
Subject: IDL 5.3 serious problem: save files sneakily restored

Posted by [kashyap](#) on Thu, 24 Aug 2000 07:00:00 GMT

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IDL 5.3 appears to have a major hull breach.

If there is an idl save file named "<whatever>.sav" in the current directory,
the contents of that file get restored whenever <whatever> is referenced as
a function within IDL.

<whatever> does not have to be a string.
It must have the ".sav" extension, and must be a valid IDL save file.

This is very dangerous, because there is no telling when local variables
will suddenly get overwritten.

I checked the online help documentation and didn't see anything about
this immediately. Even if it is a documented feature, it's a mistake.

This was discovered because we have a function called fitlines.pro
which wasn't being run because there was a goddammed savefile called
fitlines.sav in the current directory.

The log of a demonstration is appended below.

Comments?

Vinay

suppose, in the current directory, there are some IDL savefiles:

(which were made say, as follows:

idl

```
IDL> x=findgen(100)
```

```
IDL> save,file='whatever.sav'
```

```
IDL> y=x^2
```

```
IDL> save,file='kursk.sav'
```

```
IDL> exit
```

```
)
```

Then, when you start IDL and say

idl

```
IDL> print,!version
```

```
{ sparc sunos unix 5.3 Nov 11 1999}
```

```
IDL> help
```

```
% At $MAIN$
```

Compiled Procedures:

\$MAIN\$

Compiled Functions:

IDL> help,whatever()

% Restored file: WHATEVER.

% Attempt to call undefined procedure/function: 'WHATEVER'.

% Execution halted at: \$MAIN\$

IDL> help

% At \$MAIN\$

X FLOAT = Array[100]

Compiled Procedures:

\$MAIN\$

Compiled Functions:

IDL> tmp=kursk()

% Restored file: KURSK.

% Attempt to call undefined procedure/function: 'KURSK'.

% Execution halted at: \$MAIN\$

IDL> help

% At \$MAIN\$

TMP UNDEFINED = <Undefined>

X FLOAT = Array[100]

Y FLOAT = Array[100]

Compiled Procedures:

\$MAIN\$

Compiled Functions:

IDL>

--

kashyap@head-cfa.harvard.edu

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Subject: Re: IDL 5.3 serious problem: save files sneakily restored

Posted by [Paul van Delst](#) on Fri, 25 Aug 2000 07:00:00 GMT

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"Vinay L. Kashyap" wrote:

>

> In article <MPG.140f7e12fd8ffd61989bf0@news.frii.com>,

> David Fanning <davidf@dfanning.com> wrote:

>
>> It's not an unknown problem in IDL, but a relatively
>> rare one, given the huge number of functions and variables
>> people create.
>
> That's what makes this feature dangerous. There's such a
> tremendous number of functions floating around that it's
> practically impossible not to have *some* .sav files around
> that inadvertently match a function name.

I never use .sav files for code since they're not portable across IDL versions. Besides, recompilation of .pro files doesn't take *that* much extra time (at least not for my penny ante code :o).

This seems like one of those times when a slight change in one's "perception anchor" of how things *should* work will allow one to embrace how things actually *do* work.

paulv

--

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Subject: Re: IDL 5.3 serious problem: save files sneakily restored
Posted by [Mark Hadfield](#) on Sat, 26 Aug 2000 01:36:08 GMT
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"Martin Schultz" <martin.schultz@dkrz.de> wrote in message
news:39A639C7.3D01A75C@dkrz.de...

> When a file is specified by typing only the filename at the IDL
> prompt, IDL searches the current directory for filename.pro
> (where filename is the file specified) and then for filename.sav.
> If no file is found in the current directory, IDL searches in the
> same way in each directory specified by !PATH. If a file is
> found, IDL automatically compiles the contents and executes any
> functions or procedures that have the same name as the file
> specified (excluding the suffix).
>
> So, at least theoretically, pro should get executed before sav.
> And this makes all the sense in the world, because otherwise it
> would be hard for authors of compiled files to develop them -
> they would have to delete the sav file each time they modify the
> pro file and want to test changes.

In Python (which is many ways similar to IDL) the corresponding extensions are .py (source code) and .pyc (compiled). When a .py file is compiled, a .pyc file is created in the same directory. Thereafter Python loads the .pyc unless the .py has a more recent modification date. This is one of those ideas that is so clever it seems obvious once someone else has thought of it. Why can't IDL do that?

Mark Hadfield
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Subject: Re: IDL 5.3 serious problem: save files sneakily restored
Posted by [davidf](#) on Mon, 28 Aug 2000 07:00:00 GMT
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Pavel Romashkin (promashkin@cmdl.noaa.gov) writes:

> Well, for foreigner me articles unnecessary seem often times. Besides,
> matter does it or not whether placing adjectives nouns after or verbs
> before? And not it is problem indeed a.

Pavel, I was concerned about your recent absence on the newsgroup, but I see you were just off attending language school. Wonderful! I missed you a lot. :-)

Cheers,

David

P.S. Speaking of language schools, my oldest is attending one in Germany, prior to heading off to his host family. I hear through the grapevine (he is far too busy to contact us directly) that he has learned the German word for "beer". Great. :-)

--

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: IDL 5.3 serious problem: save files sneakily restored

Posted by [promashkin](#) on Mon, 28 Aug 2000 07:00:00 GMT

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David Fanning wrote:

>

> David Fanning (davidf@dfanning.com) writes:

>

>> And it is not problem *testing* changed routines.

>

> Whoops. Sorry. I've been reading too many of Pavel's posts

> lately. :-(

Well, for foreigner me articles unnecessary seem often times. Besides, matter does it or not whether placing adjectives nouns after or verbs before? And not it is problem indeed a.

Sorry,
Pavel

P.S. I just thought if I try to write in Russian I'd be of even less help than now :-(

Subject: Re: IDL 5.3 serious problem: save files sneakily restored

Posted by [Mark Hadfield](#) on Mon, 28 Aug 2000 23:48:11 GMT

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> P.S. I just thought if I try to write in Russian I'd be of even less

> help than now :-(

But more help than I would be if I tried to write in Russian!

As a more-or-less monolingusitic Kiwi I am continually impressed by the fluency most Europeans have in several languages.

Mark Hadfield

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Subject: Re: IDL 5.3 serious problem: save files sneakily restored

Posted by [Theo Brauers](#) on Thu, 21 Sep 2000 07:00:00 GMT

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Mark Hadfield wrote:

>

> In Python (which is many ways similar to IDL) the corresponding extensions

> are .py (source code) and .pyc (compiled). When a .py file is compiled, a
> .pyc file is created in the same directory. Thereafter Python loads the .pyc
> unless the .py has a more recent modification date. This is one of those
> ideas that is so clever it seems obvious once someone else has thought of
> it. Why can't IDL do that?
>

Because RSI wants you to write more IDL code ;-) ! We had a similar problem with
reading large ASCII data files: you read the once (file1.dat) and save the data
using SAVE (file1.dat.sav). When we re-read the file we check the modification
date of both files and read the newer one. It works fine now but it was written
partly in C to get the modification date of each file also in windows. Anyway,
I read that IDL5.4 will have a full function FSTAT with it.

Theo

--

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