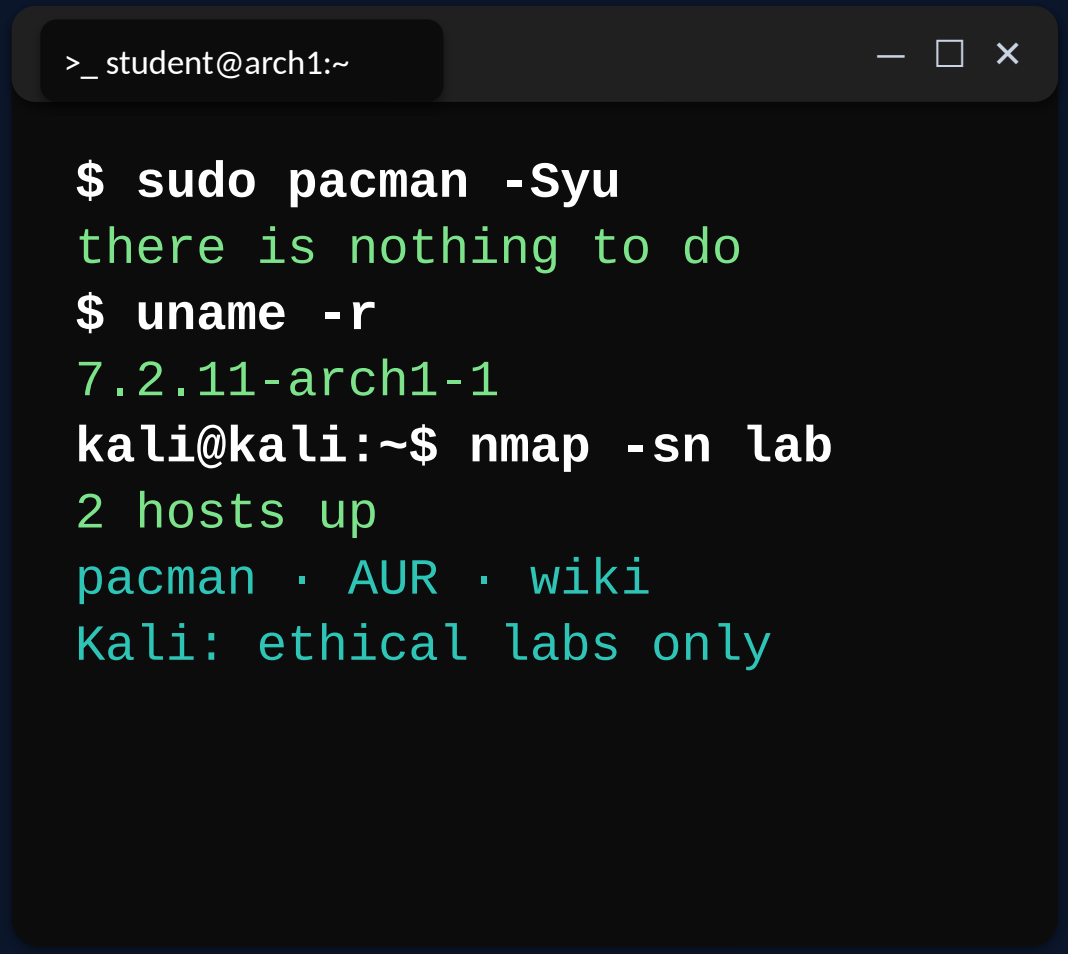


LESSON 1 OF 12

Arch & Kali Linux

Rolling · pacman · AUR · Security Lab

Arch & Kali: Rolling Releases, Philosophy & When to Use Each

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

What You Will Learn in Lesson 1

- Rolling release vs fixed release
- Arch Linux: the Arch Way, simplicity and user control
- Kali Linux: a security toolkit based on Debian testing
- Where each one fits — and where it does not
- The ethics and law of security testing
- Course plan and lab

Rolling vs Fixed Releases

	Rolling (Arch, Kali)	Fixed (Debian, Ubuntu LTS, RHEL)
Versions	No big versions; packages update continuously	Major releases every 2–3 years
Newest software	Days or weeks after upstream	Frozen at release, security fixes only
Upgrades	Small and often (pacman -Syu / apt full-upgrade)	Big release upgrades
Risk	Occasional breakage; read the news	Very stable, older software
Install media	Monthly ISO snapshot (Arch), quarterly (Kali)	Point release images
Best for	Enthusiasts, developers, labs, special toolkits	Servers, enterprise, long-term stability

Arch Linux at a Glance

Item	Arch Linux
Started	2002, Judd Vinet; community-run, elected project leader
The Arch Way	Simplicity, modernity, pragmatism, user centrality, versatility
Current ISO	2026.11.01 — Linux 7.2.11, systemd 262.1, Archinstall 4.5
Packages	pacman + official repos (core, extra, multilib) + the AUR
Docs	The Arch Wiki — useful for every Linux distribution
Architectures	x86-64 officially (ARM via the separate Arch Linux ARM project)

Kali Linux at a Glance

Item	Kali Linux
Made by	OffSec (Offensive Security); successor of BackTrack (2013)
Base	Debian testing → 'kali-rolling' branch
Current	Kali 2026.3 (Oct 2026): Linux 7.1, Xfce default, KDE Plasma 6.7, GNOME
Purpose	Penetration testing, security research, forensics, reverse engineering
Tools	600+ packaged tools in metapackages (kali-linux-default, -large, -everything)
Runs on	VMs, bare metal, live USB, WSL, cloud, ARM, Android (NetHunter)

Where Each One Fits

Use	Arch	Kali
Daily desktop / developer laptop	Yes — if you enjoy control	No — not a general desktop
Learning how Linux really works	Excellent	Some
Production servers	Rarely (prefer fixed releases)	No
Security labs, CTFs, certifications	Possible (BlackArch repo)	Yes — the standard
Forensics / incident response	—	Yes (forensic boot mode)
Gaming	Yes (Steam, SteamOS is Arch-based)	No

Ethics and Law: Rules for the Kali Half

Rule	Why
Only test systems you own or have WRITTEN permission to test	Unauthorized access is a crime in most countries
Stay inside the agreed scope and time window	Out-of-scope testing is still unauthorized
Use your own isolated lab for practice	Intentionally vulnerable VMs, no real users
Never test your school, employer, ISP or neighbors' Wi-Fi without authorization	Good intentions are not a legal defense
Protect any data you see; report findings responsibly	Confidentiality and responsible disclosure
Learn to defend, not only to attack	The goal is safer systems for everyone

The Course Plan

Lessons	Arch half	Lessons	Kali half
1	Rolling releases & philosophy	7	Purpose, ethics, law, editions
2	Installing Arch (archinstall)	8	Installing Kali: VM, USB, WSL
3	pacman, repos, mirrors, keys	9	kali-rolling, metapackages, tweaks
4	AUR, PKGBUILD, helpers	10	Tools tour (in your lab)
5	Running Arch well	11	Safe lab & Kali Purple
6	Arch family & troubleshooting	12	NetHunter, reporting, careers

The Course Lab

Host	System	Network	Used for
arch1	Arch Linux (VM, UEFI)	NAT, 10.0.0.51	Lessons 2–6
kali	Kali Linux 2026.3 (VM)	NAT + host-only 192.168.56.10	Lessons 7–12
target1	Intentionally vulnerable VM (e.g. Metasploitable 2)	host-only 192.168.56.20	Practice target — never on the internet
target2	DVWA / OWASP Juice Shop in a container	host-only 192.168.56.30	Web practice
Host	VirtualBox, KVM/virt-manager or VMware	8 GB+ RAM, 80 GB disk	Snapshots before changes
Users	student (Arch), kali (Kali default user)		sudo

Summary and Homework

- Rolling = continuous updates, newest software, read the news
- Arch: simple, user-controlled, pacman + AUR, the Arch Wiki
- Kali: Debian testing-based security toolkit by OffSec; 2026.3 current
- Arch for desktops/learning; Kali for authorized security work and labs
- Ethics: own systems or written permission, scope, isolated lab
- Homework: download the Arch ISO and Kali VM image; set up the host-only network

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.