

◆ ps Options - Why the difference?

1. ps (no options)

- Default: only shows the processes **running in the current terminal session** (your shell + things you started from it).
 - Example:
 - `ps`
 - | PID | TTY | TIME | CMD |
|------|-------|----------|------|
| 3241 | pts/0 | 00:00:00 | bash |
| 3305 | pts/0 | 00:00:00 | ps |
 - `3241 pts/0 00:00:00 bash`
 - `3305 pts/0 00:00:00 ps`
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2. ps aux

- **BSD style options** (no leading -).
 - Shows **all processes** on the system, from all users.
 - Columns: user, PID, CPU%, MEM%, etc.
 - Example:
 - `ps aux | head -5`
 - | USER | PID | %CPU | %MEM | VSZ | RSS | TTY | STAT | START | TIME | COMMAND |
|------|-----|------|------|--------|------|-----|------|-------|------|-------------------------------|
| root | 1 | 0.0 | 0.1 | 169936 | 936 | ? | Ss | Aug24 | 0:02 | /sbin/init |
| root | 531 | 0.0 | 0.3 | 215456 | 3240 | ? | Ss | Aug24 | 0:01 | /lib/systemd/systemd-journald |
| ... | | | | | | | | | | |
 - `root 1 0.0 0.1 169936 936 ? Ss Aug24 0:02 /sbin/init`
 - `root 531 0.0 0.3 215456 3240 ? Ss Aug24 0:01 /lib/systemd/systemd-journald`
 - ...
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3. ps -ef

- **Unix/POSIX style options** (with -).
- Also shows **all processes**, like ps aux, but in a different format.
- Columns: UID, PID, PPID (parent PID), start time, etc.
- Example:
- `ps -ef | head -5`
- | UID | PID | PPID | C | STIME | TTY | TIME | CMD |
|------|-----|------|---|-------|-----|----------|-------------------------------|
| root | 1 | 0 | 0 | Aug24 | ? | 00:00:02 | /sbin/init |
| root | 531 | 1 | 0 | Aug24 | ? | 00:00:01 | /lib/systemd/systemd-journald |
- `root 1 0 0 Aug24 ? 00:00:02 /sbin/init`
- `root 531 1 0 Aug24 ? 00:00:01 /lib/systemd/systemd-journald`

- ...

◆ Summary

- `ps` → only **your session's processes**.
- `ps aux` → **all processes**, BSD style output (USER, CPU, MEM).
- `ps -ef` → **all processes**, Unix style output (UID, PID, PPID, CMD).

Both `aux` and `-ef` are widely used by admins, just different column styles.

👉 in short:

- `ps` → “show me my stuff only.”
- `ps aux` / `ps -ef` → “show me the whole system.”