
Subject: SqlPerformScript bug: Not doing anything if script starts with "BEGIN;" and ends with "END;"

Posted by [zsolt](#) on Fri, 13 Oct 2023 01:12:08 GMT

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Try this simple code:

```
#include <Core/Core.h>
#include <plugin/sqlite3/Sqlite3.h>

using namespace Upp;

CONSOLE_APP_MAIN
{
    String sql_script = R"sql(
        BEGIN;
        create table TBL (
            COL integer
        );
        insert into TBL values(123);
        END;
    )sql";

    Sqlite3Session session;
    String file_name = ConfigFile("SqlPerformScript_Test.db");
    DeleteFile(file_name);
    session.Open(file_name);
    SqlPerformScript(session, sql_script);
    Sql sql(session);
    sql * Select(SqlId("COL")).From(SqlId("TBL"));
    if(!sql.Fetch()){
        Cerr() << EOL << "Nothing in table" << EOL;
        return;
    }
    int v = sql[0];
    Cout() << EOL;
    if(v == 123)
        Cout() << "It is OK. Value is: ";
    else
        Cout() << "Bad value: ";
    Cout() << IntStr(v) << EOL;
}
```

It can be fixed with this change in SqlPerformScript():

```
- if(c == ';' && level == 0 && !esc) {
```

```
+ if(c == ';' && !esc) {
```

I don't know what this level thing should do, but removing level variable and related code seems to be working well also.

Any idea?

```
@@ -18,32 +18,25 @@ StatementExecutor& SQLStatementExecutor() {  
}  
#endif
```

```
bool SqlPerformScript(SqlSession& session, Stream& script,  
                    Gate<int, int> progress_canceled, bool stoponerror)
```

```
{  
    String stmt;  
- int level = 0;  
    bool ok = true;  
    bool esc = false;  
    while(!script.IsEof()) {  
        int c = script.Term();  
        if(IsAlpha(c) || c == '_') {  
            String id;  
            while(IsAlNum(script.Term()) || script.Term() == '_') {  
                c = script.Get();  
                stmt.Cat(c);  
                id.Cat(ToUpper(c));  
            }  
-         if(!esc) {  
-             if(id == "BEGIN")  
-                 level++;  
-             if(id == "END")  
-                 level--;  
-         }  
        }  
        else  
            if(c == '"') {  
                stmt.Cat(c);  
                script.Get();  
                for(;;) {  
                    c = script.Get();  
@@ -65,15 +58,15 @@ bool SqlPerformScript(SqlSession& session, Stream& script,  
                    if(script.Term() == '$') {  
                        script.Get();  
                        stmt.Cat('$');  
                        esc = !esc;  
                    }  
                }  
            }  
        }  
    }  
}
```

```

else
- if(c == ';' && level == 0 && !esc) {
+ if(c == ';' && !esc) {
    Sql sql(session);
    session.ClearError();
    int q = 0;
    while(stmt[q] == '\r' || stmt[q] == '\n')
        q++;
    stmt = stmt.Mid(q);
    if(!sql.Execute(stmt)) {
@@ -81,20 +74,14 @@ bool SqlPerformScript(SqlSession& session, Stream& script,
        if(stoponerror)
            break;
    }
    stmt.Clear();
    script.Get();
}
else {
- if(!esc) {
-     if(c == '(')
-         level++;
-     if(c == ')')
-         level--;
- }
    if(c != '\r') {
        if(session.GetDialect() == ORACLE && c == '\n')
            stmt.Cat("\r");
        stmt.Cat(c);
    }
    script.Get();
}

```

Subject: Re: SqlPerformScript bug: Not doing anything if script starts with "BEGIN;" and ends with "END;"

Posted by [mirek](#) on Fri, 13 Oct 2023 09:02:24 GMT

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Well, the problem is that SqlPerformScript is primary dedicated to DDL and must support creation of triggers:

https://www.sqlite.org/lang_createtrigger.html

Unfortunately, with most SQLs, you have to send trigger body as single statement (that probably includes Sqlite3 as well). Thus we need to detect BEGIN/END and suppress sending after ';' until END is reached, then send the whole thing at once. That is the reason for the 'level' variable.

I am not sure how to solve your problem frankly. I would be happy with 'do not use SqlPerformScript for transactions' note in docs, but if you have any suggestions... But I do not want to overcomplicate SqlPerformScript by e.g. detecting whether the BEGIN is function body or start of transactions, that would be hardly manageable, which means chances are slim...

Mirek

Subject: Re: SqlPerformScript bug: Not doing anything if script starts with "BEGIN;" and ends with "END;"

Posted by [zsolt](#) on Fri, 13 Oct 2023 10:30:28 GMT

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Thanks for the clarification.

I create a database dump in a web server and push the whole thing to the socket as an HTTP response body.

At the start I don't know the size of it, so I don't fill the Content-Length header.

I thought it would be a good idea to put it in a transaction to ensure, that the client read the whole thing until the end.

I don't need triggers there, so I think, I will use my modified version with no level handling.

Thanks again.
