

PHP and Paradox

Sorry fo r my poor english...

I : What is PHP ?

- A script language which execute itself on server side via a dedicated parser (Php engine)
- A cross-platforms language (windows, unix...)
- Open source, freeware, extensible (language C)
- Direct access to many database engines (Oracle,Sybase,Informix,Interbase,MySql,PostgreSql...)

=> An incredible but logical success since reliability , power and simplicity are offered

This trio Apache/Php/MySql has become very quickly one of the most popular solution for building dynamic web sites.

-Another point to notice is the fast growing developer community offering huge amount of code and libraries

II: How Paradox is concerned ?

- Php can nativly access DBase files and , with ODBC, access Paradox tables.
- Php is a good candidate for building dynamic web pages with data stored in Paradox tables.

III : How does this work ?

We need a Windows box with :

- A Web server software , example Apache (freeware)
- The Php interpreter (freeware)
- The BDE , Borland Database Engine (came with Paradox)
- ODBC drivers for Paradox (came with Paradox)

A simple solution for installing Apache,Php and MySQL is to use an installation package like EasyPhp , www.easyphp.org . Once the package is installed, running the program (can be launched with Windows) will start the Apache server and the Php engine. (and also by default MySql).

All is now in place....

Why do we need the BDE ? Because the Paradox ODBC drivers use the BDE in order to propose a multi user access, via the file .Net which is shared among every BDE sessions connecting the Paradox. tables.

Be careful with the native access to DBase format (so without BDE) of Php. It does not support index or multi users access. Purpose is mainly import / export.

IV : The minimal example :

Consider a table Test.db in c:\test with the following fields :

CodeClient : autoincrement (+) , Nom : A35 (Customer No , Customer Name)

a) Create a system DNS entry for the ODBC driver you get with Paradox

- Control panel / ODBC Data Sources (32 bit)

(With XP / 2000 ODBC panel is in the administration tools)

- Clic on the page System DNS

- Clic Add and choose the driver INTERSOLV 3.11 32 Bit Paradox Files (*.db)

- General Tab :

 Data Source Name : TestPdox

 Database Directory : c:\test

- Tab Advanced :

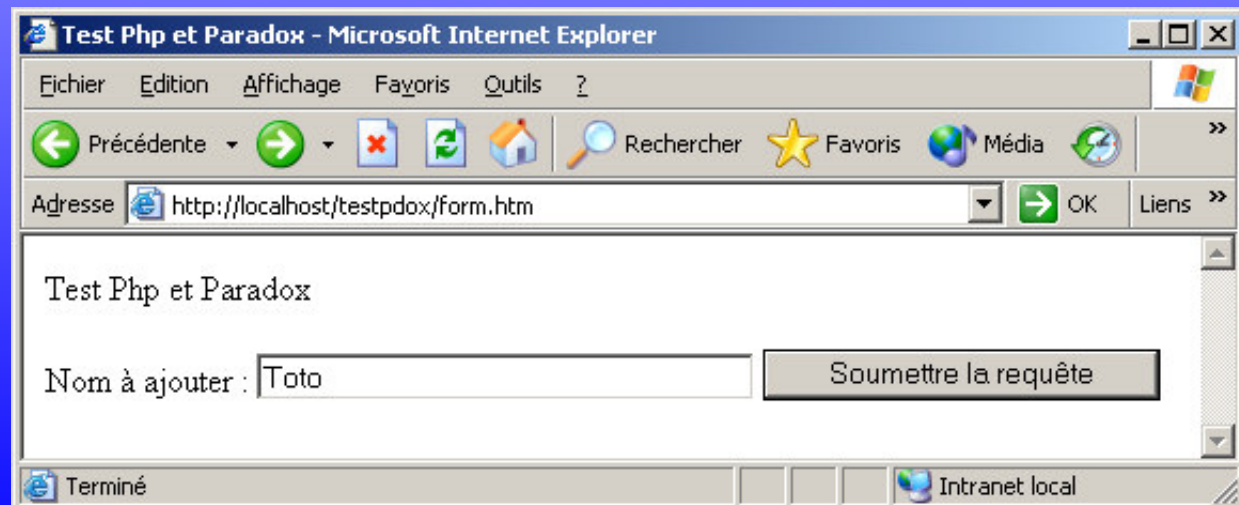
 Network Directory : Path for the NetDir directory used by Paradox

 Check the box International Sort

Validate all this

b) A Classical html form :

```
<html>
<head>
<title>Test Php et Paradox</title>
</head>
<body>
Test Php et Paradox
<form method="post" action="test.php">
Nom à ajouter :<input type="text" name="fnom" size="35" maxlength="35">
<input type="submit">
</form>
</body>
</html>
```



c) A few lines of Php for inserting and extracting the data :

```
<?php
$base="TestPdox";
$login="";
$password="";

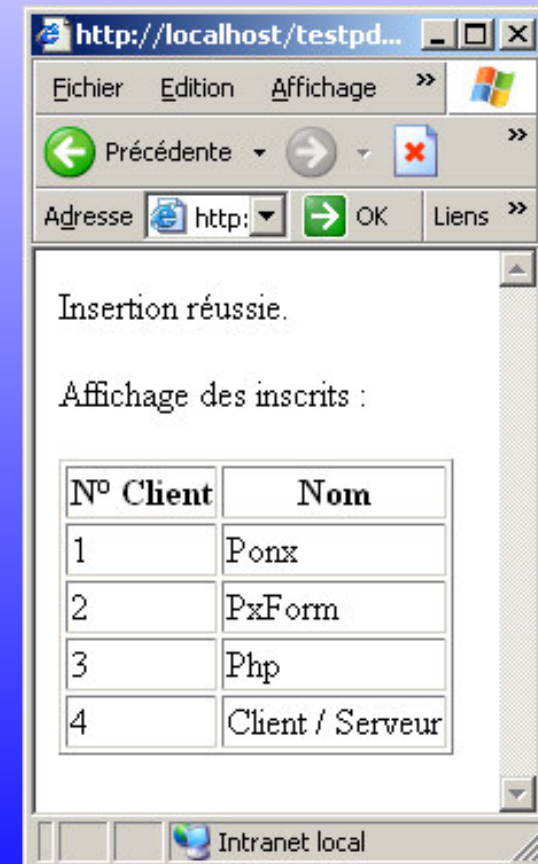
$connexion=odbc_connect($base,$login,$password) or die("Erreur de connexion");

$query="INSERT INTO Test (Nom) VALUES ('$fnom')";
odbc_do($connexion,$query) or die("Requête d'insertion incorrecte");
echo("Insertion réussie.\n");

$query="SELECT * FROM Test";
$result=odbc_do($connexion,$query) or die("Requête d'affichage incorrecte");

echo("<br><br>Affichage des inscrits :<br><br>\n");
echo("<table border='1'\>\n");
echo("<tr><th>N° Client</th><th>Nom</th></tr>\n");

while (odbc_fetch_row($result))
{
$codeclient=odbc_result($result,1);
// ou $codeclient=odbc_result($result,"CodeClient");
$nom=odbc_result($result,2);
echo("<tr><td>$codeclient</td><td>$nom</td></tr>\n");
}
echo("</table>\n");
?>
```



V : The problems we will face

a) Insertion of the quote character :

Yes it leads to an error since the SQL string is closed before the end. Php , with the "Magic quote" (cf the parameter `magic_quote_gpc` in the file `c:\windows\php.ini`) can escape for us the special chars in the data we receive (via Get, POST or Cookie) but the ODBC driver for Paradox don't accept `\` . He wants `"` (Double quote)

Solution : A little function `PrepareDonneeToParadox`

```
function PrepareDonneeToParadox($data)
{
    if (get_magic_quotes_gpc()) $data = stripslashes($data);
    $result="";
    for ($i=0;$i<strlen($data);$i++)
    {
        $l=substr($data,$i,1);
        if ($l<>"") $result .= $l; else $result .= "".$l;
    }
    $result = trim($result);
    return $result;
}
```

b) Dates insertion :

Dates have to be given to the ODBC pilot in the format : {d'aaaa-mm-jj'}

```
function FormatDateToParadox($date)
{
  if ((!isset($date)) or ($date==""))
    return "";
  else
  {
    $dateCut = explode('/', $date);
    $newDate = "{d'". $dateCut[2]."-". $dateCut[1]."-". $dateCut[0]."'"}";
    return $newDate;
  }
}
```

```
function FormatDateFromParadox($date)
{
  if ((!isset($date)) or ($date==""))
    return "";
  else
  {
    $dateCut = explode('-', $date);
    $newDate = $dateCut[2]."/". $dateCut[1]."/". $dateCut[0];
    return $newDate;
  }
}
```


c) Automatic insertion Date + Time :

This can also be done on the Paradox side with a field DateTime with default : **NOW**

d) Using Date et DateTime in SQL query :

EXTRACT function ?

SELECT {fn month(MyDate)} FROM... or more simply : SELECT month(MyDate) FROM...
See Scalaire and others useful fonctions (read the ODBC documentation)

Compare to a Date column :

WHERE MyDate = {d '2003-10-24'}

Compare to a DateTime column :

WHERE MyDate = {dt '2003-10-24'}

e) Accentuated characters :

Be careful ! We need Paradox ANSI INTL ou ANSI ASCII as table language

f) Other points :

Alpha fields are sent with white space. We can use TRIM either in SQL ou Php (trim())

Query with LIKE are case sensitive (on the contrary to MySQL) , we can use UPPER() on both side (Be careful UPPER will not work on a memo field...)

Memo fields are well accepted but not the formated ones (driver 3.11)

According the documentation FM are accepted with new versions 4.x et 5.x (not coming with Pdox)

The driver should accept master password for the Paradox tables but not secondaries via a string connection. Not tested.

the function `odbc_num_rows` returns -1 for SELECT instruction with Paradox (Ok for INSERT UPDATE and DELETE) , so we will use `SELECT COUNT(*) ...`

g) Autoincrement Counter

It seems we cannot lock a table like in MySQL (LOCK TABLE.) but we can lock a record with `SELECTFOR UPDATE`

A little table `table NoPiece.db` with (Champ A10 * , NextID I)

```
function GetNextId($champ)
{
    global $connexion;
    $query="SELECT Champ,NextID FROM NoPiece WHERE Champ='$champ' FOR UPDATE OF Champ,NextID";
    $result=odbc_do($connexion,$query) or die("Requête 1 incorrecte ".odbc_errormsg());
    odbc_fetch_row($result);
    $sid=odbc_result($result,"NextID");
    if ($sid=="") return 0;
    $query="UPDATE NoPiece SET NextID = NextID +1 WHERE Champ='$champ'";
    $result=odbc_do($connexion,$query) or die("Requête 2 incorrecte ".odbc_errormsg());
    $sid=$sid+1;
    return $sid;
}
```

VI : Links (in addition to msdn concerning ODBC) :

a) DataDirect documentation :

<http://www.datadirect-technologies.com/download/docs/odbc/odbcref/title.htm>

b) Pear :

For your information , in the PEAR project (unified extension around PHP) a direct reading access to Paradox tables via the PECL package which needs the pxlib library (written in C):

<http://pear.php.net/manual/fr/pecl.paradox.php> and <http://pxlib.sourceforge.net>