



Universitatea  
POLITEHNICA  
din București

# FreeBSD Virtualization - Improving block I/O compatibility in bhyve

---

bhyvecon 2019, Tokyo, Japan

## Authors

Sergiu Weisz  
sergiu121@gmail.com

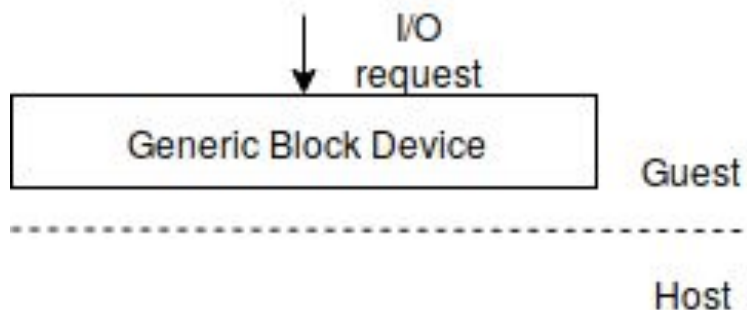
Mihai Carabaș  
mihai@freebsd.org

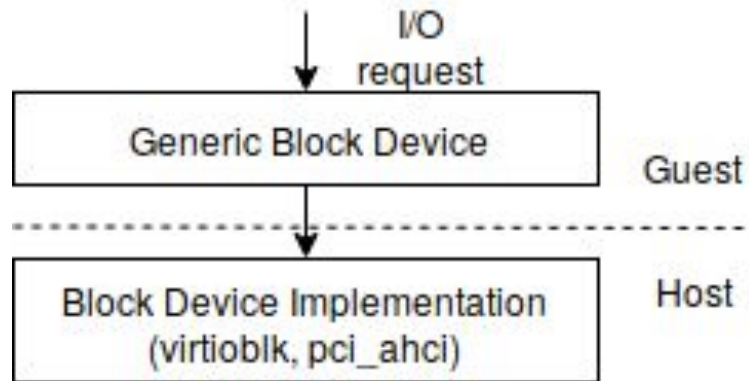
# Current difficulties

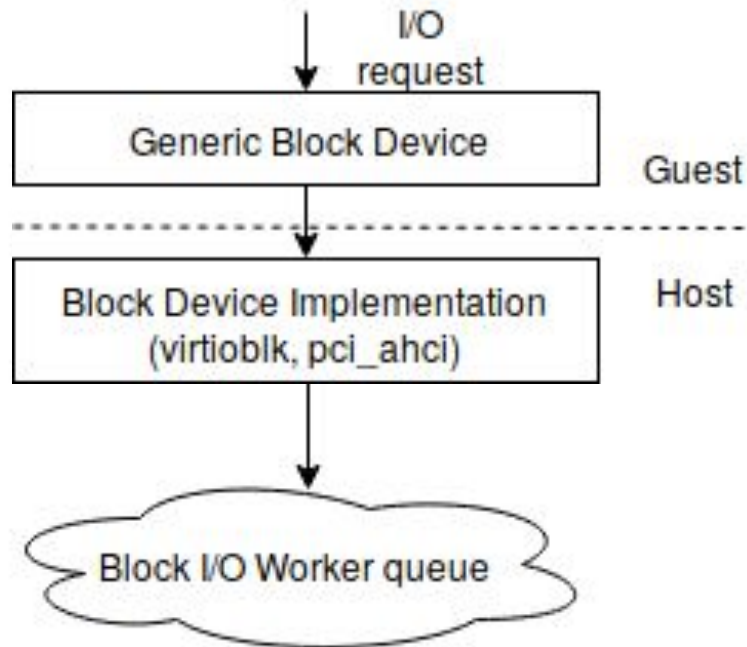
- low compatibility with other hypervisors
- no way to extend support for other formats

- developed by Marcel Molenaar
- never pushed upstream
- introduces an abstraction layer to block I/O

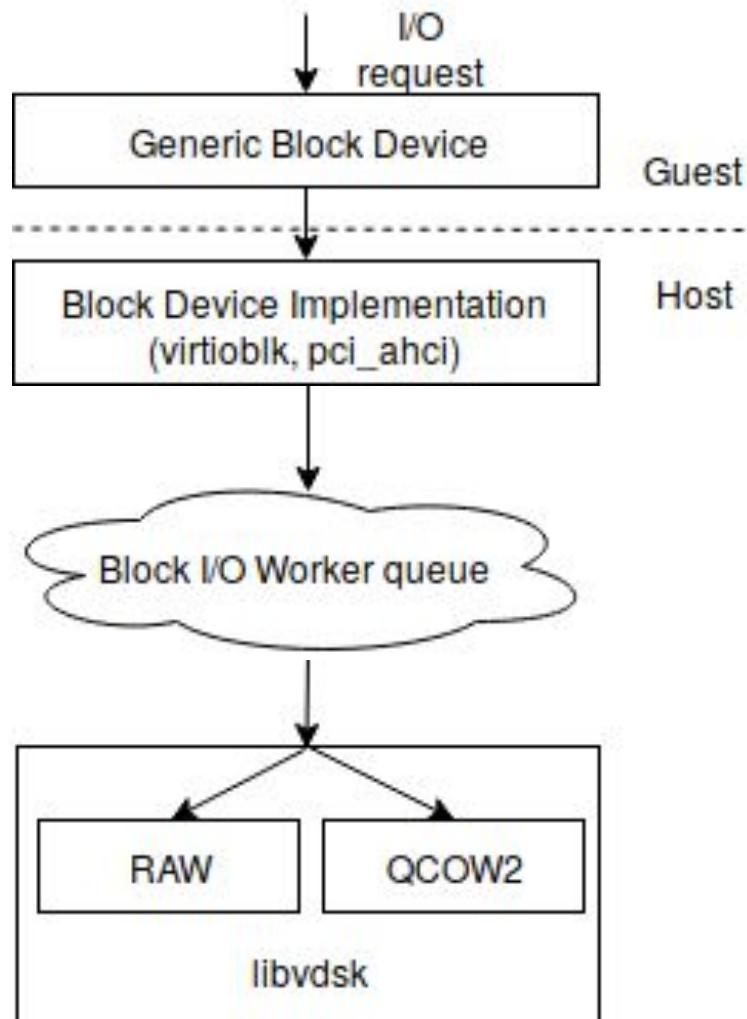
# libvdsk







# libvdsd



- image file format
- first integrated into QEMU
- nice features:
  - snapshots
  - good performance (caching)
  - compression



# Why QCOW2?

- broad support and tools
- many open source implementations
- snapshot support useful for save/restore

# Current status

- integrated libvdsd in the build system
- extended library to add private data
- implemented open, close, read, write, flush

# Further work

- further testing
- upstream the work
- add snapshot creation support
- integrate snapshotting in save/restore

# Special Thanks

- Matthew Grooms
- Marcelo Araujo
- Darius Mihai
- Elena Mihăilescu