
Subject: Re: idl - Mysql interface

Posted by [Rick Towler](#) on Mon, 20 Nov 2006 17:52:13 GMT

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There has been quite a few posts regarding IDL<->db connectivity.
Search the group.

Of course there is Dataminer. There is supposedly a package called Datajiver that was recently released by a group from CNRS that provides this interface too. An individual posted to the group regarding it, but hasn't responded to my email queries. A google search digs up a powerpoint presentation but that's it. A search of the CNRS website turns up empty.

One other option if you are on windows *may* be using the ADODB COM object. ITT and I seem to have differing opinions on this but I feel that IDL's COM interface is a bit broken and incomplete. But, if you can live with executing queries that return sets of data of a single type (say all float or all char) this may be a winning solution. I have taken this as far as I can with Oracle but I believe the Oracle driver returns arrays of arrays as type VT_VARIANT (a vector of vectors) and IDLcomIDispatch can't handle this, returning only the first element. I'm guessing, but the ODBC driver returns a 2d array of VT_VARIANT where IDL determines the type from the first element of the array. This is why mixed type queries don't work. I have a good bit of code that you can use to experiment with this if needed. It would be pretty trivial to wrap all of this up into an object and performance is actually quite good (Based on my limited experience with this in IDL and a lot of experience with my ADODB implementation in MATLAB.) I'm just waiting for IDLcomIDispatch to be completed before I do the work myself.

But like I said, search the group.

-Rick

Brian Larsen wrote:

> Hello, anyone have any experience interfacing IDL to a local mysql
> server? The idl help seems nearly incoherent when it comes to this.
>
> The situation is that I have a large (~15M records) database that I
> would like to play with the data in idl and using the power of the
> database I can do an appropriate select of the data before I read it
> into idl. I would have to imagine this is possible and am looking for
> any examples folks may have. I know how to do it with the idl-java
> bridge and idl-c interface but being able to avoid that would be a huge
> advantage (in programmer time).
>

> Cheers and thanks,
>
> Brian
>
>
> --
>
>
> -----
> Brian A. Larsen |
>
> | When you are in it up
>
> | to your ears,
> Dept. of Physics | keep
> your mouth shut.
> Space Science and Engineering Lab (SSEL)|
> Montana State University - Bozeman |
> Bozeman, MT 59717 |
>

> HOMEPAGE: <http://solar.physics.montana.edu/larsen>
> Maia: <http://www.ssel.montana.edu/maia>
> MEROPE: <http://www.ssel.montana.edu/merope>
>
> "I'm one of the most durable and fervent advocates of space
> exploration,
> but my take is that we could do it robotically at far less cost and far
>
> greater quantity and quality of results," - Dr. James Van Allen
>

Subject: Re: idl - Mysql interface
Posted by [henrygrove](#) on Mon, 20 Nov 2006 19:55:10 GMT
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I don't have idl-Mysql experience (yet), but if you want some specific examples you might also look at Marc Buie's codes (see link below). I know he does idl-mysql all the time.

<http://www.lowell.edu/~buie/idl/idl.html#categ8>

cheers,
-henry

Subject: Re: idl - Mysql interface

Posted by [Marshall Perrin](#) on Tue, 21 Nov 2006 02:08:43 GMT

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henrygroer@gmail.com <henrygroer@gmail.com> wrote:

>

> I don't have idl-Mysql experience (yet), but if you want some specific
> examples you might also look at Marc Buie's codes (see link below). I
> know he does idl-mysql all the time.

>

> <http://www.lowell.edu/~buie/idl/idl.html#categ8>

Let me second this recommendation. I make extensive use of these routines and they're quite good. It's very easy to get data into or out of mysql.

The only hiccup is that if you try a malformed SQL query or otherwise confuse mysql, the IDL/MySQL link becomes unresponsive. For personal use it's easy enough just to reset and open up a new session, but you might want to be careful about using this code in a production environment - or at least, be sure to check all your SQL carefully!

- Marshall

Subject: Re: idl - Mysql interface

Posted by [Wox](#) on Tue, 21 Nov 2006 10:12:26 GMT

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On 20 Nov 2006 08:59:41 -0800, "Brian Larsen" <balarsen@gmail.com> wrote:

> The situation is that I have a large (~15M records) database that I
> would like to play with the data in idl and using the power of the
> database I can do an appropriate select of the data before I read it
> into idl.

The dataminer was already mentioned. I don't know much about databases, but I'd guess you can use the "WHERE"?

Some code to play around with is displayed below. Check IDLdbDatabase methods for setting and getting data. (Maybe you know much more about this? If not, this might get you started.)

You could also use Marc Buie's code, as mentioned, to save you some work :-).

I don't know whether this is what you were asking for...

pro test

```
objDB = OBJ_NEW('IDLdbDatabase')
```

```
;On Windows:
```

```
ODBCstr="DRIVER={MySQL ODBC 3.51  
Driver};SERVER=servername;DATABASE=databasename;  
USER=username;PASSWORD=*****;OPTION=3;"  
objDB->Connect,connection=ODBCstr
```

```
; On Linux I couldn't get this to work, so I did this:
```

```
; Add this to .odbc.ini:
```

```
;  
;  
;[ODBC Data Sources]  
;...  
;MyODBC=MySQL ODBC 3.51 Driver  
;  
;.  
;.  
;.  
;.  
;.  
;[MyODBC]  
;Driver   = /usr/lib/libmyodbc3.so  
;Description = MySQL ODBC 3.51 Driver  
;SERVER    = servername  
;USER      = username  
;Password  = *****  
;Database  = databasename
```

```
; Uncomment for linux (comment previous lines)
```

```
;ODBCstr="MyODBC"
```

```
;objDB->Connect,datasource=mysqlinfo
```

```
if OBJ_VALID(objDB) then begin
```

```
table='tablename'
```

```
; Do your database stuff (check IDL's help on IDLdbDatabase)
```

```
; Some examples:
```

```
author='Brian A. Larsen'
```

```
a=3
```

```
v=3
```

```
objDB->ExecuteSQL, $
```

```
"UPDATE "+table+" SET a = "+string(a)+" WHERE v=
```

```
"+string(v)
```

```
objDB->ExecuteSQL, $  
"DELETE FROM "+table+" WHERE v1= "+string(v)
```

```
objDB->ExecuteSQL, $  
  "INSERT INTO "+table+"(author,v,datetime) VALUES  
('"+author+"',"+string(v)+",CURRENT_TIMESTAMP)"  
endif
```

```
obj_destroy,objDB
```

```
end
```

Subject: Re: idl - Mysql interface
Posted by [Wox](#) on Tue, 21 Nov 2006 10:20:27 GMT
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On Tue, 21 Nov 2006 11:12:26 +0100, Wox <nomail@hotmail.com> wrote:

```
> author='Brian A. Larsen'  
> a=3  
> v=3  
> objDB->ExecuteSQL, $  
> "UPDATE "+table+" SET a = "+string(a)+" WHERE v=  
> "+string(v)  
>  
> objDB->ExecuteSQL, $  
> "DELETE FROM "+table+" WHERE v1= "+string(v)  
>  
> objDB->ExecuteSQL, $  
>  "INSERT INTO "+table+"(author,v,datetime) VALUES  
> ('"+author+"',"+string(v)+",CURRENT_TIMESTAMP)"
```

Probably better to use IDLdbRecordset in the first two cases :-).
Anyway, this is just an illustration.

Subject: Re: idl - Mysql interface
Posted by [Brian Larsen](#) on Thu, 30 Nov 2006 00:29:45 GMT
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Good Stuff, I will look into Marc Buie's library, also searching the forum (which I should have done a better job of first) yielded maybe the easiest solution which I have made work which is simply using spawn (which is certainly far from elegant but does work)

As an example that wrote using help from earlier posts:

make a file called 'script.sql' -- can of course be any name
that has the query you want to perform

use simfile; select count(*) from header;

you can pre create these which is not too useful or your idl program
could create them.

then run this idl:

```
idl> ans=""  
idl> spawn, 'mysql --password="password" < script.sql', ans  
idl> PRINT, ans  
count(*) 1004  
idl> help, ans  
ANS          STRING    = Array[2]
```

Which gets the job done.

- Brian

Brian A. Larsen
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