Hypervisor Validation

Description:

Hypervisors need to behave somewhat transparently, following the specifications of real hardware, and specifically the CPU. In this project we will validate the hypervisor using new validation methods. In this project, the students will debug the hypervisor, report bugs, prepare fixes and release unit tests to validate the failures.

The exact tasks (unit-tests / fixes / debugging) will be assigned according to the student abilities.

Prerequisites:

Operating systems course (or equivalent knowledge). C, x86 knowledge.

Platform:

The student will use the KVM hypervisor[2] the Linux Kernel based Virtual Machine, and a Linux VM. Multiple workloads will be evaluated.

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Number of students: 1 or 2 students.

References:

[1] "Asynchronous Page Faults – Aix did it", Gleb Natapov. http://www.linux-kvm.org/wiki/images/a/ac/2010-forum-Async-page-faults.pdf
[2] http://www.linux-kvm.org/page/Main_Page