

Re: MsSQL DBD::ODBC IsNull and undef

Source: <http://coding.derkeiler.com/Archive/Perl/perl.dbi.users/2005-07/msg00210.html>

- *From:* martin.evans@xxxxxxxxxxxxx (Martin J. Evans)
 - *Date:* Tue, 26 Jul 2005 13:31:44 +0100 (BST)
-

Brian,

Sorry about that. I should have run through the tests.

In:

```
rgbValue = NULL;  
phs->cbValue = SQL_NULL_DATA;  
+ cbColDef = phs->cbColDef;
```

the last line needs to be:

```
if (phs->cbColDef) cbColDef = phs->cbColDef;
```

This should not now make it any worse than before and should make your case work BUT it is a very quick hack. I'll try and find time to put a better patch together for Jeff.

Martin

—

Martin J. Evans
Easysoft Ltd, UK
Development

On 26-Jul-2005 Brian Becker wrote:

```
> Was this supposed to happen? A large # of tests now fail...  
>  
> t/07bind.....ok 1/11Can't rebind placeholder 3 at t/ODBCTEST.pm line  
> 228.  
># Looks like you planned 11 tests but only ran 2.  
># Looks like your test died just after 2.  
> t/07bind.....dubious  
> Test returned status 255 (wstat 65280, 0xff00)  
> DIED. FAILED tests 3-11  
> Failed 9/11 tests, 18.18% okay  
> t/08bind2.....ok 1/5# These are tests which rely upon the driver to  
> tell what the parameter type is for the column. This means you need to  
> ensure you tell your driver the type of the column in bind_col().  
> t/08bind2.....NOK 3  
># Failed test (t/08bind2.t at line 73)
```

Re: MsSQL DBD::ODBC IsNull and undef

> t/08bind2.....NOK 4
># Failed test (t/08bind2.t at line 77)
> t/08bind2.....ok 5/5# Looks like you failed 2 tests of 5.
> t/08bind2.....dubious
> Test returned status 2 (wstat 512, 0x200)
> DIED. FAILED tests 3-4
> Failed 2/5 tests, 60.00% okay
> t/09multi.....ok
> t/20SqlServer....ok 1/37Can't rebind placeholder 2 at t/20SqlServer.t
> line 108.
># Looks like you planned 37 tests but only ran 2.
># Looks like your test died just after 2.
> t/20SqlServer....dubious
> Test returned status 255 (wstat 65280, 0xff00)
> DIED. FAILED tests 3-37
> Failed 35/37 tests, 5.41% okay
>
> -----Original Message-----
> From: Martin J. Evans [<mailto:martin.evans@xxxxxxxxxxxxx>]
> Sent: Tuesday, July 26, 2005 6:50 AM
> To: Brian Becker
> Cc: dbi-users@xxxxxxxxxx
> Subject: RE: [dbi] Re: MsSQL DBD::ODBC IsNull and undef
>
> Brian,
>
> OK, I've found this now. It is rather more complicated than it looks.
>
> I did this in odbctest (directly to MS SQL Server driver):
>
> create table mjenull(a varchar(20))
> insert into table values ('AAA')
> select * from table where a = isnull(NULL, 'AAA')
>
> correctly returns 1 row.
>
> now:
> SQLPrepare(select * from table where a = isnull(?, 'AAA')
> SQLBindParameter(stmt, 1, SQ_C_CHAR, SQL_VARCHAR, 1, 0, NULL, 0, ptr)
> NOTE the 1 for ColumnSize
> *ptr = SQL_NULL_DATA
> SQLExecute
>
> no rows returned.
>
> repeat with ColumnSize = 20
> SQLBindParameter(stmt, 1, SQ_C_CHAR, SQL_VARCHAR, 20, 0, NULL, 0, ptr)
> *ptr = SQL_NULL_DATA
> SQLExecute
>
> 1 row correctly returned.

Re: MsSQL DBD::ODBC IsNull and undef

```
>
> now insert:
> insert into table values ('A')
>
> repeat with ColumnSize = 1 (as DBD::ODBC does):
> SQLPrepare(select * from table where a = isnull(?, 'AAA'))
> SQLBindParameter(stmt, 1, SQ_C_CHAR, SQL_VARCHAR, 1, 0, NULL, 0, ptr)
> NOTE the 1 for ColumnSize
> *ptr = SQL_NULL_DATA
> SQLExecute
>
> 1 row returned and it is the row containing 'A'
>
> I'd guess this is because the SQL Server ODBC driver is looking at your
> SQLBindParameter call to determine the type and size (1) and hence is
> saying
> isnull is going to return 1 character -> 'A' in this case, even though
> we said
> 'AAA'.
>
> The solution is to make sure the ColumnSize is what SQLDescribeParam
> returns.
> The diff to DBD::ODBC 1.13 below is a total hack to make this work - it
> is not
> complete because it doesn't handle drivers that don't have
> SQLDescribeParam
> (and it is a hack). I'm afraid I don't have time right now to do this
> properly.
>
> ---- dbdimp.h Mon Oct 11 20:20:55 2004
> +++ dbdimp.h.mine Tue Jul 26 10:57:05 2005
> @@ -139,6 +139,7 @@
> SWORD tgt_sql_type; /* the PH SQL type the
> stmt
> expects */
> SDWORD tgt_len; /* size or precision the stmt
> expects */
> SDWORD cbValue; /* length of returned value OR
> SQL_NULL_DATA */
> + UDWORD cbColDef; /* ColumnSize returned from
> SQLDescribeParam */
> SDWORD *indics; /* ptr to indicator array for
> param
> arrays */
> int is_array; /* TRUE => parameter array */
>
>
> ---- dbdimp.c Fri Nov 5 03:19:36 2004
> +++ dbdimp.c.mine Tue Jul 26 11:25:41 2005
> @@ -2532,6 +2532,7 @@
> /* fall through */
```

Re: MsSQL DBD::ODBC IsNull and undef

```
> /* return 0; */
> } else {
> + phs->cbColDef = dp_cbColDef;
> if (ODBC_TRACE_LEVEL(imp_sth) >=5)
> PerlIO_printf(DBIc_LOGPIO(imp_dbh),
> " SQLDescribeParam %s: SqlType=%s,
> ColDef=%d\n",
> @@ -2747,7 +2748,7 @@
> }
> cbColDef = phs->biggestparam;
> }
> -
> +
> if (!SvOK(phs->sv)) {
> /* if is_inout, shouldn't we null terminate the buffer and send
> * it, instead?? */
> @@ -2766,6 +2767,7 @@
> } else {
> rgbValue = NULL;
> phs->cbValue = SQL_NULL_DATA;
> + cbColDef = phs->cbColDef;
> }
> }
> else {
>
> Martin
> --
> Martin J. Evans
> Easysoft Ltd, UK
> Development
>
>
>
> On 26-Jul-2005 Martin J. Evans wrote:
>> Brian,
>>
>> Looks like the NULL is getting to the SQL Server
>> ODBC driver to me - see below.
>>
>> Brian Becker wrote:
>>> Yes I am referring to the ODBC-ODBC Bridge.
>>>
>>> Here is the esoobclient.log
>>>
>> <sniiped>
>>
>>> SQLBindParameter(2bfd88,1,1(Input:),1,12,1,0,0,0,2c17e8)
>>> ^oobc_expand_desc_recs(2bfe98,1)
>>> Expanding 0, n_descrec=0, expanding to 2
>>> ^-oobc_expand_desc_recs()=2c18a4
>>> ^oobc_expand_desc_recs(2bffd8,1)
```

Re: MsSQL DBD::ODBC IsNull and undef

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```
>>> Expanding 0, n_descrec=0, expanding to 2
>>> ^-oobc_expand_desc_recs()=2c19e4
>>> Passthru:1
>>> -SQLBindParameter(...)=0
>> parameter bound as a SQL_C_CHAR
>>
>>> SQLExecute(2bfd88)
>>> ^put_bound_parameters(2bfd88,27a4f0,1)
>>> Driver supports SQLNumParams : 1
>>> SQLNumParams returns 1 parameters
>>> Processing parameter 1 of 1(1)
>>> Initial DataPtr=0, OctetLengthPtr=2c17e8(-1),
>>> IndicatorPtr=2c17e8(-1)
>>> No DataPtr - looking at indicator
>>> Indicator = -1
>>> ^put_bound_parameters()=0
>> and the indicator says it is a NULL.
>>
>> <snipped>
>>
>>> SQLFetch(2bfd88)
>>> ^fetch_bound_columns(2bfd88,27a4f0)
>>> ^fetch_column_descriptions(27a4f0,2bfd88,ffbf086)
>>> ^fetch_column_descriptions()=SQL_SUCCESS (highest result set
>>> column = 14)
>> <snipped>
>>
>> and SQLFetch returns rows.
>>
>>
>>> SQLPrepare(2c6558,2c9210,69)
>>> SQLPrepare:
>>>
>>> select * from ORders where CustomerID = isnull(?,'VINET')
>>>
>>>
>>> SQLBindParameter(2c6558,1,1(Input:),1,12,1,0,0,0,2c9290)
>>> ^oobc_expand_desc_recs(2c6668,1)
>>> Expanding 0, n_descrec=0, expanding to 2
>>> ^-oobc_expand_desc_recs()=2c934c
>>> ^oobc_expand_desc_recs(2c7ad0,1)
>>> Expanding 0, n_descrec=0, expanding to 2
>>> ^-oobc_expand_desc_recs()=2c948c
>>> Passthru:1
>>> -SQLBindParameter(...)=0
>> as before
>>
>>> SQLExecute(2c6558)
>>> ^put_bound_parameters(2c6558,27a4f0,1)
>>> SQLNumParams returns 1 parameters
```

Re: MsSQL DBD::ODBC IsNull and undef

```
>>> Processing parameter 1 of 1(1)
>>> Initial DataPtr=0, OctetLengthPtr=2c9290(-1),
>>> IndicatorPtr=2c9290(-1)
>>> No DataPtr - looking at indicator
>>> Indicator = -1
>>> -^put_bound_parameters()=0
>>> -SQLExecute(...)=0
>>
>> parameter is a NULL.
>>
>> <snipped>
>>
>>> SQLFetch(2c6558)
>>> -SQLFetch(...)=100
>> no rows returned.
>>
>> In both cases I'd say the NULL is getting to SQL Server.
>> If you get hold of odbctest which used to be in the ODBC SDK
>> you should be able to run this directly to the MS SQL Server
>> driver on Windows. If I can squeeze some time today I'll
>> try it here.
>>
>> Martin
>>
>>> -----Original Message-----
>>> From: Martin J. Evans [mailto:martin.evans@xxxxxxxxxxxxxx]
>>> Sent: Monday, July 25, 2005 12:59 PM
>>> To: dbi-users@xxxxxxxxxx
>>> Subject: RE: MsSQL DBD::ODBC IsNull and undef
>>>
>>> Brian,
>>>
>>> I presume by "Easysoft" you mean Easysoft ODBC-ODBC Bridge?
>>>
>>> If so, can you run your test script again but creating an OOB log
> file
>>> which
>>> you can do by:
>>>
>>> 1. cd /tmp
>>> 2. create odbc.ini file containing only:
>>>
>>> {Settings}
>>> Logging = 0xfffff
>>>
>>> NOTE, they are curly braces.
>>>
>>> 3. WITHOUT changing directory, run you Perl script
>>>
```

Re: MsSQL DBD::ODBC IsNull and undef

```
>>> perl /path_to_my_script/xxx.pl
>>>
>>> 4. send me the resulting esoobclient.log_<PID> which will appear in
> /tmp
>>> (where
>>> <PID> is the process ID).
>>>
>>> Martin
>>> --
>>> Martin J. Evans
>>> Easysoft Ltd, UK
>>> Development
>>>
>>>
>>> On 25-Jul-2005 Brian Becker wrote:
>>>
>>>>I am trying to bind an undef into an IsNull on a varchar field. When
>>>
>>>> I
>>>
>>>>write the query binding directly into the IsNull I get no records,
> yet
>>>>if I create a SQL variable, bind the undef to that, and then use the
>>>
>>>> SQL
>>>
>>>>variable – I get results. I have created a test script that
>>>
>>>> duplicates
>>>
>>>>the problem (sorry the test is not the best but it does illustrate
> the
>>>>problem). The test script is done off of the Northwind database for
>>>
>>>> SQL
>>>
>>>>Server 2000.
>>>>
>>>>Software:
>>>>Easysoft
>>>>unixODBC-2.2.11
>>>>perl, v5.8.6 built for sun4-solaris
>>>>DBD-ODBC-1.13
>>>>DBI-1.48
>>>>SQL Server 2000
>>>>
>>>>Test Script:
>>>>
>>>>#!perl -w -I./t
>>>>
>>>>use Test::More;
```

```

>>>>$| = 1;
>>>>
>>>>use_ok('DBI', qw(:sql_types));
>>>>use_ok('ODBCTEST');
>>>>
>>>># to help ActiveState's build process along by behaving (somewhat) if
> a
>>>>dsn is not provided
>>>>BEGIN {
>>>> if (!defined $ENV{DBI_DSN}) {
>>>> plan skip_all => "DBI_DSN is undefined";
>>>> } else {
>>>> plan tests =>4;
>>>> }
>>>>}
>>>>
>>>>
>>>>#DBI->trace(2);
>>>>my $dbh = DBI->connect();
>>>>unless($dbh) {
>>>># BAILOUT("Unable to connect to the database ($DBI::errstr)\nTests
>>>>skipped.\n");
>>>> exit 0;
>>>>}
>>>>
>>>>$dbh->{AutoCommit} = 1;
>>>>
>>>>#### testing a simple select
>>>>
>>>>my $rc = 0;
>>>>my $CustomerID;
>>>>my $sql="
>>>> Declare \@CustomerID varchar(20)
>>>> SET \@CustomerID=?
>>>> select * from ORders where CustomerID =
>>>>isnull(\@CustomerID,'VINET')
>>>> ";
>>>>my $sth = $dbh->prepare(qq{$sql});
>>>>$sth->bind_param(1,$CustomerID);
>>>>$sth->execute();
>>>>my $RowCount=0;
>>>>while(my $row = $sth->fetchrow_hashref())
>>>>{
>>>> $RowCount++;
>>>>}
>>>>is($RowCount,5, "This works");
>>>>
>>>>my $sql2="
>>>> select * from ORders where CustomerID = isnull(?,'VINET')
>>>> ";
>>>>my $sth2 = $dbh->prepare($sql2);

```

Re: MsSQL DBD::ODBC IsNull and undef

```
>>>>$sth2->bind_param(1,$CustomerID);
>>>>$sth2->execute();
>>>>$RowCount=0;
>>>>while(my $row = $sth2->fetchrow_hashref())
>>>>{
>>>> $RowCount++;
>>>>}
>>>>is($RowCount,5, "This Doesn't");
>>>># Test(1);
>>>># clean up
>>>>$sth->finish
>>>>exit(0);
>>>>
>>>>__END__
>>>>
>>>>COMMAND OUTPUT:
>>>>
>>>>#perl Makefile.PL
>>>>Useless use of private variable in void context at Makefile.PL line
>>>>
>>>>431.
>>>>
>>>>Configuring DBD::ODBC ...
>>>>
>>>>>>> Remember to actually *READ* the README file!
>>>>>>>
>>>>>>> And re-read it if you have any problems.
>>>>>>>
>>>>>>>Using DBI 1.48 (for perl 5.008006 on sun4-solaris) installed in
>>>>>>>/usr/perl5.8.6/lib/site_perl/5.8.6/sun4-solaris/auto/DBI/
>>>>>>>Using ODBC in /usr/local/easysoft/unixODBC
>>>>>>>
>>>>>>>Umm, this looks like a unixodbc type of driver manager.
>>>>>>>We expect to find the sql.h, sqlext.h and (which were
>>>>>>>supplied with unixODBC) in $ODBCHOME/include directory alongside
>>>>>>>the /usr/local/easysoft/unixODBC/lib/libodbc.so library. in
>>>>>>>$ODBCHOME/lib
>>>>>>>
>>>>>>>
>>>>>>>Checking if your kit is complete...
>>>>>>>Looks good
>>>>>>>Injecting selected odbc driver into cc command
>>>>>>>Injecting selected odbc driver into cc command
>>>>>>>Using DBI 1.48 (for perl 5.008006 on sun4-solaris) installed in
>>>>>>>/usr/perl5.8.6/lib/site_perl/5.8.6/sun4-solaris/auto/DBI/
>>>>>>>Writing Makefile for DBD::ODBC
>>>>>>>
>>>>>>>The DBD::ODBC tests will use these values for the database
> connection:
```

Re: MsSQL DBD::ODBC IsNull and undef

```
>>>> DBI_DSN=dbi:ODBC:dsn_Northwind e.g. dbi:ODBC:demo
>>>> DBI_USER=webuser
>>>> DBI_PASS=test
>>>>
>>>>#make
>>>>cp Changes blib/lib/DBD/ODBC/Changes.pm
>>>>cp ODBC.pm blib/lib/DBD/ODBC.pm
>>>>/usr/bin/perl -p -e "s/~DRIVER~/ODBC/g"
>>>>/usr/perl5.8.6/lib/site_perl/5.8.6/sun4-solaris/auto/DBI//Driver.xst
>>
>>>>ODBC.xsi
>>>>/usr/bin/perl /usr/perl5.8.6/lib/5.8.6/ExtUtils/xsubpp -typemap
>>>>/usr/perl5.8.6/lib/5.8.6/ExtUtils/typemap ODBC.xs > ODBC.xsc && mv
>>>>ODBC.xsc ODBC.c
>>>>Warning: duplicate function definition 'data_sources' detected in
>>>>ODBC.xs, line 202
>>>>gcc -c -I/usr/local/easysoft/unixODBC/include -I.
>>>>-I/usr/perl5.8.6/lib/site_perl/5.8.6/sun4-solaris/auto/DBI/
>>>>-fno-strict-aliasing -pipe -I/usr/local/include -D_LARGEFILE_SOURCE
>>>>-D_FILE_OFFSET_BITS=64 -O -DVERSION=\"1.13\"
> -DXS_VERSION=\"1.13\"
>>>>-fPIC "-I/usr/perl5.8.6/lib/5.8.6/sun4-solaris/CORE"
>>>>-I/usr/local/easysoft/unixODBC/include ODBC.c
>>>>gcc -c -I/usr/local/easysoft/unixODBC/include -I.
>>>>-I/usr/perl5.8.6/lib/site_perl/5.8.6/sun4-solaris/auto/DBI/
>>>>-fno-strict-aliasing -pipe -I/usr/local/include -D_LARGEFILE_SOURCE
>>>>-D_FILE_OFFSET_BITS=64 -O -DVERSION=\"1.13\"
> -DXS_VERSION=\"1.13\"
>>>>-fPIC "-I/usr/perl5.8.6/lib/5.8.6/sun4-solaris/CORE"
>>>>-I/usr/local/easysoft/unixODBC/include dbdimp.c
>>>>Running Mkbootstrap for DBD::ODBC ()
>>>>chmod 644 ODBC.bs
>>>>rm -f blib/arch/auto/DBD/ODBC/ODBC.so
>>>>LD_RUN_PATH="/usr/local/easysoft/unixODBC/lib" gcc -G
>>>
>>> -L/usr/local/lib
>>>
>>>>ODBC.o dbdimp.o -o blib/arch/auto/DBD/ODBC/ODBC.so
>>>>-L/usr/local/easysoft/unixODBC/lib -lodbc
>>>>chmod 755 blib/arch/auto/DBD/ODBC/ODBC.so
>>>>cp ODBC.bs blib/arch/auto/DBD/ODBC/ODBC.bs
>>>>chmod 644 blib/arch/auto/DBD/ODBC/ODBC.bs
>>>>Manifying blib/man3/DBD::ODBC.3
>>>>
>>>>Then of course make test fails on my test script above.
>>>>
>>>>Brian Becker
>>>>Jaeb Center for Health Research
>>>>15310 Amberly Drive
>>>>Suite 350
>>>>Tampa, FL 33647
```

>>>>tel: 813-975-8690
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>>>>email: bbecker@xxxxxxx
>>>><http://www.jaeb.org>
>>>>
>>>>

• **References:**

- ◆ **RE: [dbi] Re: MsSQL DBD::ODBC IsNull and undef**
 ◇ From: Brian Becker

- Prev by Date: **RE: [dbi] Re: MsSQL DBD::ODBC IsNull and undef**
- Next by Date: **Undefined value error**
- Previous by thread: **RE: [dbi] Re: MsSQL DBD::ODBC IsNull and undef**
- Next by thread: **Undefined value error**
- Index(es):
 - ◆ **Date**
 - ◆ **Thread**