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Subject: Re: more IDL falls asleep  
Posted by [Wayne Landsman](#) on Fri, 25 May 2001 07:36:38 GMT  
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Johnny Lin wrote:

i've also encountered similar problems w/ a server license running IDL 5.4.

- > it also is a solaris machine, but only has a single processor.
- >
- > has anyone else figured out another fix? any help would be much appreciated.

You're not going to like my answer -- except for the comfort that it might give in knowing that you are not the only one....

We've had problems with IDL falling asleep under a node-locked V5.4 license and a dual-processor machine running Solaris 2.7. We strongly suspected the license manager since it occurs with both V5.3 and V5.4 under the V5.4 license manager, but never with V5.3 under the V5.3 license manager. The problem also seems to be more likely to occur if the machine has many other processes running.

The strange thing is that we have another apparently identical machine that has had no problems with V5.4! So we are at a loss in trying to understand how to further diagnose the problem, and have simply downgraded the offending machine to IDL V5.3.

Wayne Landsman  
landsman@mpb.gsfc.nasa.gov

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Subject: Re: more IDL falls asleep  
Posted by [deja\\_jlin](#) on Fri, 25 May 2001 16:08:50 GMT  
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hi Wayne,

thanks for the message! yes, it's a comfort to know i'm not alone :)

Wayne Landsman <landsman@mpb.gsfc.nasa.gov> wrote in message  
news:<3B0E0B86.CCB65580@mpb.gsfc.nasa.gov>...

- >
- > We've had problems with IDL falling asleep under a node-locked V5.4 license and
- > a dual-processor machine running Solaris 2.7. We strongly suspected the
- > license manager since it occurs with both V5.3 and V5.4 under the V5.4 license
- > manager, but never with V5.3 under the V5.3 license manager. The problem also
- > seems to be more likely to occur if the machine has many other processes

> running.

>

what license managers were the v5.3 and 5.4 machines running?

thanks!

best,

-Johnny

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Johnny Lin

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Subject: Re: more IDL falls asleep

Posted by [deja\\_jlin](#) on Tue, 29 May 2001 20:39:14 GMT

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hi all,

the folks at RSI responded re this problem, and it has to deal with the license manager. here's the applicable parts of their reply (the technical term for IDL sleeping and never waking up again is "deadlock"):

If it is indeed deadlock, then I believe you are encountering a weakness in FLEXlm licensing that is generally only observable in very "large" IDL processes. It is based on an implementation of malloc() in FLEXlm that is not thread-safe. To keep a constant tab on licensing status in its network FLEXlm sends out a periodic query to each of its clients. This query uses the unsafe malloc() call. There is a very minute probability that this call might be concurrent with an IDL use of system malloc(), and that is where the deadlock occurs. Very large IDL processes that have many calls allocating new memory are capable of defying the odds and experiencing this deadly concurrency. We have actually never been able to (knowingly) reproduce this in-house, but identified the clash in 'pstack' output from our customers. You also would probably see the concurrent malloc() calls in your own run of 'pstack' on the ID of a process that has "fallen asleep."

Our only solution is Research Systems' own licensing protocol, Genver licensing. The downside to Genver licensing is that it must be renewed every 180 days, and you must have a separate license for each individual host that is running your long IDL programs.

they're working on fixing this for the 5.5 release, but aren't sure if it will

be ready then, since fixing it is actually quite tricky.

hope this helps others experiencing this problem!

best,  
-Johnny

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