

What is Gentoo Linux?



Gentoo is a **free** operating system based on Linux that can be automatically optimized and customized for just about any application or need.

Extreme configurability, **performance**, and a top-notch user and developer community are all hallmarks of the Gentoo experience.

Of course, Gentoo is **more than just software**. It is also a community around the distribution. Gentoo benefits from around 250 developers and thousands of users, many of which are experts in their fields. The distribution project provides the means for the users to enjoy Gentoo: documentation, infrastructure, release engineering, software porting, quality assurance, security followup, hardening, and more.

The philosophy of Gentoo



The goal of Gentoo is to strive to create near-ideal tools. Tools that can accommodate the needs of many different users all with divergent goals. Don't you love it when you find a tool that does exactly what you want to do? Doesn't it feel great? Our mission is to give that sensation to as many people as possible.

Daniel Robbins
Previous Chief Architect

Gentoo is all about choices.

First of all, welcome to Gentoo! You are about to enter the world of choices and performance. Gentoo is all about choices. When installing Gentoo, this is made clear several times — users can choose how much they want to compile themselves, how to install Gentoo, what system logger to use, etc. Gentoo is a fast, modern meta-distribution with a clean and flexible design. It is built on an ecosystem of free software and does not hide what is beneath the hood from its users.

Gentoo Linux Handbook.

Why I decided to try Gentoo Linux?



Learn more about Operating Systems

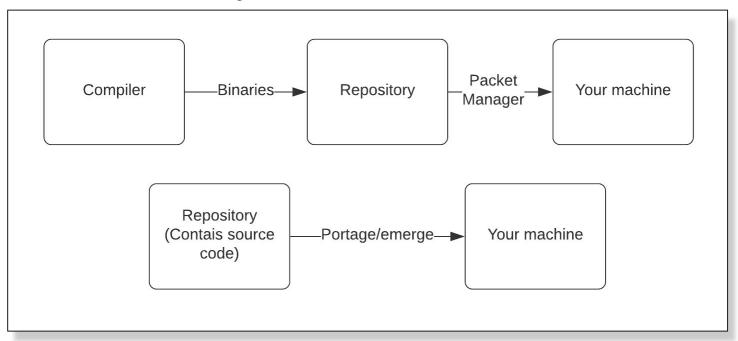


Test my skills



Adventure

Gentoo vs binary-based distributions



Benefits of compiling on your own machine



Speed up to 50-60% (2% in common)



Cutting-edge packages & kernels



Customization of individual software packages

Open Source and why it's more Secure



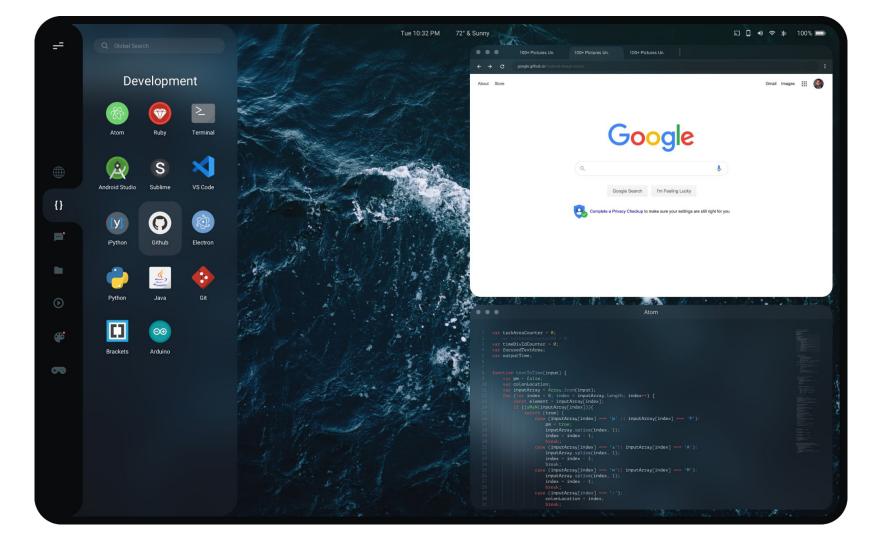
Due to the flexibility inherent in Gentoo's Portage tool and USE flags, Gentoo encourages users to build software with only the features they need. This decreases code size and complexity, and tends to increase security.

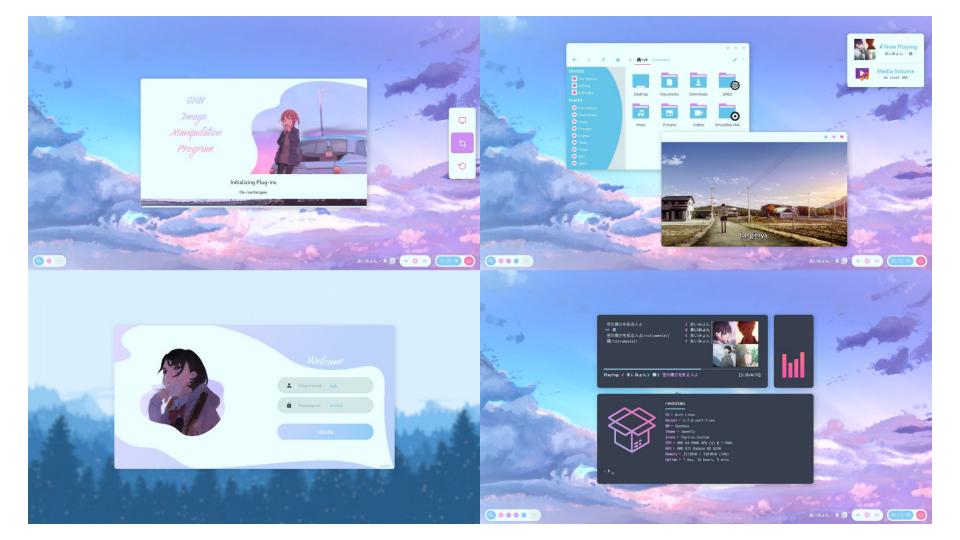
Environment customization

Ricing

"Making improvements to a system that don't actually do anyone any good, and can sometimes have negative ramifications"

Urban dictionary





```
import numpy as np
  from tqdm import tqdm
 3 from config import *
  def get data(filename):
       ''' Get matrix of input data from CSV file '''
      data = np.genfromtxt(filename, dtype=float, delimiter=".")
      return (X, y)
12 def split data(X, y, test size):
      ''' Split a proportion of the training set from its labels '''
      X = X[test size:.:]
      v = v[test size:. :]
      return (X, y, x)
19 def create batches(X, y, batch size=10):
      ''' Create a batch of samples and labels '''
      np.random.shuffle(data)
      batch count = int(data.shape[0]/batch size)
      for count in range(batch count):
      return batches
32 def sigmoid(x):
      ''' Pass a value through the sigmoid function '''
      return 1/(1+np.exp(-x))
36 def initialise network(X, y, layers=(2,)):
      ''' Initialise a network with random weight vectors '''
      network = [2*np.random.random((X.shape[1]+1, lavers[0]))-1]
      for layer, nodes in enumerate(layers):
          if laver == len(lavers)-1:
              network.append(2*np.random.random((nodes+1, y.shape[1]))-1)
```

```
ash: neofetch
         -/oyddmdhs+:.
                                       ash@Computer
     -odNMMMMMMMNNmhv+-
   -yNMMMMMMMMMMNNNmmdhv+-
                                       OS: Gentoo/Linux
 `omMMMMMMMMMMMmdmmmmddhhv/`
                                       Kernel: 5.4.48-gentoo
 omMMMMMMMMMNhhyyyohmdddhhhdo`
                                       Packages: 347 (emerge)
                                       Resolution: 2560x1440 @ 59.95Hz
.vdMMMMMMMMMdhs++so/smdddhhhhdm+`
 oyhdmNMMMMMMMNdyooydmddddhhhhyhNd.
 :oyhhdNNMMMMMMNNNmmdddhhhhhyymMh
                                       Shell: zsh 5.8
    .:+sydNMMMMNNNmmmdddhhhhhhmMmv
                                       WM: dwm
      /mMMMMMNNnmmmdddhhhhhmMNhs:
                                       Terminal: alacritty
     `oNMMMMMMNNNmmmddddhhdmMNhs+`
                                       Terminal Font: Fira Code
  `sNMMMMMMMNNnmmdddddmNMmhs/.
 /NMMMMMMMNNNNmmmdddmNMNdso: `
                                       CPU: Intel i5-6600K @ 3.900GHz [19.0°on]
+MMMMMMNNNNNmmmdmNMNdso/-
                                       GPU: NVIDIA GeForce GTX 1060 6GB
vMMNNNNNNnmmmmNNMmhs+/-
                                       Memory: 242MiB / 15950MiB (1%)
/hmmnnnnnnnndhs++/-`
                                       Disk (/): 5.1G / 120G (5%)
\displayshed // ohdmmddhys+++/:.`
ash:
```

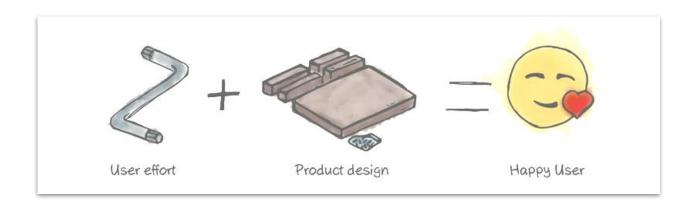
ash: ls // home/ash code
ash: cd code/deep-learning // home/ash ash: ls // home/ash/code/deep-learning data fnn README.md requirements.txt
ash: ls fnn config.py fnn.py __pycache__
ash: python fnn/fnn.py // home/ash/code/deep-learning 100% // home

Installation

Step	Result
1	The user is in a working environment ready to install Gentoo.
2	The Internet connection is ready to install Gentoo.
3	The hard disks are initialized to host the Gentoo installation.
4	The installation environment is prepared and the user is ready to chroot into the new environment
5	Core packages, which are the same on all Gentoo installations, are installed.
6	The Linux kernel is installed.
7	Most of the Gentoo system configuration files are created.
8	The necessary system tools are installed.
9	The proper boot loader has been installed and configured.
10	The freshly installed Gentoo Linux environment is ready to be explored.

IKEA Effect

IKEA Effect — is a cognitive bias in which consumers place a disproportionately high value on products they partially created.



Disadvantages of Gentoo Linux

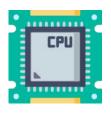
- You have to build the entire system from scratch.
- There's a much smaller community, and although the Gentoo Wiki is great, sometimes that's not enough

- You essentially have to compile every program from source, it's going to take forever.
- Experience required
- Not for casual users



The average to install it is **2 to 6 hours**. Some require more than 10 hours, there are also those who require 2 to 7 days.

A wise Gentoo user once said: all problems are caused by the user - he was wrong



There is a very high probability that the system will not work with other hardware



Gentoo allows users to **easily patch** almost any source-based package. But this still will not save you from frequent recompilation of system components

Where is Gentoo Linux used?

- 12+ active Distributions based on Gentoo.
- A large number of corporations use open source software developed by Gentoo for their own projects. For example Google with Chromium OS.
- People concerned about their security are actively using various distributions based on Gentoo. For example Liberté Linux
- Kaspersky Rescue Disk is based on Gentoo Linux









Gentoo is the final boss of Linux_(almost)

And as we know, the game gives the most **experience** for **defeating** the boss.

