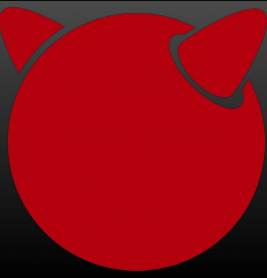


# FreeBSD graphics

Niclas Zeising

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team

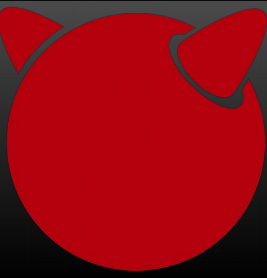
the graphics stack

challenges

future

graphics  
team



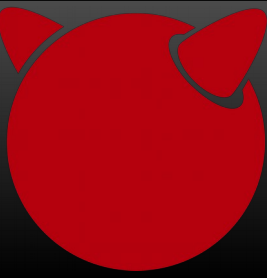


small team

use github

multiple repositories

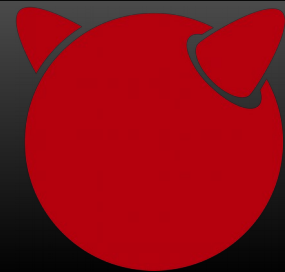
[github.com/FreeBSDDesktop](https://github.com/FreeBSDDesktop)



~300 ports

ports infrastructure

drivers



core libraries

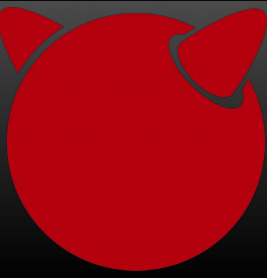
X servers

wayland

applications

drivers



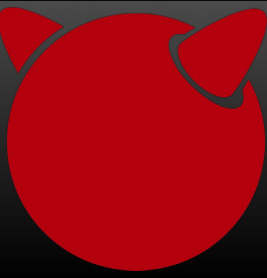


legacy driver in base

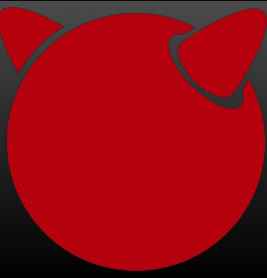
complete port

comparable to Linux 3.8





planned removal in FreeBSD 13  
replaced by `drm-legacy-kmod`  
avoid conflicting drivers

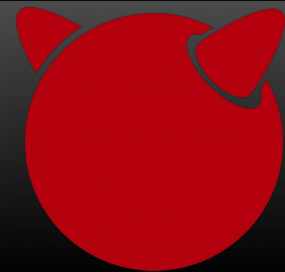


new drivers in ports

uses Linux kpi (lkpi)

amd64 tier1

i386 and ppc64 secondary



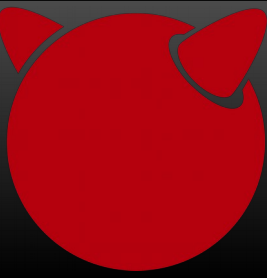
multiple versions

meta port: `graphics/drm-kmod`

available in FreeBSD 11.2 and 12.0

libraries





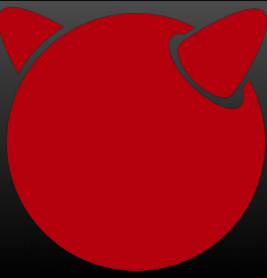
mesa – OpenGL

libdrm

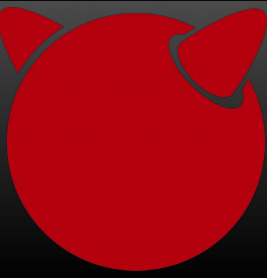
xorg libraries

X server





out of date  
ddx drivers  
modesetting

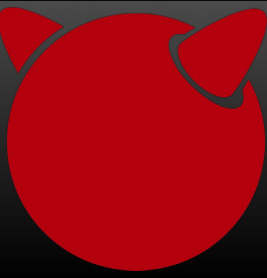


focus upstream

support in default packages

up to date





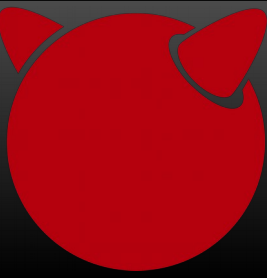
sway available

evdev support needed in kernel

needs more testing

getting  
started





# install FreeBSD

```
# pkg install xorg
```

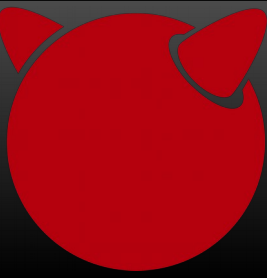
```
# pkg install drm-kmod
```

follow the instructions

```
$ startx
```

The background features abstract, overlapping shapes in dark red and bright red against a black field. The shapes are curved and organic, resembling stylized letters or forms. The bright red shape is on the right, and the dark red shape is on the left, overlapping it.

challenges



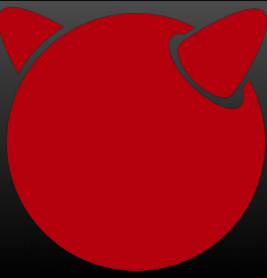
testing

build time

developer bandwidth

future



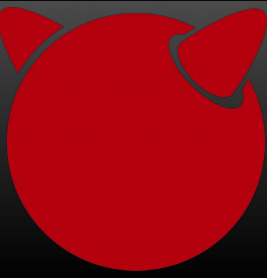


input devices

drm-legacy

autoloading

more architectures



network manager

power management

wifi support



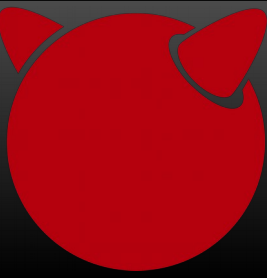
The background features abstract, overlapping shapes in shades of red and dark red against a black background. The shapes are organic and fluid, resembling a stylized graphic or perhaps a close-up of a face or object. The word "summary" is positioned on the left side of the image.

summary

# FreeBSD graphics

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[wiki.freebsd.org/Graphics](http://wiki.freebsd.org/Graphics)

[github.com/FreeBSDDesktop](https://github.com/FreeBSDDesktop)

[gitter.im/FreeBSDDesktop/Lobby](https://gitter.im/FreeBSDDesktop/Lobby)

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