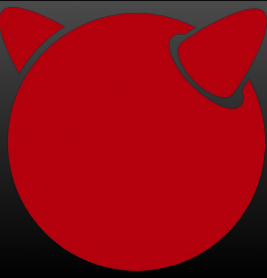


FreeBSD graphics

Niclas Zeising

zeising@FreeBSD.org

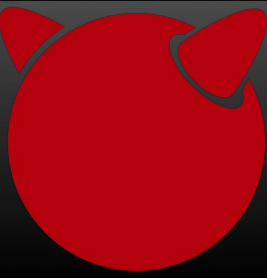


team

the graphics stack

challenges

future

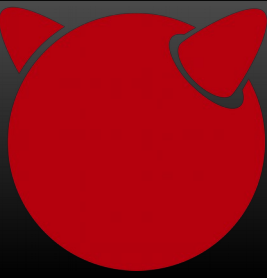


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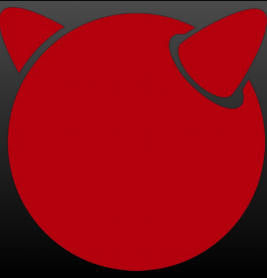


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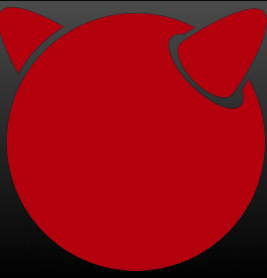
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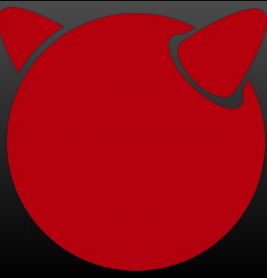


small team

use github

multiple repositories

github.com/FreeBSDDesktop

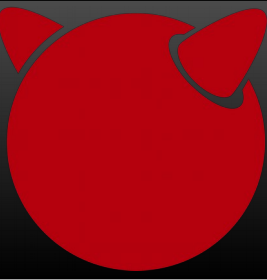


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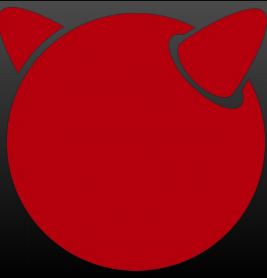


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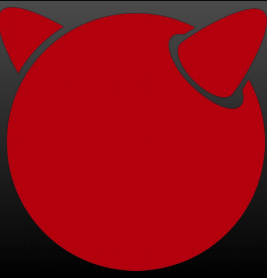


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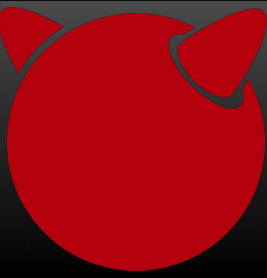
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~300 ports

ports infrastructure

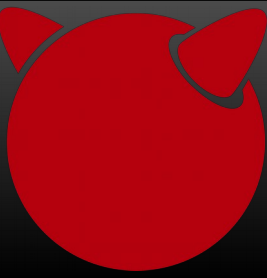
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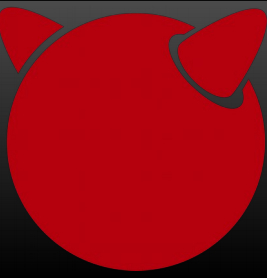
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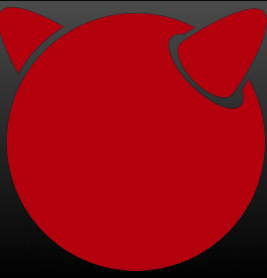


core libraries

X servers

wayland

applications

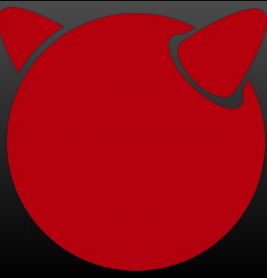


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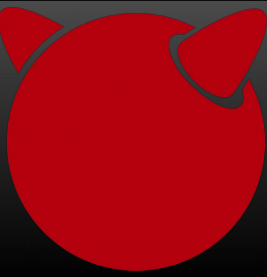


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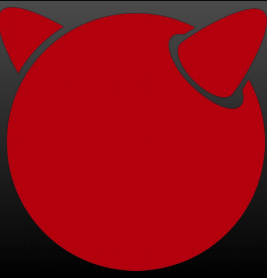
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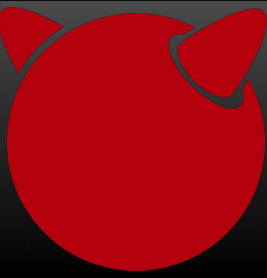




legacy driver in base

complete port

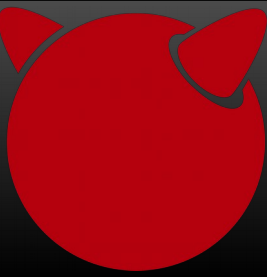
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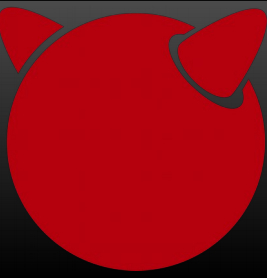
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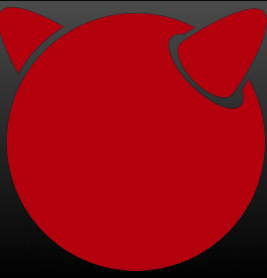
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planned removal in FreeBSD 13

replaced by `drm-legacy-kmod`

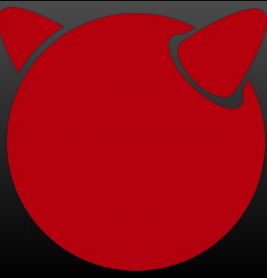
avoid conflicting drivers



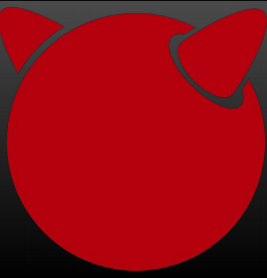
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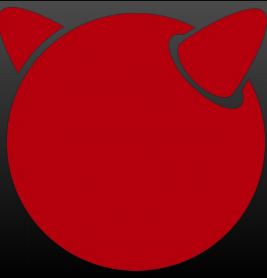


new drivers in ports

uses Linux kpi (lkpi)

amd64 tier1

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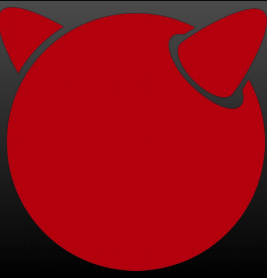


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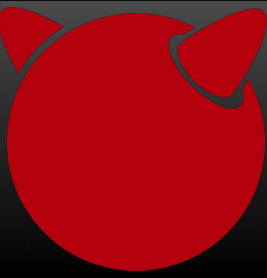


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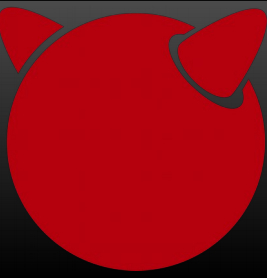
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multiple versions

meta port: `graphics/drm-kmod`

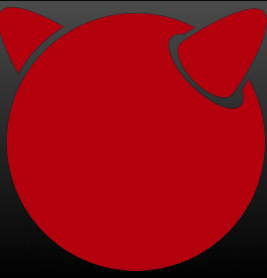
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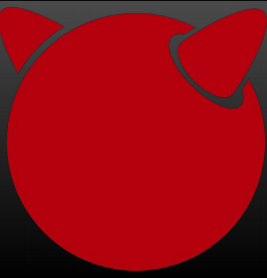
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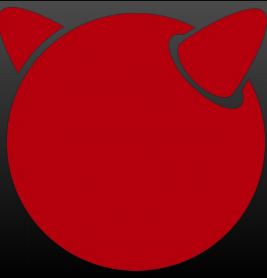




mesa – OpenGL

libdrm

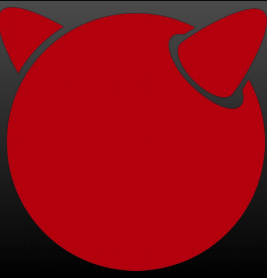
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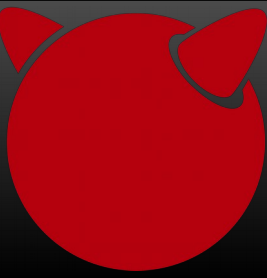
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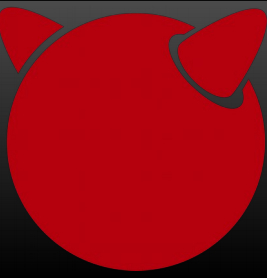




out of date

ddx drivers

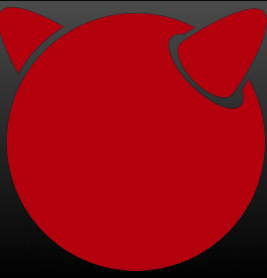
modesetting



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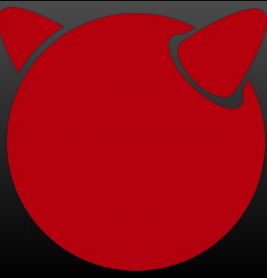
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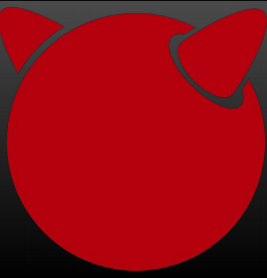
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focus upstream

support in default packages

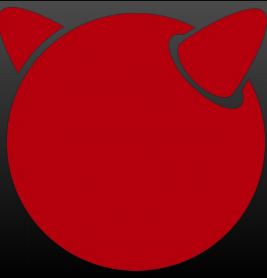
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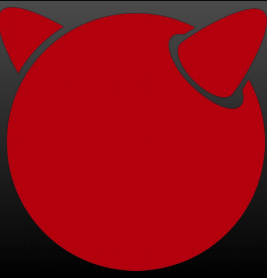
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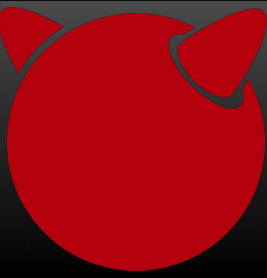
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sway available

evdev support needed in kernel

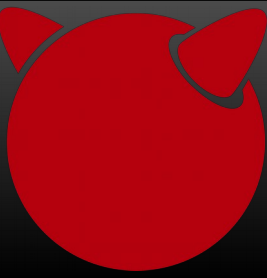
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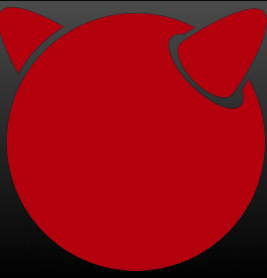
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getting
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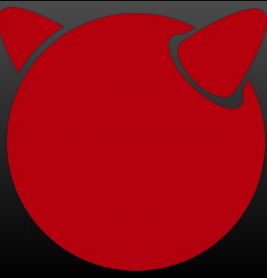


install FreeBSD

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# pkg install xorg
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$ startx
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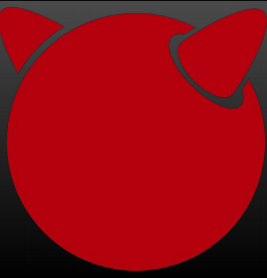


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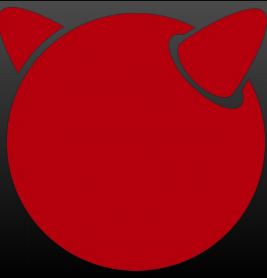



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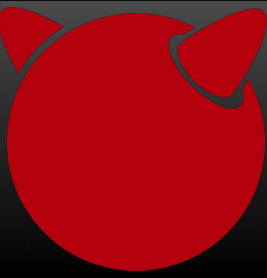
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The background features abstract, overlapping shapes in dark red and bright red against a black field. The shapes are curved and organic, resembling a stylized graphic or perhaps a portion of a face or object. The dark red shape is on the left, and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

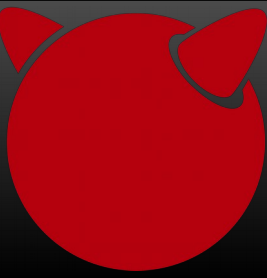
challenges



testing

build time

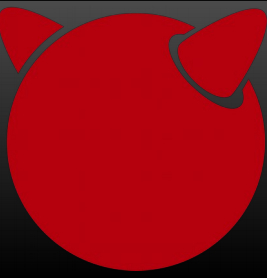
developer bandwidth



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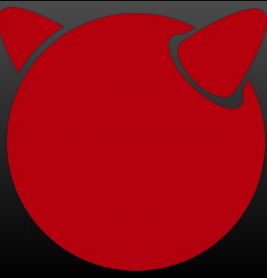
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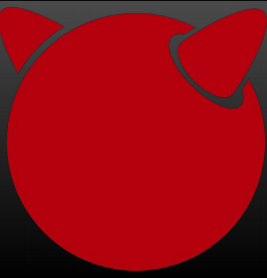


input devices

drm-legacy

autoloading

more architectures

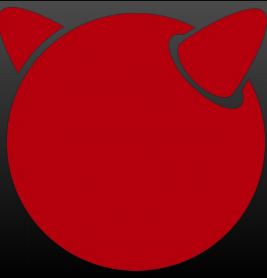


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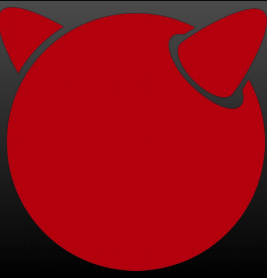


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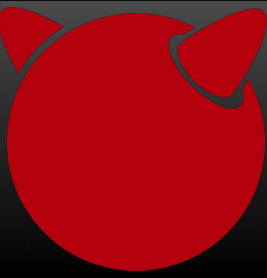


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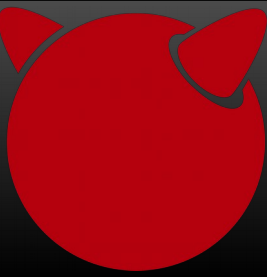


network manager

power management

wifi support

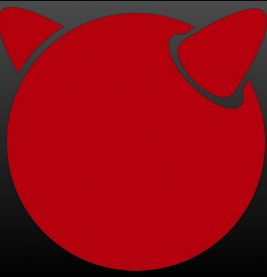
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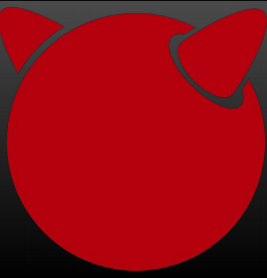
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summary

FreeBSD graphics

Niclas Zeising

zeising@FreeBSD.org



`github.com/FreeBSDDesktop`

`gitter.im/FreeBSDDesktop/Lobby`

`x11@FreeBSD.org`

`#freebsd-xorg @ EFNet`

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zeising@FreeBSD.org

@niclaszeising