

## **Install DB2 UDB 9.1.0.4**

a) Install DB2 UDB via console mode using command: -

```
/tmp/ease/disk1/db2_install
```

Choose to install to default location ( **/opt/ibm/db2/V9.1** ) and to install ESE

b) Create required Linux groups: -

```
groupadd -g 999 db2iadm1  
groupadd -g 998 db2fadm1  
groupadd -g 997 dasadm1
```

c) Create required Linux users: -

```
useradd -u 1004 -g db2iadm1 -m -d /home/db2inst1 db2inst1  
useradd -u 1003 -g db2fadm1 -m -d /home/db2fenc1 db2fenc1  
useradd -u 1002 -g dasadm1 -m -d /home/dasusr1 dasusr1
```

d) Set the password for db2inst1 ( passwords can be set for other users if needed )

```
passwd db2inst1
```

e) Create the DB2 Administration Server (DAS)

```
/opt/ibm/db2/V9.1/instance/dascrt -u dasusr1
```

f) Create the DB2 instance ( db2inst1 )

```
/opt/ibm/db2/V9.1/instance/db2icrt -a SERVER -u db2fenc1 db2inst1
```

g) Log in as db2inst1

```
su - db2inst1
```

h) Start DB2

```
db2start
```

i) Create the sample database

```
db2sampl
```

j) Connect to the sample database

```
db2 connect to sample user db2inst1 using <password>
```

k) Query the EMPLOYEE table

```
db2 "select * from employee"
```

Assuming that you get sample data back, then you are cleared to proceed.

l) Terminate the connection

```
db2 terminate
```

m) Exit the db2inst1 session

*exit*

## **Install WebSphere Portal Server 6.1.0.1**

a) Unpack images: -

IL-Setup	C1TL1ML.zip
IL-1	C1TQ8ML.tgz
IL-2	C1TR9ML.tgz
IL-3	C1U2UML.zip
IL-4	C1U2XML.zip
IL-5	C1U30ML.zip
IL-5A	C1U34ML.zip

to **/tmp** using the following **unpack.sh** script: -

```
unzip C1TL1ML.zip      -d /tmp/IL-Setup
mkdir                  /tmp/IL-1
tar -xvzf C1TQ8ML.tgz -C /tmp/IL-1
mkdir                  /tmp/IL-2
tar -xvzf C1TR9ML.tgz -C /tmp/IL-2
unzip C1U2UML.zip     -d /tmp/IL-3
unzip C1U2XML.zip     -d /tmp/IL-4
unzip C1U30ML.zip     -d /tmp/IL-5
unzip C1U34ML.zip     -d /tmp/IL-5A
```

b) Ensure sufficient disk space ( 4 GB minimum ) in **/opt**

c) Ensure fully qualified hostname e.g. **stargate.uk.ibm.com**

e) Start console-mode installation: -

*/tmp/IL-Setup/install.sh -console*

f) Step through installation, entering parameters where required. I chose to perform a full (non-admin) installation into **/opt/IBM/WebSphere** using the admin. ID of **wpsadmin**.

g) Update WAS JDK to latest ( **Fixpack 23 -> Java 1.5 SR9 -> j9vmxi3223ifx-20090225** ) level via **6.1.0-WS-WASSDK-LinuxX32-FP0000023.pak** using **WAS Update Installer 7.0.0.3 ( 7.0.0.3-WS-UPDI-LinuxIA32.zip )**

h) Update WAS ND to latest ( **Fixpack 23** ) level via **6.1.0-WS-WAS-LinuxX32-FP0000023.pak** using **WAS Update Installer 7.0.0.3 ( 7.0.0.3-WS-UPDI-LinuxIA32.zip )**

i) Update Portal to latest ( **6.1.0.2** ) via **6.1.0-WP-Multi-FP002.zip** using latest version of **Portal Update Installer ( PortalUpdateInstallerLIN.tar )**

## **Install Lotus Forms Server Webform Server 3.5**

a) Check that DB2 is started and, if not, manually start it ( run the command **db2start** as the DB2 user **db2inst1** )

b) As the DB2 user **db2inst1** run the SQL command: -

*db2 create db WS\_ACDB*

This database is used by the Webforms Server for access-control.

c) Unpack **C1KT3ML.tar.gz** to **/tmp** using **tar -xvzf**

d) Run the command: -

```
/tmp/LFServer_35_WebformServer_Linux.bin -console
```

e) Install using the following defaults/options: -

Language	=	6 ( English )
Destination Directory	=	/opt/IBM/LotusForms/Server/3.5/WebformServer
Installed Features	=	Shared File Cache / Log Server / Translator / Webform Server Samples
Installation Type	=	Typical
Deploy Translator to WAS	=	Yes
Deploy Samples to WAS	=	Yes
Database	=	DB2
Database Name	=	WS_ACDB
Host IP	=	localhost
Host Port	=	50000 ( in my case; check using <b>netstat</b> or by inspecting <b>/etc/services</b> )
Username	=	db2inst1
Password	=	<password>
Database Driver Location	=	/home/db2inst1/sqllib/java

- Check that the Database connection test completes successfully before continuing  
- if it fails, check (a) that DB2 is listening on the relevant port (b) the database exists (c) the user/password combination is correct and (d) the classpath is right - the latter caught me out **MANY MANY TIMES**

WAS Location	=	/opt/IBM/WebSphere/AppServer
Profile	=	wp_profile ( in my case )
Cell	=	starg ( in my case )
Node	=	starg ( in my case )
Server Name	=	TranslatorServer
Application Name	=	TranslatorApp
Sample Servlet	=	WebFormSampleApp
Application Context	=	/Samples

and wait for the installation to complete.

At this point, the Webform Server should be running ( it's started by default ) and you can test by hitting the URL: -

```
http://stargate.uk.ibm.com:8085/Samples/FormListServlet
```

You should see a list of forms ( one, by default ), with two yellow icons to the left of the form name; the left-most icon will attempt to render the form in the rich client Lotus Forms Viewer whereas the right-most icon will render it, in the same page, using the Webform Server.

## Welcome to IBM Lotus Forms Server - Webform Server Samples

The forms in the following directory are provided to show application developers how to extend the Webform create a Webform Server application, see the *IBM Lotus Forms Server - Webform Server Administration M*

Index of "Webform Server Samples" directory:

File Name	Date Modified	File Size
 <a href="#">FormTemplates</a>	6/16/09 12:02 PM	DIR
 <a href="#">Submissions</a>	6/16/09 12:07 PM	DIR
 <a href="#">Background Check.xfdl</a>	6/16/09 12:11 PM	70.797K
 <a href="#">HouseholdCensusSurvey.xfdl</a>	6/16/09 12:10 PM	374.761K
 <a href="#">Job App Form.xfdl</a>	6/16/09 12:11 PM	302.166K
 <a href="#">preapprovalForm.xfdl</a>	10/24/08 3:47 PM	179.784K

[Open Local Form](#)

If it's of interest, the sample form ( preapprovalForm.xfdl ) is actually stored within the sample web application here: -

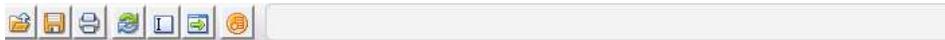
**/opt/IBM/WebSphere/wp\_profile/installedApps/starg/WebformSampleApp.ear/Samples.war/SampleForms**

so you simply copy new forms into this directory to have them automatically listed.

You can also use this URL: -

<http://stargate.uk.ibm.com:8085/translator/Translate?Action=toolbelt>

to bring up the traditional Workplace Forms web UI, which allows you to browse the file system and render the form from XFDL to XHTML.



## Welcome to IBM Lotus Forms Server - Webform Server

Webform Server allows you to use a Web browser to view and complete XFDL forms. The toolbar buttons provide the following functionality:

-  Opens any XFDL form that is available on the local computer or network.  
Shortcut key: Alt + O
-  Saves the current form to the local computer as an XFDL file.  
Shortcut key: Alt + S
-  Prints the form to the local printer.  
Shortcut key: Alt + P
-  Refreshes the form, which updates all of the computes in the form.  
Shortcut key: Alt + R
-  Toggles the accessibility mode. When this mode is active, you will see an enhanced focus indicator on any item that has the focus. As well, the form will provide additional information to active screen readers to assist users with visual impairments.  
Shortcut key: Alt + H
-  Provides version and copyright information for Webform Server.  
Shortcut key: Alt + I

To begin using Webform Server, use the Open button to open a form.

## Install Lotus Forms Server API 3.5

a) Run the command: -

```
/tmp/LFServer_35_API_Linux.bin -console
```

b) Install using the following defaults/options: -

Language	=	6 ( English )
Destination Directory	=	/opt/IBM/LotusForms/Server/3.5
Type of Installation	=	2 ( Runtime )
Deploy to WAS	=	Yes
Location of WAS	=	/opt/IBM/WebSphere/AppServer
WAS Profile	=	wp_profile ( in my case )
Cell	=	starg ( in my case )
Node	=	starg ( in my case )
Server	=	WebSphere_Portal

and wait for the installation to complete.

**Configure WebSphere Portal to use the Lotus Forms API ( required in order that the sample portlets can interact with the Webform server which is running on a different WAS instance/JVM )**

a) Copy the Lotus Forms redistributable code into the server's **/usr/lib** directory.

```
cp -r -p /opt/IBM/LotusForms/Server/3.5/API/redist/Linux/* /usr/lib
```

This should copy three binary files: -

**libpe\_cc.so libpe\_java.so libuwi\_java.so**

as well as a subdirectory, **PureEdge**, with its associated subdirectories, **76/demand**, **76/java** and **76/system**.

b) Verify that the file **/etc/PureEdgeAPI.ini** and the subdirectory **/etc/PureEdge** have been created by the installation processes.

c) Launch the administration console for WebSphere Portal ( you may need to start the **server1** or **WebSphere\_Portal** instances if not already started ). In my case, I have **WebSphere\_Portal** running, and use the following URL to access the console: -

```
https://stargate.uk.ibm.com:10041/ibm/console
```

c) Navigate to **Environment -> WebSphere Variables**

d) Navigate to the scope of the node that contains the WebSphere\_Portal instance ( in my case, this is **Cell=starg, Node=starg** )

e) Check that the following two variables exist: -

```
LFS_API_DIR          /usr/lib
LFS_API_LIB_DIR=${LFS_API_DIR}/PureEdge/76/java/classes
```

f) Save the WebSphere configuration

g) Under **Servers -> Application Servers**, navigate into the **WebSphere\_Portal** instance

h) Drill into **Java and Process Management -> Process Definition -> Environment Entries** and ensure that the **LD\_LIBRARY\_PATH** entry has: -

```
${LFS_API_DIR}:${LFS_API_DIR}/PureEdge/76/system
```

appended to it.

i) Drill into **Environment -> Shared Libraries** and, under the scope of the node ( **Cell=starg, Node=starg** in my case ), ensure that there is a library named **LFS\_API\_LIB** set to the following value: -

```

${LFS_API_LIB_DIR}/pe_api.jar
${LFS_API_LIB_DIR}/pe_api_native.jar
${LFS_API_LIB_DIR}/commons-codec.jar
${LFS_API_LIB_DIR}/xmlsec-1.4.1.jar

```

j) Under **Servers -> Application servers -> WebSphere\_Portal -> Class loader -> <name>** check that there is a **Library Reference** named **LFS\_API\_LIB**.

### **Deploy the sample portlets**

a) (Re)start WebSphere Portal

b) Log in as **wpsadmin** ( or equivalent )

c) Navigate to the **Administration** portlet

d) Under **Portlet Management -> Web modules**, choose to install the sample portlets, which are packaged in the following WAR file: -

**/opt/IBM/LotusForms/Server/3.5/WebformServer/samples/portlet/  
WebformPortletSample.war**

These portlets: -

<b>Title</b>	<b>Description</b>
FormListPortlet	Form List Sample Portlet
FormViewPortlet	Form View Sample Portlet

are packaged in a single portlet application, **WebformReleaseSamples**

e) Under **Portal User Interface -> Manage Pages**, choose to create a new page called **Lotus Forms** - I chose to create this page under **Content Root -> Home** e.g.

- Getting Started
- Web 2.0 Introduction
- Feeds
- Gadgets
- Lotus Forms

f) Deploy the two LF portlets to this page; I chose to deploy the List portlet directly above the View portlet ( note the portlet titles contain the word **Form** rather than **Forms** when searching for them ... )

g) Navigate to the **Home -> Lotus Forms** page

h) The List and View portlets should be displayed. In a similar manner to the sample web application, you should see a single form list ( preapprovalForm.xfdl ) - select the right-most link to have the form rendered by the Webform server into the View portlet.

FormListPortlet

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<a href="#">Job App Form.xfdl</a>	6/16/09 2:46 PM	302.166K
<a href="#">preapprovalForm.xfdl</a>	10/24/08 3:46 PM	179.69K

FormViewPortlet

This information is mandatory.

### Mortgage Pre-Approval Form

**Steps**

Mortgage Requirements

**Mortgage Requirements**

Provide the following mortgage information:

Mortgage Amount

Down Payment

**Mortgage Calculator**

Calculate Monthly Payment

FormViewPortlet

This information is mandatory.

### Mortgage Pre-Approval Form

**Steps**

Mortgage Requirements

Mortgage Details

Borrower Personal Data

Co-Borrower Personal Data

Finalize Pre-Approval

**Mortgage Requirements**

Provide the following mortgage information:

Mortgage Amount

Down Payment

Interest Rate  %

Payment Frequency

Amortization Period  Years

Start Date  (YYYY-MM-DD)

**Lotus Forms Server 3.5**  
Webform Server

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