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Subject: Re: Socket!

Posted by [ronn](#) on Wed, 24 Jan 2001 12:56:54 GMT

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in article 94m3t3\$joa\$1@nnrp1.deja.com, landsman@my-deja.com at landsman@my-deja.com wrote on 1/24/01 12:31 AM:

> Has anyone tried to use the Unix/Windows SOCKET procedure in IDL V5.4,  
> or thought about ways that it might be useful? It looks to me like  
> it should allow one to read a file on an anonymous FTP server, but I  
> haven't figured out the syntax for this. (I have no previous socket  
> programming experience in other languages, so I am proceeding  
> naively...)

>

I have experimented some with it, but I prefer to use Randall Franks implementation of sockets (The dll is on my web site at <http://www.rlkling.com/freeware/dlms.htm> ).

But yes, sockets are extremely useful for both pure IDL and interfacing with C programs. I recently helped someone who wanted to run a mix of IDL and C applications on different machines and pass the results back to a "master" IDL program for compilation and display. So you can use these to implement a parallel processing architecture (Shameless plug coming... If anyone is interested in doing parallel processing with IDL I have something up and running, just contact me.)

I expect, but haven't tried it, that sockets would be great for applications that need to access real time information over the web. Something like weather or stock market data comes to mind.

-Ronn

--

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

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Subject: Re: Socket!

Posted by [Craig Markwardt](#) on Wed, 24 Jan 2001 20:28:45 GMT

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landsman@my-deja.com writes:

> Has anyone tried to use the Unix/Windows SOCKET procedure in IDL V5.4,  
 > or thought about ways that it might be useful? It looks to me like  
 > it should allow one to read a file on an anonymous FTP server, but I  
 > haven't figured out the syntax for this. (I have no previous socket  
 > programming experience in other languages, so I am proceeding  
 > naively...)  
 >  
 > For example, I can open a socket to an anonymous FTP account on a  
 > machine named 'ftpservername'  
 >  
 > IDL> socket, 1, 'ftpservername', 'ftp'  
 >  
 > and read the welcome message  
 >  
 > IDL> text = "  
 > IDL> readf,1,text & print,text  
 >  
 > but I haven't figured out the syntax for reading a file on  
 > the FTP server. I'd also be interested in hearing of other possible  
 > applications for the SOCKET procedure. Is it mainly for use with a C  
 > interface, or is it useful in pure IDL applications?

FTP is a particularly unsuitable protocol because it requires a  
 \*separate\* connection for data exchange. The socket you opened is  
 simply the control connection. It may be very difficult to implement  
 this particular protocol in IDL since it requires the client, you, to  
 "listen" on the data socket, and I am not sure that SOCKET supports  
 that.

From my chance to play with SOCKET, the telnet protocol does seem to  
 be implemented, so users are spared from doing the complicated and  
 arcane telnet negotiation. If you want something FTP-like you might  
 try HTTP or TFTP (the "trivial" FTP protocol). Anyway you cut it, you  
 will probably need to implement the raw protocol.

I think Ron is right, SOCKET is a great opportunity for users to do  
 their own interprocess communication, but if you need some of the  
 standard protocols then seek outside library help. Also, it should be  
 fairly easy to implement the HTTP protocol. Try this to get yourself  
 started:

```
socket, unit, 'cow.physics.wisc.edu', 80, /get_lun
printf, unit, 'GET http://cow.physics.wisc.edu/~craigm/idl/idl.html'
text = ""
while eof(unit) EQ 0 do begin
  readf, unit, text
  print, text
endwhile
```

free\_lun, unit

Happy socketing,  
Craig

--

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Craig B. Markwardt, Ph.D.      EMAIL:   craigmnet@cow.physics.wisc.edu  
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response  
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Subject: Re: Socket!  
Posted by [Craig Markwardt](#) on Wed, 24 Jan 2001 21:30:31 GMT  
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Craig Markwardt <craigmnet@cow.physics.wisc.edu> writes:

>  
> ... discussion of FTP over and HTTP in IDL  
> I think Ron is right, SOCKET is a great opportunity for users to do  
> their own interprocess communication, but if you need some of the  
> standard protocols then seek outside library help. Also, it should be  
> fairly easy to implement the HTTP protocol. Try this to get yourself  
> started:  
> ... example program  
>

Here I am replying to my own post. I must be half-way to loony!

Apparently the FTP protocol does support a "passive" technique which may be easier to implement within IDL, but it still does require implementing the protocol in IDL. Also I am told that my HTTP example may have been too simple (at least it's a starting point).

I think there is hope that a future version of IDL may have an implementation of these protocols, thus saving us the trouble.

Craig

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Craig B. Markwardt, Ph.D.      EMAIL:   craigmnet@cow.physics.wisc.edu  
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