
Subject: Sticky problem : MySql and UTF8

Posted by [BioBytes](#) on Mon, 02 Jan 2012 09:56:32 GMT

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Hi alls,

Sorry to come back on a discussion that have already been developped in the forum but I still face some issues with MySql encoding UTF8.

I added the line forcing MySql encoding to UTF8 starting with opening of my application session "rmSession"

```
if(rmSession.Connect(cnxStr.At(3),cnxStr.At(4),"dbrisks",server,ScanInt(cnxStr.At(2),NULL,10)))
{
    mysql_set_character_set(rmSession,"utf8");
```

```
SQL = rmSession;
```

```
...
}
```

I have an SqlArray with 7 columns linked each to a specific SqlId (fields described in Schema file). Data input are controlled by SqlCtrls (DocEdit for the first 2 columns). When I implement the action WhenAcceptEdit, I got a Sql Error telling that string encoding of the second DocEdit is incorrect if there is some accents (My application is in French).

If I delete the mysql_set_character_set(...) line, no more error when accept edit but of course the string is incorrectly encoded in the MySql table (accents are replaced with ? character).

I turned this problem in another part of my source as follows. I checked the window closing and I save the current charset, forcing then charset to UTF8 then proceed SqlCtrls updating and return to saved charset. I must say that my application default charset is already UTF8. So something remains understandable for me.

```
[I]void rmFileDialog::Close()
{
    int idRisk;
    String qtfStr;

    byte previousCharset = GetDefaultCharset();

    try
    {
        if(ok.HasFocus())|| (ok.HasMouse())
        {
            if(GetMode()==ADD)
            {
                if(IsPackArrayEmpty())||IsRisksArrayEmpty())
```

```

{

enregistrement.))<<""];
    Exclamation(qtfStr);
}
else
{
    PromptOK(t_("Enregistrement du nouveau dossier et ouverture de la fiche de saisie des

    SQL &numFileCtrls.Insert(TBLPROD);

    for(int i=0;i<arrayPres.GetCount();i++)
        if((bool)arrayPres.Get(i,2))SQL
&Insert(TBLPRODPACK)(IDPRODUCT,~rmNumFileEdit)(DEVICE,As
String(arrayPres.Get(i,1)));

    for(int i=0;i<arrayCatSpecRisk.GetCount();i++)
        if((bool)arrayCatSpecRisk.Get(i,2))
        {
            SQL &Select(IDRISKGEN).From(TBLRISKGEN).Where(NAME==AsString
(arrayCatSpecRisk.Get(i,1)));
            while(SQL.Fetch())idRisk=SQL[IDRISKGEN];

            SQL.Clear();
            SQL &Insert(TBLRISKGENPROD)(NUMRISKFILE,~rmNumFileEdit)(NUMG
ENRISK,idRisk);
        }

    risksWin.SetDropLists();
    risksWin.Execute();
}

}

if(GetMode()==SELECT)
{
    SetDefaultCharset(CHARSET_UTF8);
    SQL & numFileCtrls.UpdateModified(TBLPROD).Where(NUM==~rmNumFileEd it);
    //numFileCtrls.Load(SQL,TBLPROD,NUM==~rmNumFileEdit);
    numFileCtrls.ClearModify();

    if(IsPackArrayModified())
    {
        SQL &Delete(TBLPRODPACK).Where(IDPRODUCT==~rmNumFileEdit);

        for(int i=0;i<arrayPres.GetCount();i++)

```

```

        if((bool)arrayPres.Get(i,2))SQL
&Insert(TBLPRODPACK)(IDPRODUCT,~rmNumFileEdit)(DEVICE,As
String(arrayPres.Get(i,1)));
    }

    if(IsRiskArrayModified())
    {
        SQL &Delete(TBLRISKGENPROD).Where(NUMRISKFILE==~rmNumFileEdit);

        for(int i=0;i<arrayCatSpecRisk.GetCount();i++)
            if((bool)arrayCatSpecRisk.Get(i,2))
            {
                SQL &Select(IDRISKGEN).From(TBLRISKGEN).Where(NAME==AsString
(arrayCatSpecRisk.Get(i,1)));
                while(SQL.Fetch())idRisk=SQL[IDRISKGEN];

                SQL.Clear();
                SQL &Insert(TBLRISKGENPROD)(NUMRISKFILE,~rmNumFileEdit)(NUMG
ENRISK,idRisk);
            }
        }
    }
}

SetDefaultCharset(previousCharset);
TopWindow::Close();
}
catch(SqlExc &ex)
{
    PanicMessageBox(t_("Erreur SQL"),t_("L'erreur suivante s'est produite :")+ex.ToString());
    TopWindow::Close();
}
}[/I]

SetDefaultCharset(previousCharset);
TopWindow::Close();
}
catch(SqlExc &ex)
{
    PanicMessageBox(t_("Erreur SQL"),t_("L'erreur suivante s'est produite :")+ex.ToString());
    TopWindow::Close();
}
}[/I]

```

Some help or comments ?

Thank you in advance and Happy New Year with U++

Cheers
Biobytes

Subject: Re: Sticky problem : MySql and UTF8
 Posted by [BioBytes](#) on Mon, 23 Jan 2012 21:37:46 GMT
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Right way to solve the accentuated issue with MySql and UTF8 is to add the following code after getting the connection:

```
mysql_set_character_set(MySession,"utf8");
```

Operations of insertion must be done as follows:

```
String str = ToCharset(CHARSET_UTF8,AsString(~MyEditString),GetDefaultCharset(),'?');
SQL &Insert(MYTABLE)(NAME,str)(NUM,MyEditInt.GetData());
```

Operations of deletion must be done as follows:

```
SQL &Delete(MYTABLE).Where(NAME==ToCharset
CHARSET_UTF8,~MyEditString,GetDefaultCharset(),'?'));
```

I will try to post a code snippet to explain in details how to proceed with MySql and UTF8 encoded tables.

Hoping this will be helpful for someones

Biobytes

Subject: Re: Sticky problem : MySql and UTF8
Posted by [mr_ped](#) on Tue, 24 Jan 2012 07:53:20 GMT
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BTW, I noticed you never use [CODE] [/CODE] markup to post source code ... do you hate it or what?

Subject: Re: Sticky problem : MySql and UTF8
Posted by [sergeynikitin](#) on Tue, 24 Jan 2012 20:47:10 GMT
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I use SQL schema added value:

```
//=====
=====//
```

```
//=====
=====//
```

```
#ifdef MYSQL_DB
#define SERIAL_ INT_
#endif
```

```
//=====
=====//
//      //
//  TERMINAL  //
//      //
//=====
=====//

TABLE_ (TERMINAL)
#ifdef MYSQL_DB
  TABLE_SUFFIX("CHARACTER SET utf8 COLLATE utf8_general_ci\n")  // <<-----this line set
  right MySQL options
#endif
  SERIAL_ (TER_ID) PRIMARY_KEY AUTO_INCREMENT
  STRING_ (TER_NAME,13)
  DATE_ (TER_DATECREATE)
  DATE_ (TER_DATEMODIFY)
  INT_ (TER_ID_GROUP)
  INT_ (TER_ID_TYPE)
  INT_ (TER_ID_TEMPLATE)
  INT_ (TER_PLACE)
  STRING_ (TER_COMMENT,255)
END_TABLE
```

Subject: Re: Sticky problem : MySql and UTF8
 Posted by [BioBytes](#) on Wed, 25 Jan 2012 20:49:40 GMT
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Thanks for your help Sergey,

Sure it is easier to configure MySql encoding format directly into the Sql Schema.

Hi Mr Ped,
 you are right but I miss the possibility of using the CODE markups, shame on me

Regards

Biobytes

Subject: Re: Sticky problem : MySql and UTF8
 Posted by [mirek](#) on Thu, 26 Jan 2012 09:01:06 GMT
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BioBytes wrote on Mon, 23 January 2012 16:37 Right way to solve the accentuated issue with MySql and UTF8 is to add the following code after getting the connection:

```
mysql_set_character_set(MySession,"utf8");
```

Operations of insertion must be done as follows:

```
String str = ToCharset(Charset_UTF8,AsString(~MyEditString),GetDefaultCharset(),'?');  
SQL &Insert(MYTABLE)(NAME,str)(NUM,MyEditInt.GetData());
```

Operations of deletion must ne done as follows:

```
SQL &Delete(MYTABLE).Where(NAME==ToCharset  
Charset_UTF8,~MyEditString,GetDefaultCharset(),'?'));
```

I will try to post a code snippet to explain in details how to proceed with MySql and UTF8 encoded tables.

Hoping this will be helpful for someones

Biobytes

Thanks, I will try to integrate this into MySql session.

Mirek

Subject: Re: Sticky problem : MySql and UTF8
Posted by [BioBytes](#) on Sat, 28 Jan 2012 09:54:18 GMT
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Ok thank you Mirek.

Just apart: This encoding issue does not occur when connection is done using ODBCsession as the ODBC driver should include encoding functions. Unfortunately, ODBC solution is not optimal in production when databases contain a lot of records and many users need to access the same tables.

Regards

Biobytes

Subject: Re: Sticky problem : MySql and UTF8
Posted by [mirek](#) on Sat, 04 Feb 2012 17:55:24 GMT
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I do not know: I have just spent some time with this, and it seems that at least in current U++ trunk, everything is already fixed. Suggested call is included in "Open" and MySql performs character conversions as needed.

Practically the only thing you have to satisfy is to make sure that your table (and table column, as crazy MySql allows definition of encoding on per-column basis) has the correct encoding. It does not even have to be utf-8, it just have to support characters that you are trying to push there...

Subject: Re: Sticky problem : MySql and UTF8
Posted by [sergeynikitin](#) on Thu, 19 Apr 2012 16:47:13 GMT
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sergeynikitin wrote on Tue, 24 January 2012 23:47: use SQL schema added value:

```
//=====
=====//
```

```
//=====
=====//
```

```
#ifdef MYSQL_DB
#define SERIAL_ INT_
#endif
```

```
//=====
=====//
//      //
//  TERMINAL  //
//      //
//=====
=====//
```

```
TABLE_ (TERMINAL)
#ifdef MYSQL_DB
TABLE_SUFFIX("CHARACTER SET utf8 COLLATE utf8_general_ci\n") // <<-----this line set
right MySQL options
#endif
SERIAL_ (TER_ID) PRIMARY_KEY AUTO_INCREMENT
STRING_ (TER_NAME,13)
DATE_ (TER_DATECREATE)
DATE_ (TER_DATEMODIFY)
INT_ (TER_ID_GROUP)
INT_ (TER_ID_TYPE)
```

```
INT_ (TER_ID_TEMPLATE)
INT_ (TER_PLACE)
STRING_ (TER_COMMENT,255)
END_TABLE
```

Some improvements:

```
#ifndef flagPGSQL_DB
#define SERIAL_ INT_
#else
#define AUTO_INCREMENT
#endif
```

```
#ifdef flagMYSQL_DB
#undef TABLE_
#define TABLE_(x) DOID(x) TABLE(x) \
TABLE_SUFFIX("CHARACTER SET utf8 COLLATE utf8_general_ci\n")
#endif
```

```
//=====
=====//
//      //
//      USER      //
//      //
//=====
=====//
```

```
TABLE_ (USER)
SERIAL_ (USR_ID) PRIMARY_KEY AUTO_INCREMENT
STRING_ (USR_NAME, 255)
STRING_ (USR_REALNAME, 255)
STRING_ (USR_LOGINNAME, 20)
STRING_ (USR_PASSWORD, 20)
STRING_ (USR_RIGHTS, 2000)
END_TABLE
```

Subject: Re: Sticky problem : MySql and UTF8
Posted by [BioBytes](#) on Fri, 20 Apr 2012 08:33:09 GMT
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Hi Sergey,

Thank you so much for the additional information about SQL Schema. Very useful. Applying this provision makes UTF8-encoding in MySql better controlled as I have no more problems in my own applications from now (until next time?)

Regards

Biobytes
