NAME

virtio - VirtIO Device Support

SYNOPSIS

To compile VirtIO device support into the kernel, place the following lines in your kernel configuration file:

```
device virtio
device virtio_pci
```

Alternatively, to load VirtIO support as modules at boot time, place the following lines in loader.conf(5):

```
virtio_load="YES"
virtio_pci_load="YES"
```

DESCRIPTION

VirtIO is a specification for para-virtualized I/O in a virtual machine (VM). Traditionally, the hypervisor emulated real devices such as an Ethernet interface or disk controller to provide the VM with I/O. This emulation is often inefficient.

VirtIO defines an interface for efficient I/O between the hypervisor and VM. The **virtio** module provides a shared memory transport called a virtqueue. The virtio_pci device driver represents an emulated PCI device that the hypervisor makes available to the VM. This device provides the probing, configuration, and interrupt notifications needed to interact with the hypervisor. FreeBSD supports the following VirtIO devices:

Ethernet An emulated Ethernet device is provided by the vtnet(4) device driver.

Block An emulated disk controller is provided by the virtio_blk(4) device driver.

Console Provided by the virtio_console(4) driver.

Entropy Provided by the virtio_random(4) driver.

Balloon A pseudo-device to allow the VM to release memory back to the hypervisor is provided by the virtio_balloon(4) device driver.

GPU Graphics support is provided by the virtio_gpu(4) device driver.

SCSI An emulated SCSI HBA is provided by the virtio_scsi(4) device driver.

SEE ALSO

virtio_balloon(4), virtio_blk(4), virtio_console(4), virtio_gpu(4), virtio_random(4), virtio_scsi(4), vtnet(4)

HISTORY

Support for VirtIO first appeared in FreeBSD 9.0.

AUTHORS

FreeBSD support for VirtIO was first added by Bryan Venteicher <*bryanv@FreeBSD.org*>.