Subject: IDL & Memory Usage...
Posted by Randall Skelton on Tue, 03 Sep 2002 13:47:09 GMT
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Hi all,

Does anyone know how IDL 5.5a breaks up into smaller processes under
Linux? When I run top on my machine I see:

```
 ------------------------------------------------------------ -------------------
2:37pm  up 12 days,  4:41, 10 users,  load average: 0.16, 0.12, 0.09
85 processes: 84 sleeping, 1 running, 0 zombie, 0 stopped
CPU0 states:  0.0% user,  2.2% system,  0.0% nice, 97.2% idle
CPU1 states:  0.0% user,  0.0% system,  0.0% nice, 100.0% idle
Mem:  3089264K av, 2238680K used,  850584K free,     196K shrd,  200332K buff
Swap: 6289320K av,   49024K used, 6240296K free                939340K cached

  PID USER  PRI NI SIZE RSS   SHARE STAT %CPU %MEM  TIME  COMMAND
  579 rhs   8   0  828M 828M  3912  S    0.0  27.4  74:11 idl
  583 rhs   9   0  828M 828M  3912  S    0.0  27.4   0:00 idl
  584 rhs   9   0  828M 828M  3912  S    0.0  27.4  15:46 idl
  585 rhs   9   0  828M 828M  3912  S    0.0  27.4   0:00 idl
 ------------------------------------------------------------ -------------------
```

I only have one IDL session running, but 4 separate processes appear. It
also appears that each is consuming 828MB of RAM. Is this an attempt to
get around the 2.1GB address limit for 32-bit machines? I'll admit this
is a relatively large calculation but IDL cannot *REALLY* be taking 110%
of my memory resources ;)

Cheers,
Randall

Subject: Re: IDL & Memory Usage...
Posted by Craig Markwardt on Tue, 03 Sep 2002 14:48:30 GMT
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Randall Skelton <rhskelto@atm.ox.ac.uk> writes:

> Hi all,
>
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> 585 rhs 9 0 828M 828M 3912 S 0.0 27.4 0:00 idl
> ---

Hi Randall--

Let me guess. Are you running three or four widget programs? If the answer is yes, I will submit that idl "fork()s" itself for each widget that appears or perhaps creates a new thread, which is the same as a new process under Linux. This is a common approach for X-windows applications.

The second point is that all of these processes share the same memory, so they aren't using 4 x the memory of a single one.

Hope that helps, [and is right!]

Craig

--

Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response

---

Subject: Re: IDL & Memory Usage...
Posted by Timm Weitkamp on Wed, 04 Sep 2002 07:56:43 GMT
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On 03.09.02 at 09:48 -0500, Craig Markwardt wrote:

> I will submit that idl "fork()s" itself for each widget that appears or
> perhaps creates a new thread, which is the same as a new process under
> Linux. This is a common approach for X-windows applications.

I have noticed the same behavior as Randall without running any widgets, and my guess was that it is due to 5.5's multithreading.

Timm

Subject: Re: IDL & Memory Usage...
Posted by Nigel Wade on Wed, 04 Sep 2002 10:44:22 GMT
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Randall Skelton wrote:

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>
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> is a relatively large calculation but IDL cannot *REALLY* be taking 110%
> of my memory resources ;)
>
> Cheers,
> Randall

I would assume that they are threads rather than real processes.

The way Linux implements threads is rather strange, they are basically individual processes which share a lot of kernel resources and have the same VM (at least I *think* that's the way it's done).

--
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