
Subject: Re: IDL_IDLBridge limited to 4?

Posted by [Juggernaut](#) on Thu, 04 Nov 2010 19:30:14 GMT

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On Nov 4, 12:14 pm, Donald Woodraska <don.woodra...@gmail.com> wrote:

> I've been using the IDL_IDLBridge to run tasks in parallel in the
> background. However, when I increase the number of IDL_IDLBridge
> objects beyond 4, they don't seem to do anything. Although they are
> given tasks, the linux top command doesn't show any increase in CPU
> usage. I've cranked it up from 4 to as many as 14 IDL_IDLBridge
> objects, but the CPU usage doesn't go beyond 400%.

>
> My box has dual quad cores with hyperthreading, so it looks like 16
> CPU cores are available. IDL recognizes all 16 in !CPU, but I can't
> seem to use them.

>
> IDL> help,!cpu,/str
> ** Structure !CPU, 6 tags, length=32, data length=32:
> HW_VECTOR LONG 0
> VECTOR_ENABLE LONG 0
> HW_NCPU LONG 16
> TPOOL_NTHREADS LONG 16
> TPOOL_MIN_ELTS LONG64 100000
> TPOOL_MAX_ELTS LONG64 0

>
> I've split my job into 4 pieces and run 4 separate IDL instances with
> 4 bridge objects each on 4 separate terminals. There has to be a
> better way.

>
> Is there some kind of an internal limit in IDL preventing me from
> using more than 4 bridge objects at the same time? Is there a startup
> parameter I need to change? I'm running version 7.0.8 (no DE) on
> Redhat 5.

>
> Thanks!

Are you using the NOWAIT keyword for asynchronous operation?

Subject: Re: IDL_IDLBridge limited to 4?

Posted by [don.woodraska](#) on Tue, 09 Nov 2010 18:26:12 GMT

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> Are you using the NOWAIT keyword for asynchronous operation?

Yes. I first create an array of objects using a call to
OBJ_NEW('IDL_IDLBridge') for each index in the array.

```
I create an integer variable called threadcnt (unimaginative) to cycle
through all of the bridge objects to check if their status() is not
busy
if oBridgeArr[threadcnt]->Status() eq 0 then begin
...
oBridgeArr[threadcnt]->execute, cmdlist[i], /NOWAIT
```

If the /NOWAIT keyword was not set then I couldn't run more than 1 at a time. By limiting the number of objects in the array I can see that for one object I get 100% CPU usage, for 2 I get 200%, for 3 I get 300%, and for 4 I get 400%. For anything more than 4 I always get 400%. There is no difference from 4 all the way up to 14.

However, by running 4 separate IDL command-line sessions, I can use all 1600% available (nearly).

I saw another post where someone tried using one IDL_IDLBridge object to create a bunch of other IDL_IDLBridge objects. I haven't tried that, but even if that works, it's just a workaround.

Has anyone else tried to use more than 4 IDL_IDLBridges simultaneously?
