Subject: Re: [PATCH 1/3] Introduce cpuid_on_cpu() and cpuid_eax_on_cpu()
Posted by Alexey Dobriyan on Tue, 03 Apr 2007 14:50:13 GMT
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On Tue, Apr 03, 2007 at 03:42:50PM +0200, Andi Kleen wrote:
> > > Both powernow-k8 and cpuid attempt to schedule
> > > to the target CPU so they should already run there. But it is some other CPU,
> > > but when they ask your _on_cpu() functions they suddenly get a "real" CPU?
> > > Where is the difference between these levels of virtualness?
> >
> > *_on_cpu functions do some work on given physical CPU.
> > set_cpus_allowed() in openvz operates on VCPU level, so process doing
> > set_cpus_allowed() still could be scheduled anywhere.
>
> Ok so you have multple levels.
>
> > > Also it has weird semantics. For example if you have multiple
> > > virtual CPUs mapping to a single CPU then would the powernow-k8 driver
> > > try to set the frequency multiple times on the same physical CPU?
> >
> > If core cpufreq locking is OK, why would it?
>
> It won't know about multiple CPUs mapping to a single CPU.
>
> > apply_microcode() looks small enough to convert it to IPIs, but so far
> > nobody asked for microcode updates in openvz.
>
> Well if they try it they will probably have problems.
>
> > > Before adding any hacks like this I think your vcpu concept
> > > needs to be discussed properly on l-k. For me it doesn't look like it is
> > > something good right now though.
> >
> > Andi, I think it all relies on correctness of core cpufreq locking.
>
> I have my doubts it will cope with you changing all reasonable expected semantics
> under it.

Synchronization promitives work as expected. Otherwise openvz'd be buried in bugs
all over the map.

Core cpufreq has per-cpu array of rw-semaphores but the index of
semaphore one want to down comes from userspace not from number of CPU
process is executing virtual or physical.

Probably davej could say something.