

# Arch Linux

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# The Arch Way

# Simplicity

- ▶ trying to hide the complexities of a system actually results in an even more complex system
- ▶ keep the complexities well organized and transparent

# Code-correctness over convenience

- ▶ elegance of design , clean, correct, simple code, rather than unnecessary patching, automation, eye candy or “newbie-friendliness.”
- ▶ Simple implementation shall always trump simple user interface.

# User-centric vs “User-Friendly”

- ▶ complete control and responsibility over the system.

# Openness

- ▶ Openness removes all boundaries and abstraction between the user and the system.
- ▶ provides more control, while simultaneously simplifying system maintenance.

# Freedom

- ▶ embrace functionality over ideology
- ▶ no automatic configuration
- ▶ no opinions
- ▶ “Arch Linux is what you make it.” – Judd Vinet
- ▶ meta distribution
- ▶ encourages configuration using text-files

# advantages of text-based configuration

- ▶ universally accessible
- ▶ infinitely more configurable
- ▶ does *NOT* hide any configuration flags
- ▶ easy backup/restore
- ▶ store your configs in version control
- ▶ revert back to last working config
- ▶ share and improve you configuration
- ▶ <https://github.com/pankajmore/dotfiles>



## *do-it-yourself* approach

- ▶ you are fully responsible for your system
- ▶ you know enough about the system to think of possible causes that lead to a bug
- ▶ try to fix the system yourself before asking

# Rolling Release

- ▶ latest version of your favourite software in the official repo
- ▶ no version anxiety
- ▶ less upgrade breakage
- ▶ easier to find out what went wrong in case something breaks
- ▶ easier to rollback

## non-patched, vanilla software

- ▶ software delivered as the upstream developer intended
- ▶ less monkey patching leads to fewer bugs introduced by the distro maintainers
- ▶ almost *all* bugs are upstream

# BSD *like* init system

- ▶ *rc.conf* to manage your major system settings
- ▶ much easier to configure than multi-directory runlevel based init scripts

# Pacman

- ▶ extremely fast
- ▶ tells you what its doing, and doesn't do anything without asking
- ▶ does *NOT* 'automate' for your 'convenience'
- ▶ does *NOT* alter configs which might have been 'customized'
- ▶ does *NOT* install a service and set it up to run automatically
- ▶ only does what a *package manager* ought to do

# ABS

- ▶ ports-like system for building and packaging software from source Code
- ▶ PKGBUILD to automate software compilation
- ▶ Much saner than manually compiling a software
- ▶ install using pacman to keep track of the newly installed package
- ▶ see a PKGBUILD in action! eg. firefox

# Why ABS?

- ▶ Compile or recompile a package, for any reason
- ▶ Make and install new packages from source of software for which no packages are yet available
- ▶ Customize existing packages to fit your needs (enabling or disabling options, patching)
- ▶ Rebuild your entire system using your compiler flags, “a la FreeBSD” (e.g. with `pacbuilder`)
- ▶ Cleanly build and install your own custom kernel
- ▶ Get kernel modules working with your custom kernel
- ▶ Easily compile and install a newer, older, beta, or development version of an Arch package by editing the version number in the `PKGBUILD`

# AUR

- ▶ Arch User Repository (AUR) is a community-driven repository for Arch users.
- ▶ collection of unsupported PKGBUILDS
- ▶ automates those long boring ubuntu tutorials to install some estoric software
- ▶ eg. iitk firewall authentication PKGBUILD



# Who should *NOT* use Arch?

- ▶ you disagree with the Arch philosophy.
- ▶ you do not have the ability/time/desire for a 'do-it-yourself' GNU/Linux distribution.
- ▶ you require support for an architecture other than x86\_64 or i686.
- ▶ you take a strong stand on using a distribution which only provides free software as defined by GNU.
- ▶ you believe an operating system should configure itself, run out of the box, and include a complete default set of software and desktop environment on the installation media.
- ▶ you do not want a bleeding edge, rolling release GNU/Linux distribution.
- ▶ you are happy with your current OS.
- ▶ you want an OS that targets a different userbase.

# Advantages of using Arch !!

- ▶ “the red pill for ubuntu users”
- ▶ realise that debating which distro is better is pointless
- ▶ an end to your *distro-hopping* habit
- ▶ more knowledge about linux internals than you could have learnt in years of using ubuntu
- ▶ improves your *sys-admin* skills
- ▶ smooth system maintenance

# Try Arch

- ▶ Programmers and tinkerers generally like Arch after switching from Ubuntu
- ▶ Those who are new to Linux might need to spend considerable time and effort to get familiar with the Linux ecosystem
- ▶ competent Ubuntu users might be delighted by Arch
- ▶ Test it in a VirtualBox
- ▶ a weekend to spare for installation
- ▶ follow the Beginner's Guide in the Arch Wiki to install Arch
- ▶ just by installing Arch you would know more about Linux than the average Ubuntu guy

## Relevant Links :

- ▶ Arch Linux Home Page
- ▶ The Arch Way
- ▶ FAQ
- ▶ Beginners' Guide
- ▶ This Slide [goo.gl/v8Vb1](https://goo.gl/v8Vb1)