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 supress 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.
