What can we learn from Hyperbola Linux?

open-source

Neville Jackson nevj Dedicated   **2d**

What can we learn from Hyperbola Linux?

There have been 3 topics in which I have examined

- how to install Hyperbola

Hyperbola Linux install

The current version of Hyperbola Linux is hyperbola-milky-way-v0.4.2-dual.iso. This is not the BSD kernel version referred to in the topic This version has a Linux-libre kernel. I started my install with a torrent download of hyperbola-milky-way-v0.4.2-dual.iso, started a new virtual machine in virt-manager, set it up with 8G of memory, 4 CPU,s, and 50G of file space. When I load the .iso file, I get a screen as follows **[Screenshot_2023-07-27_13-50-35]** Choose the top line boot option a…

- how to get X windows and a Window Manager running in Hyperbola

Getting X windows into Hyperbola Linux

Following the Hyperbola Linux install described here it would be nice if I could get a graphic window system running, instead of operating at an alphanumeric login prompt. So I had to learn a few pacman commands, then when I tried to do a system update, I discovered there was no network connection. Most Linux installs setup a primary network connection for you, but not Hyperbola… it is like Gentoo… you do it all. So I looked around , found there was no NetworkManager, but it did have dhcpc…

- how to get a Desktop Environment in Hyperbola

Can Hyperbola Linux support a Desktop Environment?

Desktop Environments available in Hyperbola Linux We have seen that it is possible to start with a Display Manager and add features so that it begins to look like a primitive DE. That is one approach, the other is to look for a dropin fully configured DE. Unfortunately Hyperbola will not run any of the well known DE's, because they use packages like dbus which Hyperbola philosophy does not approve. There is, however, one DE which avoides all of the hyperbola-banned packages, because it i…

These 3 steps are things that are generally taken for granted in most Linux distributions. Why so much difficulty in Hyperbola?

The answer is that there are a large number of packages which are not present in Hyperbola, for reasons related to the philosopy of the Free Software Foundation and the GNU Free Software Movement.

https://wiki.hyperbola.info /doku.php?id=en:start#if_hyperbola_is_a_fully_free_distribution_is_it_fo llowing_the_gnu_free_system_distribution_guidelines_gnu_fsdg

So the thing that most characterizes Hyperbola is the list of things that are missing. Lets have a look at these.

What packages are missing from Hyperbola Linux?

There is a full list of available packages here

https://www.hyperbola.info/packages/

and a complete list of packages-not-included here

https://wiki.hyperbola.info /doku.php?id=en:philosophy:incompatible_packages

The missing packages are systemd, dbus, openssl, bluez, xorg, gtk-doc, libcanberra, avahi, zstd, protobuf, libatasmart, java/openjdk, rust, sudo, gettest, mono, nodejs, npm, pip, conan, cargo, flatpak, chromium, qt-webengine, youtube-dl/yt-dlp, electron, midori, gp, cdrtools, kodi, pulseaudio, libhandy, imagemagick, directx-headers, directx-shader-compiler, redis, syslog-ng, libsecret, polkit, udisks2, gvfs, pam, retroarch/libretro, qt-location, php, sbc.

Those are Arch package names, I believe. The full reasons for omitting each package are given in the above link. For nearly all of them there is a reasonable fully free alternative, eg it uses OpenRC instead of systemd, xenocara instead of Xorg, graphicsmagick instead of imagemagick.

To give some idea of the amount of code removed, I recorded the RAM used by Hyperbola and some other distros

Distro	Ram Used(Mb)
Hyperbola as installed	76
Hyperbola/IceWM	108
Hyperbola/LuminaDE	145
Antix/IceWM	168
MX21/Xfce	610
Debian12/Gnome	1412
Mint21/Cinnamon	1315

Those are all as installed, without added software. Hyperbola is smaller than Antix, but it is more than 10x smaller than Mint or Debian.

The question of whether Hyperbola can function as a normal desktop with so many things missing has been answered by the previous 3 topics. There remains the question of what is the point of struggling to do things in this totally free way?

The real message behind Hyperbola

If you study the list of missing packages carefully, and look at the reasons, you will find that it is not just a matter of Licencing and Open Source. There are issues of software quality. Many of the packages on the banned list are the result of coorporate projects which tends to introduce unreasonable complexity and to compromise free software goals. Some are languages (go and rust) and some are package managers (pip and cargo) which tend to undermine the integrity of the main Linux package manager.

So what they are saying is that the goals of some of these rejected packages tend to compromise the goals of a fully free Linux or a clean coded Linux, that the implementation is poor quality, and that there is unreasonable code bloat.

So the real message is this. Modern Linux has accumulated a good deal of 'rubbish-ware' and it is time to pause development and conduct a 'pruning' phase.

The future for Hyperbola

Hyperbola have announced that future releases will use a BSD kernel, instead of LinuxLibre. So we may have our first GNU/BSD distro. That in itself will be interesting, but it does not change the arguments presented above, which are mainly about non-GNU packages, not the kernel.

There is no suggestion that an average Linux user should install Hyperbola and expect it to be better than any other distro. It is not for that, it is for the future.

Links

Hyperbola Linux: Systemd-Free Arch With Linux-libre Kernel

Hyperbola GNU/Linux-libre is a systemd-free distribution for advanced users who prefer to keep their distribution free from proprietary components.

https://www.hyperbola.info/

https://wiki.hyperbola.info

**https://wiki.hyperbola.info
/doku.php?id=en:manual:beginner_installation**

**https://wiki.hyperbola.info
/doku.php?id=en:philosophy:incompatible_packages**

https://www.hyperbola.info/todo/xenocara-migration/

Rosika Schreck Rosika Dedicated   **2d**

Hi Neville, 👋

what a great summary of your efforts. 👍

Combined with the links to your previous work on the subject of hyperbola this
is a very useful compendium and how-to.

Thanks a lot for your time and work. ❤️

Many greetings from Rosika 🙂

Neville Jackson nevj Dedicated   **2d**

> Rosika Schreck:
>
> great summary of your efforts

Hi Rosika,
Thank you. It is nice to know someone cares.
I think Hyperbola is like a canary in a coal mine… alerting us to a creeping
problem.
Did you notice the ram sizes.?

Regards
Neville

Rosika Schreck Rosika Dedicated   **2d**

Hi Neville, 👋

you´re welcome.

> Neville Jackson:
>
> Did you notice the ram sizes.?

Yes, I did. This is really great, especially for me, as I cultivate some sort of "RAM
fetish". 😉

Hyperpobola - in theory - would be a very good OS for my PC with its 4 GB of RAM.
Antix seems to be very modest in this respect as well. But to beat even Antix...
... that´s to be admired. 😃

Many greetings from Rosika 🙂

Neville Jackson nevj Dedicated   **2d**

> Rosika Schreck:
>
> Antix seems to be very modest in this respect as well.

We need to look closer at Antix. It has some nice features.
You can do Antix in 15 mins... Hyperbola will take you a week or more. There is also Parabola.

Rosika Schreck Rosika Dedicated   **2d**

Thanks Neville, 👋

yes, Antix seems inetersting.
DistroWatch even characterizes it as being a distro "From RAM".

What I don´t quite get is, its release model is characterized as "Fixed, Semi, Rolling".
So ist ist fixed or semi-rolling, or rolling?
Or are there indeed three alternatives of this OS available... 🤔 ?

Cheers from Rosika

P.S.:

Thanks for mentioning Parabola.

Neville Jackson nevj Dedicated   **2d**

> Rosika Schreck:
>
> release model is characterized as "Fixed, Semi, Rolling

It seems fixed to me... rather like MX... you get all updates (not just security like Debian) but when a new release comes out you need to reinstall (or inline upgrade).

There are not 3 distros.

Rosika Schreck Rosika Dedicated   **2d**

Thanks Neville,

fixed seems good.
Sometimes I don´t get the nomenclature used by DistroWatch. Sorry.

Cheers from Rosika 🙂

Neville Jackson nevj Dedicated   **2d**

> Rosika Schreck:
>
> Sometimes I don´t get the nomenclature used by DistroWatch

I am not sure they even understand.

—————————————————— last visit ——————————————————

Jimmy Lindsey Akatama   **3h**

> Neville Jackson:
>
> So the real message is this. Modern Linux has accumulated a good deal of 'rubbish-ware' and it is time to pause development and conduct a 'pruning' phase.

Hey Neville,
I don't agree with the sentiment, at least in terms of RAM usage. You have a good argument in terms of Free Software philosophy.

First, RAM is pretty cheap, especially DDR4 RAM. I recently bought 32 GB of it back in spring for like 50 or 60 USD.

Second, while I am glad you like Hyperbola Linux, for most people, this distro would probably not be good enough for consideration. Even for me, someone who likes Linux/FOSS software enough to spend time on this forum, would not ever consider it for anything else than a fun side project to get running.

The reason for this I think is pretty simple: there are a ton of missing features and programs due to their dedication to their goals, as noble as they are. I know you are aware of this, but I am mentioning it to say that some of the extra 1 GB of RAM usage on startup are due to these programs and features that people generally want. That means that this extra 1 GB is not 1 GB of RAM wasted, but being put to purposeful use.

Additionally, in comparison to Windows, Linux's resource usage is positively tiny. I would say that Linux software, in general, seems to do a good job of managing resources appropriately. Could it maybe do better? I mean, if you put in enough

effort you can probably make just about every program more efficient. The question is: is that effort better spent elsewhere? Most of the time, considering how well Linux is already doing in this regard, I have to say yes.

The exception to what I am saying might be SystemD - I am still not sure what I think of it, but it does seem like it would be better if it was at least split up into different programs, if not a several completely different programs.

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