FAQ 4D FOR FLEX

What is the difference between 4D for Flex and DAX ?

They both target developing RIA for a 4D Server. But, they really follow two different schemes:

4D for Flex works in a connected mode, without any component on Server side. The communication between the client and the Server relies on a SQL proprietary protocol (same as the one used for ODBC support for 4D SQL Server). So, it requires opening a special port on firewalls for allowing communication.

Which port is used?

The SQL Server port set in the preferences, default was 1919 until 11.2 and is now 19812.

Of course this port needs to be available through firewalls.

Persistent connection?

You've got two communication modes between 4D & Flex:

- using HTTP (or SOAP over HTTP), working in disconnected mode, exchanging data in Plain Old XML (POX)
- using SQL sockets with 4D for Flex, working in connected mode, exchanging data through a binary protocol

Locking records?

you can use the **SELECT FOR UPDATE** feature, see:

 4D for Flex manual

http://www.4d.fr/documentation/4DdocV11/CMF/CMF18499.HTM

Minimum 4D version?

v11.4 for 4D for Flex 1.1

Is it compatible with other SQL Data Sources?

No, it uses a SQL protocol specific to 4D SQL Server.

Does it need ODBC?

No, it's a connection using binary sockets. No need for ODBC. Flex is talking directly to 4D SQL Server: fast and easy!

Does it require modifying existing code?

No Server-side code is needed but you'd better add some security control in the new On SQL Authentication database method.

But if I want to call existing 4D code?

You can call 4D methods published for SQL, just check the box 'Available through SQL' in the method Properties Editor and call it from your SQL code. See examples.

Is 4D Server required?

Not for development, but for deployment: yes. See 4D documentation on SQL Server.

What is required for development?

Apart from a 4D SQL Server, you need Flex SDK. You can get if for free on Adobe site (http://www.adobe.com/products/flex/) and use it with command-line or use the commercial IDE Flex Builder provided by Adobe.

What about user interface controls?

4D for Flex proposes in this version:

1. a custom DataGrid inheriting from Flex DataGrid.
2. some navigation controls (like automatic first-next-last...)

But you can also use Flex UI Controls like the Adavanced DataGrid available in Flex 3 Builder Pro:

http://livedocs.adobe.com/flex/3/html/help.html?content=dpcontrols_6.html

Is there any utility tool for debugging communications?

There is no utility like an HTTP sniffer as 4D for Flex uses binary sockets.

But you've got:

- a SQL Server side log, see examples for activating it
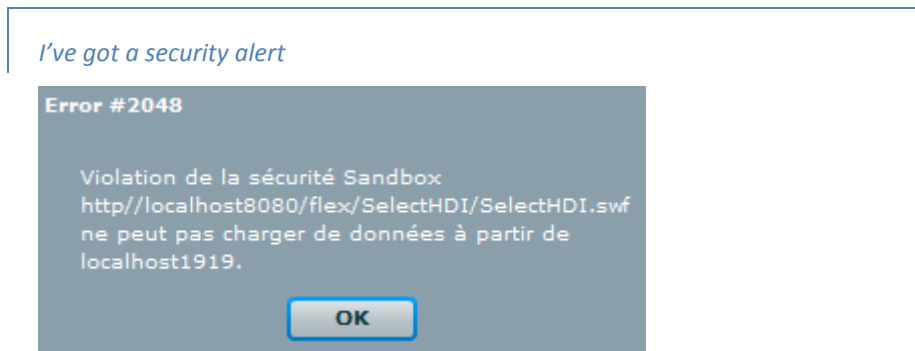- an AIR component for tracing communication between Flex and 4D

What about size?

- The 4D for Flex component (Flex4D_SQL.swc) is 803 k by itself .
- The Flex4D+Controls.swc (DataGrid…) weighs 799 k.
- A demo like Spendings (including both components) weighs 388k.

You can decrease swf size with Flex 3 mechanism of persistent framework caching:

"allows the Flex framework to be cached the first time any Flex application is used, so it is ready for reuse with other Flex applications regardless of the domain they come from.

This cache is unrelated to the browser cache, so once the Flex framework has been downloaded it will continue to be available to any Flex application." See Adobe site.

Error #2048

Violation de la sécurité Sandbox
http//localhost8080/flex/SelectHDI/SelectHDI.swf
ne peut pas charger de données à partir de
localhost1919.

OK

Or in english:

Error #2048

Security sandbox violation

http://localhost8080/SpendingsUI.swf cannot load data from localhost1919

This is due to a change in Adobe Flash Player Security Model starting from 9.0.124 version, see http://www.adobe.com/support/security/bulletins/apsb08-11.html .

To fix this issue you need to use 4D Server v11 SQL release 2. In addition you need to save a policy file allowing connection to SQL Server port in a folder inside the DB package: Preferences/SQL/Flash. This file called socketpolicy.xml may contain something like that:

```
<cross-domain-policy>
 <allow-access-from domain="*" to-ports="19812"/>
</cross-domain-policy>
```

You can also get error #2031, solution is the same.

Fr_FR locale

Quote: "Any beginner flex user with a fresh FB3 install would not have a fr_fr locale and would not be able to compile/run the demos."

Anwser:

1) In fact Adobe does not provide "fr_FR" locale (only english & japanese locales are provided). You have to create your own locale by using the "copylocale" tool provided by Adobe. Using the "Adobe Flex 3 SDK Command prompt", just type: copylocale en_US fr_FR

Of course your locale would not be automatically translated but you now have a proper "fr_FR" locale and you should be able to compile your examples...

2) Adobe will provide translations for more languages in the future. For now on, for French and Spanish you can use this http://ttfx.org/Tontons_Flexeurs/BabelFlex.html

AIR Conflict

Quote: "I tried to create an AIR project using 4D for Flex but there seems to be a conflict.

Looks like some of 4D for Flex's classes conflict with AIR's own SQL classes. SQLConnect is one of them"

Answer:

1) The approach of using what we called Flash layer is not supported as it is explained in the manual.

2) if you still want to use this API, you can fully qualify the function as a workaround:

```
private var _connection:fourD.sql.SQLConnection;

private function initApp():void { _connection = new
fourD.sql.SQLConnection();
```

That's how we built our SQLAdmin AIR demo, derivated from Christophe Coenraets'work (http://coenraets.org/blog/2008/02/sqlite-admin-for-air-10/).

Where can I find all errors ?

Here: http://livedocs.adobe.com/flex/3/langref/runtimeErrors.html

How do I call a 4D method without executing an SQL command?

You can't.
"SELECT {fn sqlSP_getHDIhtmlComment(ID) AS TEXT} from HDI_WRITE WHERE ID=2"
is the way of executing a 4D method thru the SQL protocol (cf : Call4DHDI)

I updated my flash player to the version 10 and my flex application doesn't work?

You must update your Flex Builder or Flex sdk.

What level of SSL?

For the SQL protocol we use a 2048-bit RSA key with RSA RC4 algorithm.

On which Forums can I find informations?

4D for Flex corner on forums.4d.fr: http://forums.4d.fr/Forum/FR/2165144/0/0/
4D-Flex Google group (independent from 4D): http://groups.google.com/group/4d-flex?hl=en

the data grid always seems to return columns from a query in alphabetic order

http://forums.4d.fr/Post/FR/2443029/1/2443030

This is the default behavior. To override the default, just add DataGridColumn objects, they will allow you (among other possibilities) to set the order of the columns:

```
<mx:DataGrid dataProvider="{_contactSQL}">
        <mx:columns>
        <mx:DataGridColumn dataField="id"/>
        <mx:DataGridColumn dataField="forename"/>
        <mx:DataGridColumn dataField="surname"/>
        </mx:columns>
</mx:DataGrid>
```

Error Management

See CrduHDI for samples of basic error management

Transactions?

Transactions are performed at SQL level. See 4D for Flex manual:
"USING TRANSACTIONS
Transactions can be managed automatically by the Server or manually through SQL commands."
see http://www.4d.fr/documentation/4DdocV11/QLF/QLF00005.HTM

What about FlashBuilder 4?

Current version is meant to be used with Flex 3.

But, though non certified, there doesn't seem to be any known compatibility issue with Flex 4 (in beta version at the time of releasing 4D fo Flex 1.1).
If using with Flah Builder 4:
 In case of problem, you have the choice when importing a project in the Builder of the SDK you want to use.

WARNING: the project is converted to Flash Builder 4 format and cannot be opened anymore using Flex Builder 3.

Using new version, you can then benefit of new Sparkles theme, simply after recompiling the project.

Deployment licenses

this subject has been discussed on http://groups.google.com/group/4d-flex?hl=en

1) you can choose/mix classic HTTP communication (without 4D for Flex) and SQL communication (using 4D for Flex)
2) 4D for Flex runs in connected mode (like a 4D Client) and consumes a 4D Client connection per 4D for Flex connection.
3) if you plan to have lot of (unknown) simultaneous SQL connections, SQL Unlimited is the solution designed for this kind of use