Backup

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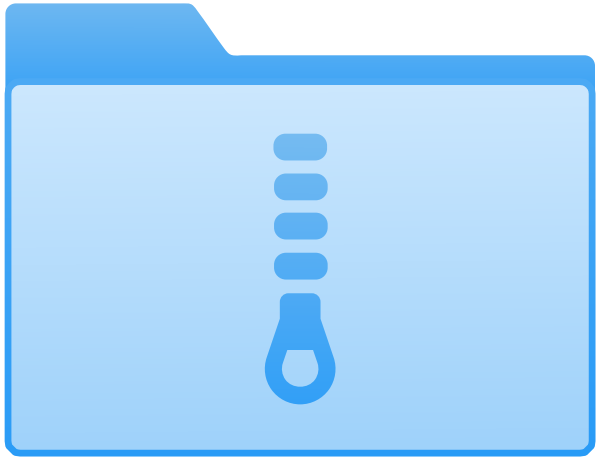
tar

- 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?



scp

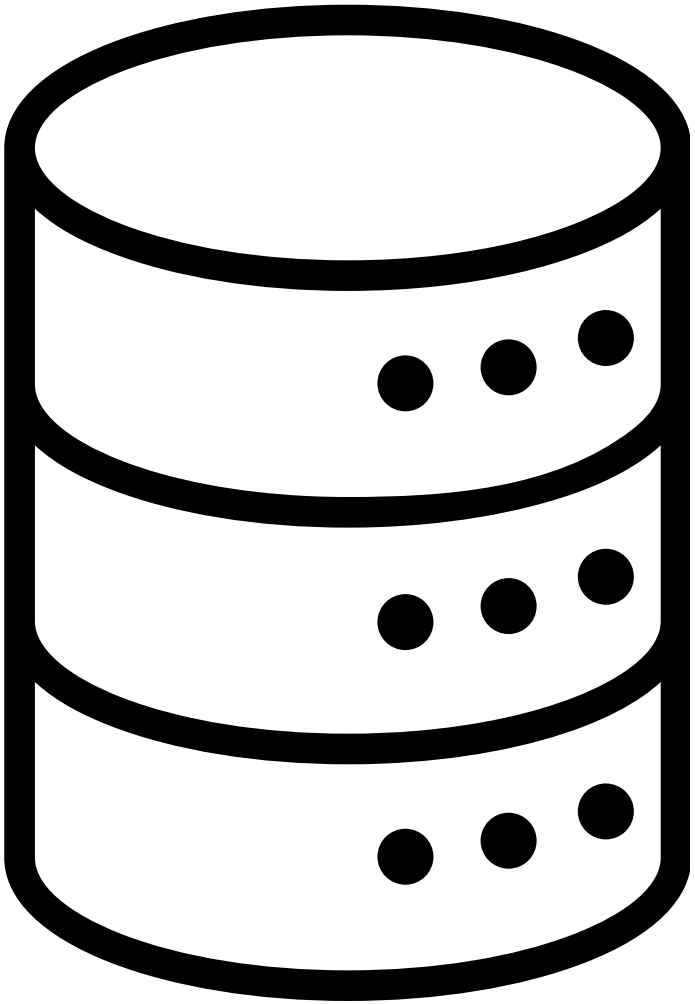
- Transfer files to a remote more securely than FTP
- Can use keys so that you don't have to enter a password
- Can be *slow* especially if you are repeating yourself

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

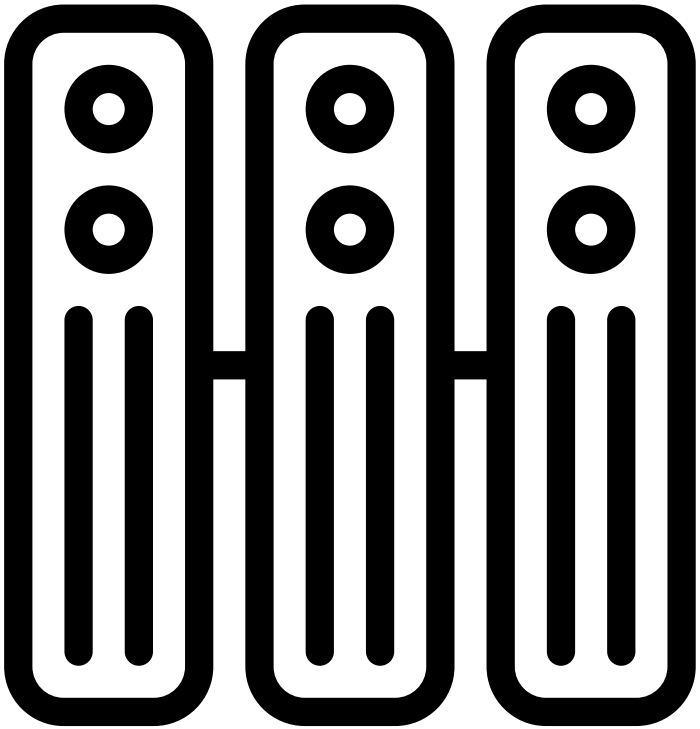
Databases



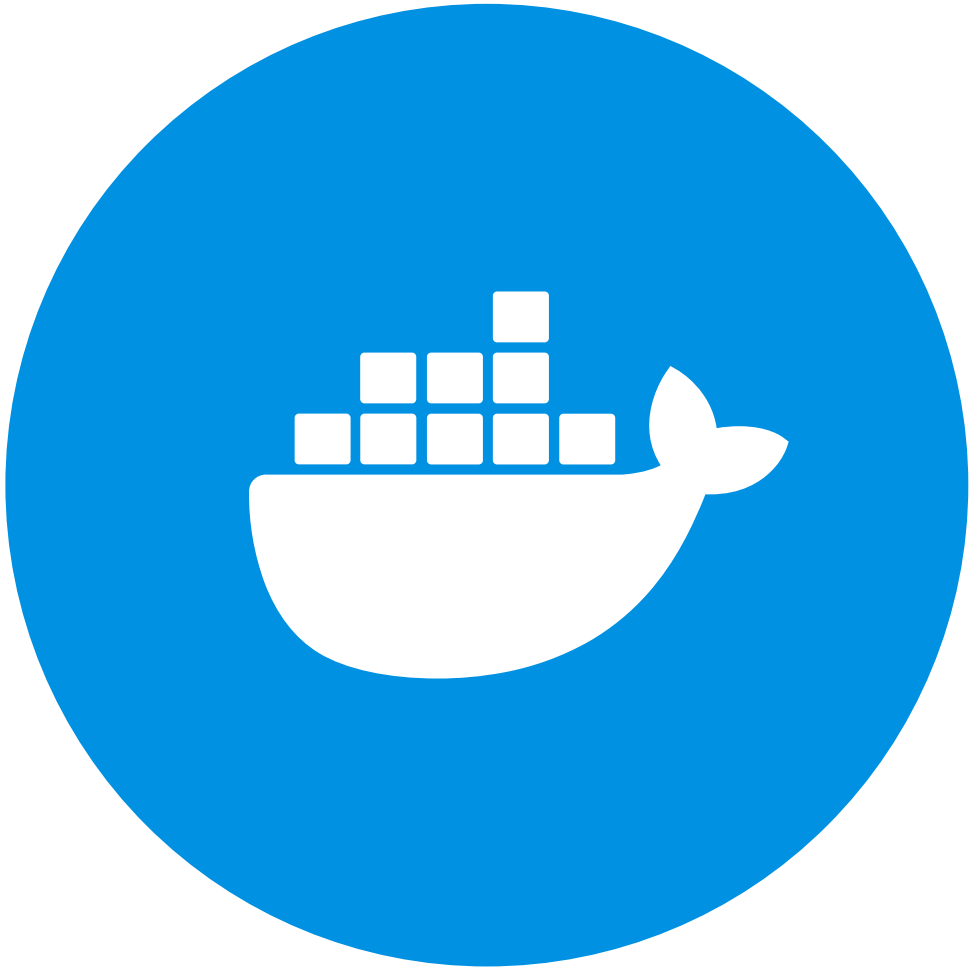
- Know where your database stores its persistent data (typically it's in the documentation on Docker Hub).
- Some databases use small files, others use large. This can effect your backup strategy.
- Some databases have built-in ways of performing backups (mysqldump)

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.



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!