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Subject: Re: PostgreSQL can't allocate shared memory  
Posted by [Gregor Mosheh](#) on Mon, 16 Apr 2007 13:57:56 GMT  
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>> And the HN's kernel.shmmax is set to 1 GB. (Is that relevant in a VE?)  
> check the same in VE please.  
> AFAICS, by default kernel sets:  
> #define SHMMAX 0x2000000  
> which is 32Mb.  
> So you have to increase it in VE /etc/sysctl.conf file or in /proc.

Ahhh, very tricky -- in that it's exactly what one should expect! Thanks, Kirill; I can't believe that this escaped me. I had thought that the VE would have shmmax set by the UBC; evidently it's the case that each VE gets their own set of sysctls for perfectly ordinary use.

So, let me summarize the shared memory situation for VEs:

- \* The HN's kernel.shmmax sets an absolute limit on shared memory, for both the HN and any VEs.
- \* A VE's shmpages sets the limit on shared memory for that VE. Therefore it must be  $\leq$  kernel.shmmax
- \* Then the VE uses sysctl kernel.shmmax to set their allowable limit, which of course must be  $\leq$  the VE's shmpages.

Sound right?

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"Remember that no one cares if you can back up, only if you can restore."  
- AMANDA

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