FreeBSD Xen status update

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Changes in FreeBSD 10

- Vector callback for injecting event channel interrupts.
- PV timer.
- PV IPIs.
- Add Xen support into GENERIC kernel config.
- Sponsored by SpectraLogic and Citrix.
PVH DomU

- Supported guest mode since Xen 4.4.
- Builds on top of the PVHVM work introduced in FreeBSD 10.
- Half-merged into HEAD, some patches remaining.
- Same speed as PVHVM, main difference is the way it boots.
- By long not as intrusive as a traditional PV port.
PVH Dom0

- Xen side patches almost fully merged (done by Mukesh Rathor @Oracle).
- Main difference between PVH DomU and Dom0 is that on Dom0 FreeBSD needs to manage the hardware.
- Add support for PIRQ (physical interrupts routed on top of event channels).
- ACPI tables are parsed by Dom0, and Xen must be made aware of the underlying devices.
- Xen user-space control devices needed by the toolstack:
  - Privcmd: allows issuing hypercalls and mapping foreign domain memory from user-space.
  - Evtchn: allows registering and receiving interrupts by user-space applications.
Big items remaining

- Add multiboot support to the FreeBSD bootloader.
- Improve if xn:
  - Doesn’t work with a NetBSD backend.
  - Doesn’t work properly between guests on the same host.
Thanks
Questions?