Subject: Re: New free DLL for calling Python from IDL!
Posted by Dick Jackson on Tue, 15 Apr 2014 18:16:39 GMT
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Helder wrote:

> Dear Jason,
> I had a look at this again. I installed python 64 bit and still have the same
problem. I'll describe it again as follows:
> - Open IDL DE 64-bit, type random=pyimport("random") --> IDL closes suddenly.
No message. Too fast.
> - Open IDL command line, type the same command --> IDL closes. As above.
> - Python version: 64-bit. To check that, I did the following. I put in a file
called test.py the following lines:
>
> import struct
> print "n-bits=", struct.calcsize("P") * 8
>
> then I called from IDL the following:
> IDL> spawn, 'python test.py', out, err
> IDL> out, err
> n-bits= 64
>
> IDL> !version
> {
>   ARCH: "x86_64",
>   OS: "Win32",
>   OS_FAMILY: "Windows",
>   OS_NAME: "Microsoft Windows",
>   RELEASE: "8.3",
>   BUILD_DATE: "Nov 15 2013",
>   MEMORY_BITS: 64,
>   FILE_OFFSET_BITS: 64
> }
>
> So now the nr of bits of IDL and Python (version 2.7.6) match.
>
> Any clue why this is not working? Has anybody managed the windows 7 64-bit
installation?
>
> Regards,
> Helder

Hi Helder,

I can add a data point, if it's useful to know... on my Windows 7 64-bit, I have
Python 3 running, and this all works fine with the Python 3 tweak to test.py:

```
-----
import struct
print("n-bits=", struct.calcsize("P") * 8)
-----
```

```
IDL> spawn, 'python test.py', out, err
IDL> out,err
n-bits= 64

IDL> random=pyimport("random")
Slither 3.0, by Jacquette Consulting, Inc. Built on 2014-02-03 16:39:36.132000
Copyright (c) 2011 [...]
[...]
% Loaded DLM: SLITHER.
IDL> !version
{
    ARCH: "x86_64",
    OS: "Win32",
    OS_FAMILY: "Windows",
    OS_NAME: "Microsoft Windows",
    RELEASE: "8.3",
    BUILD_DATE: "Nov 15 2013",
    MEMORY_BITS: 64,
    FILE_OFFSET_BITS: 64
}
IDL> np=pyimport('numpy')
IDL> sp=pyimport('scipy')
IDL> np,sp
<ObjHeapVar3(PYTHONOBJECT)>
<ObjHeapVar4(PYTHONOBJECT)>
```

Cheers,
-Dick

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Bonus section:

In case you are tempted to jump to Python 3, here's how I did it, using Miniconda3 and Anaconda. My recipe for getting Python 3.3 (I'm using Windows 7 64-bit, IDL 8.3 64-bit):

On http://continuum.io/blog/anaconda-python-3 , follow instructions for

Installing Miniconda3:

Go to this page:
http://repo.continuum.io/miniconda/index.html

Download the latest Miniconda3 for your OS, install it, then at a Command Prompt:

```
C:\> conda install anaconda
```

It will list the hundreds of things it will download and link, then tell it to
Proceed (type "y" then Enter)

Be patient! Then, at the command prompt, you should be able to start a Python
session and import numpy and scipy:

```
C:\>python
Python 3.3.4 |Anaconda 1.9.1 (64-bit)| (default, Feb 10 2014, 17:54:43) [MSC v.1
600 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
 >>> import numpy as np
 >>> import scipy as sp
 >>> exit()
```

Test IDL and Slither (installed with correct DLM for Python 3.3):

```
IDL> DLM_LOAD('Slither')
Slither 3.0, by Jacquette Consulting, Inc. Built on 2014-02-03 16:39:36.132000
Copyright (c) [...]
IDL> np=pyimport('numpy')
IDL> sp=pyimport('scipy')
```

Helder wrote, On 2014-04-15, 9:22am:

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>  On Tuesday, March 4, 2014 2:00:51 PM UTC+1, Jason Ferrara wrote:
>>  Is there any error message before the crash? If the workbench is closing right away before you get a chance to see any error messages try running from command line IDL.
>>
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>>  On Tuesday, March 4, 2014 3:29:51 AM UTC-5, Helder wrote:
>>
>>>  On Tuesday, March 4, 2014 6:38:24 AM UTC+1, Chris Torrence wrote:
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>>>
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>>>>  On Monday, March 3, 2014 7:18:19 PM UTC-7, Jeff N. wrote:
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>>>> > Unfortunately, I cannot get the DLM to load on either of my windows machines :(I have a 32-bit win8 machine, and a 64-bit win7 machine. Both are running IDL 8.2 and Python 2.7 (Specifically, the Python(x,y) installation). In both cases, attempting to call pyimport() to import any python module crashes IDL. It happens pretty quickly, so i feel like it's something simple, but not sure.
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>>>> Hi Jeff,
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>>>> I believe that the DLM was built against IDL 8.3. It won't work against earlier versions of IDL because the symbol tables have changed. So you'll need to upgrade your IDL version before it will work.
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>>>> For future versions of IDL, I'm trying to not change the symbol tables. So hopefully, when IDL 8.3.x comes out, we won't need a new build of Slither. I can't guarantee it, but that's the plan.
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>>> Hi,
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>>> I have the same problem as Jeff (sudden crash when calling pyimport()).
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>>> Using 8.3:
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>>> IDL> !VERSION
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>>> {
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>>
>>>   ARCH: "x86_64",
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```
>>
>>>      OS: "Win32",
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>>>      OS_FAMILY: "Windows",
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>>>      OS_NAME: "Microsoft Windows",
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>>>      RELEASE: "8.3",
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>>
>>>      BUILD_DATE: "Nov 15 2013",
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>>>
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>>>      MEMORY_BITS: 64,
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>>>      FILE_OFFSET_BITS: 64
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>>> }
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>>> Any ideas?
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>>> Cheers,
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>>> Helder
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