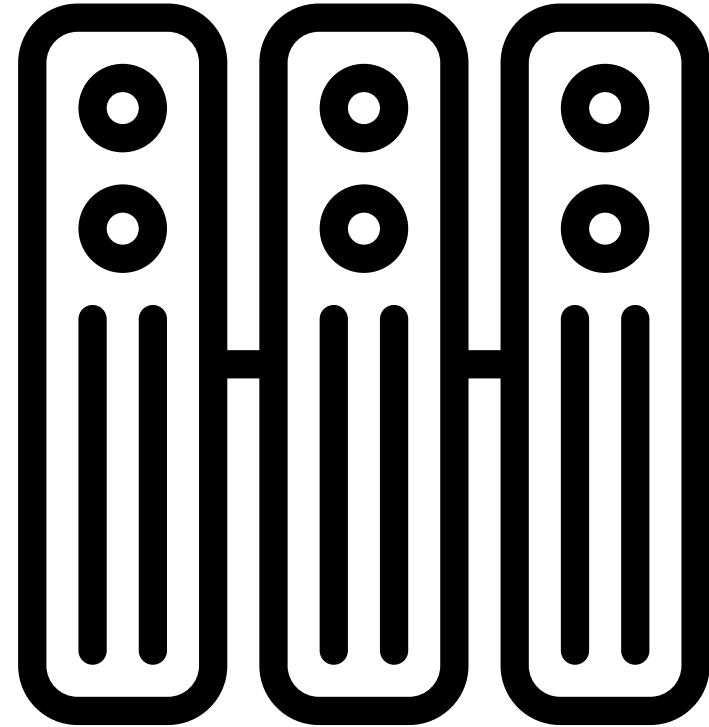


“Database-icon” by [Zahra Ibrahim](#) is licensed under [CC BY-SA 4.0](#)

- Know where your database stores its persistent data (typically it's in the documentation on Docker Hub).
- Some databases use small files, others use large. This can effect your backup strategy.
- Some databases have built-in ways of performing backups (mysqldump)

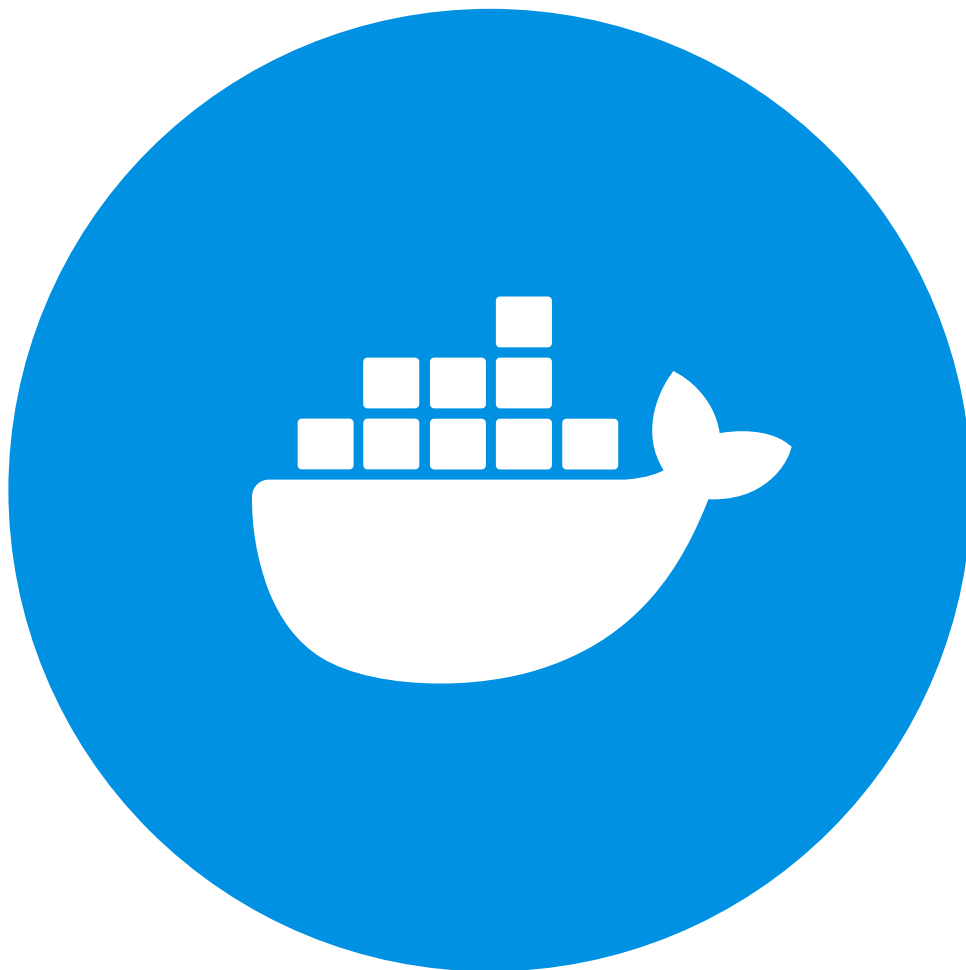
# Network Attached Storage

- RAID is not a backup, I repeat  
RAID IS NOT A BACKUP!
- Some NAS solutions have built-in backup options
- Don't replicate work that has already been done by the vendor, since most backup needs are very similar there is typically already a built solution.



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# Container Volumes



[Docker Logo](#) is in the public domain under [CC0](#)

- Particularly hard to get to because they could be running in a virtual environment.
- Typically we spin up a container with the volume mounted *just* to handle a backup operation:

```
docker run -v myvol:/mnt -v  
"$(pwd):/output" ubuntu tar cf /  
output/files.tar /mnt
```

- On a Linux host, it's a little easier to get at the volumes, they may be part of your regular backup schedule.
- You can also do it from the Docker Desktop GUI!