restic Encrypted backups

START HERE

`restic` **`init`**
Create a repository

`restic` **`backup`** *`<path>`*
Take a snapshot

`restic` **`snapshots`**
List snapshots

`restic` **`restore latest --target`** *`<dir>`*
Restore newest

`restic` **`forget --keep-daily 7 --prune`**
Apply retention

`restic` **`check`**
Verify repository

`restic` **`mount`** *`<dir>`*
Browse as files

`restic` **`unlock`**
Clear stale locks

Files your data → `backup` → **Snapshot** deduplicated, encrypted → `forget` → **Unreferenced data** still in repo → `prune` → **Space freed** repo shrinks

CONCEPTS

Set RESTIC_REPOSITORY and RESTIC_PASSWORD_FILE once, then every command works without -r.

Every snapshot is a full view, but identical chunks are stored once, so repeated backups are small and fast.

Lose the password and the data is gone: there is no recovery. Store it separately from the repo.

REPOSITORY

`restic` **`init`**
Create a new repository

`restic` **`-r`** *`<repo>`* *`<command>`*
Select a repository for one command

`export RESTIC_REPOSITORY=`*`<repo>`*
Set the default repository

`export RESTIC_PASSWORD_FILE=`*`<file>`*
Read the password from a file

`--password-command "`*`<cmd>`***`"`**
Get the password from a command

`restic` **`-r sftp:`***`<user>`***`@`***`<host>`***`:`***`<path>`** **`init`**
Repository over SFTP

`restic` **`-r s3:https://`***`<host>`***`/`***`<bucket>`** **`init`**
S3-compatible repository
Needs AWS_ACCESS_KEY_ID and AWS_SECRET_ACCESS_KEY in the environment.

`restic` **`-r rest:https://`***`<host>`***`:8000/ init`**
Repository on a REST server

`restic` **`-r rclone:`***`<remote>`***`:`***`<path>`** **`init`**
Any backend via rclone

`restic` **`key list`**
List repository passwords

BACKUP

`restic` **`backup`** *`<path>`***`...`**
Back up paths into a new snapshot

`restic` **`backup -n -v`** *`<path>`*
Dry run, show what would be added

BACKUP (cont.)

`restic` **`backup --exclude "`***`<pattern>`***`"`** *`<path>`*
Skip matching files

`restic` **`backup --exclude-file`** *`<file>`* *`<path>`*
Read exclude patterns from a file

`restic` **`backup --tag`** *`<tag>`* *`<path>`*
Label the snapshot

`restic` **`backup --one-file-system`** *`<path>`*
Stay on one filesystem

`restic` **`backup --exclude-caches`** *`<path>`*
Skip dirs marked CACHEDIR.TAG

`restic` **`backup --exclude-larger-than 1G`** *`<path>`*
Skip big files

`restic` **`backup --files-from`** *`<file>`*
Read the path list from a file

`restic` **`backup --skip-if-unchanged`** *`<path>`*
No new snapshot if nothing changed

SNAPSHOTS

`restic` **`snapshots`**
List snapshots

`restic` **`snapshots --tag`** *`<tag>`*
Filter by tag

`restic` **`snapshots --host`** *`<host>`* **`--path`** *`<path>`*
Filter by host and path

`restic` **`ls latest`**
List files in a snapshot

`restic` **`ls -l latest`** *`<dir>`*
Long listing of one directory

`restic` **`find`** *`<pattern>`*
Search all snapshots for a file

`restic` **`diff`** *`<id1>`* *`<id2>`*
Compare two snapshots

`restic` **`stats`**
Show restore size

`restic` **`stats --mode raw-data`**
Show actual repo size

`restic` **`tag --add`** *`<tag>`* *`<id>`*
Add a tag to a snapshot

`restic` **`forget`** *`<id>`*
Remove one snapshot

RESTORE

`restic` **`restore`** *`<id>`* **`--target`** *`<dir>`*
Restore a snapshot

`restic` **`restore latest --target`** *`<dir>`*
Restore the newest snapshot

`restic` **`restore latest --host`** *`<host>`* **`--path`** *`<path>`* **`--target`** *`<dir>`*
Newest for a host and path
--path only picks the snapshot, it does not limit what is restored.

`restic` **`restore latest:`***`<subdir>`* **`--target`** *`<dir>`*
Restore only one subfolder

`restic` **`restore`** *`<id>`* **`--include "`***`<path>`***`" --target`** *`<dir>`*
Restore only matching files

`restic` **`restore`** *`<id>`* **`--exclude "`***`<path>`***`" --target`** *`<dir>`*
Restore all but matching files

`restic` **`restore`** *`<id>`* **`--dry-run -vv --target`** *`<dir>`*
Preview a restore

`restic` **`dump latest`** *`<file>`*
Print one file to stdout

`restic` **`mount`** *`<dir>`*
Mount the repo via FUSE
Linux needs fuse and fusermount; the mountpoint must be outside the repository.

`fusermount -u` *`<dir>`*
Unmount (or press Ctrl+C)

RETENTION

`restic` **`forget --keep-last`** *`<n>`*
Keep the n newest snapshots

`restic` **`forget --keep-daily`** *`<n>`* **`--keep-weekly`** *`<n>`* **`--keep-monthly`** *`<n>`*
Tiered retention policy

`restic` **`forget --keep-yearly`** *`<n>`*
Keep one per year

`restic` **`forget --keep-within 30d`**
Keep everything of recent days

`restic` **`forget --keep-tag`** *`<tag>`*
Never remove tagged snapshots

RETENTION (cont.)

`restic` **`forget --dry-run`** *`<keep-flags>`*
Preview what would be removed

`restic` **`forget --prune`** *`<keep-flags>`*
Forget and reclaim space

`restic` **`forget --host`** *`<host>`* **`--tag`** *`<tag>`* *`<keep-flags>`*
Limit policy to a subset

`restic` **`prune`**
Delete unreferenced data

`restic` **`prune --dry-run`**
Preview prune

MAINTENANCE

`restic` **`check`**
Verify repo structure

`restic` **`check --read-data`**
Read and verify all pack data
Slow and downloads everything on remote backends.

`restic` **`check --read-data-subset 10%`**
Verify a random share of data

`restic` **`unlock`**
Remove stale locks

`restic` **`copy --from-repo`** *`<src>`* *`<id>`*
Copy snapshots to another repo

`restic` **`version`**
Show version

OPTIONS AND ENVIRONMENT

`--json`
Machine-readable output

`-q / -v`
Quieter or more verbose output

`RESTIC_PASSWORD`
Password in the environment
Visible to other processes of the same user; prefer a password file.

`AWS_ACCESS_KEY_ID / AWS_SECRET_ACCESS_KEY`
S3 credentials

RECIPES

Back up a database dump

```
pg_dump <db> | restic backup --
stdin \
  --stdin-filename <db>.sql --
tag db
restic dump latest <db>.sql |
psql <db>
```