Subject: Re: Any drawbacks using openvz-enterprise kernel with <4GB RAM?
Posted by dev on Thu, 22 Jun 2006 07:13:38 GMT

One note which describes why enterprise kernel is required though it has such performance overhead:

i686 architecture is 32 bit, which limits virtual address space to 4GB of RAM. This address space is splitted between user applications and kernel. In std kernels it is splitted as 3GB(user):1GB(kernel). So Linux kernel directly can access _only_ 1GB of RAM. This 1Gb is called "normal zone" and is used for kernel structures and private memory. Effectively, normal zone has usually about 700-800Mb of usable RAM, which is suitable for running ~5000-8000 of tasks and ~20-60 VPSs. If this zone is exhausted kernel starts working very slow as it takes time to find any free memory.

enterprise kernel increases size of normal zone up to 3.6Gb. This allows to run ~4 times more tasks and VPSs on machines with >=8GB RAM. It is a tradeoff between performance and density.