



**A sneak peek into the realm of  
immutable Linux distributions.**



Opportunity Open Source

**What is a Linux  
distribution?**

# The issues with classic Linux distributions

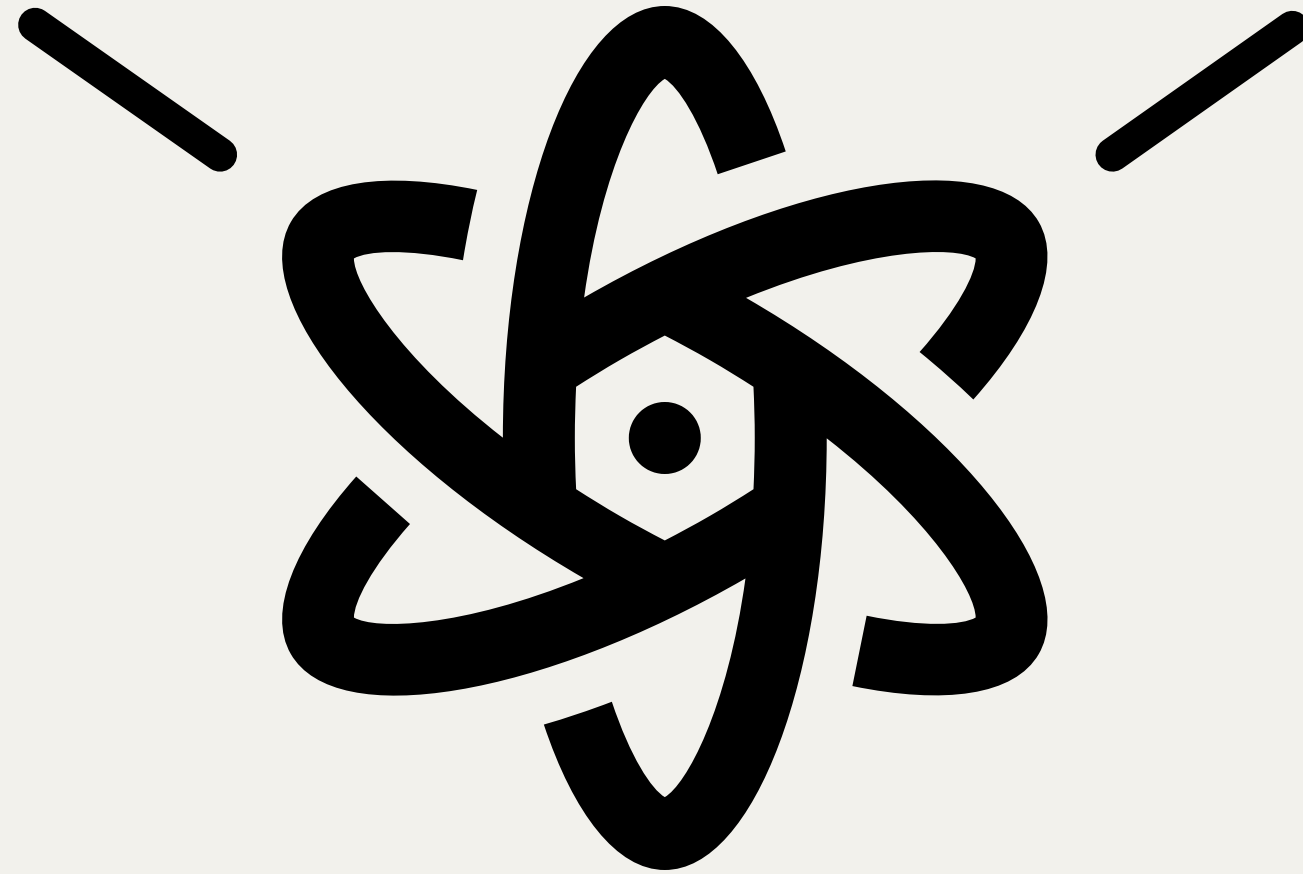
``rm -rf /`` still works in 2023.

You can expect to encounter system breakages all the time.

Inability to install apps with conflicting dependencies



**Not allowing for  
a classic `rm -rf /`**



**Updates that don't  
necessitate reboots**

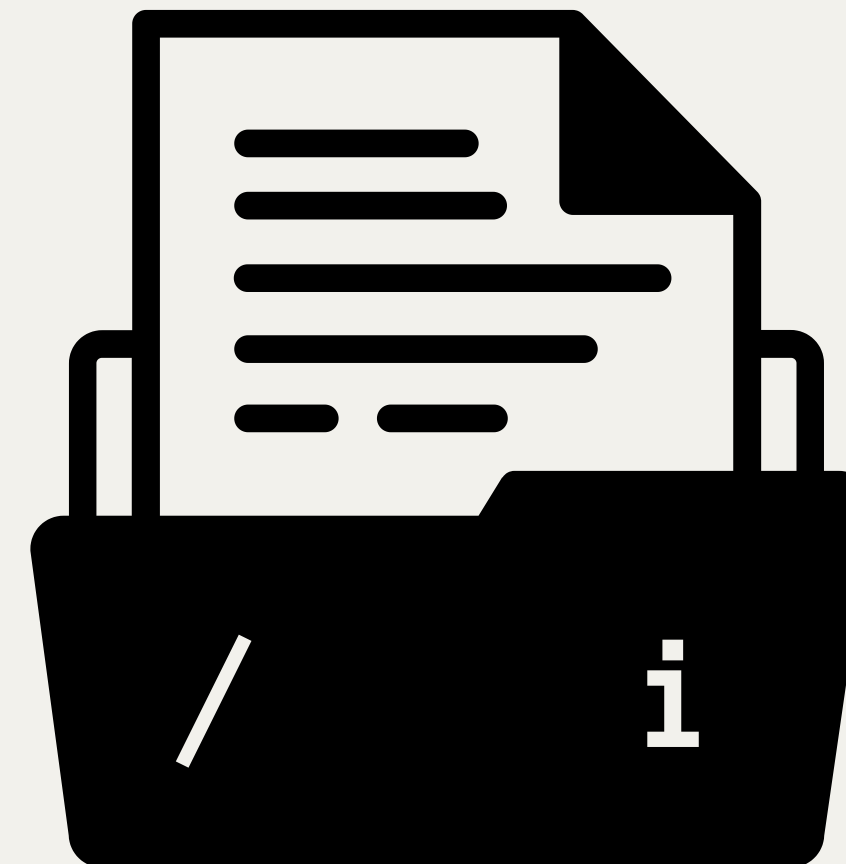
What's immutability  
and atomicity?

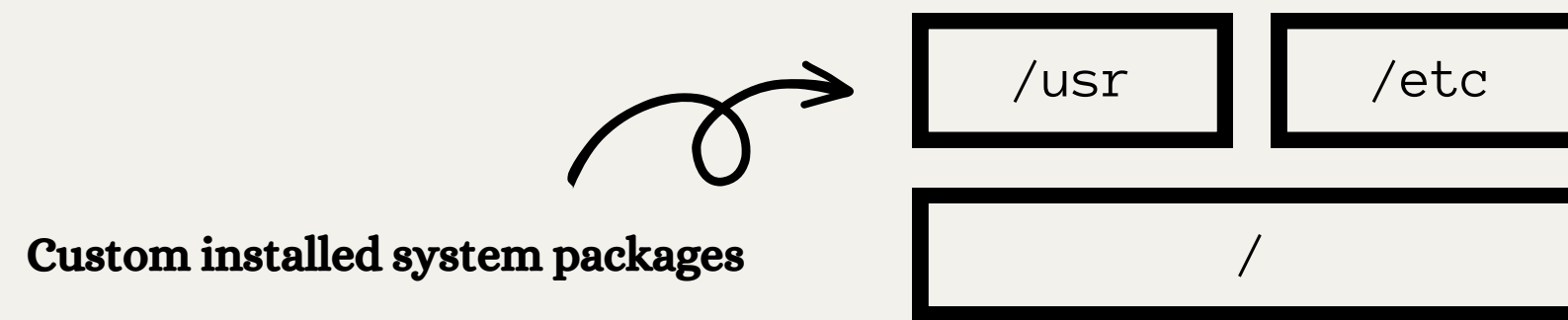
# v1

- Used file attributes for immutability, using code from snapd.
- Lacked support for atomic updates, requiring immutability to be disabled for updates.
- Slowed down boots for toggling the immutability bit on files in parallel.

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Our original  
implementation





# overlays

① **Latest ISO downloaded with zsync. (~50MBs)**



✂ **Overlays for custom-install system packages rebuilt.**



🔄 **System replaced on next boot using initramfs hook.**

# Atomic updates

# Thank you!

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