

> TERMINAL COMMAND REFERENCE

CTF Range & Terminal Bootcamp companion — Palumbo Cyber

Getting Around

Command	What it does	Example
pwd	Prints the full path of the folder you're in right now. Use it any time you feel lost.	pwd
ls	Lists what's in the current folder. Add -a for hidden files too, or -l for a detailed view.	ls -a
cd	Moves into a different folder. cd .. goes up one level; cd alone (or cd ~) jumps home.	cd documents

Reading Files

Command	What it does	Example
cat	Prints an entire text file to the screen. Best for short files.	cat notes.txt
head	Shows just the first lines of a file (10 by default). Add -N for a specific count.	head -5 app.log
tail	Shows just the last lines of a file. Great for the newest entries in a growing log.	tail -5 app.log
wc	Word count: reports how many lines, words, and characters are in a file.	wc app.log
diff	Compares two files line by line and shows exactly what's different between them.	diff draft.txt final.txt

Searching

Command	What it does	Example
grep	Searches inside a file for lines containing your text. Add -r to search a whole folder.	grep ALERT auth.log
find	Searches an entire folder tree for files by name, however deeply buried. * is a wildcard.	find . -name "*.txt"

File Forensics

Command	What it does	Example
file	Looks at a file's actual bytes to identify its real type -- extensions can lie, bytes can't.	<code>file mystery.dat</code>
xxd	(hexdump) Shows a file's raw bytes in hex with a text preview -- how you'd spot a real signature.	<code>xxd mystery.dat</code>
strings	Pulls out any readable text hiding inside an otherwise unreadable (binary) file.	<code>strings mystery.dat</code>
sha256sum	Computes a file's cryptographic fingerprint (hash) -- how you verify a file wasn't altered.	<code>sha256sum report.txt</code>

Encoding & Ciphers

Command	What it does	Example
base64	Encodes/decodes Base64 text. Not encryption -- just a text-safe encoding anyone can reverse.	<code>base64 -d encoded.b64</code>
caesar	Shifts every letter by a fixed number of places. To undo a shift of N, use -N (or 26-N).	<code>caesar -7 cipher.txt</code>
rot13	Shorthand for caesar 13 -- its own reverse, since 13+13 = 26 (a full loop).	<code>rot13 cipher.txt</code>

Permissions & Access

Command	What it does	Example
chmod	Changes a file's permissions -- who can read, write, or run it. Fixes 'Permission denied'.	<code>chmod +x locked.txt</code>
sudo	Runs one command as an administrator, bypassing normal permission checks. Use deliberately.	<code>sudo cat locked.txt</code>
unlock	Opens a password-protected file -- locked by a secret you need to know, not by permissions.	<code>unlock mypassword vault.locked</code>

Communication

Command	What it does	Example
mail	(inbox) Lists the messages waiting for you. Some hints only show up here, not in a file.	<code>mail</code>
read	Opens a specific email by its number from the mail list.	<code>read 2</code>

System & Network (simulated)

Command	What it does	Example
whoami	Prints the current username.	whoami
ps	Lists running processes -- real analysts use this to spot something that shouldn't be running.	ps
netstat	Lists active network connections -- useful for spotting a connection that shouldn't exist.	netstat
ifconfig	Lists network interfaces and their IP addresses.	ifconfig
ping	Sends test packets to a host to check whether it's reachable.	ping 8.8.8.8

Utility

Command	What it does	Example
history	Lists every command you've run this session, numbered in order.	history
man	Shows a detailed manual entry for a command.	man grep
help	Shows a quick list of every available command.	help
clear	Clears the terminal screen.	clear

Practice these commands in the Terminal Bootcamp and the browser-based Terminal Command Reference page before attempting the CTF Range.

"Simulated" commands print realistic example output rather than your device's real data.