



WebUtil Implementation Guide

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1 What is “WebUtil”?

WebUtil provides way of transferring files between the Client PC and the Application/Database Server via Oracle Web Forms.

The core features of WebUtil are :-

- **Text_IO**
 - Read and write text files on the client machine
- **Tool_Env**
 - Read client side variables
- **C API on the client**
 - Interface with client side C.
- **Host**
 - Run Host commands on the client machine
- **OLE2**
 - Integrate with client side OLE (e.g. Word and Excel)
- **Enhanced Host commands**
 - Host command can now call back into Forms!
- **Browser functions**
 - Integrate with the browser.
- **File transfer**
 - Move from between the client, application server and database.
- **File Manipulation**
 - Manipulate client side files.
- **Client machine information**
 - Read information from the client machine
- **READ/WRITE_IMAGE_FILE**
 - Read and write client side images
- **Get_File_Name**
 - Use a file selection dialog on the client machine
- **D2KWUtil features**
 - Client side interface into the D2KWUtil package.

There is a great deal of documentation on WebUtil on the Oracle Website. The aim of this document is to provide a relatively simplistic approach to deploying WebUtil on the Application Server.

<http://www.oracle.com/technology/products/forms/htdocs/webutil/webutil.htm>

2 Installing WebUtil

If you've selected the Complete installation option for installing Oracle Developer Suite 10g (10.1.2), WebUtil is installed and configured for you.

If you've downloaded WebUtil to install into a previous version of Oracle Forms, or to upgrade an earlier version of WebUtil, read the Webutil Release Notes document that is part of this distribution.

You can also read the Webutil Release Notes at
<http://www.oracle.com/technology/products/forms/>.

The current version of WebUtil is 1.0.6. It can be configured with Oracle AS 10g (9.0.4) as well as Oracle AS 10g (10.1.2).

2.1 Prerequisites

In order to use WebUtil there are several version prerequisites:

Oracle Forms Version: WebUtil is designed to run with Oracle Forms 10g (9.0.4) and Oracle Forms 10g (10.1.2).

No testing has been done with previous versions.

Client Java Virtual Machine (JVM): WebUtil requires either JInitiator 1.3.1.13 and higher, or the Sun Java Plug-in Version 1.4.2 or higher. WebUtil uses certain Java 1.3 features that are not available in earlier versions of the JVM.

UNIX and Linux directory permissions: WebUtil downloads install.syslib libraries mentioned in webutil.cfg into the bin directory of the JRE or JVM. The client needs write permission in that particular directory.

For more information about supported plug-ins, see the latest certification matrix, Oracle Forms 10g: Client Platform Support Statement of Direction at

<http://www.oracle.com/technology/products/forms/>.

Oracle Application Server Java Virtual Machine – For its Java operations on the middle tier, WebUtil needs a JVM of version 1.2.2 or higher. The JVMs supplied with Oracle Developer Suite 10g (10.1.2), Oracle Developer Suite 10g (9.0.4), Oracle Application Server 10g (10.1.2), and Oracle Application Server 10g (9.0.4) are ideal.

Oracle Database Version – The file transfer facilities within WebUtil that post and get files from the database need to be installed into a 9.0.1 database or higher. Using WebUtil against an older database will mean that this type of file transfer is not available to you.

2.2 Installation – Application Server

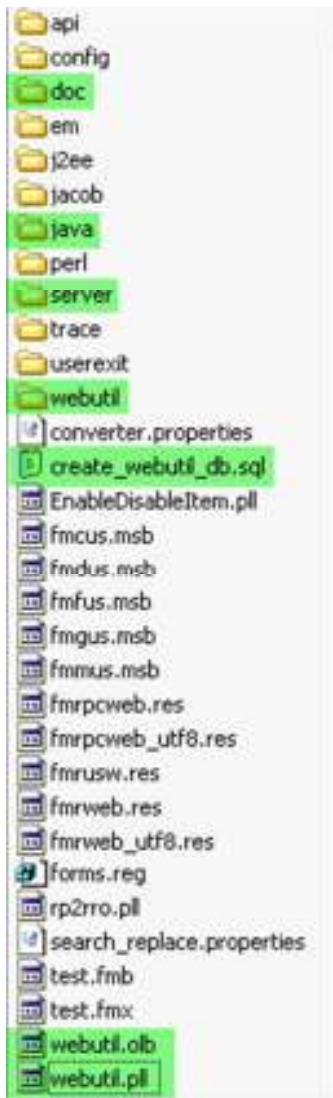
To install WebUtil onto an Application Server extract this ZIP file into the Oracle Forms home – i.e.

Forms 9 - C:\product\AS.9.0.4\AS_Mid_Tier\forms90
Forms 10 - C:\oracle\product\AS_Mid_Tier\forms



webutil_106.zip

Doing so will affect the following folders/files :-



At runtime the primary components used for WebUtil are the frmwebutil.jar file and webutil.pll.

Some features of WebUtil such as OLE integration also require extra operating system libraries, which will be downloaded to the client on demand such as the jacob.dll and jacob.jar files for OLE integration.

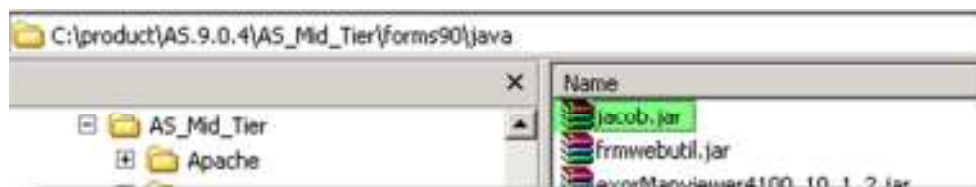
These operating system-specific files are then stored in the **forms/webutil** and **forms/java** directories, respectively.

The Jacob libraries are attached here and need to be unzipped into the following folders:-



Jacob_18.zip

Java –



DLL –



2.3 Digital Signing

You need to sign both `frmwebutil.jar` and `jacob.jar` with the same digital certificate.

This is a one-time operation which allows your end-users to trust that the JACOB routines can access client side resources.

If you do not have an existing signing certificate, or if you are not sure how to sign Jar files, a script is in the `forms\WebUtil` directory to help you.

This script is called `sign_webutil.sh` for UNIX and `sign_webutil.bat` for Windows.

To sign the Jar files:

- Open a Command window and change to the `ORACLE_HOME\forms\webutil` directory.
- Check that `ORACLE_HOME/jdk/bin` is in the path. If it is not, add it.
- In Windows, Issue `sign_webutil.bat ORACLE_HOME\forms\java\frmwebutil.jar` (or the path to where you installed WebUtil). On UNIX, issue `sign_webutil.sh ORACLE_HOME/forms/java/frmwebutil.jar` (or the path to where you installed WebUtil).
- In Windows, Issue `sign_webutil.bat ORACLE_HOME\forms\webutil\jacob.jar`. In Unix, issue `sign_webutil.sh $ORACLE_HOME>\forms\java\jacob.jar`.

2.4 Configure HTTP Server

WebUtil needs a single virtual directory to be defined in order to download files at runtime as they are needed. You will need to create a virtual directory called

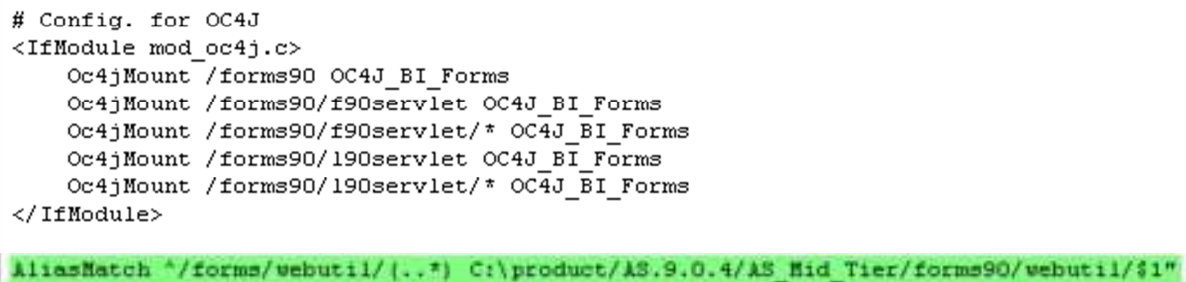
`j2ee/DevSuite/application-deployments/forms/formsweb/webutil`

which maps onto the `ORACLE_HOME/forms/webutil` directory in the Oracle Developer Suite and Oracle Application Server `ORACLE_HOME` directories.

In Oracle Application Server, define the same virtual directory in the `forms/server/forms.conf` file:-

`AliasMatch ^/forms/webutil/(.*) $ORACLE_HOME/forms/webutil/$1"`

i.e.



```
# Config. for OC4J
<IfModule mod_oc4j.c>
    Oc4jMount /forms90 OC4J_BI_Forms
    Oc4jMount /forms90/f90servlet OC4J_BI_Forms
    Oc4jMount /forms90/f90servlet/* OC4J_BI_Forms
    Oc4jMount /forms90/l90servlet OC4J_BI_Forms
    Oc4jMount /forms90/l90servlet/* OC4J_BI_Forms
</IfModule>

AliasMatch ^/forms/webutil/(.*) C:\product\AS.9.0.4\AS_Mid_Tier/forms90/webutil/$1"
```

2.5 Configure FORMSWEB.CFG File

You need to define the location of the WebUtil.jar file :-

```
webUtilArchive=frmwebutil.jar
```

You need to define the default HTML templates to use with JINIT/JRE :-

```
baseHTMLjinitiator=webutiljini.htm
```

You also need to define the location of the Jacob JAR file :-

```
webUtilArchive=jacob.jar
```

```
EV1f
pjcArchive=frmall.jar,exor_jpg.jar,UploadClient.jar,UploadCl
separateFrame=True
lookandfeel=Oracle
colorScheme=Teal
splashScreen=no
archive=exor_jpg.jar,exorMapviewer4100_10_1_3.jar,mvclient_1
archive_jini=frmall_jinit.jar
background=bgnd2.gif
connectMode=HTTP
width=1024
height=768
IE50=Jinitiator
networkretries=30
form=hig1807.fmx
pjcRegisterApplet=exor.mapserver.RegisterCertificate
envFile=default.env
imageBase=codebase
workingDirectory=C:\exor\4200_DEV\bin
WebUtilArchive=frmwebutil.jar,jacob.jar
baseHTMLjinitiator=webutilbase.htm
WebUtilLogging=on

#WebUtilLoggingDetail=normal
#WebUtilErrorMode=Alert
#WebUtilDispatchMonitorInterval=5
#WebUtilTrustInternal=true
#WebUtilMaxTransferSize=16384
```

Please don't enable the commented out (#) options unless you really need to – they will raise messages through the forms. These are particularly useful for debugging problems.

You don't really need to enable the WebUtilLogging either unless you really want a trace of all connections etc.

2.6 Configure DEFAULT.ENV file

The default.env file on the App Server requires the following info adding (usually stored in `/forms/server`) :-

`WEBUTIL_CONFIG=ORACLE_HOME\forms\server\webutil.cfg`

`CLASSPATH=\ORACLE_HOME\forms\java\frmwebutil.jar;c:\ids9i\jdk\jre\lib\rt.jar`

i.e.

```
#
# Java class path
# This is required for the Forms debugger
# You can append your own Java code here)
# f90srv.jar, repository.jar and ldapjclnt9.jar are required for
# the password expiry feature to work(#2213140).
#
```

```
CLASSPATH=C:\product\AS.9.0.4\AS_Mid_Tier\j2ee\OC4J_BI_Forms\applications\forms90app\forms90w
WEBUTIL_CONFIG=C:\product\AS.9.0.4\AS_Mid_Tier\forms90\server\webutil.cfg
```

2.7 Securing WebUtil

The Oracle documentation covers the security side of WebUtil – too much to go into here!

http://www.oracle.com/webapps/online-help/forms/10g/state/content/navId.3/navSetId._vtTopicFile.web_util|install~htm/

2.8 Configuring webutil.cfg

There are numerous options that can be configured in webutil.cfg relating to Logging, OS specifics, Upload/Download, Work areas all of which are documented here in detail :

http://www.oracle.com/webapps/online-help/forms/10g/state/content/navId.3/navSetId._vtTopicFile.web_util|config~htm/

We are only really interested in getting the File Transfer working to start with, and this requires the following change to webutil.cfg (stored under **forms/server**)

```
# no matter what the settings in
# transfer.appsrv.* are. This setting is
# required if you need the Client side
# READ/WRITE_IMAGE_FILE procedures.
# transfer.appsrv.accessControl: Can be TRUE or FALSE - allows you to indicate
# that uploads and downloads can only occur from
# the directories named in the
# transfer.appsrv.read.n and
# transfer.appsrv.write.n entries and their
# subdirectories. If this setting is FALSE,
# transfers can happen anywhere.
# transfer.appsrv.read.<n>: List of directory names that downloads can read
# from.
# transfer.appsrv.write.<n>: List of directory names that uploads can write
# to.

#NOTE: By default the file transfer is disabled as a security measure
transfer.database.enabled=TRUE
transfer.appsrv.enabled=TRUE
transfer.appsrv.workAreaRoot=
transfer.appsrv.accessControl=TRUE
#List transfer.appsrv.read.<n> directories
transfer.appsrv.read.1=c:\temp
#List transfer.appsrv.write.<n> directories
transfer.appsrv.write.1=c:\temp
```