
Subject: IDL and Beowolf ?

Posted by [dmarshall](#) on Mon, 23 Jul 2001 16:08:32 GMT

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I just finished reading The Do-It-Yourself Supercomputer by William W. Hargrove, Forrest M. Hoffman and Thomas Sterling in this months Scientific American

<http://www.sciam.com/2001/0801issue/0801hargrove.html>

And wondered if anyone had any thoughts/experience with running IDL applications on such a cluster.

Dave.

Subject: Re: IDL and Beowolf ?

Posted by [ronn](#) on Mon, 23 Jul 2001 22:06:20 GMT

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in article GGxou8.KBJ.A.ebony@news.trentu.ca, dmarshall@ivory.trentu.ca at dmarshall@ivory.trentu.ca wrote on 7/23/01 12:08 PM:

> I just finished reading The Do-It-Yourself Supercomputer by William W.
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> American
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> And wondered if anyone had any thoughts/experience with running IDL
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> Dave.

Dave,

I have set up an interface between IDL and PVM (the Parallel Virtual Machine). You can see a blurb about it at

<http://www.kilvarock.com/software/idltopvm.htm>

I have used it for some massive runs that would have been impossible without the parallel processing. The way I have the code set up you can either run an IDL save file as a "slave" program or a C or Fortran program as a slave. If you stay completely with IDL it is even a little easier than regular PVM as IDL always knows the data type and size so you don't have to explicitly state these like you would in a regular C (or Fortra) PVM program.

If you are interested in learning more send me an email.

-Ronn

--

Ronn Kling

KRS, inc.

email: ronn@rlkling.com

"Application Development with IDL" 1½ programming book updated for IDL5.4!

"Calling C from IDL, Using DLM's to extend your IDL code" NEW BOOK!

Shareware and Freeware at: <http://www.rlkling.com/>

Subject: Re: IDL and Beowolf ?

Posted by [Craig Markwardt](#) on Tue, 24 Jul 2001 02:10:41 GMT

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david@dfanning.com (David Fanning) writes:

> Time to upgrade from IDL 4.0, Craig? :-)

I already use IDL 5.2 and 5.3, thank you very much. :-) I stick with the old notation and avoid new features, because "why break what's already fixed?"

Craig

--

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

Subject: Re: IDL and Beowolf ?

Posted by [bruhwile](#) on Tue, 31 Jul 2001 19:53:47 GMT

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dmarshall@ivory.trentu.ca wrote in message news:<GGxou8.KBJ.A.ebony@news.trentu.ca>...

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> Dave.

Hi Dave,

At Tech-X Corporation, we have prototyped the use of MPI (message passing interface) with IDL and have succesfully tested this simple

prototype on a Beowolf style linux cluster. Tech-X will soon receive funding from the US Department of Energy for further proof-of-principle development of this idea. This next round of development will occur over a six month period, beginning in September.

Tech-X just issued a press release on this subject, and I just posted that press release to this news group.

Cheers,
David

Subject: Re: IDL and Beowolf ?

Posted by nobody@nowhere.com (S on Thu, 02 Aug 2001 16:36:27 GMT

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On 31 Jul 2001 12:53:47 -0700, David Bruhwiler <bruhwile@txcorp.com> wrote:

> dmarshall@ivory.trentu.ca wrote in message news:

<GGxou8.KBJ.A.ebony@news.trentu.ca>...

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> Cheers,

> David

Wow! Things have certainly developed in the past year or so. I might have missed this, but somebody mentioned the licensing issue, how is that dealt with? I once had a huge data-set which required me to do a large number of iterative deconvolution calculations. I ended-up using a batch file which would run a subset of the data and then do a save and exit before the 7-min

demo mode would expire, then a shell script would fire-up idl again, run the batch file (which in turn read another file to figure out where I left off) and so on ad infinitum. This sounds like cheating, I know, but actually I had an IDL license on my desktop, but wanted to use a new Linux cluster we had put together, and couldn't see installing IDL on each machine (the cost of the IDL licenses exceeds the cost of the hardware!). So that was my solution. I never did get the clustering to work with IDL, though. I didn't try too hard, one because of the licensing issue, and two because I couldn't figure out how to get IDL to use MPI. I thought IDL was kind of like the old BASIC, you type it in and run it, that's my interpretation of the term "interpretive". Yet, to use MPI with my C programs, I compiled in certain MPI libs, so how can that be done in IDL? Maybe you could "re-enlighten" me and re-post your press release?

--

Steve S.

steve@NOSPAMmailaps.org
remove NOSPAM before replying

Subject: Re: IDL and Beowolf ?

Posted by nobody@nowhere.com (S) on Thu, 02 Aug 2001 16:40:54 GMT

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On 31 Jul 2001 12:53:47 -0700, David Bruhwiler <bruhwile@txcorp.com> wrote:

> dmarshall@ivory.trentu.ca wrote in message news:

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> Cheers,
> David

Ugh, I just read your press release, ex-squeeze me for asking to re-post it :^)!

--
Steve S.

steve@NOSPAMmailaps.org
remove NOSPAM before replying

Subject: Re: IDL and Beowolf ?
Posted by [bruhwile](#) on Fri, 03 Aug 2001 03:20:42 GMT
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Steve Smith wrote...

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> BASIC, you type it in and run it, that's my interpretation of the term "inter-
> pretive". Yet, to use MPI with my C programs, I compiled in certain MPI libs,
> so how can that be done in IDL?

Hi Steve,

We're aware of the licensing issue, and so is RSI. It's a subject under discussion.

IDL provides two mechanisms for invoking compiled C or Fortran code from within a script. The MPI libraries are compiled C code, so there is no fundamental difficulty with making MPI calls from IDL scripts. However, there are some tricky technical issues that we had to resolve in order to make the initial prototype work.

Sorry to be vague, but we're not yet ready to reveal the details and we have not yet tested the concept on a serious problem. We'll learn over the next few months just how well our approach will work.

Cheers,
David

Subject: Re: IDL and Beowolf ?

Posted by [Axel Schweiger](#) on Fri, 03 Aug 2001 17:06:25 GMT

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<!doctype html public "-//w3c//dtd html 4.0 transitional//en">

<html>

On a slightly different note. My sense is that a great deal of progress in

terms of speed for big applications could be made by having as a translator/compiler

for IDL. I know you can write code to run efficiently in IDL as well but becomes

very hard when you have a lot of branches in your code. Just my 2 cents worth.

<p>Axel

<p>"Steve Smith" wrote:

<blockquote TYPE=CITE>On 31 Jul 2001 12:53:47 -0700, David Bruhwiler <bruhwile@txcorp.com>

wrote:

>dmarshall@ivory.trentu.ca wrote in message news:

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