

Installation and Configuration Instructions for Database Connectivity for JavaScript

Here we explain how to install DBC-JS in the supported client and server environments.

The distribution ZIP file contains three directory trees:

- => js - Client JavaScript libraries
- => php - Server gateway PHP code
- => public_docs - JSDoc for the client libraries
- => demos - demo applications

Server

The server environment is a PHP container, running in a web-server, that accesses a relational database.

DBC-JS has been tested on the following server configurations:

- => OS: Windows XP
- => Web-Server: Apache version 2.0.58 and version 2.2.3
- => PHP (server): PHP version 5.2.0
- => Database: IBM DB2 version 8.2.2

Note that it should be a straightforward process to install DBC-JS on a different software stack: e.g., using Linux rather than Windows XP; or using MySQL rather than DB2. Preliminary tests show that simply supplying a different DSN parameter to the RDB constructor allows application code to seamlessly switch between different database servers. This is possible because the DBC-JS gateway accesses databases through the PDO interface.

Configuring Apache

The text below shows how to modify an Apache httpd.conf file to allow access the JavaScript and PHP files. Note that c:/cvs/jsdbc denotes the root directory of a DBC-JS installation, and should be replaced with the corresponding directory used in your installation.

```
<Directory C:/cvs/jsdbc/php/public>
  Order allow,deny
  Allow from all
</Directory>
Alias /jsdbc C:/cvs/jsdbc/php/public
```

```
<Directory C:/cvs/jsdbc/js>
  Order allow,deny
  Allow from all
</Directory>
Alias /jsdbc_js C:/cvs/jsdbc/js
```

NOTE: this is only to access the demo code, and is otherwise not needed

```
<Directory C:/cvs/jsdbc/demos>
  Options Indexes
```

```
Order allow,deny
Allow from all
</Directory>
Alias /jsdbc/demos C:/cvs/jsdbc/demos
```

The text below shows how to configure the Apache httpd.conf file to run PHP.

```
# Pointer to the PHP5.2 DLL
LoadModule php5_module "C:/MyPrograms/PHP5_2/php5apache2.dll"
AddType application/x-httpd-php .php
# Pointer to the PHP5.2 php.ini file
PHPIniDir "C:/MyPrograms/PHP5_2"
```

Configure PHP

Here we describe how to configure your PHP installation to run the PDO extension.

We've found major bugs when using the PDO extension with PHP version 5.1: please install PHP version 5.2.

As noted in the PDO documentation (<http://us2.php.net/manual/en/ref.rdb.php>), under Windows, PDO and all the major drivers ship with PHP as shared extensions, so that the configuration process is quite easy. The process for Linux is slightly more complicated.

The text below shows how to configure the PHP php.ini file to run the PDO extension with the generic ``odbc" database driver. The specified dlls must be installed in the directory specified in your ``extension_dir" entry (availability in ``PHP/ext" does not suffice). The dlls must also be available via your PATH.

```
extension=php_pdo.dll
extension=php_pdo_odbc.dll
```

Configure the Database

Like the ODBC and the PDO specifications, the DBC-JS API uses a Data Source Name (DSN) as the virtual name of a given database. DBC-JS passes the specified DSN to the PHP PDO constructor. In general, a DSN consists of the PDO driver name, followed by a colon, followed by the PDO driver-specific connection syntax

In general, a DSN is of the form PDO-Driver-Name:Driver-specific-information. For example, for the PDO_ODBC driver, the DSN would be ``odbc:ODBC-DSN". See the PDO documentation ([#pdo.drivers](http://us2.php.net/manual/en/ref.rdb.php)) for documentation links for the various PDO drivers. If you need to define an ODBC DSN on Windows, see <http://support.microsoft.com/kb/305599> for more information. We have tested DBC-JS using the PDO_ODBC driver on Windows XP.

Client

DBC-JS clients are web-applications running in a standard browser

(i.e., no plugins or extensions need to be installed).

DBC-JS has been tested on the following client configurations:

=> OS: Windows XP

=> Web-Browser: Mozilla Firefox versions 1.5 and 2.0.

We are aware that DBC-JS does not run in IE, and may add support for this browser in a later release.

To use DBC-JS, web-applications simply include the following JavaScript files:

=> DBC-JS_JS_DIR/messages.js

=> DBC-JS_JS_DIR/rdb.js

=> DBC-JS_JS_DIR/utils.js

Here DBC-JS_JS_DIR specifies the directory of the JavaScript files that are available to web-clients in your DBC-JS installation

For example, a web-page will say:

```
<script language="JavaScript" type="text/javascript"
src="http://yourhost:8080/jsdbc_js/rdb.js">
```