Your distro is a Scheme library
Hacking your way through the GNU Guix API

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The Emacs of distros
When large numbers of nontechnical workers are using a programmable editor, they will be tempted constantly to begin programming in the course of their day-to-day lives. This should contribute greatly to computer literacy [...]
user freedom = access + empowerment
$ guix package -i emacs guile
#1. Packages & package lookup.
#2. The store.
build processes
chroot, separate UIDs

Guile Scheme
(guix packages)
(guix store)

build daemon
build processes
chroot, separate UIDs

build daemon

Guile Scheme
(guix packages)
(guix store)

RPCs
build processes
chroot, separate UIDs

Guile, make, etc.

Guile, make, etc.

Guile, make, etc.

build daemon

Guile Scheme

(guix packages)

(guix store)

RPCs
#3. From packages to derivations.
guix graph --type=package coreutils

9 nodes
Where are GCC, libc, etc.??
What about the compiler’s compiler, etc.?
383 nodes

guix graph --type=derivation coreutils

(too big)
origin

package

bag

build system

derivation
#4. “Staging”: hosting build-side code.
build processes
chroot, separate UIDs

Guile
make, etc.

Guile
make, etc.

Guile
make, etc.

build daemon

Guile Scheme

(guix packages)

(guix store)

RPCs
#5. Operating system!