

Easy Steps for Webutil Forms 12c : 1. Add Manifest, Sign Jacob.jar (1.18) 2. Running Webutil Demo Form 12c 3. Steps for setting DRS - Deployment Rule Set (Doc ID 2185543.1)

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APPLIES TO:

Oracle Forms - Version 12.2.1.0.0 and later
Information in this document applies to any platform.

GOAL

1. How to **add manifest and sign jacob.jar** for 12c forms using webutil
2. How to use **webutil demo** form
3. How to set **DRS (Deployment Rule Set)** when you use **JRE 1.8** to access Oracle forms 12c

SOLUTION

1) Forms 12c Jacob.jar file and signing

1. Using <http://sourceforge.net/projects/jacob-project/files/jacob-project/1.18-M2> --> Download the jacob.jar and corresponding dll files (32-bit and 64-bit)
2. Unzip it into ORACLE_HOME/forms/webutil folder.

Copy 32-bit jacob-1.18-M2-x86.dll to ...\\Oracle_Home\\forms\\webutil\\win32 folder
Copy 64-bit jacob-1.18-M2-x64.dll to ...\\Oracle_Home\\forms\\webutil\\win64 folder

3. Custom jar files such as jacob.jar, jar files containing icons, or others may not have the manifest entries.

a) Create a text file with the following entries and place it in the same directory as your jar file. In this example, we will call it mymanifest.txt

Permissions: all-permissions

Codebase: *

Application-Name: OracleForms

Note: The last line of the manifest file must end in a new line or carriage return.

b) Include the JDK Path in the environment variable PATH

```
export PATH=<ORACLE_HOME>/jdk/bin:$PATH
```

c) Add the attributes of the text file to an existing jar manifest by executing the following command:

```
jar -ufm jacob.jar mymanifest.txt
```

This will modify the manifest.mf inside the given jar file.

Refer and follow the below note for the same

* How to Add Manifest Entries into Custom Jar Files Such as jacob.jar or Jar Files Containing Icons (Doc ID 1583119.1)

Once Manifest entries has been added, then teh same needs to be resigned using a certificate from a Certificate Authority
As With jdk 1.8, it is recommended using a certificate from a Certificate Authority.

4. Sign the Jar file :

Got to Oracle_Home\user_projects\domains\base_domain\config\fmwconfig\components\FORMS\instances\forms1\bin

Set the JRE 1.8 and the jdk path

```
eg: E:\12c\Middleware\Oracle_Home\user_projects\domains\base_domain\config\fmwconfig\components\FORMS\instances\forms1\bin>set PATH="C:\Program Files\Java\jdk1.8.0_92\jre\bin";%PATH%
```

```
E:\12c\Middleware\Oracle_Home\user_projects\domains\base_domain\config\fmwconfig\components\FORMS\instances\forms1\bin>set PATH=E:\12c\Middleware\Oracle_Home\jdk\bin;%PATH%
```

Edit sign_webutil.bat to add / amend the below in that file

```
Oracle_Home\user_projects\domains\base_domain\config\fmwconfig\components\FORMS\instances\forms1\bin>sign_webutil.bat
```

Please do ensure to set the Password for KEYSTORE_PASSWORD and JAR_KEY_PASSWORD

For example :

```
SET KEYSTORE_PASSWORD=Welcome1
```

```
SET JAR_KEY_PASSWORD=Welcome1
```

--> Search for ECHO Generating a self signing certificate for key=%JAR_KEY%...

Edit as below

ECHO Generating a self signing certificate for key=%JAR_KEY%...

```
...\Oracle_Home\oracle_common\jdk\bin\keytool -genkey -dname "CN=%DN_CN%, OU=%DN_OU%, O=%DN_O%, C=%DN_C%" -alias %JAR_KEY% -keypass %JAR_KEY_PASSWORD%  
-keystore %KEYSTORE% -storepass %KEYSTORE_PASSWORD% -validity %VALIDDAYS%
```

Instead of

```
...\ORACLE~1\jdk\bin\keytool -genkey -dname "CN=%DN_CN%, OU=%DN_OU%, O=%DN_O%, C=%DN_C%" -alias %JAR_KEY% -keypass %JAR_KEY_PASSWORD% -keystore  
%KEYSTORE% -storepass %KEYSTORE_PASSWORD% -validity %VALIDDAYS%
```

NB: Need to add oracle_common directory in between

--> Search for ECHO Signing %1 using key=%JAR_KEY%...

Edit as below

ECHO Signing %1 using key=%JAR_KEY%...

```
...\Oracle_Home\oracle_common\jdk\bin\jarsigner -keystore %KEYSTORE% -storepass %KEYSTORE_PASSWORD% -keypass %JAR_KEY_PASSWORD% %1 %JAR_KEY%
```

Instead of

```
...\ORACLE~1\jdk\bin\jarsigner -keystore %KEYSTORE% -storepass %KEYSTORE_PASSWORD% -keypass %JAR_KEY_PASSWORD% %1 %JAR_KEY%
```

NB: Need to add oracle_common directory in between

Sign the Custom Jar files as below using self signed certificate.

```
E:\12c\Middleware\Oracle_Home\user_projects\domains\base_domain\config\fmwconfig\components\FORMS\instances\forms1\bin>sign_webutil.bat E:\12c\Middleware\Oracle_Home\forms\java\jacob.jar
```

WARNING:

Self-signing Jar files is no longer recommended.

Jar files should be digitally signed using a trusted certificate.

Generating a self signing certificate for key=webutil2...

...successfully done.

.
Backing up jacob.jar as jacob.jar.old...

1 file(s) copied.

Signing jacob.jar using key=webutil2...

jar signed.

Warning:

No -tsa or -tsacert is provided and this jar is not timestamped. Without a times
tamp, users may not be able to validate this jar after the signer certificate's
expiration date (2017-08-21) or after any future revocation date.

...successfully done.

5. Restart the managed Server WLS_FORMS.

6. Clear the Client Jar Cache and retest if you have jacob related issues.

2) Webutil Demo for 12c :

<http://www.oracle.com/ocom/groups/public/@otn/documents/webcontent/196249.zip> --> webutil demo

1. Unzip the zip file into a temporary area on your machine.

2. Copy webutil_demo.fmb to a directory which is currently on your FORMS_PATH

3. The demo uses a DLL to show the functionality of the C API. Copy ffsamp.dll to the
<ORACLE_HOME>\forms\webutil directory. The C API demo is not supported for use in a 64bit
browser and/or 64bit JRE. In Forms version 11.1.2+, copy to
<ORACLE_HOME>\forms\webutil\win32

4. Open your webutil.cfg file and add the following line
install.syslib.0.user.1=ffisamp.dll|40960|1.0|true

5. In the webutil.cfg file ensure you have the line
o transfer.appsrv.workAreaRoot=c:\temp
o transfer.appsrv.accessControl=TRUE
o transfer.database.enabled=TRUE
o transfer.appsrv.enabled=TRUE

6. Create a directory c:\temp and a file called c:\temp\downloaded_from_as.txt. Ensure you add text to this file. This is a test file which will be used to demonstrate loading files from the application server to the client. The Download test expects this file to exist in this location on the Application Server.

7. wu_fileupload_db_demo.sql and create_webutil_db.sql -- to be executed in database (using sqlplus) connected to schema where form will be connected (for example : scott) and a commit;

8. Recompile webutil.pll and check whether new webutil.plx is generated.

9. Detach webutil.pll and webutil.olb (remove from object group) from webutil_demo form and reattach new webutil.pll and open the webutil.olb and drag and drop to object group in forms builder

10. Compile/generate webutil_demo.fmb into an FMX. This can be done from within the Forms Builder or the command line. It may be necessary to include the compile_all=yes option in order to ensure the form runs properly.

11. In client machine :

Remove webutil.hostname.32.properties ---> C:\Users\<hostname> folder

If form is executed using JRE 1.7 --> Java Control Panel --> Security-->Edit Site List--> Add-->http://machine:port/forms/java/jacob.jar

If form is executed using JRE 1.8 --> Jar File Signing for Forms – Addressing JRE Java Security Warnings such as "Do you want to run this application?", "Application Blocked by Java Security", "Running this application may be a security risk", etc (Doc ID 2065434.1) Steps to set DRS is given below :

3) Deployment Rule Set :

+++ Create a file ruleset.xml with following contents : (http://docs.oracle.com/javase/7/docs/technotes/guides/jweb/security/deployment_rules.html)

```
<ruleset version="1.0+">  
<rule>  
<id location="http://hostname:port/forms/frmservlet" />  
<action permission="run" />  
</rule>  
</ruleset>
```

The following rule set allows all RIAs from http://hostname:port/forms/frmservlet to run without security prompts. RIAs from other locations do not match the rule so default processing is used and security prompts are shown as applicable.

ruleset.xml file should be created in folder Oracle_Home\oracle_common\jdk\bin and

+++ Must be packaged in a signed JAR file named DeploymentRuleSet.jar (steps follow)

```
\Oracle_Home\oracle_common\jdk\bin>jar cf DeploymentRuleSet.jar ruleset.xml
```

+++ Signing :

The JAR file must be signed with a valid certificate from a trusted certificate authority.
Here it is signed using sign_webutil file.

```
\Oracle_Home\user_projects\domains\base_domain\config\fmwconfig  
\components\FORMS\instances\forms1\bin>sign_webutil.bat DeploymentRuleSet.jar  
WARNING:
```

Self-signing Jar files is no longer recommended.
Jar files should be digitally signed using a trusted certificate.

Generating a self signing certificate for key=webutil2...
keytool error: java.lang.Exception: Key pair not generated, alias <webutil2> already exists

.
There were warnings or errors while generating a self signing certificate. Please review them.

.
Backing up DeploymentRuleSet.jar as DeploymentRuleSet.jar.old...
1 file(s) copied.
Signing DeploymentRuleSet.jar using key=webutil2...
jar signed.

Warning:
No -tsa or -tsacert is provided and this jar is not timestamped. Without a timestamp, users may not be able to validate this jar after the signer certificate's expiration date (2017-08-21) or after any future revocation date.
...successfully done.

+++ Install the DeploymentRuleSet.jar file on your users' systems in the following directories:

On Windows platforms, install the file in the <Windows-directory>\Sun\Java\Deployment directory, for example, c:\Windows\Sun\Java\Deployment. (If this is not available, it has to be created)
On Solaris or Linux platforms, install the file in the /etc/.java/deployment directory.
On Mac OS X platforms, install the file in the /Library/Application Support/Oracle/Java/Deployment/ directory.

To view the active rule set, see the Security section of Java Control Panel.

+++ Then follow the steps provided in :

How to Export and Import the Product Management Certificate Created from the sign_webutil Script (Doc ID 1596871.1)

+++ Add Oracle_Home\oracle_common\jdk\bin to PATH

```
C:\Users\username>keytool -export -keystore .keystore -alias webutil2 -file publicpmkey.csr
```

Enter keystore password:

Certificate stored in file <publicpmkey.csr>

+++ Clear Java Cache and Browser Cache

+++ Remove webutil.properties from client machine which will be in c:\users\username folder

12.Run the form using the WebUtil config section. For example,

http://server:port/forms/frmservlet?form=webutil_demo&config=webutil&userid=scott/tiger@oracle

13. If you use config=webutil_webstart

http://server:port/forms/frmservlet?form=webutil_demo&config=webutil_webstart&userid=scott/tiger@oracle

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