Subject: Any drawbacks using openvz-enterprise kernel with <4GB RAM?
Posted by wfischer on Wed, 21 Jun 2006 13:07:11 GMT
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If we have multiple machines with identical hardware, but only different amount of memory (between 1 and 8 GB), are there problems or some big performance penalties when we use ovzkernel-enterprise kernel on all machines (also on the machines with less than 4 GB memory)?

I looked on the diff of the smp- and enterprise-config of openvz-kernel, and got this result:
[user@linux openvz-kernel-configs]$ diff kernel-2.6.8-022stab077-i686-smp.config.ovz kernel-2.6.8-022stab077-i686-enterprise.config.ovz
93,97c93,97
< # CONFIG_X86_4G is not set
< # CONFIG_X86_SWITCH_PAGETABLES is not set
< # CONFIG_X86_4G_VM_LAYOUT is not set
< # CONFIG_X86_UACCESS_INDIRECT is not set
< # CONFIG_X86_HIGH_ENTRY is not set

> CONFIG_X86_4G=y
> CONFIG_X86_SWITCH_PAGETABLES=y
> CONFIG_X86_4G_VM_LAYOUT=y
> CONFIG_X86_UACCESS_INDIRECT=y
> CONFIG_X86_HIGH_ENTRY=y
101c101
< CONFIG_NR_CPUS=8

> CONFIG_NR_CPUS=32
125,126c125,126
< CONFIG_HIGHMEM4G=y
< # CONFIG_HIGHMEM64G is not set

> # CONFIG_HIGHMEM4G is not set
> CONFIG_HIGHMEM64G=y
127a128
> CONFIG_X86_PAE=y

I'm not sure if some of the options (e.g. CONFIG_X86_4G=y) have a negative influence on performance when the machine has not more than 4 GB memory.

I already looked at http://wiki.openvz.org/Different_kernel_flavors_%28UP%2C_SMP%2C_ENTERPRISE%2C_ENTNOSPLIT%29 but I would be interested in more detail what side-effects the the config parameters have that are different across the 4 configurations. I also googled for the config parameters (like CONFIG_X86_4G), but did not find good explanations. Does anybody know of a good resource on these kind of information?

best wishes from sunny Austria,
Werner