chown Cheatsheet

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Quick reference for changing file and directory ownership with chown in Linux

chown changes file and directory ownership in Linux. This cheatsheet covers user and group changes, recursive ownership updates, common patterns, and safe usage.

Basic Syntax

Use these core command forms for `chown`.

`chown USER FILE`	Change file owner
`chown USER:GROUP FILE`	Change owner and group
`chown :GROUP FILE`	Change group only
`chown USER: FILE`	Change owner and set group to user's login group
`chown --reference=REF FILE`	Copy owner and group from another file

Common Examples

Common ownership changes for files and directories.

`chown root file.txt`	Set owner to `root`
`chown www-data:www-data /var/www/index.html`	Set owner and group for a web file
`sudo chown $USER:$USER file.txt`	Return ownership to current user
`chown :developers app.log`	Change group only
`chown --reference=source.txt target.txt`	Match ownership of another file

Recursive Changes

Apply ownership updates to full directory trees.

`chown -R USER:GROUP /path`	Recursively change owner and group
`chown -R USER /path`	Recursively change owner only
`chown -R :GROUP /path`	Recursively change group only
`chown -R -h USER:GROUP /path`	Change symlink ownership itself during recursion
`chown -R --from=OLDUSER:OLDGROUP NEWUSER:NEWGROUP /path`	Change only matching current ownership

Symlinks and Traversal

Control how `chown` treats symbolic links.

`chown USER:GROUP symlink`	Change target by default
`chown -h USER:GROUP symlink`	Change symlink itself (not target)
`chown -R -H USER:GROUP /path`	Follow symlink command-line args to directories
`chown -R -L USER:GROUP /path`	Follow all directory symlinks
`chown -R -P USER:GROUP /path`	Never follow symlinks (default)

Safe Patterns

Use these patterns to avoid ownership mistakes.

`chown --from=root root:root /path/file`	Change only if current owner matches
`find /path -user olduser -exec chown newuser {} +`	Target only files owned by one user
`find /path -group oldgroup -exec chown :newgroup {} +`	Target only one group
`ls -l /path/file`	Verify ownership before and after changes
`id username`	Confirm user and group names exist

Common Errors

Quick checks when ownership changes fail.

`Operation not permitted`	You need root privileges; run with `sudo`
`invalid user`	Verify user exists with `getent passwd username`
`invalid group`	Verify group exists with `getent group groupname`
`Changes did not apply recursively`	Confirm `-R` was used
`Access still denied after chown`	Check permission bits with `ls -l` and ACLs

Related Guides

Use these guides for full ownership and permissions workflows.

Chown Command in Linux	Full chown guide with examples
chgrp Command in Linux	Change file group ownership
How to Change File Permissions in Linux (chmod command)	Update permission bits
Understanding Linux File Permissions	Ownership and permission model
How to List Groups in Linux	Check group membership and IDs