



GuixSD

Introduction

- GuixSD is a **Free Software Foundation** approved Linux Distribution that uses the GNU Guix package manager.
- It also uses the **Linux-libre** kernel
- It supports **GNU Hurd** as an alternative to the Linux kernel although Hurd is still under heavy development
- The Guix package manager is based on the Nix package manager which also has a distribution called **NixOS**

Why is GuixSD a "Wierd-ass" distro?

- It has "**Derivations**" (build spec or sequence of build actions to be performed by the worker daemon to then build the package...)
- Package manifests are written in "**Scheme**" or "**GNU Guile**"? I guess they are the same thing...
- There is no installer
- There is no ISO, just a USB image
- GuixSD doesn't use systemd or init, it uses "**GNU Daemon Shepherd**" (dmd) for its service manager
- It is already implementing a **Hurd** port but the Linux port is still in beta...
- It seems to be infatuated with making the "**GNU System**" an actual operating system...

Why is GuixSD awesome

- **Guix is called a "functional" package manager (similar to Nix), which apparently means:**
 - the package build and installation process is seen as a "mathematical" function
 - That function takes inputs, such as build scripts, a compiler, and libraries, and returns an installed package
 - It cannot alter the environment of the running system in any way.
 - This is achieved by running build processes in isolated environments (or containers)
- **Guix package manager features**
 - reproducible builds
 - transactional (Atomic) package upgrade and rollback
 - per-user installation
 - garbage collection (package cleanup)
- **Unprivileged package management (no root privileges needed!)**
 - Each user may install software without conflicting with other users or the system
 - Each user may have many "profiles"
 - The guix environment tool can be used to quickly create development environments.
 - Like Python virtualenv, but for anything.

Why is GuixSD is annoying

[Link to Very fucking annoying video](#)

Demo

https://audio-video.gnu.org/video/misc/2016-07_GNU_Guix_Demo_2.webm

References

- <https://media.libreplanet.org/u/libreplanet/m/solving-the-deployment-crisis-with-gnu-guix-29b0/>
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- https://archive.fosdem.org/2015/schedule/event/the_emacs_of_distros/attachments/slides/717/export/events/attachments/the_emacs_of_distros/slides/717/gnu_guix_emacs_of_distros.pdf