

KVM CPUID bits

Glauber Costa <glommer@redhat.com>, Red Hat Inc, 2010

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A guest running on a kvm host, can check some of its features using cpuid. This is not always guaranteed to work, since userspace can mask-out some, or even all KVM-related cpuid features before launching a guest.

KVM cpuid functions are:

function: KVM_CPUID_SIGNATURE (0x40000000)

returns : eax = 0,
 ebx = 0x4b4d564b,
 ecx = 0x564b4d56,
 edx = 0x4d.

Note that this value in ebx, ecx and edx corresponds to the string "KVMKVMKVM". This function queries the presence of KVM cpuid leafs.

function: define KVM_CPUID_FEATURES (0x40000001)

returns : ebx, ecx, edx = 0
 eax = and OR'ed group of (1 << flag), where each flag is:

flag	value	meaning
KVM_FEATURE_CLOCKSOURCE	0	kvmclock available at msrs 0x11 and 0x12.
KVM_FEATURE_NOP_IO_DELAY	1	not necessary to perform delays on PIO operations.
KVM_FEATURE_MMU_OP	2	deprecated.
KVM_FEATURE_CLOCKSOURCE2	3	kvmclock available at msrs 0x4b564d00 and 0x4b564d01
KVM_FEATURE_CLOCKSOURCE_STABLE_BIT	24	host will warn if no guest-side per-cpu warps are expected in kvmclock.