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My cron job does not run on the VPS: the usual causes

VPS & Servers

CODE

RLX-MZ-KB-1389

VERSION

v2026.10.10

COUNTRY · LANGUAGE

Mozambique · English

MozOut Mozambique

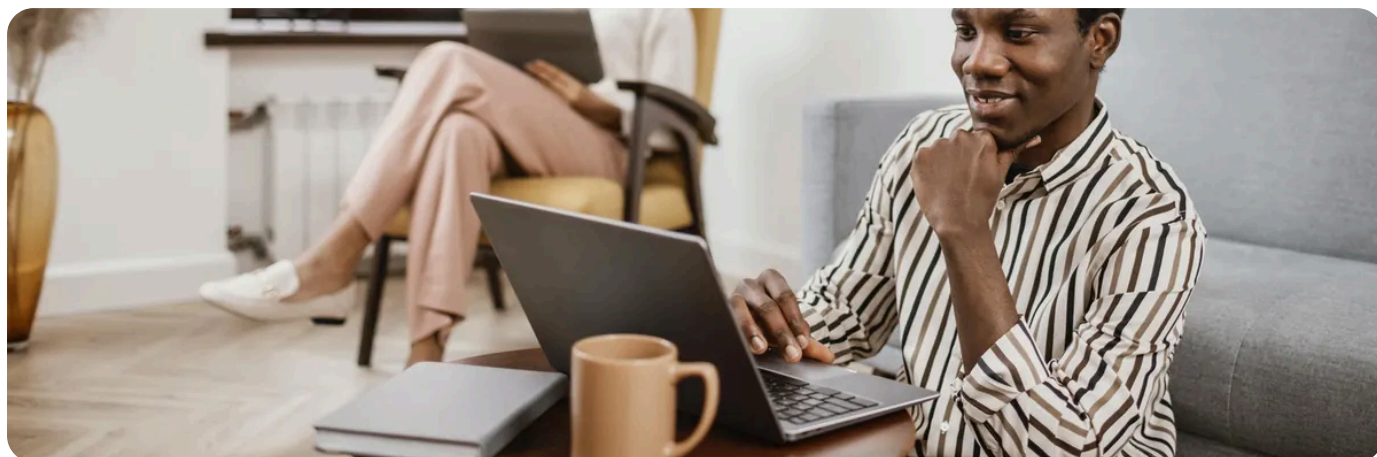
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My cron job does not run on the VPS: the usual causes

VPS & Servers Created on **October 10, 2026** 3 min read



When a cron job does not run on a VPS, the cause is almost never cron itself: it is **the environment it runs in**. cron starts with a minimal environment, without your `PATH`, without your terminal and without your working directory. The command that works at the prompt fails there. The cure is to use full paths, redirect the output to a file, and read that file.

➞ Step by step

- 1 See the job.** `crontab -l` lists your user's jobs (`sudo crontab -l -u root` root's). System jobs live in `/etc/crontab` and `/etc/cron.d/` and carry an extra column with the user name.
- 2 Check the service is active.** `systemctl status cron` on Debian and Ubuntu; `systemctl status crond` on AlmaLinux and Rocky.
- 3 See whether cron even tried.** On Debian and Ubuntu, `grep CRON /var/log/syslog | tail`; on any systemd system, `sudo journalctl -u cron` (or `-u crond`). If the line shows up, cron ran the command and the problem is inside it.
- 4 Capture the output.** Add to the end of the line `>> /var/log/my-cron.log 2>&1` (create the file or use a folder the user can write to). Wait for one run and read the file: the error will be there.
- 5 Use full paths.** `/usr/bin/php /var/www/yourdomain.tld/task.php` instead of `php task.php`. Find the path with `which php`. If the script opens files by relative path, start the line with `cd /folder &&`.
- 6 Try the same command with cron's environment:** `env -i /bin/sh -c "your_command"`. If it fails like that, it is the environment.

? The causes, in order of frequency

Symptom	Cause and remedy
Works in the terminal, fails in cron	Minimal PATH and environment. Full paths for the program and the files; variables defined in the crontab itself or in the script.
Nothing in cron's log	The service is stopped, or the crontab has a syntax error. The five time fields are: minute, hour, day of month, month, day of week.
The script "has no permission"	The execute bit is missing (<code>chmod +x script.sh</code>), or the cron user cannot read the folder: file permissions .
A line with % breaks	In a crontab, <code>%</code> means newline. Escape it with <code>\%</code> , for example in <code>date +\%F</code> .
Runs at the wrong hour	cron uses the server's time zone. See it with <code>timedatectl</code> . A job "at 2" is at 2 in that zone, not yours. To set it: the VPS time zone and clock .
Runs, but does nothing	The command ends with an error nobody sees. Without output redirection, cron tries to mail it to a local mailbox nobody reads.
Runs twice at the same time	The previous run has not finished. Use <code>flock</code> to prevent overlaps.



Do not edit another user's crontab by mistake.

A job that writes files as root into a site folder leaves them owned by root, and the site can no longer change them. Put the job in the crontab of the user who owns the files (`sudo crontab -e -u username`).



Be careful with jobs that delete.

Rehearse by hand first, with a test folder. A line with a mistyped path and an `rm` is hard to undo, and on a VPS the backups are yours: **backing up a VPS**.



For PHP jobs and automatic backups

we have ready-made articles: **running a PHP script from a cron job** and **automatic backups of your own application**. On cron in general and in the hosting panel: **cron jobs**.

 NEED A HAND?

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 **Open a support ticket** →

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File permissions on a VPS



Running a PHP script from a cron job



Automatic backups of your own application



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