# README

## Penguin's eggs are generated and new birds are ready to fly...




It took years of work to create the penguins-eggs, and I also incurred expenses for renting the site and subscribing to Google Gemini, for the artificial intelligence that is now indispensable.



## Index



## Links

# penguins-eggs

**penguins-eggs** (or simply `eggs`) is a console tool that allows you to remaster your system and redistribute it as live images on USB sticks or via PXE.

Think of it as a way to "hatch" a new system from an existing one. It is a system cloning and distribution remastering tool primarily designed for Linux. It allows users to create customized live ISO images or backups of a Linux system, replicating the setup easily.

### Key Capabilities

- **Distribution Remastering:** Craft your own Linux distro (or a spin of an existing one). Tweak an existing system, strip or add components, and package it as a new ISO.
- **System Backup & Cloning:** Create a snapshot of your current system, including installed packages and configurations.
- **Distro-Agnostic:** Works across **Debian, Devuan, Ubuntu, Arch, Fedora, AlmaLinux, Rocky, OpenSuSE, and Alpine**.
- **Multi-Architecture:** Debian/Ubuntu packages are relased for `i386`, `amd64`, `arm64` and `riscv64` (more info).
- **Fast & Efficient:** Leverages OverlayFS to avoid physically copying the entire filesystem, combined with zstd compression (up to 10x faster).
- **Secure:** Supports LUKS encryption for user data within the ISO.

# Installation

There are three main ways to install `eggs`. Choose the one that fits your workflow.

### Method 1: The "Fresh Eggs" Script (Recommended)

This is the most practical way suitable for all supported distros. It automatically configures necessary repositories (like NodeSource) and installs dependencies.

```
git clone [https://github.com/pieroproietti/fresh-eggs]
(https://github.com/pieroproietti/fresh-eggs)
cd fresh-eggs
sudo ./fresh-eggs.sh
```

### Method 2: AppImage (Universal)

Download the latest AppImage from Releases.

**Prerequisites:** Depending on your distro, you may need FUSE:

- **Debian/Ubuntu:** `sudo apt-get install fuse libfuse2`
- **Arch:** `sudo pacman -S fuse2`
- **Fedora:** `sudo dnf install fuse fuse-libs`

**Run:**

```
chmod +x penguins-eggs-*.AppImage
sudo ./penguins-eggs-*.AppImage
```

*The AppImage will automatically configure itself as `/usr/bin/eggs`.*

### Method 3: Native Packages

If you prefer native package managers, specific repositories are available.

| Family | Instructions |
|---|---|
| **Debian/Ubuntu** | Install Guide / PPA Info |
| **Arch/Manjaro** | Available in **AUR** and **Manjaro Community**. Use `yay penguins-eggs` or `pamac install penguins-eggs`. |
| **Fedora/RHEL** | Fedora Guide / Enterprise Linux |
| **Alpine** | Available in the penguins-alpine repo. |

## Usage

Once installed, simply run `eggs` to see the available commands.

### Basic: Create a Clean ISO

This creates a distributable live ISO *without* user data. Perfect for sharing your custom distro.

```
sudo eggs produce
```

### Cloning: Backup Your System

To keep your user data, configurations, and files:

| Goal | Command | Description |
|---|---|---|

| Goal | Command | Description |
| --- | --- | --- |
| **Standard Clone** | `eggs produce --clone` | Copies user data unencrypted. **Do not share publicly.** |
| **Home Encryption** | `eggs produce --homecrypt` | Encrypts `/home` data inside the ISO using LUKS. |
| **Full Encryption** | `eggs produce --fullcrypt` | Encrypts the entire system (Debian/Devuan only). |

### Compression Options

- `--pendrive`: Optimized for USBs (zstd level 15).
- `--standard`: Uses `xz` compression.
- `--max`: Maximum compression (`xz -Xbcj`).

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# The Aviary: Tools & Terminology

`penguins-eggs` uses a bird-themed naming convention for its internal tools:

- **Wardrobe:** A tool to organize customizations, scripts, and themes. It allows you to switch between configurations (e.g., from a bare CLI system to a full GUI). See penguins-wardrobe.
- **Cuckoo:** A PXE boot server feature. It allows you to boot your generated ISO on other computers over the local network without needing a USB drive.
- **Yolk:** A local repository bundled inside the ISO containing essential packages, allowing offline installation.
- **Krill:** The internal CLI/TUI system installer. Essential for server installs or when no GUI is available.
- **Calamares:** The industry-standard GUI installer, automatically configured by `eggs` for desktop environments.
- **Mom & Dad:**
  - `eggs mom`: Interactive help and documentation assistant.
  - `eggs dad`: Configuration wizard. Run `sudo eggs dad -d` to reset configuration.

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# Supported Distributions

`eggs` is designed to be distro-agnostic. It respects the original package manager and repository lists.

- **Debian Family:** Debian, Devuan, Ubuntu, Linux Mint, Kali, KDE Neon, Pop!_OS.
- **Arch Family:** Arch Linux, Manjaro, Biglinux, EndeavourOS, Garuda.
- **RPM Family:** Fedora, AlmaLinux, Rocky Linux, OpenSUSE.
- **Others:** Alpine Linux.

> [!NOTE] For a complete and updated list, please consult SUPPORTED-DISTROS.

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# Links & Documentation

- **Official Website:** penguins-eggs.net
- **Blog & News:** The Triple Somersault
- **SourceForge ISOs:** Download Examples
- **User Guide:** Wardrobe User Guide

# Commands

- `eggs adapt`
- `eggs autocomplete [SHELL]`
- `eggs calamares`
- `eggs config`
- `eggs cuckoo`
- `eggs dad`
- `eggs export appimage`
- `eggs export iso`
- `eggs export pkg`
- `eggs export tarballs`
- `eggs help [COMMAND]`
- `eggs kill`
- `eggs krill`
- `eggs love`
- `eggs mom`
- `eggs produce`
- `eggs setup install`
- `eggs setup purge`
- `eggs status`
- `eggs tools clean`
- `eggs tools repo`
- `eggs tools skel`
- `eggs tools stat`
- `eggs tools yolk`
- `eggs update`
- `eggs version`
- `eggs wardrobe get [REPO]`
- `eggs wardrobe list [REPO]`
- `eggs wardrobe show [REPO]`
- `eggs wardrobe wear [REPO]`

## `eggs adapt`

adapt monitor resolution for VM only

```
USAGE
  $ eggs adapt [-h] [-v]

FLAGS
  -h, --help     Show CLI help.
  -v, --verbose

DESCRIPTION
  adapt monitor resolution for VM only

EXAMPLES
  $ eggs adapt
```

*See code: src/commands/adapt.ts*

## eggs autocomplete [SHELL]

Display autocomplete installation instructions.

```
USAGE
  $ eggs autocomplete [SHELL] [-r]

ARGUMENTS
  [SHELL]  (zsh|bash|powershell) Shell type

FLAGS
  -r, --refresh-cache  Refresh cache (ignores displaying instructions)

DESCRIPTION
  Display autocomplete installation instructions.

EXAMPLES
  $ eggs autocomplete

  $ eggs autocomplete bash

  $ eggs autocomplete zsh

  $ eggs autocomplete powershell

  $ eggs autocomplete --refresh-cache
```

*See code: @oclif/plugin-autocomplete*

## eggs calamares

a GUI system installer - install and configure calamares

```
USAGE
  $ eggs calamares [-h] [-i] [-n] [-p] [-r] [--remove] [--theme <value>] [-
v]

FLAGS
  -h, --help           Show CLI help.
  -i, --install        install calamares and its dependencies
  -n, --nointeractive  no user interaction
  -p, --policies       configure calamares policies
  -r, --release        release: remove calamares and all its dependencies
after the installation
  -v, --verbose
      --remove         remove calamares and its dependencies
      --theme=<value>  theme/branding for eggs and calamares

DESCRIPTION
  a GUI system installer - install and configure calamares

EXAMPLES
  sudo eggs calamares

  sudo eggs calamares --install

  sudo eggs calamares --install --theme=/path/to/theme

  sudo eggs calamares --remove
```

*See code: src/commands/calamares.ts*

## eggs config

Configure eggs to run it

```
USAGE
  $ eggs config [-c] [-h] [-n] [-v]

FLAGS
  -c, --clean          remove old configuration before to create new one
  -h, --help           Show CLI help.
  -n, --nointeractive  no user interaction
  -v, --verbose        verbose

DESCRIPTION
  Configure eggs to run it

EXAMPLES
  sudo eggs config

  sudo eggs config --clean

  sudo eggs config --clean --nointeractive
```

*See code: src/commands/config.ts*

## eggs cuckoo

PXE start with proxy-dhcp

```
USAGE
  $ eggs cuckoo [-h] [-v]

FLAGS
  -h, --help     Show CLI help.
  -v, --verbose  verbose

DESCRIPTION
  PXE start with proxy-dhcp

EXAMPLES
  sudo eggs cuckoo
```

*See code: src/commands/cuckoo.ts*

## eggs dad

ask help from daddy - TUI configuration helper

```
USAGE
  $ eggs dad [-c] [-d] [-f <value>] [-h] [-n] [-v]

FLAGS
  -c, --clean          remove old configuration before to create
  -d, --default        reset to default values
  -f, --file=<value>   use a file configuration custom
  -h, --help           Show CLI help.
  -n, --nointeractive  no user interaction
  -v, --verbose

DESCRIPTION
  ask help from daddy - TUI configuration helper

EXAMPLES
  sudo dad

  sudo dad --clean

  sudo dad --default
```

*See code: src/commands/dad.ts*

## eggs export appimage

export penguins-eggs AppImage to the destination host

```
USAGE
  $ eggs export appimage [-c] [-h] [-v]

FLAGS
  -c, --clean    remove old .AppImage before to copy
  -h, --help     Show CLI help.
  -v, --verbose  verbose

DESCRIPTION
  export penguins-eggs AppImage to the destination host

EXAMPLES
  $ eggs export pkg

  $ eggs export pkg --clean

  $ eggs export pkg --all
```

*See code: src/commands/export/appimage.ts*

## eggs export iso

export remastered ISO in the destination host

```
USAGE
  $ eggs export iso [-C] [-c] [-h] [-v]

FLAGS
  -C, --checksum  export checksums md5 and sha256
  -c, --clean     delete old ISOs before to copy
  -h, --help      Show CLI help.
  -v, --verbose   verbose

DESCRIPTION
  export remastered ISO in the destination host

EXAMPLES
  $ eggs export iso

  $ eggs export iso --clean
```

*See code: src/commands/export/iso.ts*

## eggs export pkg

export penguins-eggs package to the destination host

```
USAGE
  $ eggs export pkg [-a] [-c] [-h] [-v]

FLAGS
  -a, --all      export all archs
  -c, --clean    remove old .deb before to copy
  -h, --help     Show CLI help.
  -v, --verbose  verbose

DESCRIPTION
  export penguins-eggs package to the destination host

EXAMPLES
  $ eggs export pkg

  $ eggs export pkg --clean

  $ eggs export pkg --all
```

*See code: src/commands/export/pkg.ts*

## eggs export tarballs

export pkg/iso/tarballs to the destination host

```
USAGE
  $ eggs export tarballs [-c] [-h] [-v]

FLAGS
  -c, --clean    remove old .deb before to copy
  -h, --help     Show CLI help.
  -v, --verbose  verbose

DESCRIPTION
  export pkg/iso/tarballs to the destination host

EXAMPLES
  $ eggs export tarballs

  $ eggs export tarballs --clean
```

*See code: src/commands/export/tarballs.ts*

## eggs help [COMMAND]

Display help for eggs.

```
USAGE
  $ eggs help [COMMAND...] [-n]

ARGUMENTS
  [COMMAND...]  Command to show help for.

FLAGS
  -n, --nested-commands  Include all nested commands in the output.

DESCRIPTION
  Display help for eggs.
```

*See code: @oclif/plugin-help*

## eggs kill

kill the eggs/free the nest

```
USAGE
  $ eggs kill [-h] [-i] [-n] [-v]

FLAGS
  -h, --help           Show CLI help.
  -i, --isos           erase all ISOs on remote mount
  -n, --nointeractive  no user interaction
  -v, --verbose        verbose

DESCRIPTION
  kill the eggs/free the nest

EXAMPLES
  sudo eggs kill
```

*See code: src/commands/kill.ts*

## eggs krill

a TUI system installer - install the system

```
USAGE
  $ eggs krill [-b] [-c] [-k] [-d <value>] [-H] [-h] [-i] [-n] [-N] [-p] [-
r] [-R <value>] [-s] [-S] [-t]
    [-u] [-v]

FLAGS
  -H, --halt             Halt the system after installation
  -N, --none             Swap none: 256M
  -R, --replace=<value>  Replace partition. eg: --replace /dev/sda3
```

```
  -S, --suspend          Swap suspend: RAM x 2
  -b, --btrfs            Format btrfs
  -c, --chroot           chroot before to end
  -d, --domain=<value>   Domain name, defult: .local
  -h, --help             Show CLI help.
  -i, --ip               hostname as ip, eg: ip-192-168-1-33
  -k, --crypted          Crypted CLI installation
  -n, --nointeractive    no user interaction
  -p, --pve              Proxmox VE install
  -r, --random           Add random to hostname, eg: colibri-ay412dt
  -s, --small            Swap small: RAM
  -t, --testing          Just testing krill
  -u, --unattended       Unattended installation
  -v, --verbose          Verbose

DESCRIPTION
  a TUI system installer - install the system

EXAMPLES
  sudo eggs install

  sudo eggs install --unattended --halt

  sudo eggs install --chroot
```

*See code: src/commands/krill.ts*

## eggs love

the simplest way to get an egg!

```
USAGE
  $ eggs love [-c] [-f] [-h] [-H] [-k] [-n] [-v]

FLAGS
  -H, --hidden         stealth mode
  -c, --clone          clone (uncrypted)
  -f, --fullcrypt      clone crypted full
  -h, --help           Show CLI help.
  -k, --homecrypt      clone crypted home
  -n, --nointeractive  no user interaction
  -v, --verbose

DESCRIPTION
  the simplest way to get an egg!

EXAMPLES
  $ eggs auto
```

*See code: src/commands/love.ts*

## eggs mom

ask help from mommy - TUI helper

```
USAGE
  $ eggs mom [-h]

FLAGS
  -h, --help  Show CLI help.

DESCRIPTION
  ask help from mommy - TUI helper

EXAMPLES
  $ eggs mom
```

*See code: src/commands/mom.ts*

## eggs produce

produce a live image from your system

```
USAGE
  $ eggs produce [--addons <value>...] [--basename <value>] [-c] [--
excludes <value>...] [-f] [-h] [-H] [-k]
    [-i] [-K <value>] [--links <value>...] [-m] [-N] [-n] [-p] [-P <value>]
[--release] [-s] [-S] [--theme <value>] [-v]
    [-y]

FLAGS
  -H, --hidden               stealth mode
  -K, --kernel=<value>       kernel version
  -N, --noicon               no icon eggs on desktop
  -P, --prefix=<value>       prefix
  -S, --standard             standard compression: xz -b 1M
  -c, --clone                clone (uncrypted)
  -f, --fullcrypt            clone crypted full
  -h, --help                 Show CLI help.
  -i, --includeRootHome      folder /root is included on live
  -k, --homecrypt            clone crypted home
  -m, --max                  max compression: xz -Xbcj ...
  -n, --nointeractive        no user interaction
  -p, --pendrive             optimized for pendrive: zstd -b 1M -
Xcompression-level 15
  -s, --script               script mode. Generate scripts to manage iso
build
  -v, --verbose              verbose
  -y, --yolk                 force yolk renew
      --addons=<value>...    addons to be used: adapt, pve, rsupport
      --basename=<value>     basename
```

```
      --excludes=<value>...  use: static, homes, home
      --links=<value>...     desktop links
      --release              release: remove penguins-eggs, calamares and
dependencies after installation
      --theme=<value>        theme for livecd, calamares branding and
partitions

DESCRIPTION
  produce a live image from your system

EXAMPLES
  sudo eggs produce                    # zstd fast compression

  sudo eggs produce --pendrive         # zstd compression optimized
pendrive

  sudo eggs produce --clone            # clear clone (unencrypted)

  sudo eggs produce --homecrypt      # clone crypted home (all inside /home
is cypted)

  sudo eggs produce --fullcrypt      # clone crypted full (entire system is
crypted)

  sudo eggs produce --basename=colibri
```

*See code: src/commands/produce.ts*

## eggs setup install

Automatically check and install system prerequisites

```
USAGE
  $ eggs setup install

DESCRIPTION
  Automatically check and install system prerequisites

EXAMPLES
  $ eggs setup                         # this help

  sudo eggs setup install              # install native dependencies,
autocomplete, man, etc

  sudo eggs setup purge                # purge all configurations,
autocomplete, man, etc installed from penguins-eggs AppImage
```

*See code: src/commands/setup/install.ts*

## eggs setup purge

Automatically check and install system prerequisites

```
USAGE
  $ eggs setup purge

DESCRIPTION
  Automatically check and install system prerequisites

EXAMPLES
  $ eggs setup                          # this help

  sudo eggs setup install              # install native dependencies,
autocomplete, man, etc

  sudo eggs setup purge                # purge all configurations,
autocomplete, man, etc installed from penguins-eggs AppImage
```

*See code: src/commands/setup/purge.ts*

## eggs status

informations about eggs status

```
USAGE
  $ eggs status [-h] [-v]

FLAGS
  -h, --help     Show CLI help.
  -v, --verbose

DESCRIPTION
  informations about eggs status

EXAMPLES
  $ eggs status
```

*See code: src/commands/status.ts*

## eggs tools clean

clean system log, apt, etc

```
USAGE
  $ eggs tools clean [-h] [-n] [-v]

FLAGS
  -h, --help           Show CLI help.
  -n, --nointeractive  no user interaction
```

```
  -v, --verbose        verbose

DESCRIPTION
  clean system log, apt, etc

EXAMPLES
  sudo eggs tools clean
```

*See code: src/commands/tools/clean.ts*

## eggs tools repo

add/remove penguins-repos

```
USAGE
  $ eggs tools repo [-a] [-h] [-n] [-r] [-v]

FLAGS
  -a, --add            add penguins-repos
  -h, --help           Show CLI help.
  -n, --nointeractive  no user interaction
  -r, --remove         remove penguins-repos
  -v, --verbose        verbose

DESCRIPTION
  add/remove penguins-repos

EXAMPLES
  sudo eggs tools repo --add

  sudo eggs tools repo --remove
```

*See code: src/commands/tools/repo.ts*

## eggs tools skel

update skel from home configuration

```
USAGE
  $ eggs tools skel [-h] [-u <value>] [-v]

FLAGS
  -h, --help          Show CLI help.
  -u, --user=<value>  user to be used
  -v, --verbose

DESCRIPTION
  update skel from home configuration
```

```
EXAMPLES
  sudo eggs tools skel

  sudo eggs tools skel --user user-to-be-copied
```

*See code: src/commands/tools/skel.ts*

## eggs tools stat

get statistics from sourceforge

```
USAGE
  $ eggs tools stat [-h] [-m] [-y]

FLAGS
  -h, --help   Show CLI help.
  -m, --month  current month
  -y, --year   current year

DESCRIPTION
  get statistics from sourceforge

EXAMPLES
  $ eggs tools stat

  $ eggs tools stat --month

  $ eggs tools stat --year
```

*See code: src/commands/tools/stat.ts*

## eggs tools yolk

configure eggs to install without internet

```
USAGE
  $ eggs tools yolk [-h] [-v]

FLAGS
  -h, --help     Show CLI help.
  -v, --verbose

DESCRIPTION
  configure eggs to install without internet

EXAMPLES
  sudo eggs tools yolk
```

*See code: src/commands/tools/yolk.ts*

## eggs update

update the Penguins' eggs tool

```
USAGE
  $ eggs update [-h] [-v]

FLAGS
  -h, --help     Show CLI help.
  -v, --verbose  verbose

DESCRIPTION
  update the Penguins' eggs tool

EXAMPLES
  $ eggs update
```

*See code: src/commands/update.ts*

## eggs version

```
USAGE
  $ eggs version [--json] [--verbose]

FLAGS
  --verbose  Show additional information about the CLI.

GLOBAL FLAGS
  --json  Format output as json.

FLAG DESCRIPTIONS
  --verbose  Show additional information about the CLI.

    Additionally shows the architecture, node version, operating system,
and versions of plugins that the CLI is using.
```

*See code: @oclif/plugin-version*

## eggs wardrobe get [REPO]

get warorobe

```
USAGE
  $ eggs wardrobe get [REPO] [-h] [-v]

ARGUMENTS
```

```
  [REPO]  repository to get

FLAGS
  -h, --help     Show CLI help.
  -v, --verbose

DESCRIPTION
  get warorobe

EXAMPLES
  $ eggs wardrobe get

  $ eggs wardrobe get your-wardrobe
```

*See code: src/commands/wardrobe/get.ts*

## eggs wardrobe list [REPO]

list costumes and accessoires in wardrobe

```
USAGE
  $ eggs wardrobe list [REPO] [-d <value>] [-h] [-v]

ARGUMENTS
  [REPO]  wardrobe to get

FLAGS
  -d, --distro=<value>  distro
  -h, --help            Show CLI help.
  -v, --verbose

DESCRIPTION
  list costumes and accessoires in wardrobe

EXAMPLES
  $ eggs wardrobe list

  $ eggs wardrobe list your-wardrobe

  $ eggs wardrobe list --distro arch
```

*See code: src/commands/wardrobe/list.ts*

## eggs wardrobe show [REPO]

show costumes/accessories in wardrobe

```
USAGE
  $ eggs wardrobe show [REPO] [-h] [-j] [-v] [-w <value>]
```

```
ARGUMENTS
  [REPO]  costume to show

FLAGS
  -h, --help              Show CLI help.
  -j, --json              output JSON
  -v, --verbose
  -w, --wardrobe=<value>  wardrobe

DESCRIPTION
  show costumes/accessories in wardrobe

EXAMPLES
  $ eggs wardrobe show colibri

  $ eggs wardrobe show accessories/firmwares

  $ eggs wardrobe show accessories/
```

*See code: src/commands/wardrobe/show.ts*

## eggs wardrobe wear [REPO]

wear costume/accessories from wardrobe

```
USAGE
  $ eggs wardrobe wear [REPO] [-h] [-a] [-f] [-v] [-w <value>]

ARGUMENTS
  [REPO]  costume to wear

FLAGS
  -a, --no_accessories    not install accessories
  -f, --no_firmwares      not install firmwares
  -h, --help              Show CLI help.
  -v, --verbose
  -w, --wardrobe=<value>  wardrobe

DESCRIPTION
  wear costume/accessories from wardrobe

EXAMPLES
  sudo eggs wardrobe wear duck

  sudo eggs wardrobe wear accessories/firmwares

  sudo eggs wardrobe wear wagtail/waydroid
```

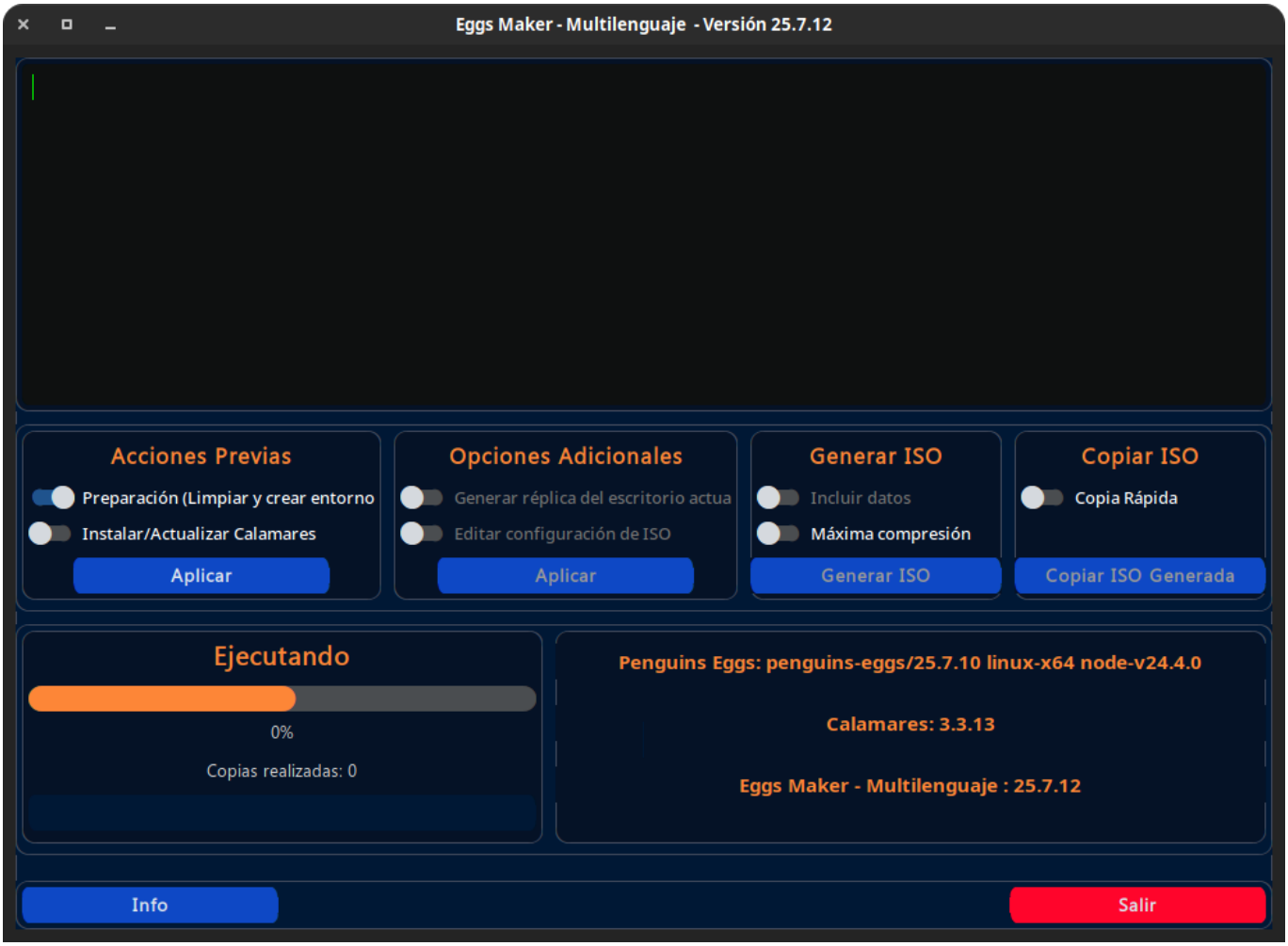
*See code: src/commands/wardrobe/wear.ts*

# GUI

There are two GUIs for penguins-eggs at the moment: eggsmaker and penGUI.

## eggsmaker

A project by Jorge Luis Endres.




eggsmaker is a graphical interface for penguins-eggs.

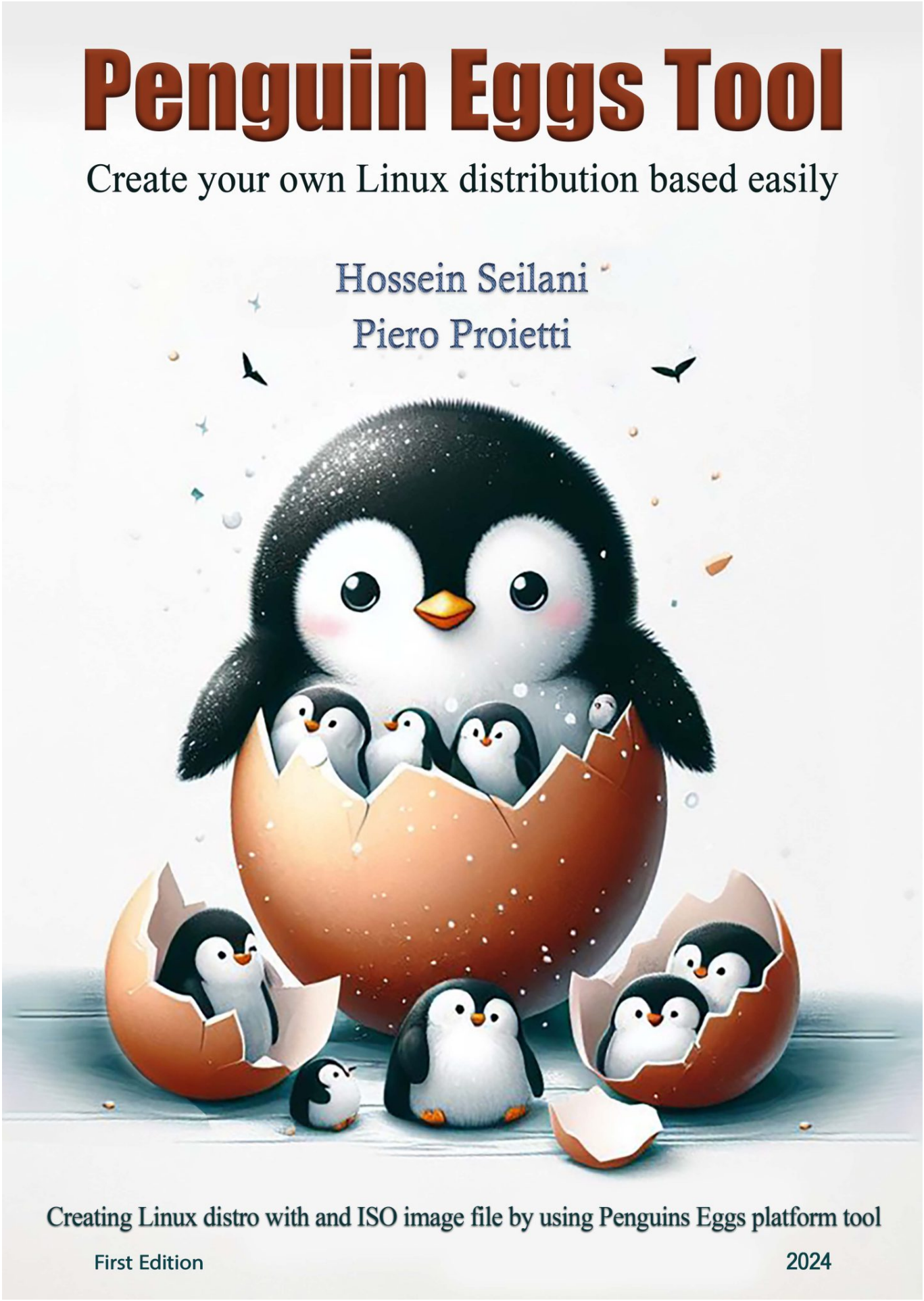
Written by my friend Jorge Luis Endres, it is essential and functional. It doesn't cover all the possibilities of penguins-eggs, but in the end, a GUI should be simple and intuitive.

I like it, I hope you like it too, and I thank Jorge for his daring.

eggsmaker packages are available on Jorge gdrive.

# Book

My friend Hosein Seilany founder of predator-os, has written a book on Penguins's eggs, with my partecipation. It's a remarkable work - even in size and weight - so it's a great honor to announce it here!




That's all, Folks!

One of the standout features of Penguins Eggs' is its hassle-free setup. It comes with all the necessary configurations, making it a convenient choice for users. Just like in real life, the magic of Penguins Eggs' lies within - no additional setup required!

## More Information

In addition to the official guide, there are other resources available for Penguins Eggs' users, particularly developers. These resources can be found in the penguins-eggs repository under the documents section.

Some noteworthy documents include:

- Hens: Different Species: A brief guide on using Penguins Eggs' in Debian, Arch, and Manjaro.
- Arch-naked: A blog post detailing how to create an Arch naked live, install it, and customize the resulting system into a graphics development station.

If you have any questions or need further assistance, feel free to contact me via email at pieroproietti@gmail.com. You can also stay updated by following my blog or connecting with me on , Telegram, Mastodom, Facebook, GitHub, Jitsi, Reddit or Twitter, Mastodom.

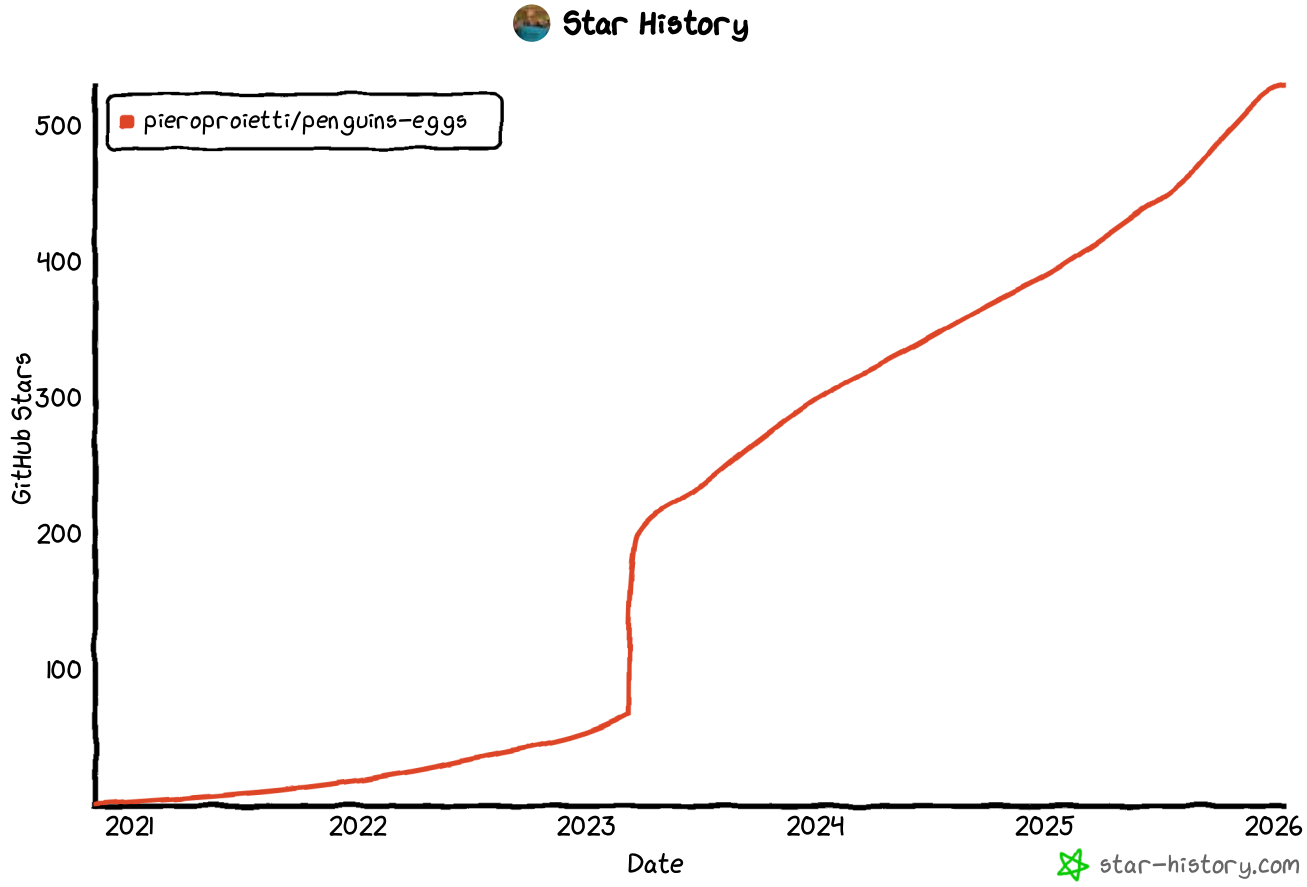
## A word of thanks

- This README would not be so well cared for if not for the work of Hosein Seilain who spent his time revising and supplementing the text;
- The eggs icon was designed by Charlie Martinez;
- and a word of thanks to all of you who are using it and providing feedback and motivation to continue it.

Thank you!

## Star History

This project collects stars, look to the sky... contribute!

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