Subject: Re: Memory management by 5.4 on Sunblade
Posted by John-David T. Smith on Thu, 20 Dec 2001 18:50:14 GMT
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JD Smith wrote:
>
> Timm Weitkamp wrote:
>>
>> Hi,
>>
>> I'm mostly using IDL 5.4 on my laboratory's Linux86 cluster, and
>> running memory-critical simulation code on it which uses lots of large
>> temporary arrays.
>>
>> Now they've bought a Sunblade as the first test machine of a future
>> cluster, and so I tried running my code on that one, using 5.4 as
>> before. That is,
>>
>> IDL> print,!version
>> { sparc sunos unix 5.4 Sep 25 2000 64 64}
>>
>> However, I noticed that memory management by IDL 5.4 on the Sunblade
>> is extremely poor in that variable space "freed" by TEMPORARY, DELVAR,
>> or simply by dynamic resizing of a variable is not actually freed but
>> kept allocated (so tells me "top").
>>
>> I wonder if this bug will persist with 5.5, which hasn't yet been
>> installed on any machine here. Has anybody else made any experience
>> with 5.4 or 5.5 on Sunblade in this context?
>
> It's not a *bug*, it's a *feature*. IDL allocates memory as necessary
> from the OS, and then, even if it doesn't need it any more, hangs onto
> it just in case. This is true I think on all platforms, and all recent
> versions of IDL. You still have the memory available, just not to the
> system as a whole.

I should clarify my statement: it's a *bug* or *feature* (depending on
your point of view) of the memory management sub-system of your OS, not
of IDL. IDL wisely relies on the host OS for memory management, and
concentrates on what it does best. One of the RSI developers made a
good point regarding the differing behaviors of, e.g., Solaris vs. Linux
memory management: it's a tradeoff between returning memory to the
system (which can be costly), and speed. As is usual in these cases,
you cannot have your cake and eat it too.

Good luck,

JD