Rsync Cheatsheet

A comprehensive cheat sheet covering essential Rsync commands, options, and use cases for efficient file synchronization and backup.

Basic Usage

Core Syntax

`rsync [OPTION...] SRC... DEST` - Basic syntax for rsync command.

Local:

`rsync [OPTION...] SRC... DEST`

Remote:

Push: `rsync [OPTION...] SRC... [USER@]HOST:DEST`

Pull: `rsync [OPTION...] [USER@]HOST:SRC... DEST`

Basic Examples

Syncing a local folder to another local folder:

`rsync -avz ./source_folder /destination_folder`

Syncing a local folder to a remote folder (push):

`rsync -avz ./source_folder user@remote_host:/remote_destination`

Syncing a remote folder to a local folder (pull):

`rsync -avz user@remote_host:/remote_source ./local_destination`

Syncing the *contents* of a source directory:

`rsync -avz ./source_folder/ /destination_folder`

Note the trailing slash on the source.

Important Notes

Trailing slash `/` matters! Use `/source/` to sync content *within* `source`, and `/source` to sync the directory `source` itself.

`-a` implies `-r` (recursive), but be mindful of symlinks. If you don't want to follow symlinks, use `-l` to copy them as links.

Essential Options

Transfer Options

Option	Description
`-z, --compress`	Enable compression during transfer to reduce bandwidth usage.
`--partial`	Allows resuming of aborted syncs, useful for large files or unreliable connections.
`--bwlimit=RATE`	Limits socket I/O bandwidth to a specified RATE in KB/s. Example: `--bwlimit=200`
`--rsync-path=PATH`	Tells rsync to execute from a specific path, useful if rsync isn't in the system's default path.

Display Options

Option	Description
`-q, --quiet`	Suppress non-error messages.
`-v, --verbose`	Increase verbosity. Use `-vv` or `-vvv` for even more details.
`--stats`	Show file transfer stats.
`-h, --human-readable`	Output numbers in a human-readable format.
`--progress`	Show progress during transfer.
`-P`	Equivalent to `--partial --progress`

Advanced Options

Skipping and Filtering

`-u, --update`	Skip files that are newer on the destination.
`-c, --checksum`	Skip files based on checksum, not modification time and size.
`--exclude=PATTERN`	Exclude files matching the specified pattern.
`--include=PATTERN`	Include files matching the specified pattern (overrides exclude).
`--exclude-from=FILE`	Read exclude patterns from FILE.
`--include-from=FILE`	Read include patterns from FILE.
`--files-from=FILE`	Read list of filenames from FILE to transfer.
`-C, --cvs-exclude`	Exclude files that would be excluded by CVS (from local/global `.cvsignore` files).

Deletion Options

`--delete`	Delete extraneous files from the destination directory. Use with caution!
`--delete-before`	Deletion happens before transfer.
`--delete-after`	Deletion happens after transfer. This is the default.
`--delete-during`	Deletion happens during transfer (less efficient).
`--delete-delay`	Find deletions during, defer until after.

Backup Options

`-b, --backup`	Backup with suffix.
`--suffix=SUFFIX`	Backup suffix (default `~` if `--backup-dir` not specified).
`--backup-dir=DIR`	Make backups into hierarchy under DIR.
`--link-dest=DIR`	Hardlink to files in DIR when unchanged.

Archive and Security

Archive Options

`-a, --archive`	Archive mode; equals `-rlptgoD` (no `-H,-A,-X`).
`-r, --recursive`	Recurse into directories.
`-l, --links`	Copy symlinks as links.
`-p, --perms`	Preserve permissions.
`-t, --times`	Preserve modification times.
`-g, --group`	Preserve group.
`-o, --owner`	Preserve owner (super-user only).
`-D`	Preserve devices and special files.

Security Options

`--numeric-ids`	Don't map uid/gid values by user/group name.
`--no-implied-dirs`	Don't send implied directories with `--recursive`.
`--fake-super`	Store/recover privileged attrs using a fake super account.

OSX Specific Exclusions

Common exclusions for macOS systems:
`--exclude '.Trashes'`
`--exclude '.Spotlight-V100'`
`--exclude '.fseventsd'`