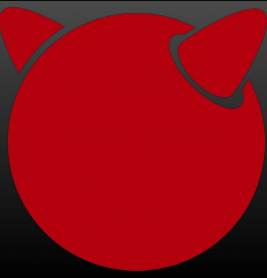


# FreeBSD graphics

Niclas Zeising

[zeising@FreeBSD.org](mailto:zeising@FreeBSD.org)

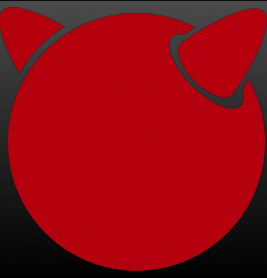


team

the graphics stack

challenges

future

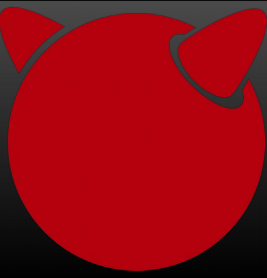


team

**the graphics stack**

challenges

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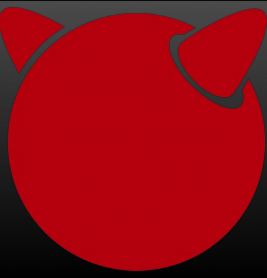


team

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**challenges**

future



team

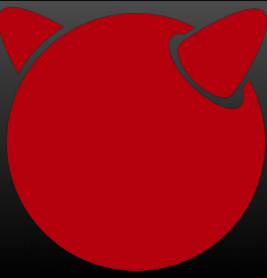
the graphics stack

challenges

**future**

team



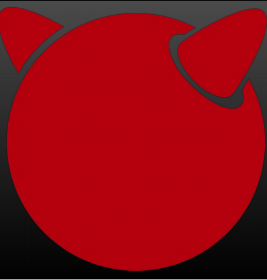


**small team**

use github

multiple repositories

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



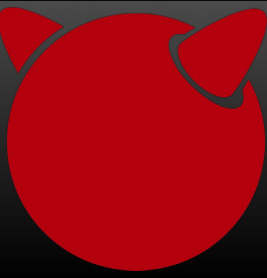
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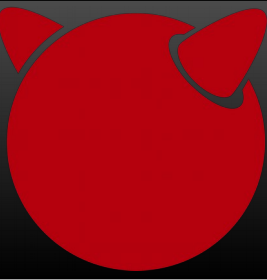


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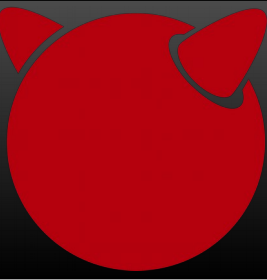


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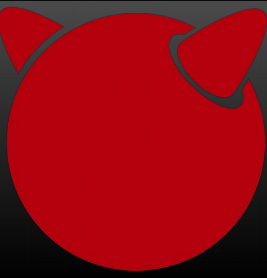
`github.com/FreeBSDDesktop`



~300 ports

ports infrastructure

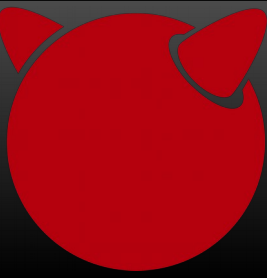
drivers



~300 ports

**ports infrastructure**

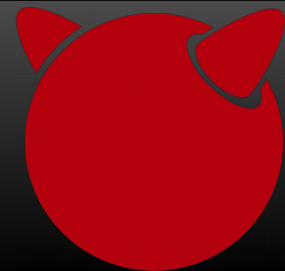
drivers



~300 ports

ports infrastructure

**drivers**

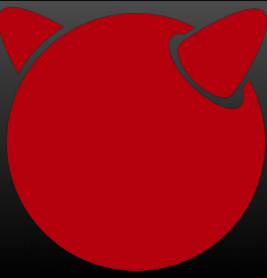


core libraries

X servers

wayland

applications

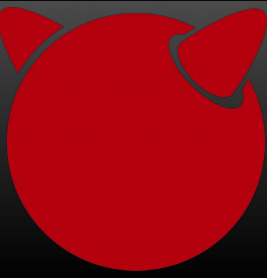


core libraries

**X servers**

wayland

applications



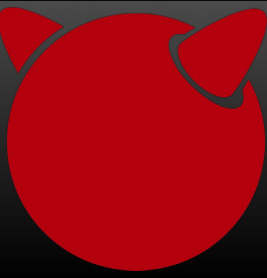
core libraries

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applications





core libraries

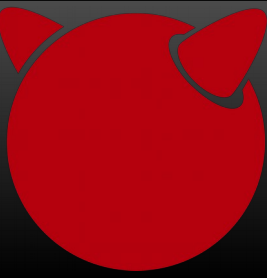
X servers

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**applications**

drivers

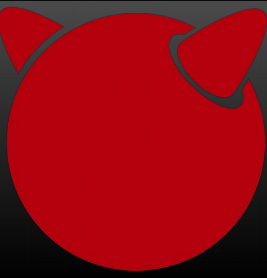




legacy driver in base

complete port

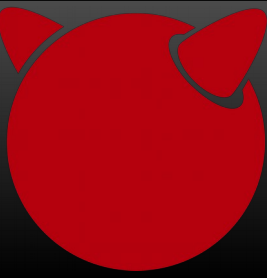
comparable to Linux 3.8



legacy driver in base

**complete port**

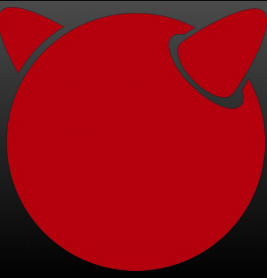
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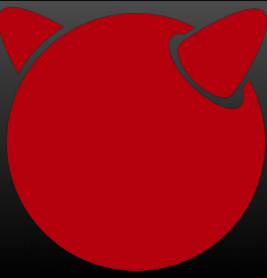
**comparable to Linux 3.8**



new driver in port

uses Linux kpi (lkpi)

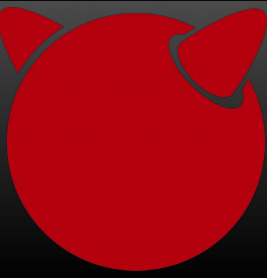
amd64 only



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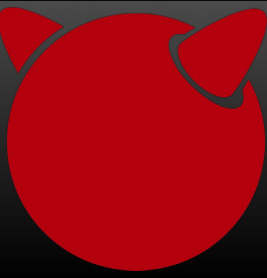
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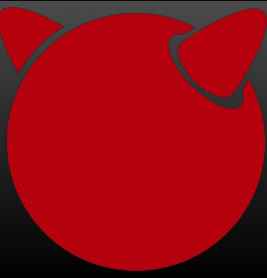




multiple versions

meta port work in progress

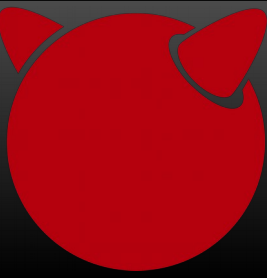
available in FreeBSD 11.2



multiple versions

**meta port work in progress**

available in FreeBSD 11.2



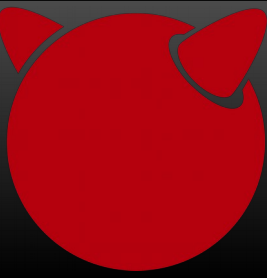
multiple versions

meta port work in progress

**available in FreeBSD 11.2**

libraries

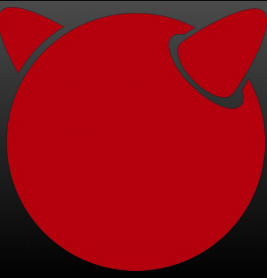




mesa – OpenGL

libdrm

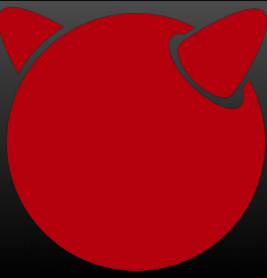
xorg libraries



mesa – OpenGL

**libdrm**

xorg libraries



mesa – OpenGL

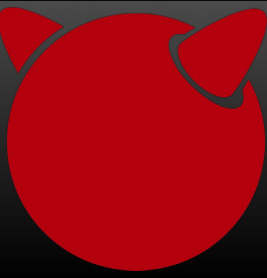
libdrm

**xorg libraries**

X server



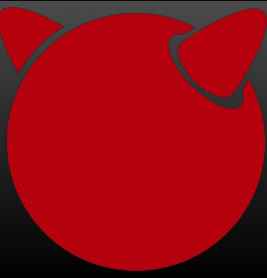




out of date

ddx drivers

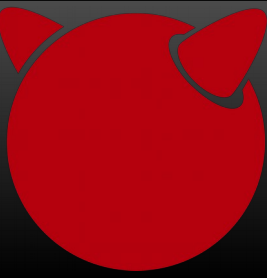
modesetting



out of date

**ddx drivers**

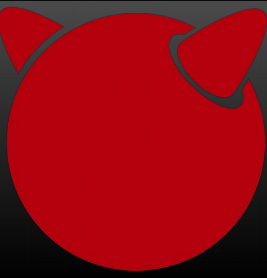
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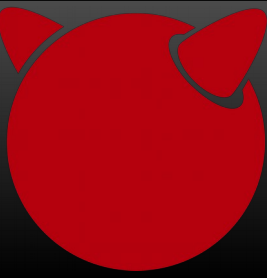
**modesetting**



focus upstream

outdated in FreeBSD

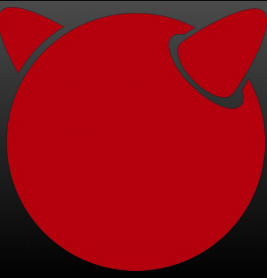
needs attention



focus upstream

**outdated in FreeBSD**

needs attention



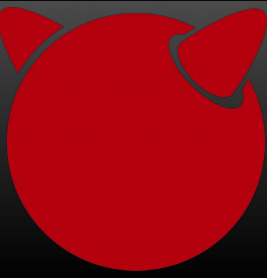
focus upstream

outdated in FreeBSD

**needs attention**

The background features abstract, overlapping shapes in dark red and bright red against a black field. The shapes are curved and layered, creating a sense of depth and movement. The word "challenges" is centered on the left side of the image.

challenges

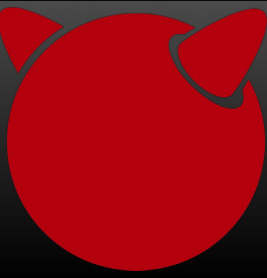


testing

build time

developer bandwidth

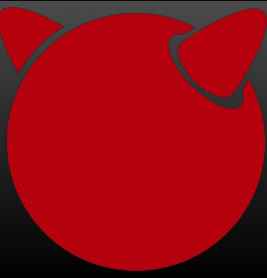




testing

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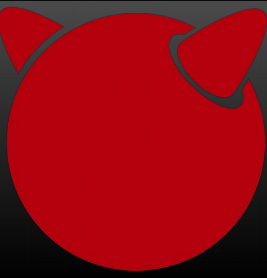
testing

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future



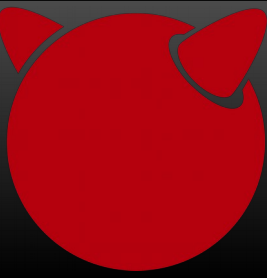


input devices

drm-legacy

autoloading

more architectures

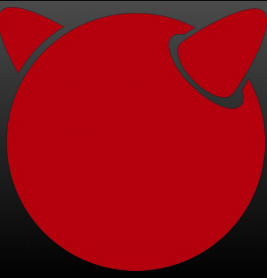


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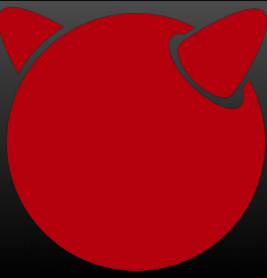


input devices

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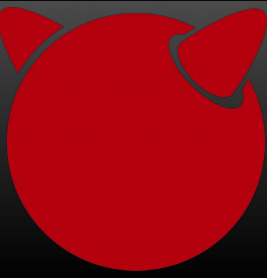


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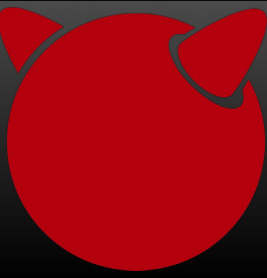
network manager

power management

wifi support



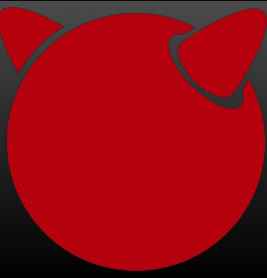
future



network manager

**power management**

wifi support



network manager

power management

**wifi support**

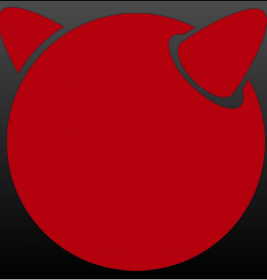
The background features abstract, overlapping shapes in dark red and bright red against a black field. The shapes are organic and fluid, resembling a stylized graphic or perhaps a portion of a face or object. The dark red shape is on the left, and the bright red shape is on the right, with some overlap between them.

summary

# FreeBSD graphics

Niclas Zeising

[zeising@FreeBSD.org](mailto:zeising@FreeBSD.org)



`github.com/FreeBSDDesktop`

`gitter.im/FreeBSDDesktop/Lobby`

`x11@FreeBSD.org`

`#freebsd-xorg @ EFNet`