
Subject: Re: IDL and Beowolf ?

Posted by [bruhwile](#) on Fri, 03 Aug 2001 03:20:42 GMT

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Steve Smith wrote...

>> At Tech-X Corporation, we have prototyped the use of MPI (message
>> passing interface) with IDL and have successfully 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.

>
> 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 "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
