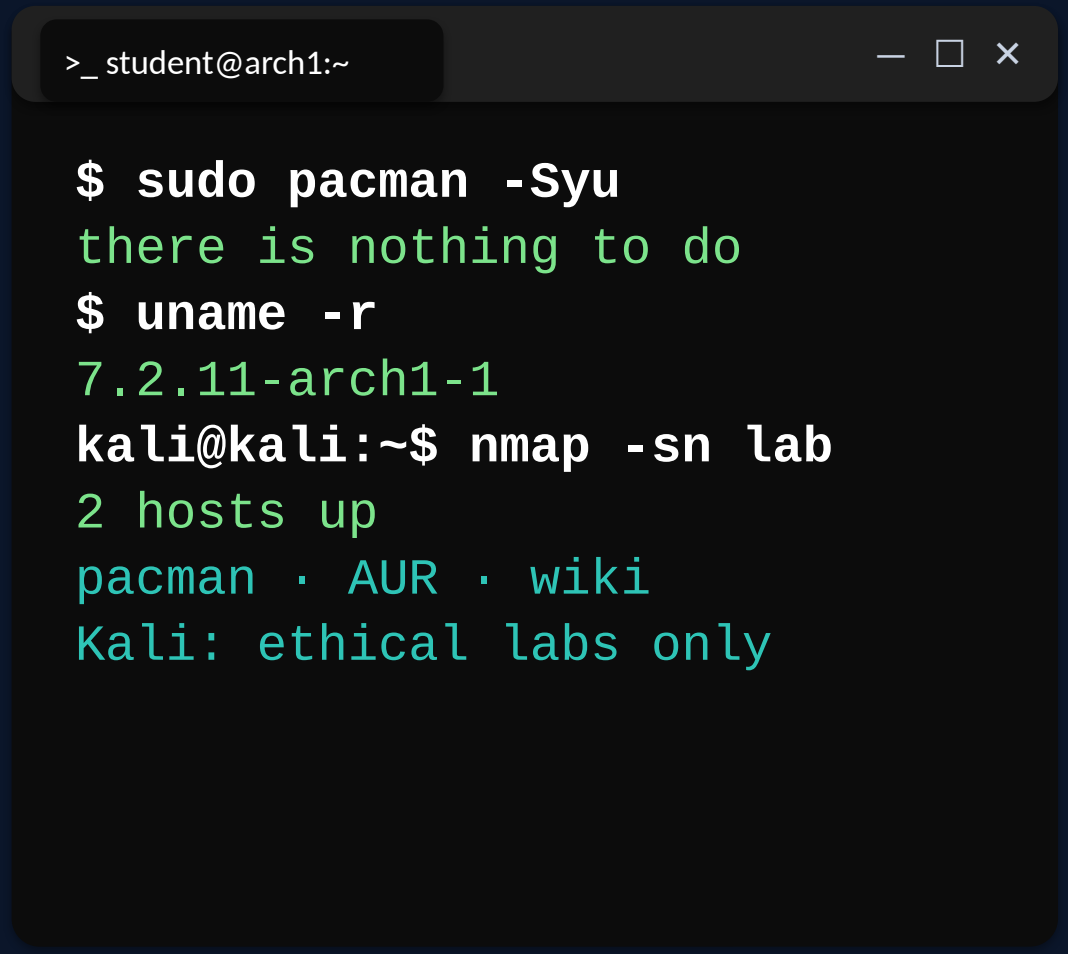


LESSON 5 OF 12

Arch & Kali Linux

Rolling · pacman · AUR · Security Lab

Running Arch Well: Updates, News, Snapshots & Desktops

Full Course · Arch 2026.11 · Kali 2026.3 (Nov 2026)

What You Will Learn in Lesson 5

- A weekly maintenance routine
- Arch news and manual interventions
- Automatic Btrfs snapshots with snapper + snap-pac
- Booting a snapshot and rolling back
- Desktops, display managers and Flatpak
- Security basics Arch leaves to you: firewall, updates, SSH
- Backups and keeping a package list

A Weekly Maintenance Routine

#	Step	Command
1	Read the news first	archlinux.org/news (or arch-announce mailing list / RSS)
2	Full upgrade	sudo pacman -Syu (or paru for repo + AUR)
3	Merge config changes	sudo pacdiff
4	Check for problems	systemctl --failed ; journalctl -b -p err
5	Clean up	paccache -rk2 ; pacman -Qdtq | sudo pacman -Rns -
6	Reboot after kernel/systemd/mesa	uname -r vs pacman -Q linux
Tip	Upgrade weekly, not monthly	Small steps are easier to fix than huge jumps

Arch News: Manual Interventions (examples from 2026)

Date	News item	Lesson
2026-10-21	Update php ≥ 8.5.12 / php-legacy ≥ 8.3.36 to prevent remote code execution	Security: upgrade now
2026-10-21	Update ca-certificates-mozilla ≥ 3.131.1-1 (compromised CA removed)	Security: upgrade now
2026-07-21	virtualbox-ext-vnc ≥ 7.2.12-2 requires manual intervention	Follow the steps
2026-06-12	Active AUR malicious packages incident	Review AUR packages
2026-05-25	varnish renamed to vinyl-cache — breaking change	Config paths change
How	archlinux.org/news, RSS, arch-announce list; tools like informant	Before every -Syu

Automatic Snapshots: snapper + snap-pac

```
[student@arch1 ~]$ findmnt -no FSTYPE /          # needs Btrfs root
btrfs
[student@arch1 ~]$ sudo pacman -S snapper snap-pac
[student@arch1 ~]$ sudo snapper -c root create-config /
[student@arch1 ~]$ sudo snapper -c root set-config TIMELINE_LIMIT_DAILY=7 \
      NUMBER_LIMIT=20
[student@arch1 ~]$ sudo systemctl enable --now snapper-timeline.timer \
      snapper-cleanup.timer
[student@arch1 ~]$ sudo pacman -S htop            # snap-pac makes pre/post snapshots
[student@arch1 ~]$ sudo snapper -c root list | tail -3
  42 | pre  |    | ... | pacman -S htop
  43 | post | 42 | ... | htop
```

Boot a Snapshot and Roll Back

```
# GRUB: sudo pacman -S grub-btrfs ; sudo systemctl enable --now grub-btrfsd
#   → 'Arch Linux snapshots' submenu in GRUB lets you boot a snapshot read-only
# systemd-boot / Limine: use limine-snapper-sync or boot from the ISO

# Undo only the changes of one pacman transaction (pre 42 → post 43):
[student@arch1 ~]$ sudo snapper -c root undochange 42..43

# Full rollback of / to snapshot 42 (then reboot):
[student@arch1 ~]$ sudo snapper -c root rollback 42
[student@arch1 ~]$ sudo reboot
# Note: /home is a separate subvolume — your files are not rolled back
```

Desktops, Display Managers and Flatpak

```
[student@arch1 ~]$ sudo pacman -S plasma-meta sddm konsole dolphin   # KDE Plasma 6.8
[student@arch1 ~]$ sudo systemctl enable sddm
# or GNOME:  sudo pacman -S gnome gdm && sudo systemctl enable gdm
[student@arch1 ~]$ sudo pacman -S pipewire pipewire-pulse wireplumber
[student@arch1 ~]$ sudo pacman -S noto-fonts noto-fonts-cjk noto-fonts-emoji \
      vazirmatn-fonts                    # Persian/Dari font
[student@arch1 ~]$ sudo pacman -S flatpak
[student@arch1 ~]$ flatpak install flathub org.libreoffice.LibreOffice
[student@arch1 ~]$ sudo pacman -S power-profiles-daemon bluez bluez-utils
[student@arch1 ~]$ sudo systemctl enable --now bluetooth
```

Security Basics Arch Leaves to You

```
# No firewall is enabled by default on Arch
[student@arch1 ~]$ sudo pacman -S ufw && sudo ufw default deny incoming
[student@arch1 ~]$ sudo ufw allow ssh && sudo systemctl enable --now ufw && sudo ufw enable
# SSH hardening
[student@arch1 ~]$ printf 'PermitRootLogin no\nPasswordAuthentication no\n' | \
      sudo tee /etc/ssh/sshd_config.d/10-hardening.conf
[student@arch1 ~]$ sudo systemctl restart sshd
# Security advisories
[student@arch1 ~]$ sudo pacman -S arch-audit && arch-audit   # known CVEs installed
# No automatic updates: you upgrade (weekly!) — never auto-upgrade a rolling system blindly
```

Backups and a Package List

```
[student@arch1 ~]$ pacman -Qqen > ~/pkglist-repo.txt      # explicit, official repos
[student@arch1 ~]$ pacman -Qqem > ~/pkglist-aur.txt       # explicit, AUR/foreign
# Reinstall on a new machine:
[student@arch1 ~]$ sudo pacman -S --needed - < pkglist-repo.txt
[student@arch1 ~]$ paru -S --needed - < pkglist-aur.txt

# Snapshots are NOT backups — copy data to another disk or server:
[student@arch1 ~]$ rsync -aHAX --delete ~/ /mnt/backup/student/
[student@arch1 ~]$ sudo pacman -S borg     # deduplicated, encrypted backups
[student@arch1 ~]$ borg init -e repokey /mnt/backup/borg && borg create /mnt/backup/borg::{now} ~/
```

Summary and Homework

- Weekly: news → pacman -Syu → pacdiff → check → clean → reboot if needed
- Read archlinux.org/news before upgrading (manual interventions)
- snapper + snap-pac: pre/post snapshots on every pacman run
- Roll back: grub-btrfs boot, snapper undochange / rollback
- Arch enables nothing by default: desktop, firewall, Bluetooth are your choice
- Homework: set up snapper on arch1; break and roll back a package; save your package lists

Thank You! 🙏

Free videos & PDFs: www.MyWebUniversity.com

Slides for this lesson: MyWebUniversity.com/presentations

YouTube: @MyWebUniversity · @MyWebUniversity-Dari

Wahidullah Lutfy — Founder and Director of IT of MyWebUniversity, and CS teacher

Book: The Direct Path to Linux Ubuntu (Amazon · Barnes & Noble)

Learn it, then pass it on.