SFTP Command Cheat Sheet

A quick reference guide for Secure File Transfer Protocol (SFTP) commands, covering basic operations, file management, permissions, and advanced usage.

Basic SFTP Commands

Connecting to a Server

`sftp user@host`	Connect to `host` as `user`.
`sftp -P port user@host`	Connect to `host` on a specific `port` as `user`. (Note: Capital `-P` is important.)
`sftp -i identity_file user@host`	Connect using the key specified by `identity_file` for authentication.
`sftp host`	Connect to `host` as current local user.
`exit` or `bye`	Terminate the SFTP session.

Navigating the SFTP Environment

`pwd`	Print working directory on the remote host.
`lpwd`	Print working directory on the local host.
`cd path`	Change remote directory to `path`.
`lcd path`	Change local directory to `path`.
`ls`	List files in the current remote directory.
`lls`	List files in the current local directory.
`ls -l`	Show more details about files in the current remote directory.

File Transfer Operations

`get remote_file local_file`	Download `remote_file` and save it as `local_file`.
`get remote_file`	Download `remote_file` and save it with the same name locally.
`put local_file remote_file`	Upload `local_file` and save it as `remote_file`.
`put local_file`	Upload `local_file` and save it with the same name remotely.
`mget remote_files`	Download multiple `remote_files`.
`mput local_files`	Upload multiple `local_files`.

File Management

Basic File Operations

`mkdir directory_name`	Create a new directory on the remote server.
`rmdir directory_name`	Remove a directory on the remote server (must be empty).
`rm filename`	Remove a file on the remote server.
`rename old_path new_path`	Rename a file or directory on the remote server.
`ln -s target link_name`	Create a symbolic link on the remote server.

File Permissions

`chmod mode path`	Change permissions of a file or directory on the remote server.
`chown owner path`	Change the owner of a file or directory on the remote server.
`chgrp group path`	Change the group of a file or directory on the remote server.
`stat path`	Display file or directory attributes.

File Transfer Options

`reget remote_file local_file`	Resume downloading `remote_file` to `local_file`.
`reput local_file remote_file`	Resume uploading `local_file` to `remote_file`.
`set_transfer_option`	Example: `set progress true`. Sets options for file transfers. Use `help` to see available options.
`get -P remote_file local_file`	Download with preservation of modification times, access times, and modes.
`put -P local_file remote_file`	Upload with preservation of modification times, access times, and modes.

Advanced SFTP Usage

Command Execution

`!command`	Execute a local shell command. Example: `!ls -l`.
`version`	Display the SFTP version.
`help [command]`	Get help on SFTP commands. If no command is given, it prints general help.

Batch Processing

`sftp -b batch_file user@host`	Run SFTP commands from a `batch_file`. Each line in the file is treated as an SFTP command.

Example batch file:	`get remote_file local_file`
	`put local_file remote_file`
	`exit`

`sftp -b -`	Read commands from standard input.

Configuration

`~/.ssh/config`	You can pre-define connection settings in your SSH configuration file. This allows you to use shorthand commands.

Example:

```
Host myserver
    HostName server.example.com
    User myuser
    Port 2222
    IdentityFile ~/.ssh/mykey
```

Then connect with: `sftp myserver`

Troubleshooting and Tips

Common Errors

Permission Denied: Ensure you have the necessary permissions on both the local and remote systems. Check file and directory permissions, and that your SSH key (if used) is properly configured and authorized on the remote server.
Connection Refused: Verify that the remote server is running and accessible on the specified port. Firewall rules may be blocking the connection.
File Not Found: Double-check the spelling and path of the file or directory you are trying to access. Use `pwd` and `lpwd` to confirm your current locations.

SFTP Tips

Tab Completion: Use the Tab key to auto-complete file and directory names. This can save time and prevent typos.
Wildcards: Use wildcards (`*`, `?`) with `mget` and `mput` to transfer multiple files matching a pattern. Be careful to avoid unintended matches.
Quoting: If a file or directory name contains spaces or special characters, enclose it in quotes.
Batch Scripting: For repetitive tasks, create an SFTP batch script to automate the process.