KVM Unit Tests for Bhyve

bhyve office hours

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What are the KVM unit tests ?

- An extremely minimal operating system

- Designed to exercise low-level hypervisor features

- Originally designed for Linux KVM/x86

  - Now works on most supported KVM CPU architectures

- exec image is in multiboot format

  - serial port and a custom ISA device required.

- https://gitlab.com/kvm-unit-tests/kvm-unit-tests

KVM unit tests + bhyve

- Tests have very few dependencies:

  - multiboot format ?

    - **grub2-bhyve** has support for that

  - custom ISA device ?

    - simple to add to bhyve

- Support contributed to bhyve by Adam Fenn (D27130, r367762)

How is this useful ?

- Targeted at low-level developers

  - Avoids having to hack a guest o/s to test a feature

  - Nearly instantaneous turnaround on test runs

  - Feature development results in regression tests

- Also useful as a general regression-test tool

  - e.g. to verify a new CPU release

- ARMv8 support

TODO

- Lots of test failures to diagnose

  - Genuine bug/Not applicable ?

- Create a port for the test suite

- Upstream FreeBSD and bhyve test suite modifications

- Write bhyve-specific tests