Subject: New free DLL for calling Python from IDL!
Posted by rlkling on Mon, 03 Mar 2014 15:03:51 GMT
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Hello Everyone,

I am extremely pleased to announce that Exelisvis, Jacquette Consulting and myself have worked together to bring you the Slither dll for calling Python from IDL.

If you are familiar with Slither it was previously a paid for item. But we felt that it was of such potential use to the IDL community that we all worked together to provide it for free.

You can download it here.

www.slither4idl.com

There are dlls and shared objects for every platform IDL runs upon. Plus it supports Python versions, 2.6, 2.7 and 3.3.

Then, to help you over the learning curve you can order this eBook from my website for $5.00

http://www.rlkling.com/using-python-from-idl.htm

Don't worry if you don't have a kindle, there are free kindle readers for every platform that IDL supports. I'm really excited about using the eBook format and making this book a living document. According to Amazon when the eBook is updated you will get an email, and you can download the new version for free.

I also hope that the IDL community will send me examples of what they have done with Slither and I will add them to the book, with your name on the chapter.

We hope you enjoy this new dimension for IDL!

-Ronn Kling

Subject: Re: New free DLL for calling Python from IDL!
Posted by David Fanning on Mon, 03 Mar 2014 16:32:11 GMT
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Ronn Kling writes:

> We hope you enjoy this new dimension for IDL!

Goodness! I have enough trouble getting people to install ImageMagick.
You are very brave! ;-)

Cheers,

David

P.S. Is there a support hot-line?

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: New free DLL for calling Python from IDL!
Posted by ronn kling[1] on Mon, 03 Mar 2014 18:28:40 GMT
View Forum Message <> Reply to Message

> Goodness! I have enough trouble getting people to install ImageMagick.
>
> You are very brave! ;-)
>

Just an eternal optimist.

>
>
>
> P.S. Is there a support hot-line?
>
>
That's the idea of a ever updating eBook. We keep it updated so that only one person has to figure it out.

Subject: Re: New free DLL for calling Python from IDL!
Posted by David Fanning on Mon, 03 Mar 2014 19:02:12 GMT
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ronn kling writes:

> That's the idea of a ever updating eBook. We keep it updated so that only one person has to figure it out.

You are an eternal optimist! I've made $9.75 on my e-book Standing on
the Ocean after everyone here told me "you should really write a book!"
I expected to get rich, but it turned into three months of work without
much pay-back. Hope you do better. In my experience, not too many people
read books these days. :-)

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: New free DLL for calling Python from IDL!
Posted by Haje Korth on Mon, 03 Mar 2014 19:29:01 GMT
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Very nice Ronn. Bought the book, installed python and found a bug: IDL 8.3 crashes when .f (.full_session_reset) is issued after the DLM is load. To reproduce do

np=pyimport('numpi')
.f

Please fix!

Thank you ,
Haje

On Monday, March 3, 2014 10:03:51 AM UTC-5, ronn kling wrote:
> Hello Everyone,
>
>
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> You can download it here.
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> www.slither4idl.com

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> There are dlls and shared objects for every platform IDL runs upon. Plus it supports Python versions, 2.6, 2.7 and 3.3.
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> Then, to help you over the learning curve you can order this eBook from my website for $5.00
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> http://www.rlkling.com/using-python-from-idl.htm
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> Don't worry if you don't have a kindle, there are free kindle readers for every platform that IDL supports. I'm really excited about using the eBook format and making this book a living document. According to Amazon when the eBook is updated you will get an email, and you can download the new version for free.
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> I also hope that the IDL community will send me examples of what they have done with Slither and I will add them to the book, with your name on the chapter.
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>
> We hope you enjoy this new dimension for IDL!
>
>
>
> -Ronn Kling

Subject: Re: New free DLL for calling Python from IDL!
Posted by chris_torrence@NOSPAM on Mon, 03 Mar 2014 19:47:57 GMT
View Forum Message <> Reply to Message

On Monday, March 3, 2014 12:29:01 PM UTC-7, Haje Korth wrote:
> Very nice Ronn. Bought the book, installed python and found a bug: IDL 8.3 crashes when .f (.full_session_reset) is issued after the DLM is load. To reproduce do
>
>
>
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> .f

>
>
>
> Please fix!
>
>
>
> Thank you ,
>
> Haje
>
>
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Cheers,
Chris

Subject: Re: New free DLL for calling Python from IDL!
Posted by PMan on Mon, 03 Mar 2014 20:03:44 GMT
View Forum Message <> Reply to Message

On Monday, March 3, 2014 10:03:51 AM UTC-5, ronn kling wrote:
> Hello Everyone,
>
>
>
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> There are dlls and shared objects for every platform IDL runs upon. Plus it supports Python versions, 2.6, 2.7 and 3.3.
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>
>
>
> We hope you enjoy this new dimension for IDL!
>
>
>
> -Ronn Kling

I was wondering what happened to Slither. I discovered some references to it on the web last year, but it just seemed to have vanished. I will check it out.

Subject: Re: New free DLL for calling Python from IDL!
Posted by ronn kling[1] on Mon, 03 Mar 2014 20:24:00 GMT
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>
> In Ronn's defense, I don't think he's going to be fixing any bugs in the code. That is Jaquette Consulting's responsibility. I would bet that they forgot to register a DLM "unload" routine for .full reset. So the DLM is probably being unloaded, but it isn't being given the chance to unload any of it's data structures. But it's free!
>
>

So when you find bugs like this please email me at ronn@rlkling.com and I will add them to a list. At some point I want to have Jacquette Consulting add support for the Dictionary object that is new in 8.3.

Python also allows multiple return values like this
U,V,W = svd(array)
That I would somehow like to mimic in IDL maybe with returning a list or something.

And remember it is free!

Subject: Re: New free DLL for calling Python from IDL!
Posted by Haje Korth on Mon, 03 Mar 2014 20:41:32 GMT
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Chris and Ronn,
I was not complaining, I was just reporting a bug. Without the source code I unfortunately cannot fix it myself. Also I was too excited to try this out without checking how the work was divided between Ronn and Jaquette Consulting.

Chris' possible explanation of a possibly missing unload routine makes sense. The DLM creators should read Ronn's book "Calling C from IDL" from which I learned how to do that. :-)

In any case, this is a great addition to IDL. Thank you for making it available!

Cheers,
Haje

On Monday, March 3, 2014 2:47:57 PM UTC-5, Chris Torrence wrote:
> On Monday, March 3, 2014 12:29:01 PM UTC-7, Haje Korth wrote:
>
>> Very nice Ronn. Bought the book, installed python and found a bug: IDL 8.3 crashes when .f (.full_session_reset) is issued after the DLM is load. To reproduce do
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>> .f
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>> Please fix!
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>
> Cheers,
>
> Chris

Subject: Re: New free DLL for calling Python from IDL!
Posted by David Fanning on Mon, 03 Mar 2014 20:41:44 GMT
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ronn kling writes:

> And remember it is free!

Well, around here this generally means bug fixes within the hour. I
can't tell if you are using the term correctly or not. ;-)

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: New free DLL for calling Python from IDL!
Posted by Jason Ferrara on Mon, 03 Mar 2014 20:57:44 GMT
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On Monday, March 3, 2014 2:47:57 PM UTC-5, Chris Torrence wrote:
>
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>

There is an exit handler registered and it attempts to do the right things.

I think this may be a numpy bug. See
http://mail.scipy.org/pipermail/numpy-discussion/2009-March/ 040849.html

---

Subject: Re: New free DLL for calling Python from IDL!
Posted by Haje Korth on Mon, 03 Mar 2014 21:10:25 GMT
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Hi Jason,
thanks for chiming in. I do not think that this is a bug in numpy as the same problem occurs with scipy:

sp=pyimport('scipy')
.f

also crashes IDL.

Cheers,
Haje

On Monday, March 3, 2014 3:57:44 PM UTC-5, Jason Ferrara wrote:
> On Monday, March 3, 2014 2:47:57 PM UTC-5, Chris Torrence wrote:
>
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>> In Ronn's defense, I don't think he's going to be fixing any bugs in the code. That is Jaquette Consulting's responsibility. I would bet that they forgot to register a DLM "unload" routine for .full reset. So the DLM is probably being unloaded, but it isn't being given the chance to unload any of it's data structures. But it's free!
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http://mail.scipy.org/pipermail/numpy-discussion/2009-March/ 040849.html

---

Subject: Re: New free DLL for calling Python from IDL!
Posted by Jason Ferrara on Mon, 03 Mar 2014 21:16:48 GMT
View Forum Message <> Reply to Message

On Monday, March 3, 2014 4:10:25 PM UTC-5, Haje Korth wrote:
> Hi Jason,
>
> thanks for chiming in. I do not think that this is a bug in numpy as the same problem occurs with scipy:
>
>
>
> sp=pyimport('scipy')
>
> .f
>
>
>
> also crashes IDL.
>

Scipy includes numpy. But even without that, Slither uses numpy to represent IDL data types in Python. So just loading the Slither DLM causes numpy to get imported.

Subject: Re: New free DLL for calling Python from IDL!
Posted by Haje Korth on Mon, 03 Mar 2014 21:28:40 GMT
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I see, thanks Jason. Then I am not sure what to do about that. Haje

On Monday, March 3, 2014 4:16:48 PM UTC-5, Jason Ferrara wrote:
> On Monday, March 3, 2014 4:10:25 PM UTC-5, Haje Korth wrote:
>
>> Hi Jason,
>
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>> thanks for chiming in. I do not think that this is a bug in numpy as the same problem occurs with scipy:
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Subject: Re: New free DLL for calling Python from IDL!
Posted by David Fanning on Mon, 03 Mar 2014 21:29:15 GMT
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rlkling@gmail.com writes:

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> If you are familiar with Slither it was previously a paid for item. But we felt that it was of such potential use to the IDL community that we all worked together to provide it for free.

I'm not really familiar with Slither, but I know Python a bit. What is confusing me is why IDL and Python together are that much better than either one of them alone. What do these two packages bring as a dowry to the marriage?

Is this for people who know both languages and can't decide if they are Catholic or Episcopalian?

This isn't the next new graphics system, is it?

Just a tad confused, I guess. Probably has to do with age. :-)

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: New free DLL for calling Python from IDL!
Posted by Haje Korth on Mon, 03 Mar 2014 21:52:10 GMT
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Well, as a Lutheran, I can still appreciate the beautiful art in Italian Catholic churches. And it's similar with Python. I am not and will never be a regular Python user. But the fact the Python user base is growing is undeniable. I can see it in the offices around me. So the ability to be able to use those folk's functions without recoding everything sounds appealing to me. (Don't know much about python or slither at this point. In fact, I heard of Slither the first time today.)

On Monday, March 3, 2014 4:29:15 PM UTC-5, David Fanning wrote:
> rlkling@gmail.com writes:
>
>
>
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> Just a tad confused, I guess. Probably has to do with age. :-)
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> Cheers,
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> David
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> --
>
> David Fanning, Ph.D.
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> Fanning Software Consulting, Inc.
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>
> Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: New free DLL for calling Python from IDL!
Posted by Jason Ferrara on Mon, 03 Mar 2014 22:22:25 GMT
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There are many 3rd party libraries available for Python but not IDL. Slither gives you access to those libraries.

We've also found it quite useful for writing "DLMs" for interfacing IDL with data acquisition hardware where multithreading is required. Rather that writing a normal C/C++ dlm, where you have to write the hardware control code and the IDL interface code, you can write the hardware control library in Python, and then with Slither call that library directly without writing any additional interface code.

On Monday, March 3, 2014 4:29:15 PM UTC-5, David Fanning wrote:
>
>
>
> I'm not really familiar with Slither, but I know Python a bit. What is
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> David Fanning, Ph.D.
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Subject: Re: New free DLL for calling Python from IDL!
Posted by David Fanning on Mon, 03 Mar 2014 23:12:02 GMT
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Jason Ferrara writes:

> There are many 3rd party libraries available for Python but not IDL. Slither gives you access to those libraries.

Thank you. Just to clarify, you are saying then that Slither gives you access to Python libraries without the overhead of having to learn much Python? Non-expert python programmers might use Python libraries, but in their preferred IDL programming language. Do I understand that right?

Cheers,

David
--
David Fanning, Ph.D.
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Subject: Re: New free DLL for calling Python from IDL!
Posted by chris_torrence@NOSPAM on Mon, 03 Mar 2014 23:22:34 GMT
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Well, here's another example that might put both me and David out of business. I installed the Anaconda (python 2.7 package), which comes with all of the matplotlib libraries.

This example is taken directly from the matplotlib gallery page:
http://matplotlib.org/examples/pie_and_polar_charts/pie_demo _features.html

Create a pie chart from within IDL:

```
plt = pyimport("matplotlib.pyplot")
sizes = [15,30,45,10]
```

```
labels = ['Frogs', 'Hogs', 'Dogs', 'Logs']
colors = ['yellowgreen', 'gold', 'lightskyblue', 'lightcoral']
explode = [0, 0.1, 0, 0]
p = plt.pie(sizes, explode=explode, labels=labels, colors=colors, $
  autopct='%1.1f%%', shadow=1, startangle=90)
void = plt.axis('equal')
void = plt.show(block=0)
void = plt.savefig('plot.pdf')
```

But here's a question for Jason or Ronn: once I've created the "p" object, it says it is a "tuple". Is there any way to get properties back out of the object? I tried the following:

```
IDL> pb = pyimportbuiltins()
IDL> pb.getattr(p,'colors')
% PYTHONOBJECT::GETATTR: AttributeError: 'tuple' object has no attribute 'colors'
```

Cheers,
Chris
ExelisVIS

Subject: Re: New free DLL for calling Python from IDL!
Posted by ronn kling[1] on Mon, 03 Mar 2014 23:24:44 GMT

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Right, the syntax differences between IDL 8.+ and Python are very small. So if you are looking at this code you can't tell if it is Python or IDL

```
derfilt = np.array([1.0,-2,1.0])
```

So an IDL user can use Python libraries with out a lot of learning overhead. That is why I went through all the examples in the eBook so users can see what little tweaks they need to get access to the Python libs that they want.

Subject: Re: New free DLL for calling Python from IDL!
Posted by ronn kling[1] on Mon, 03 Mar 2014 23:37:09 GMT

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> But here's a question for Jason or Ronn: once I've created the "p" object, it says it is a "tuple". Is there any way to get properties back out of the object? I tried the following:
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> IDL> pb = pyimportbuiltins()
>
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>
> % PYTHONOBJECT::GETATTR: AttributeError: 'tuple' object has no attribute 'colors'
>

Jason may have a better way but what I would do is pull the tuple apart into separate variables on the python side using pyexec and then get them back one at a time.

This is exactly the case where maybe at some point we can get Jason to mod Slither to return something like a Dictionary object.

Subject: Re: New free DLL for calling Python from IDL!
Posted by chris_torrence@NOSPAM on Mon, 03 Mar 2014 23:40:29 GMT
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On Monday, March 3, 2014 4:37:09 PM UTC-7, ronn kling wrote:
>> But here's a question for Jason or Ronn: once I've created the "p" object, it says it is a "tuple". Is there any way to get properties back out of the object? I tried the following:
>
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>>
>
> Jason may have a better way but what I would do is pull the tuple apart into separate variables on the python side using pyexec and then get them back one at a time.
>
>
>
> This is exactly the case where maybe at some point we can get Jason to mod Slither to return something like a Dictionary object.

Yes. What I want to do is just:
  print, p.colors
Then it will really look like IDL code, and we'll all be horribly confused. :-)
-C

Subject: Re: New free DLL for calling Python from IDL!
Posted by Jason Ferrara on Mon, 03 Mar 2014 23:56:23 GMT
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```
IDL> p = plt.pie(sizes, explode=explode, labels=labels, colors=colors, $
>    autopct='%1.1f%%', shadow=1, startangle=90)
IDL> print, p
([<matplotlib.patches.Wedge object at 0x0000000017D6F320>, <matplotlib.patches.Wedge object
at 0x0000000018200B00>, <matplotlib.patches.Wedge object at 0x000000001820B320>,
<matplotlib.patches.Wedge object at 0x0000000018210B00>], [<matplotlib.text.Text object at
0x0000000017D6FFD0>, <matplotlib.text.Text object at 0x00000000182077F0>,
<matplotlib.text.Text object at 0x000000001820BFD0>, <matplotlib.text.Text object at
0x00000000182177F0>], [<matplotlib.text.Text object at 0x00000000182005C0>,
<matplotlib.text.Text object at 0x0000000018207DA0>, <matplotlib.text.Text object at
0x00000000182105C0>, <matplotlib.text.Text object at 0x0000000018217DA0>])
IDL> print, p[0]
[<matplotlib.patches.Wedge object at 0x0000000017D6F320>, <matplotlib.patches.Wedge object
at 0x0000000018200B00>, <matplotlib.patches.Wedge object at 0x000000001820B320>,
<matplotlib.patches.Wedge object at 0x0000000018210B00>]
IDL> print, p[1]
[<matplotlib.text.Text object at 0x0000000017D6FFD0>, <matplotlib.text.Text object at
0x00000000182077F0>, <matplotlib.text.Text object at 0x000000001820BFD0>,
<matplotlib.text.Text object at 0x00000000182177F0>]
IDL> print, (p[1])[0].get_text()
Frogs
IDL> print, (p[1])[2].get_text()
Dogs
IDL>
```

On Monday, March 3, 2014 6:22:34 PM UTC-5, Chris Torrence wrote:
> Well, here's another example that might put both me and David out of business. I installed the Anaconda (python 2.7 package), which comes with all of the matplotlib libraries.
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> This example is taken directly from the matplotlib gallery page:
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>
>
> Create a pie chart from within IDL:
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> plt = pyimport("matplotlib.pyplot")
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> sizes = [15,30,45,10]
>
> labels = ['Frogs', 'Hogs', 'Dogs', 'Logs']
>
> colors = ['yellowgreen', 'gold', 'lightskyblue', 'lightcoral']

>
> explode = [0, 0.1, 0, 0]
>
> p = plt.pie(sizes, explode=explode, labels=labels, colors=colors, $
>
> autopct='%1.1f%%', shadow=1, startangle=90)
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> void = plt.axis('equal')
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> % PYTHONOBJECT::GETATTR: AttributeError: 'tuple' object has no attribute 'colors'
>
>
>
> Cheers,
>
> Chris
>
> ExelisVIS

Subject: Re: New free DLL for calling Python from IDL!
Posted by Jason Ferrara on Tue, 04 Mar 2014 00:06:24 GMT
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And to get colors of the wedges...

```
IDL> print, (p[0])[0].get_edgecolor()
     0.00000000      0.00000000      0.00000000      1.0000000
IDL> print, (p[0])[0].get_facecolor()
     0.60392157      0.80392157      0.19607843      1.0000000
IDL>
```

On Monday, March 3, 2014 6:40:29 PM UTC-5, Chris Torrence wrote:
> On Monday, March 3, 2014 4:37:09 PM UTC-7, ronn kling wrote:
>

>>> But here's a question for Jason or Ronn: once I've created the "p" object, it says it is a "tuple". Is there any way to get properties back out of the object? I tried the following:
>
>
>
> Yes. What I want to do is just:
>
>   print, p.colors
>
> Then it will really look like IDL code, and we'll all be horribly confused. :-)
>
> -C

Subject: Re: New free DLL for calling Python from IDL!
Posted by jeffnettles4870 on Tue, 04 Mar 2014 02:18:19 GMT
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Ronn,

This is great news, thank you!!

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.

Any ideas?

Thanks,
Jeff

On Monday, March 3, 2014 10:03:51 AM UTC-5, ronn kling wrote:
> Hello Everyone,
>
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>
> I am extremely pleased to announce that Exelisvis, Jacquette Consulting and myself have worked together to bring you the Slither dll for calling Python from IDL.
>
>
>
> If you are familiar with Slither it was previously a paid for item. But we felt that it was of such potential use to the IDL community that we all worked together to provide it for free.
>
>
>
> You can download it here.

>
>
>
> www.slither4idl.com
>
>
>
> There are dlls and shared objects for every platform IDL runs upon. Plus it supports Python versions, 2.6, 2.7 and 3.3.
>
>
>
> Then, to help you over the learning curve you can order this eBook from my website for $5.00
>
>
>
> http://www.rlkling.com/using-python-from-idl.htm
>
>
>
> Don't worry if you don't have a kindle, there are free kindle readers for every platform that IDL supports. I'm really excited about using the eBook format and making this book a living document. According to Amazon when the eBook is updated you will get an email, and you can download the new version for free.
>
>
>
> I also hope that the IDL community will send me examples of what they have done with Slither and I will add them to the book, with your name on the chapter.
>
>
>
> We hope you enjoy this new dimension for IDL!
>
>
>
> -Ronn Kling

Subject: Re: New free DLL for calling Python from IDL!
Posted by chris_torrence@NOSPAM on Tue, 04 Mar 2014 05:38:24 GMT
View Forum Message <> Reply to Message

On Monday, March 3, 2014 7:18:19 PM UTC-7, Jeff N. wrote:
> Ronn,
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> This is great news, thank you!!
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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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Cheers,
Chris
ExelisVIS

Subject: Re: New free DLL for calling Python from IDL!
Posted by chris_torrence@NOSPAM on Tue, 04 Mar 2014 05:40:55 GMT
View Forum Message <> Reply to Message

On Monday, March 3, 2014 5:06:24 PM UTC-7, Jason Ferrara wrote:
> And to get colors of the wedges...
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> IDL> print, (p[0])[0].get_edgecolor()
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>> print, p.colors
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>
>> Then it will really look like IDL code, and we'll all be horribly confused. :-)
>
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>> -C

Thanks Jason for the response! I'm having lots of fun playing with python & IDL.
-Chris

Subject: Re: New free DLL for calling Python from IDL!
Posted by Helder Marchetto on Tue, 04 Mar 2014 08:29:51 GMT
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On Tuesday, March 4, 2014 6:38:24 AM UTC+1, Chris Torrence wrote:

> On Monday, March 3, 2014 7:18:19 PM UTC-7, Jeff N. wrote:
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> Cheers,
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> Chris
>
> ExelisVIS

Hi,
I have the same problem as Jeff (sudden crash when calling pyimport()).
Using 8.3:

```
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
}
```

Any ideas?

Cheers,
Helder

Subject: Re: New free DLL for calling Python from IDL!

Posted by markb77 on Tue, 04 Mar 2014 08:30:35 GMT
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cool! I'm looking forward to trying it out. Many thanks!
Mark

Subject: Re: New free DLL for calling Python from IDL!
Posted by Jason Ferrara on Tue, 04 Mar 2014 12:50:53 GMT
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Here is an example showing how to create a plot with matplotlib and display it in IDL without needing to save the plot to a temporary file.

```
plt = pyimport("matplotlib.pyplot")
mpagg = pyimport("matplotlib.backends.backend_agg")
fig = plt.figure(facecolor='w')
canvas = mpagg.FigureCanvasAgg(fig)
ax=fig.add_subplot(111)
ax.plot, [1,2,3]
stringio = pyimport("cStringIO")
numpy = pyimport("numpy")
imgdata = stringio.StringIO()
canvas.print_rgba, imgdata
w = (canvas.get_width_height())[0]
h = (canvas.get_width_height())[1]
img = (numpy.fromstring(imgdata.getvalue(), dtype=numpy.uint8, /pyobj)).reshape([h,w,4])
img = reverse(img(1:3,*,*),3)
tv, img, /true
```

Subject: Re: New free DLL for calling Python from IDL!
Posted by Jason Ferrara on Tue, 04 Mar 2014 13:00:51 GMT
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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.

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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> OS: "Win32",
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> OS_NAME: "Microsoft Windows",
>
> RELEASE: "8.3",
>
> BUILD_DATE: "Nov 15 2013",
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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,
>
> Helder

Subject: Re: New free DLL for calling Python from IDL!
Posted by Haje Korth on Tue, 04 Mar 2014 13:05:28 GMT
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Chris,
are you sure this is correct? I just built my Geopack DLM on IDL 8.3 and it runs fine on IDL 8.2.3. I have not checked other IDL versions but when running 8.2.3 I am pretty confident that DLM code compiled for that version runs on IDL all the way back to 6.4. In 6.4 there was a significant change in the API and I remember many people including myself being upset because compiling for different OS AND differen IDL versions results in just too many permutations of the executables that are difficult to maintain.

Haje

On Tuesday, March 4, 2014 12:38:24 AM UTC-5, Chris Torrence wrote:
> On Monday, March 3, 2014 7:18:19 PM UTC-7, Jeff N. wrote:
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>> Ronn,
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> Cheers,
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> Chris
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> ExelisVIS

Subject: Re: New free DLL for calling Python from IDL!
Posted by Haje Korth on Tue, 04 Mar 2014 13:08:15 GMT
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Following on my last comment to Chris, I just have tested slither on IDL 8.2.3 and it indeed crashes the DE when typing np=pyinport('numpy') after spitting out the slither info notice. There is no further debug info.

On Tuesday, March 4, 2014 8:00:51 AM UTC-5, 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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>> IDL> !VERSION
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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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>> MEMORY_BITS: 64,
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>> Cheers,
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>> Helder

Subject: Re: New free DLL for calling Python from IDL!
Posted by Haje Korth on Tue, 04 Mar 2014 13:11:31 GMT
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I tried the command line version of 8.2.3 as well and there is no further info either. The last line is "%Loaded DLM: Slither" then the message box "IDL has stopped working" pops up.

On Tuesday, March 4, 2014 8:00:51 AM UTC-5, Jason Ferrara wrote:
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Subject: Re: New free DLL for calling Python from IDL!
Posted by Helder Marchetto on Tue, 04 Mar 2014 13:22:20 GMT
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On Tuesday, March 4, 2014 2:00:51 PM UTC+1, Jason Ferrara 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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>> Using 8.3:
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>> IDL> !VERSION
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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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>>   MEMORY_BITS: 64,
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>>   FILE_OFFSET_BITS: 64
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>> Helder

Dear Jason,
thank for looking into this. No, there is no message. Simply closes the IDL DE. In the command line the same happens.

IDL>np = pyimport("numpy")

C:\Program Files\Exelis\IDL83\bin\bin.x86_64>
C:\Program Files\Exelis\IDL83\bin\bin.x86_64>python --version
Python 2.7.5

C:\Program Files\Exelis\IDL83\bin\bin.x86_64>python
..
>> import numpy as np
>>
>> exit()

So, I get no "%Loaded DLM:xxx" message or any other info.

I went a bit further and installed the 32-bit version in the 32-bit IDL directory and in this case I could use python...

My guess at this moment is that I was using IDL 64-bit and trying to use 32-bit Python. (To check the version just type python at the command line)
32-bit IDL works fine (as far as I tested) with 32-bit python.

Cheers,
Helder

Subject: Re: New free DLL for calling Python from IDL!
Posted by Haje Korth on Tue, 04 Mar 2014 13:34:15 GMT
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I agree, bittage of IDL and Python have to match, I ran into that problem first yesterday. However, for me slither does not load 32 bit python on 32-bit IDL 8.2.3. It does load on IDL 8.3.

Maybe Chris does have a point with the changes in the API. Maybe the changes are such that only some functionality is affected. That would explain why my own DLMs run without chnages across these DLM versions.

On Tuesday, March 4, 2014 8:22:20 AM UTC-5, Helder wrote:

> 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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> IDL>np = pyimport("numpy")
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> C:\Program Files\Exelis\IDL83\bin\bin.x86_64>

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> C:\Program Files\Exelis\IDL83\bin\bin.x86_64>python --version
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> Python 2.7.5
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>
> C:\Program Files\Exelis\IDL83\bin\bin.x86_64>python
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> ..
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>>> exit()
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> Cheers,
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Subject: Re: New free DLL for calling Python from IDL!
Posted by jeffnettles4870 on Tue, 04 Mar 2014 13:34:35 GMT
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Jason: No, I don't get any further information, just the dreaded "IDL has stopped working" message :(

Chris: I'm an ENVI user - I think you guys were putting out an ENVI service pack every time IDL

upgrades so that we could use the most current IDL, but I don't think there's a new ENVI service pack for IDL 8.3 is there? For that I'd need ENVI 5.1 I think, correct?

Subject: Re: New free DLL for calling Python from IDL!
Posted by chris_torrence@NOSPAM on Wed, 05 Mar 2014 03:27:34 GMT
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On Tuesday, March 4, 2014 6:34:35 AM UTC-7, Jeff N. wrote:
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Hi Jeff,

Actually, it's usually the other way around these days. When we do a new release of ENVI, then we release IDL as well. :-)

And you're correct, ENVI 5.1 goes along with IDL 8.3. So you would need to upgrade both.

Also, following on Haje's post, yes, it totally depends upon what symbols you use. If you look at the bottom of the idl_export.h file (in the distribution), you'll see all the exported symbols. Occasionally, we will insert a new symbol into the middle of that list, which will move all of the other symbols down. So as long as you aren't using any symbols below the new one, you will get lucky and your DLM will work correctly. Before IDL 8.3, we weren't really being careful about where we inserted symbols, and just assumed that users would need to recompile their DLM's for each release. Now, we'll try to be more careful. Even so, there's still a possibility that Slither (and other DLM's) won't work correctly in a new version unless they are recompiled.

Cheers,
Chris
ExelisVIS

Subject: Re: New free DLL for calling Python from IDL!
Posted by Dick Jackson on Wed, 05 Mar 2014 17:19:36 GMT
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Jason Ferrara wrote, On 2014-03-03, 2:22pm:> There are many 3rd party libraries available for Python but not IDL. Slither gives you access to those libraries.
 >
 > We've also found it quite useful for writing "DLMs" for interfacing IDL with

data acquisition hardware where multithreading is required. Rather that writing a normal C/C++ dlm, where you have to write the hardware control code and the IDL interface code, you can write the hardware control library in Python, and then with Slither call that library directly without writing any additional interface code.

[aside:]

When Slither was being born, I was standing outside the delivery room...

A client of mine needed some serious hardware interfacing done so that our programs could control these devices from IDL. He found Jason to do the job, and rather than implement a one-off DLL, (if I remember correctly) Jason figured, "why not just develop a complete Python-IDL interface at the same time?" So, thanks to that forward-thinking move (which paid off well), and contributions of Ronn Kling and Exelis VIS, we now enjoy the spin-off technology.

--

Cheers,
-Dick

Dick Jackson Software Consulting Inc.
Victoria, BC, Canada
www.d-jackson.com

Subject: Re: New free DLL for calling Python from IDL!
Posted by Haje Korth on Wed, 05 Mar 2014 19:02:51 GMT
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Chris.
this makes perfect sense and explains the differences in behavior of my and the Slither DLMs between different IDL versions. I only use the simple stuff (no pointer), which my brain can process! In that case, it seems to make common sense that new symbols should always be appended at the end, where it would not affect old code. I guess that is what you meant with being more careful where you insert the new symbol.

Cheers,
Haje

On Tuesday, March 4, 2014 10:27:34 PM UTC-5, Chris Torrence wrote:
> Also, following on Haje's post, yes, it totally depends upon what symbols you use. If you look at the bottom of the idl_export.h file (in the distribution), you'll see all the exported symbols. Occasionally, we will insert a new symbol into the middle of that list, which will move all of the other symbols down. So as long as you aren't using any symbols below the new one, you will get lucky and your DLM will work correctly. Before IDL 8.3, we weren't really being careful about where we inserted symbols, and just assumed that users would need to recompile their DLM's for

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> ExelisVIS

Subject: Re: New free DLL for calling Python from IDL!
Posted by Helder Marchetto on Tue, 15 Apr 2014 16:22:19 GMT
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On Tuesday, March 4, 2014 2:00:51 PM UTC+1, Jason Ferrara wrote:
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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",
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   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

Subject: Re: New free DLL for calling Python from IDL!
Posted by Dick Jackson on Tue, 15 Apr 2014 18:16:39 GMT
View Forum Message <> Reply to Message

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>
> 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

Dick Jackson Software Consulting Inc.
Victoria, BC, Canada
www.d-jackson.com

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:
> 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.
>>
>>
>>
>> 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:
>>
>>>
>>
>>>> On Monday, March 3, 2014 7:18:19 PM UTC-7, Jeff N. wrote:
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>>>> > Ronn,
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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",
>>
>>>
>>
>>>   RELEASE: "8.3",
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>>>   BUILD_DATE: "Nov 15 2013",
>>
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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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Subject: Re: New free DLL for calling Python from IDL!
Posted by yuxipang on Tue, 15 Apr 2014 19:53:01 GMT
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Hi Helder,

I can run the codes (see below) provided by Chris Torrence on my OS64 Win7 laptop. I put the Slither.DLL and Slither.DLM in a separate directory on the IDL path, and added the following lines in the startup.pro file (based on suggestions from Ronn Kline's ebook).

PREF_SET, 'IDL_DLM_PATH', 'C:\WorkSpace\IDL\Slither\python33; <IDL_DEFAULT>', /COMMIT

When I put slither DLL/DLM files in the directory of C:\Program Files\Exelis\IDL83\bin\bin.x86_64\, it did not work for me.

The standard Python 3.3.3 and its extension packages (matplotlib, numpy and others)were

downloaded from following sites ...
https://www.python.org/downloads/
http://www.lfd.uci.edu/~gohlke/pythonlibs/

```
=======================================
 plt = pyimport("matplotlib.pyplot")
  sizes = [15,30,45,10]
  labels = ['Frogs', 'Hogs', 'Dogs', 'Logs']
  colors = ['yellowgreen', 'gold', 'lightskyblue', 'lightcoral']
  explode = [0, 0.1, 0, 0]
  p = plt.pie(sizes, explode=explode, labels=labels, colors=colors, $
    autopct='%1.1f%%', shadow=1, startangle=90)
  void = plt.axis('equal')
  void = plt.show(block=1)  ; block=0 used by Chris
=======================================
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
}
=======================================
```

Hope this helps, if you have any additional questions, please send me an email.

Yuxi

Subject: Re: New free DLL for calling Python from IDL!
Posted by David Fanning on Tue, 15 Apr 2014 20:29:21 GMT
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yuxipang@gmail.com writes:

> I can run the codes (see below) provided by Chris Torrence on my OS64 Win7 laptop. I put the Slither.DLL and Slither.DLM in a separate directory on the IDL path, and added the following lines in the startup.pro file (based on suggestions from Ronn Kline's ebook).
>
> PREF_SET, 'IDL_DLM_PATH', 'C:\WorkSpace\IDL\Slither\python33; <IDL_DEFAULT>', /COMMIT
>
> When I put slither DLL/DLM files in the directory of C:\Program Files\Exelis\IDL83\bin\bin.x86_64\, it did not work for me.

This makes some sense to me, because Windows 7 doesn't like it when you try to write into someone else's directory like this. It *appears* to allow it, but even if you are an administrator of your machine, it doesn't really work. I think it is a file permission thing. I don't know the details.

For example, if I find a bug in an IDL library program and fix it, I can "save" it back into the IDL lib directory. All appears normal. But, I can't actually "run" the new version of the program, because it wasn't *really* saved there. I have to save it in a directory I own and use it from there.

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: New free DLL for calling Python from IDL!
Posted by chris_torrence@NOSPAM on Thu, 17 Apr 2014 16:53:37 GMT
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Hi Helder,

If I recall, I had some problems with the stock python. I then tried Anaconda and the Slither dlm worked fine first time. I'm on a Mac.

Note: I just dropped the Slither dlm/dll/so straight into IDL's 64-bit bin directory, so I didn't have to worry about changing dlm_path. It would probably work fine outside of the bin directory, but I just wanted to get it working first.

Cheers,
Chris

Subject: Re: New free DLL for calling Python from IDL!
Posted by Jason Ferrara on Mon, 28 Apr 2014 19:06:22 GMT
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Paths shouldn't matter. The standard Python windows installers drop a dll into \Windows\system32. The name of the dll includes the Python version, so that installs of different Python versions can coexist. When Slither loads it loads appropriate dll from \Windows\system32,

and then the dll knows how to find the rest of the Python install.

Make sure that if you start Python from the command line you can do "import numpy" without it crashing. If there is something wrong with your numpy install Slither won't load correctly.

On Tuesday, April 15, 2014 7:06:13 PM UTC-4, Helder wrote:
>
>
> Hi,
>
> well, first thanks to all Dick, Yuxi and David.
>
> Unfortunately, it's still not working. Here is the summary of what I have tried.
>
>
>
> I installed python 2.7 and 3.3 (WinPython). I made sure I had the right path for the right test. Meaning if I started python from the command line I would either get version 2.7 or 3.3 depending on how I modified the windows path.
>
>
>
> I made new directories where I put the Slither dll and dlm files (for versions 2.7 and 3.3 in separate dirs!).
>
>
>
> Removed the old Slither dll and dlm files.
>
>
>
> Tried pyimport and without setting the path and it did not work as expected.
>
> I set the path in IDL and windows to python 2.7 and Slither and tried pyimport -> sudden crash. No info, no warning.
>
>
>
> Same happens for python 3.3.
>
>
>
> If I remove the windows path, so that I cannot start python from the command line without going in the specific directory, I still get a total crash. So apparently it isn't even getting to start python or communicate with it.
>
>
>

> Although it's pretty late (1 am), I'm quite sure I didn't screw up the paths in windows and idl. I double checked this in windows from the command line and in idl I made restarted.
>
>
>
> I'll think about this tomorrow, but I don't see how Anaconda could be better/different.
>
>
>
> Thanks again for your help.
>
>
>
> 'night,
>
> Helder

Subject: Re: New free DLL for calling Python from IDL!
Posted by Matt[3] on Thu, 31 Jul 2014 10:51:04 GMT
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Hi All,

This sounds like a great project! However, I seem to be running into trouble straight away... Apologies if I'm doing something stupid here:

I have Anaconda 2.0.1 installed on a 64bit Linux machine, using Python 2.7.8, numpy 1.8.1 and IDL 8.3. I've copied the 64 bit Linux Slither.so and Slither.dlm files into my bin.linux.x86_64 folder (which is what shows up when I do PRINT, EXPAND_PATH('<IDL_DEFAULT_DLM>')). However, when I try to run the first example in the documentation, I get:

IDL> random=pyimport("random")
ImportError: No module named numpy
% Dynamically loadable module failed to load: SLITHER.
% Execution halted at: $MAIN$

To check that IDL sees the same version of Python as the system does:
IDL> spawn, 'python -c "import platform; print platform.python_version()"'
2.7.8

And just to check that numpy can be imported:
IDL> spawn, 'python -c "import numpy; print numpy.zeros(2)"
[0. 0.]

Am I missing something obvious here?

Thanks in advance,

Matt

Subject: Re: New free DLL for calling Python from IDL!
Posted by Fabzi on Thu, 31 Jul 2014 11:00:18 GMT
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Hi,

On 31.07.2014 12:51, Matt wrote:
> IDL> spawn, 'python -c "import platform; print platform.python_version()"'
> 2.7.8

Jus to be sure, what happens when you do:

IDL> py = pyimport('__main__')
IDL> py->exec, 'print(sys.version)'
IDL> py->exec, 'import numpy'

?

Subject: Re: New free DLL for calling Python from IDL!
Posted by Fabzi on Thu, 31 Jul 2014 11:01:35 GMT
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oops, I meant:

IDL> py = pyimport('__main__')
IDL> py->exec, 'import sys'
IDL> py->exec, 'print(sys.version)'
IDL> py->exec, 'import numpy'

On 31.07.2014 13:00, Fabien wrote:
> IDL> py = pyimport('__main__')
> IDL> py->exec, 'print(sys.version)'
> IDL> py->exec, 'import numpy'

Subject: Re: New free DLL for calling Python from IDL!
Posted by Matt[3] on Thu, 31 Jul 2014 11:03:58 GMT
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Thanks, Fabien. The same thing happens:

IDL> py = pyimport('__main__')

ImportError: No module named numpy
% Dynamically loadable module failed to load: SLITHER.
% Execution halted at: $MAIN$

On Thursday, 31 July 2014 12:01:35 UTC+1, Fabien wrote:
> oops, I meant:
>
>
>
> IDL> py = pyimport('__main__')
>
> IDL> py->exec, 'import sys'
>
> IDL> py->exec, 'print(sys.version)'
>
> IDL> py->exec, 'import numpy'
>
>
>
> On 31.07.2014 13:00, Fabien wrote:
>
>> IDL> py = pyimport('__main__')
>
>> IDL> py->exec, 'print(sys.version)'
>
>> IDL> py->exec, 'import numpy'

Subject: Re: New free DLL for calling Python from IDL!
Posted by Fabzi on Thu, 31 Jul 2014 11:10:39 GMT
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On 31.07.2014 13:03, Matt wrote:
> IDL> py = pyimport('__main__')
> ImportError: No module named numpy

well this is strange because you're just importing python... Does anaconda have a startup file for python, importing things like numpy, iPython, etc automatically? That doesn't really explain why it doesn't work, but would be a starting point maybe...

Subject: Re: New free DLL for calling Python from IDL!
Posted by Matt[3] on Fri, 01 Aug 2014 13:33:08 GMT
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I've just tried setting this up on a newer system, which has the same basic setup, but potentially "cleaner" installs of IDL and Anaconda. I now get a different message:

IDL> random=pyimport("random")
% PYIMPORT: Error loading sharable executable.
Symbol: IDL_Load, File = /usr/local/exelis/idl83/bin/bin.linux.x86_64/Slither.so
libpython2.7.so.1.0: cannot open shared object file: No such file or directory
% Execution halted at: $MAIN$

Again, when I call Python using Spawn, I get sensible-looking outputs.

Could this perhaps be because there are effectively two Python builds on my machine? One is the system Python (2.6.6), and the other Anaconda, which I've installed in the /opt directory. IDL seems to see the right one when I use Spawn (2.7.8), but perhaps Slither sees the other?

Cheers,

Matt

On Thursday, 31 July 2014 12:10:39 UTC+1, Fabien wrote:
> On 31.07.2014 13:03, Matt wrote:
>
>> IDL> py = pyimport('__main__')
>
>> ImportError: No module named numpy
>
>
>
> well this is strange because you're just importing python... Does
>
> anaconda have a startup file for python, importing things like numpy,
>
> iPython, etc automatically? That doesn't really explain why it doesn't
>
> work, but would be a starting point maybe...

Subject: Re: New free DLL for calling Python from IDL!
Posted by Jason Ferrara on Mon, 18 Aug 2014 22:21:56 GMT
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On Thursday, July 31, 2014 7:10:39 AM UTC-4, Fabien wrote:
> On 31.07.2014 13:03, Matt wrote:
>
>> IDL> py = pyimport('__main__')
>
>> ImportError: No module named numpy

>
>
>
> well this is strange because you're just importing python... Does
>
> anaconda have a startup file for python, importing things like numpy,
>
> iPython, etc automatically? That doesn't really explain why it doesn't
>
> work, but would be a starting point maybe...

Slither requires numpy. It's used for making IDL array visible to python. Slither attempts to import numpy after loading the python dll/so. So if you try to use Slither with a Python install that doesn't have numpy you'll get the error above.
