

bhyve status report

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The last 12 months...

- Guest support
- H/w support
- Performance
- Features

Mo' guests

- BSD
 - OpenBSD ≥ 5.1 ; NetBSD/amd64 ≥ 6.0
- Older guests (32 & 64-bit)
 - Centos/RHEL ≥ 4.8 through 7.1
 - Ubuntu ≥ 10.0 up to 15.04
 - Continually test Linux-latest

H/w - CPU support

- Ivy Bridge Xeon
 - Virtual APIC page
 - Posted interrupts

H/w - CPU supp-2

- AMD SVM
 - In CURRENT since 10/2014
 - MFCd to 10-stable; will be in 10.2
 - Tested with Opteron/Phenom/Kaveri

H/w - PCI passthru

- PCI SRIOV support committed
 - Intel 10/40G adapters (ixgbe/ix)
- FreeBSD device control
 - Allows dynamic pass thru attach/detach

Performance - timers

- Timer emulations moved to in-kernel
 - 8254, RTC, PM-timer
 - (local APIC & HPET already there)
- Fixes drift/jitter issues
- No more boot-time o/s timer vs timer cal issues
- Allows true UTC time, not just host time

Performance - scaling

- Have run guests with 20 vCPUS, 120G
 - (dual-socket Ivy Bridge v3)
- Unlimited (almost) numbers of device emulations

Code in transit

- Intel e1000 (82545EM)
- XHCI controller
 - USB mouse target
- AT keyboard
- Winbond watchdog timer
- Module infrastructure

Windows

- Nothing running as of yet
- Still ramping up on a most unfamiliar tech
- UEFI a requirement...

UEFI

- Been running for a long time
 - Pluribus Networks using in production
- But:
 - OVMF target becoming more qemu-specific
 - Intel release Minnowboard under 2-clause BSD
 - Will use that as a template
- Lots of work remaining

Thanks

Questions ?