
Subject: MySqlConnection Close and Reconnect crashes Application

Posted by [hoelblin](#) on Wed, 25 Nov 2020 16:17:33 GMT

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Hi,

I have an Application with a Connection to MySQL. When the Application is Idle for a long Period of Time the Connection is Closed with session.Close.

After that session.IsOpen returns false.

When I try to reconnect with session.Reconnect() the App Crashes with a Null Pointer dereference.

It seems like in Sql.Cancel cn->cancel is called while Member cn == NULL.

This behavior is on TheIDE Version 15512 on Windows with CLANG, on TheIDE 13664 with minGW this works as expected without crashing.

To reproduce the Crash i have taken the SQL_MySql reference Example and make some minor changes.

```
#include <MySQL/MySQL.h>

// debian: sudo apt-get install libmysqlclient-dev

using namespace Upp;

#define SCHEMADIALECT <MySQL/MySQLSchema.h>
#define MODEL <mysqlCrash/schema.sch>
#include <Sql/sch_header.h>
#include <Sql/sch_source.h>
#include <Sql/sch_schema.h>

CONSOLE_APP_MAIN
{
    MySqlConnection session;
    // edit the connection parameters if necessary
    if(session.Connect("test_user", "test", "test")) {
        Cout() << "Connected\n";
        SQL = session;

        SqlSchema sch(MY_SQL);
        All_Tables(sch);
        // create the table if necessary
        SqlPerformScript(sch.Upgrade());
        SqlPerformScript(sch.Attributes());
    }
}
```

```

SQL.ClearError();

try {
// insert some random data
SQL & Insert(TEST_TABLE)(VALUE, Uuid::Create().ToString());
// fetch some data
Sql sql;
sql * Select(ID, VALUE).From(TEST_TABLE)
        .OrderBy(Descending(ID))
        .Limit(5);
while(sql.Fetch())
    Cout() << AsString(sql[0]) << ": " << AsString(sql[VALUE]) << "\n";
}
catch(SqlExc &ex) {
    Cerr() << "ERROR: " << ex << "\n";
    SetExitCode(1);
}

session.Close();

Sleep(2000);

if(session.IsOpen()) {
    Cout() << "Connection closed FAILED!\n";
} else {
    Cout() << "Connection closed!\n";
}

Sleep(2000);

Cout() << "Try open Connection again\n";

if(session.Reconnect()) { // CRASH !!!!!!!!!!!
try {
    Sql sql;
    sql * Select(ID, VALUE).From(TEST_TABLE)
            .OrderBy(Descending(ID))
            .Limit(3);
while(sql.Fetch())
    Cout() << AsString(sql[0]) << ": " << AsString(sql[VALUE]) << "\n";
}
catch(SqlExc &ex) {
    Cerr() << "ERROR: " << ex << "\n";
    SetExitCode(1);
}
} else {
    Cout() << "ERROR: " << session.GetLastError() << "\n";
}

```

```
}  
}  
else {  
    Cerr() <<"ERROR: Unable to connect to database\n";  
    SetExitCode(1);  
}  
}
```

// Moderator: PLEASE USE CODE TAG FOR THE NEXT TIME!

My Question is what is the right way to do a Reconnect after Close ?

File Attachments

- 1) [mysqlCrash1.PNG](#), downloaded 598 times
 - 2) [mysqlCrash2.PNG](#), downloaded 572 times
-

Subject: Re: MySqlConnection Close and Reconnect crashes Application

Posted by [Alboni](#) on Thu, 03 Dec 2020 18:55:45 GMT

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If you closed the session yourself you need to do a normal Connect() I think, not a Reconnect.

Reconnect is for when the session lost the connection from a network error etc. When that happens MySqlConnection::WhenReconnect callback is activated.

The default behaviour is to call MySqlConnection::Reconnect(), but you can set it to your own function from which you can call MySqlConnection::Reconnect()

Subject: Re: MySqlConnection Close and Reconnect crashes Application

Posted by [mirek](#) on Fri, 11 Dec 2020 10:11:55 GMT

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Alboni wrote on Thu, 03 December 2020 19:55 If you closed the session yourself you need to do a normal Connect() I think, not a Reconnect.

Reconnect is for when the session lost the connection from a network error etc. When that happens MySqlConnection::WhenReconnect callback is activated.

The default behaviour is to call MySqlConnection::Reconnect(), but you can set it to your own function from which you can call MySqlConnection::Reconnect()

That is correct, this was the intention of Reconnect. That said, expecting that you can call Reconnect after Close makes sense too, so I have plugged all holes (well, there was actually just one, in Cancel) to make possible, with one catch: Close unsets global SQL session (and that is probably correct behaviour), so you need to assign it again after Reconnect ("SQL = session").

Mirek

Subject: Re: MySqlSession Close and Reconnect crashes Application
Posted by [hoelblin](#) on Sun, 17 Jan 2021 20:30:53 GMT
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Sorry for my late Reply and thanks for all Answers !

I had now time for testing so I have written a small GUI Testapplication where I can CONNECT, DISCONNECT, RECONNECT, SELECT to a Mysql Database.

When I
CONNECT
SELECT
.....
.....
DISCONNECT
RECONNECT
SELECT
....

all works well, but with
CONNECT
SELECT
.....
.....
DISCONNECT
CONNECT
SELECT -> crashes in String0.isLarge

It is OK for me to use Reconnect but as Alboni and Mirek wrote Connect should also work. So is still something wrong with my Connect Code ?

TheIDE 15596 from 2020-12-17 Windows with CLANG

Code of the Testapplication

```
mysqltest::mysqltest()  
{  
    CtrlLayout(*this, "Window title");
```

```
acResult.AddColumn("Text");
btConnect.WhenAction = THISBACK(mysqlConnect);
btReConnect.WhenAction = THISBACK(mysqlReconnect);
btDisconnect.WhenAction = THISBACK(mysqlDisconnect);
btSelect.WhenAction = THISBACK(mysqlSelect);
```

```
btConnect.Enable();
btReConnect.Disable();
btDisconnect.Disable();
btSelect.Disable();
```

```
}
```

```
void mysqltest::mysqlConnect()
```

```
{
if(session.Connect("user", "pw", "db", "localhost")) {
    SQL = session;
```

```
    btDisconnect.Enable();
    btSelect.Enable();
    btConnect.Disable();
```

```
    firstConnect = true;
} else {
    Exclamation(session.GetLastError());
}
}
```

```
void mysqltest::mysqlReconnect()
```

```
{
if(!session.IsOpen()) {
if(firstConnect) {
if(session.Reconnect()) {
    SQL = session;
```

```
    btReConnect.Disable();
    btConnect.Disable();
    btSelect.Enable();
    btDisconnect.Enable();
```

```
    Exclamation("Reconnect succesfull!");
} else {
    Exclamation(String() << "Reconnect failed with " << session.GetLastError());
}
} else {
    Exclamation("Use Connect first!");
```

```
    }
}
}
```

```

void mysqltest::mysqlDisconnect()
{
if(session.IsOpen()) {
    session.Close();

    acResult.Clear();

    if(!session.IsOpen()) {
        btConnect.Enable();
        btReConnect.Enable();
        btDisconnect.Disable();
        btSelect.Disable();

        Exclamation("Connection closed!");
    } else {
        Exclamation("Connection NOT closed!!!!!!");
    }
}
}

```

```

void mysqltest::mysqlSelect()
{
if(session.IsOpen()) {

    try {
        Sql sql;
        sql.Execute("select name from names");

        if(sql.WasError()) {
            Exclamation(sql.GetLastError());
        } else {
            while(sql.Fetch()) {
                acResult.Add(sql[0]);
            }
        }
    } catch(SqlExc &ex) {
        Exclamation(ex);
    }
    } else {
        Exclamation("Database not opened!");
    }
}
}

```

```

GUI_APP_MAIN
{
    mysqltest().Run();
}

```

}

The Backtrace from the Debugger

```
Upp::String0::IsLarge() at C:\upp\uppsrc\Core\String.h 214
Upp::String0::Free() at C:\upp\uppsrc\Core\String.h 256
Upp::String0::Assign(s=) at C:\upp\uppsrc\Core\String.h 273
Upp::String::operator=(s=) at C:\upp\uppsrc\Core\String.h 376
Upp::Sql::SetStatement(s=) at C:\upp\uppsrc\Sql\Sql.cpp 105
Upp::Sql::Execute(s=) at C:\upp\uppsrc\Sql\Sql.cpp 166
mysqltest::mysqlSelect() at C:\upp\MyApps\mysqltest\main.cpp 83
Upp::callback<mysqltest,mysqltest>::<unnamed-tag>::operator()() at
C:\upp\uppsrc\Core\CallbackNP.i 38
Upp::Function<void ()>::Wrapper<`lambda at C:\upp\uppsrc\Core\CallbackNP.i:38:17'>::Execute()
at C:\upp\uppsrc\Core\Function.h 17
Upp::Function<void ()>::operator()() at C:\upp\uppsrc\Core\Function.h 76
Upp::Ctrl::Action() at C:\upp\uppsrc\CtrlCore\Ctrl.cpp 474
Upp::Pusher::PerformAction() at C:\upp\uppsrc\CtrlLib\Button.cpp 17
Upp::Pusher::FinishPush() at C:\upp\uppsrc\CtrlLib\Button.cpp 101
Upp::Pusher::LeftUp() at C:\upp\uppsrc\CtrlLib\Button.cpp 58
Upp::Ctrl::MouseEvent(event=145, p=, zdelta=0, keyflags=0) at
C:\upp\uppsrc\CtrlCore\CtrlMouse.cpp 169
Upp::Ctrl::MouseEvent0(event=145, p=, zdelta=0, keyflags=0) at
C:\upp\uppsrc\CtrlCore\CtrlMouse.cpp 92
Upp::Ctrl::MouseEventH(event=145, p=, zdelta=0, keyflags=0) at
C:\upp\uppsrc\CtrlCore\CtrlMouse.cpp 110
Upp::Ctrl::MEvent0(e=145, p=, zd=0) at C:\upp\uppsrc\CtrlCore\CtrlMouse.cpp 337
Upp::Ctrl::DispatchMouseEvent(e=145, p=, zd=0) at C:\upp\uppsrc\CtrlCore\CtrlMouse.cpp 598
Upp::Ctrl::DispatchMouse(e=145, p=, zd=0) at C:\upp\uppsrc\CtrlCore\CtrlMouse.cpp 588
Upp::Ctrl::DoMouse(e=145, p=, zd=0) at C:\upp\uppsrc\CtrlCore\Win32Wnd.cpp 571
Upp::Ctrl::WindowProc(message=514, wParam=0, lParam=5046318) at
C:\upp\uppsrc\CtrlCore\Win32Proc.cpp 136
Upp::TopWindow::WindowProc(message=514, wParam=0, lParam=5046318) at
C:\upp\uppsrc\CtrlCore\TopWin32.cpp 70
Upp::Ctrl::WndProc(hWnd=302bc, message=514, wParam=0, lParam=5046318) at
C:\upp\uppsrc\CtrlCore\Win32Wnd.cpp 674
CallWindowProcW()
DispatchMessageW()
Upp::Ctrl::sProcessMSG(msg=) at C:\upp\uppsrc\CtrlCore\Win32Wnd.cpp 770
Upp::Ctrl::ProcessEvent(quit=171e47f) at C:\upp\uppsrc\CtrlCore\Win32Wnd.cpp 794
Upp::Ctrl::ProcessEvents(quit=171e47f) at C:\upp\uppsrc\CtrlCore\Win32Wnd.cpp 808
Upp::Ctrl::EventLoop(ctrl=171e5e8) at C:\upp\uppsrc\CtrlCore\Win32Wnd.cpp 840
Upp::TopWindow::Run(appmodal=0) at C:\upp\uppsrc\CtrlCore\TopWindow.cpp 324
GuiMainFn_() at C:\upp\MyApps\mysqltest\main.cpp 103
Upp::AppExecute__(app=1400022e0) at C:\upp\uppsrc\Core\App.cpp 442
WinMain(hInstance=140000000, lpCmdLine=17cf286 "", nCmdShow=10) at
C:\upp\MyApps\mysqltest\main.cpp 101
```

WinMainCRTStartup()
WinMainCRTStartup()
BaseThreadInitThunk()
RtlUserThreadStart()

Subject: Re: MySqlSession Close and Reconnect crashes Application
Posted by [mirek](#) on Tue, 19 Jan 2021 08:28:42 GMT
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Could you please .zip the whole package and post here so that I do not need to invent the rest of the code? :)

Mirek

Subject: Re: MySqlSession Close and Reconnect crashes Application
Posted by [hoelblin](#) on Tue, 19 Jan 2021 21:13:36 GMT
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Here is the zipped Package.

hoelblin

File Attachments

1) [mysqltest.7z](#), downloaded 200 times

Subject: Re: MySqlSession Close and Reconnect crashes Application
Posted by [mirek](#) on Thu, 21 Jan 2021 14:19:27 GMT
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Thank you. Should be now fixed, can you please check (trunk or nightly tomorrow)?

Mirek

Subject: Re: MySqlSession Close and Reconnect crashes Application
Posted by [hoelblin](#) on Sat, 23 Jan 2021 14:40:53 GMT
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Tested with nightly 15689 and all works fine.
Thank you very much :)
