

Unify your distributions

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- Work laptop: Thinkpad X1 Nano.
- Self hosted build machine: 32 CPU, 128G RAM.
- VPS machine: DigitalOcean droplet.
- Single board computer: Pine A64 LTS.

- 1 distribution per month on the laptop.
- Debian stable on the build machine.
- Ubuntu on the VPS.
- Armbian on the SBC.



Guix

- Work laptop: Guix system.
- Build machine: Guix system.
- VPS machine: Guix system.
- SBC: Guix system.



Guix

- Package manager written in Guile scheme.
- Advanced distribution proposing declarative system configuration for transparent and reproducible operating systems.

Why GNU Guix?

- Declarative configuration.
- Single Git repository.
- Easy to install/reconfigure/deploy.
- Reproducible: no backups.



- Installation with the graphical installer.
- Jump to the latest Guix revision: `guix pull`.
- Periodical tasks:
 - `guix pull`
 - `guix gc`
 - `guix system reconfigure meije.scm`



- Similar configuration but with a different set of services.
- `guix deploy` instead of `guix system reconfigure` for convenience.
- Used as an offload machine with Wireguard.

Deploy the configuration

```
guix deploy elbruz.scm
```



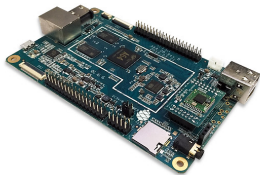
- Standalone configuration with `guix` system image.
- `guix deploy` instead of `guix system reconfigure` for performance reasons.

Build the image

```
guix system image -t qcow2 -L ~/maint/hydra/modules/ do.scm
```

Deploy the configuration

```
guix deploy -L ~/maint/hydra/modules do-deploy.scm
```



- Similar to the VPS but with a different architecture.
- Fewer available substitutes.

Configuration file

```
(use-modules (gnu)
             (gnu image)
             (gnu platforms arm)
             (gnu system images pine64))
(use-package-modules linux)

(define vignemale
  (operating-system
   (inherit pine64-barebones-os)
   (packages (cons i2c-tools %base-packages))))

(image
 (inherit
  (os+platform->image vignemale aarch64-linux
   #:type pine64-image-type))
 (name 'vignemale-raw-image))
```

Build the image

```
guix system image vignemale.scm
```

SBC machine

```
This is the GNU system.  Welcome.
```

```
vignemale login: root
```

```
This is the GNU operating system, welcome!
```

```
root@vignemale ~# i2cdetect -y 0
```

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | a | b | c | d | e | f |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 00: | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10: | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20: | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30: | 30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 40: | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 50: | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 60: | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 70: | -- | -- | -- | -- | -- | -- | -- | -- | | | | | | | | |

- You can run Guix System on SBC or VPS indifferently.
- You can also use this approach to maintain large build farms.
- It's easy to contribute, come help us!