

**I use NixOS btw...**

Learnings from 2 years daily driving NixOS

## Nix Trinity

### NIXOS

A declarative operating system building on top of the Nix package manager.

┃ Turn your OS into an executable program.

### NIX PACKAGE MANAGER

A declarative package manager building on the Nix language.

### NIX LANGUAGE

A functional programming language:

┃ A DSL for producing reproducible builds.

## Nix Language

### Expressions

```
1 let
2   x = 1;
3 in
4   {
5     a = {
6       b = true;
7     };
8     d.e.f = "hello";
9     y = x;
10    config = builtins.readFile ./config.ini;
11  }
```

## Nix Language

### Derivations

```
1 rustPlatform.buildRustPackage rec {
2   pname = "presenterm";
3   version = "0.10.1";
4
5   src = fetchFromGitHub {
6     owner = "mfontanini";
7     repo = "presenterm";
8     tag = "v${version}";
9     hash = "sha256- ... 06HsX28mLvTrWh5yIbo/a54M=";
10  };
11
12  buildInputs = [
13    libsixel
14  ];
15
16  # ...
17 }
```

# Nix Package Manager

## Nix Store

```
/nix/store/sm724q6cyqwwghbadxssw9v2xyns56yn-python3-3.11.9  
/nix/store/zr51xbkmmkflpp1nm433vfgpkndhp64d-python3-3.11.9
```

## Package Registry

The screenshot shows the GitHub repository for Nixpkgs. The repository is public and has 19.6k stars and 15.1k forks. It is currently on the 'nixos-unstable' branch, which is 1093 commits behind 'master'. The repository has 209 branches and 126 tags. The commit history shows a recent commit by 'wegank' to 'libcupsfilters' 2 days ago. The repository is described as 'Nix Packages collection & NixOS' and includes a README, MIT license, code of conduct, security policy, and activity feed.

NixOS / nixpkgs

Code Issues 5k+ Pull requests 5k+ Actions Projects 21 Security Insights

nixpkgs Public

Sponsor Edit Pins Watch 274 Fork 15.1k Star 19.6k

nixos-unstable 209 Branches 126 Tags

Go to file Add file Code

About

Nix Packages collection & NixOS

linux nix nixos nixpkgs hacktoberfest

Readme MIT license Code of conduct Security policy Activity Custom properties 19.6k stars 274 watching

This branch is 1093 commits behind master.

wegank libcupsfilters: 2.1.0 -> 2.1.1 (#383227) ✓ e3e32b6 · 2 days ago 764,837 Commits

|               |   |              |
|---------------|---|--------------|
| .devcontainer | .devcontainer: tweaks   | 2 months ago |
| .github       | build(deps): bump actions/create-github-app-token from 1.1...     | last week    |
| ci            | OWNERS: Add @hsjobeki to lib files                                | last week    |
| doc           | testers.shellcheck: refactor, update docs, and simplify tests ... | 3 days ago   |
| lib           | lib/strings: allow CA paths in isStorePath                        | last week    |



# NixOS

```
.../slides/2025-03-25-voxxed-days :: nix run nixpkgs#neofetch  
f4z3r@nix
```



```
OS: NixOS 25.05.20250303.ba487db (Warbler) x86_64  
Host: Dell Inc. 0V0059  
Kernel: 6.13.5  
Uptime: 35 mins  
Packages: 1219 (nix-system), 1841 (nix-user)  
Shell: fish 3.7.1  
Resolution: 1920x1200  
DE: Hyprland (Wayland)  
Theme: Materia-dark [GTK2/3]  
Icons: Papirus-Dark [GTK2/3]  
Terminal: ghostty  
CPU: 12th Gen Intel i7-1260P (16) @ 2.100GHz  
GPU: Intel Alder Lake-P GT2 [Iris Xe Graphics]  
Memory: 6280MiB / 15601MiB
```



- Entire OS managed by Nix
- Fully reproducible
- Only data not replicated

<https://github.com/f4z3r/nix>

## Use Cases

### Dev Environments

- Pin tooling
- Ensure consistency
- Use abstractions: **DevBox** (<https://www.jetify.com/devbox>)

### CI/CD

- Define pipelines as code
- Run locally

### Fleet Management

- Server management
- Replacement for pre-built ISOs / Packer