SCP Cheatsheet

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Quick reference for secure file transfer with scp over SSH

SCP (Secure Copy) transfers files and directories between systems over SSH. This cheatsheet covers common scp commands for uploads, downloads, recursive copies, ports, keys, and useful options.

Basic Syntax

Use this general form for `scp` commands.

`scp SOURCE DEST`	General `scp` syntax
`scp file.txt user@host:/path/`	Copy local file to remote
`scp user@host:/path/file.txt .`	Copy remote file to current directory
`scp user@host:/path/file.txt /local/path/`	Copy remote file to local directory

Upload Files

Copy local files to a remote host.

`scp file.txt user@host:/tmp/`	Upload one file
`scp file1 file2 user@host:/tmp/`	Upload multiple files
`scp *.log user@host:/var/log/archive/`	Upload matching files
`scp -p file.txt user@host:/tmp/`	Preserve modification times and mode

Download Files

Copy files from a remote host to your local system.

`scp user@host:/tmp/file.txt .`	Download to current directory
`scp user@host:/tmp/file.txt ~/Downloads/`	Download to specific directory
`scp user@host:'/var/log/*.log' .`	Download remote wildcard (quoted)
`scp user@host:/tmp/file.txt ./new-name.txt`	Download and rename locally

Copy Directories

Use `-r` for recursive directory transfers.

`scp -r dir/ user@host:/tmp/`	Upload directory recursively
`scp -r user@host:/var/www/ ./backup/`	Download directory recursively
`scp -r dir1 dir2 user@host:/tmp/`	Upload multiple directories
`scp -rp project/ user@host:/srv/`	Recursive copy and preserve attributes

Ports, Keys, and Identity

Connect with custom SSH settings.

`scp -P 2222 file.txt user@host:/tmp/`	Use custom SSH port
`scp -i ~/.ssh/id_ed25519 file.txt user@host:/tmp/`	Use specific private key
`scp -o IdentityFile=~/.ssh/id_ed25519 file.txt user@host:/tmp/`	Set key with `-o` option
`scp -o StrictHostKeyChecking=yes file.txt user@host:/tmp/`	Enforce host key verification

Performance and Reliability

Tune speed, verbosity, and resilience.

`scp -C large-file.iso user@host:/tmp/`	Enable compression
`scp -l 8000 file.txt user@host:/tmp/`	Limit bandwidth (Kbit/s)
`scp -v file.txt user@host:/tmp/`	Verbose output for debugging
`scp -q file.txt user@host:/tmp/`	Quiet mode
`scp -o ConnectTimeout=10 file.txt user@host:/tmp/`	Set connection timeout

Remote to Remote Copy

Transfer files between two remote hosts.

`scp user1@host1:/path/file user2@host2:/path/`	Copy between remote hosts
`scp -3 user1@host1:/path/file user2@host2:/path/`	Route transfer through local host
`scp -P 2222 user1@host1:/path/file user2@host2:/path/`	Use custom port (applies to both hosts)

Common Patterns

Frequently used command combinations.

`scp -r ./site user@host:/var/www/`	Deploy static site files
`scp -i ~/.ssh/id_ed25519 -P 2222 backup.sql user@host:/tmp/`	Upload with key and custom port
`scp user@host:/etc/nginx/nginx.conf ./`	Pull config for review
`scp -rp ./configs user@host:/etc/myapp/`	Copy configs and keep metadata

Troubleshooting

`Permission denied`	Verify user has write access to the destination path
`Host key verification failed`	`ssh-keygen -R hostname` to remove old key, then retry
`Connection refused on custom port`	`scp -P PORT file user@host:/path/` (uppercase `-P`)
`Transfer stalls or times out`	`scp -o ConnectTimeout=10 -o ServerAliveInterval=15 file user@host:/path/`
`Not a regular file error`	Add `-r` for directories: `scp -r dir/ user@host:/path/`
`Protocol error on OpenSSH 9.0+`	`scp -O file user@host:/path/` to use legacy SCP protocol
`Debug connection issues`	`scp -v file user@host:/path/` for verbose SSH output

Related Guides

Use these articles for detailed file transfer and SSH workflows.

How to Use SCP Command to Securely Transfer Files	Full scp guide with practical examples
SSH Command in Linux	SSH options, authentication, and connection examples
How to Use Linux SFTP Command to Transfer Files	Interactive secure file transfer over SSH
How to Use Rsync for Local and Remote Data Transfer	Incremental sync and directory transfer