

# Configuring Forms 6i for 9iAS

Software Used: Oracle 9iAS Release 1 (1.0.2.2.2); Oracle Forms 6i Patchset 4

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## Step 1: Install necessary Oracle Software Per Oracle Documentation

Only 9iAS's Enterprise Edition contains Forms and Reports Services

## Step 2: Configure HTTP Listener (Apache) for Forms

There are many Configuration Files to be modified; I will attempt to list, whenever possible, just

Since all Forms Requests will be Brokered through the Apache HTTP Listener, we will begin he \$APACHE\_HOME/conf/httpd.conf file. This is normally included by virtue of the \$APACHE\_I are present. Afterwords, we will modify Apache's JServ module to facilitate use of the Forms Se

### Entry in the \$APACHE\_HOME/conf/httpd.conf:

```
# Include the Oracle configuration file for custom settings
include "/vol/oracle/product/9iAS/1.0.2.2.2/Apache/Apache/conf/oracle_apache..
```

### Entry in the \$APACHE\_HOME/conf/oracle\_apache.conf:

```
include "/vol/oracle/product/9iAS/1.0.2.2.2/6iserver/conf/6iserver.conf"
```

### Appropriate Entries in the \$DEV6i\_HOME/conf/6iserver.conf:

```
# Apache configuration file for Forms and Reports Server

# Required virtual paths for Forms and Reports components
Alias /webcache/ "/vol/oracle/product/9iAS/1.0.2.2.2/6iserver/reports60/
Alias /dev60html/ "/vol/oracle/product/9iAS/1.0.2.2.2/6iserver/tools/web6
Alias /forms60java/ "/vol/oracle/product/9iAS/1.0.2.2.2/6iserver/forms60/ja
Alias /jinitiator/ "/vol/oracle/product/9iAS/1.0.2.2.2/6iserver/jinit/doc/
Alias /dev60temp/ "/vol/oracle/product/9iAS/1.0.2.2.2/6iserver/tools/web6

ScriptAlias /dev60cgi/ "/vol/oracle/product/9iAS/1.0.2.2.2/6iserver/tools/w

# Forms and Reports CGI needs to have ORACLE_HOME set
SetEnvIf Request_URI "rwcgi60" ORACLE_HOME=/vol/oracle/product/9iAS/1.0.2.
SetEnvIf Request_URI "rwcgi60" LD_LIBRARY_PATH=/vol/oracle/product/9iAS/1.
er/lib
SetEnvIf Request_URI "rwcgi60" DISPLAY=localhost:0.0
SetEnvIf Request_URI "f60cgi" ORACLE_HOME=/vol/oracle/product/9iAS/1.0.2.
SetEnvIf Request_URI "f60cgi" LD_LIBRARY_PATH=/vol/oracle/product/9iAS/1.
er/lib

# Forms CGI needs location of formsweb.cfg file
SetEnv FORMS60_WEB_CONFIG_FILE /vol/oracle/product/9iAS/1.0.2.2.2/6iserve:
```

```

er/formsweb.cfg

# Mime types for Forms and Reports
AddType video/avi avi
AddType application/x-orarrp rrp rrp rrp rrp rrp rrp

# Virtual paths for Forms and Reports demos (if installed)
Alias /rep60demo/ "/vol/oracle/product/9iAS/1.0.2.2.2/6iserver/tools/de
ports/"
Alias /forms60demo/ "/vol/oracle/product/9iAS/1.0.2.2.2/6iserver/tools/de
Alias /web_qt/ "/vol/oracle/product/9iAS/1.0.2.2.2/6iserver/doc60/ad
US/"

```

### **Reminder: Restart Apache after making Configuration File Changes.**

### **Step 3: Configure Apache's JServ for Forms Servlets**

Make the following changes to the respective configuration files entries.

#### **`$ORACLE_HOME/Apache/Jserv/etc/jserv.properties:`**

```

#Forms Servlet
wrapper.classpath=/vol/oracle/product/9iAS/1.0.2.2.2/6iserver/forms60/java/f6
wrapper.path=/vol/oracle/product/9iAS/1.0.2.2.2/bin:/vol/oracle/product/9iAS/
wrapper.env=PATH=/vol/oracle/product/9iAS/1.0.2.2.2/bin:/vol/oracle/product/9
# Required for Forms and Report Servlets alike
wrapper.env=LD_LIBRARY_PATH=/vol/oracle/product/9iAS/1.0.2.2.2/lib:/vol/oracl
0.2.2.2/6iserver/lib
wrapper.env=ORACLE_HOME=/vol/oracle/product/9iAS/1.0.2.2.2/6iserver
wrapper.env=FORMS60_PATH=/vol/oracle/product/9iAS/1.0.2.2.2/6iserver/forms60
# Report Servlet Configuration
wrapper.classpath=/vol/oracle/product/9iAS/1.0.2.2.2/Apache/Jserv/servlets
# Reports also uses the ORACLE_HOME environment variable set above for Forms

```

#### **`$ORACLE_HOME/Apache/Jserv/etc/zone.properties:`**

```

# default repository location
repositories=/vol/oracle/product/9iAS/1.0.2.2.2/Apache/Jserv/servlets
# add it for Forms Servlets
repositories=/vol/oracle/product/9iAS/1.0.2.2.2/6iserver/forms60/java/f60srv.

# Forms Servlet Configuration
servlets.startup=f60servlet,f60listener
servlet.f60servlet.code=oracle.forms.servlet.FormsServlet
servlet.f60listener.code=oracle.forms.servlet.ListenerServlet
servlet.f60servlet.initArgs=configFileName=/vol/oracle/product/9iAS/1.0.2.2.2
# Reports Servlet Configuration
servlet.RWServlet.code=oracle.reports.rwsgi.RWServlet

```

### **Step 4: Edit Forms 6i Server Configuration Files**

#### **`$DEV6i_HOME/forms60/server/formsweb.cfg:`**

The Following Parameters may need to be Changed after Install:

- serverURL: Full URL to ListenerServlet
- jinit\_download\_page: Virtual Path to your JInitiator Download Page
- serverPort: Make sure this is the same port that you plan on starting the Forms Server on
- serverHost: DNS-Resolvable Server name of the Machine
- connectMode (socket | http | https): Make sure that this is set to the same Mode you plan on st
- archive, archive\_jini, archive\_ie: Specifies Java Archives for Forms Functions

```

archive_jini=f60all_jinit.jar
serverURL=http://dromi.oit.pdx.edu/servlet/oracle.forms.servlet.ListenerServlet
; Parameters for JInitiator
; Page displayed to Netscape users to allow them to download JInitiator.
; If you create your own version, set this parameter to point to it.
jinit_download_page=/jinitiator/us/jinit_download.htm
; Parameters related to the version of JInitiator.
jinit_classid=
clsid:ff348b6e-fd21-11d4-a3f0-00c04fa32518jinit_exename=jinit.exe#Version=
1,1,8,7jinit_mimetype=application/x-jinit-applet;version=1.1.8.7
; Forms Web CGI Configuration File
; -----
; This file defines parameter values used by the Forms Web CGI

; *****
; PARAMETER VALUES USED BY DEFAULT
; *****
; SYSTEM PARAMETERS
; -----
; These have fixed names and give information required by the Forms
; Web CGI in order to function. They cannot be specified in the URL query
; string. But they can be overridden in a named configuration (see below).
baseHTML=%ORACLE_HOME%/forms60/server/base.htm
baseHTMLJInitiator=%ORACLE_HOME%/forms60/server/basejini.htm
HTMLdelimiter=%
;MetricsServerPort=9021
;MetricsServerErrorURL=
; The next parameter specifies how to execute the Forms applet under
; Microsoft Internet Explorer 5.0. Put IE50=native if you want the
; Forms applet to run in the browser's native JVM.
IE50=

JInitiator ; USER PARAMETERS ; ----- ; These match variables (e.g.
in the baseHTML file. Their values ; may be overridden by specifying
them in theURLquerystring;(e.g."http://myhost.mydomain.com/ifcgi60.exe?form=m
; or by overriding them in a specific, named configuration (see below)

; 1) Runform arguments:
form=test.fmx
userid=bob/bob@BONZI
otherparams=

; 2) HTML page title, attributes for the BODY tag, and HTML to add before and
; after the form:
pageTitle=Oracle Forms Server
HTMLbodyAttrs=
HTMLbeforeForm=
HTMLafterForm=

```

```

; 3) Values for the Forms applet parameters:
width=650
height=500
separateFrame=false
splashScreen=no
; select default background by not specifying a value
background=
lookAndFeel=Oracle
colorScheme=teal
serverApp=default
serverPort=9001
serverHost=dromi.oit.pdx.edu
connectMode=http
archive=f60web.jar
archive_ie=f60all.cab

; *****
; SPECIFIC CONFIGURATIONS
; *****
; Application-specific Entries Below...

```

### **\$DEV6i\_HOME/forms60\_server:**

This Script Starts up the Forms\_Server and Sets up its Environment

The Following Variables/Parameters may need to be Changed after Install:

- ORACLE\_HOME: Should be Set to the 6i Server (a.k.a DEV6i\_HOME)
- FORMS60\_MAPPING: Modify this to a Virtual Path Defined in the 6iserver.conf file. This w when you deploy your Application
- mode: Change the mode argument in all relevant Forms Exectuable calls to be the same as tha
- port: Change the port argument in all relevant Forms Exectuable calls to be the same as that s

```

#!/bin/sh
## Startup script for Forms Server
## Refer to Install Doc for more detail on each of these environment variable

if [ "$1" ]
then
    case $1 in
        start)    action=$1
                ;;
        stop)     action=$1
                ;;
        ouistart) action=$1
                ;;
        *)        echo "`basename $0`: incorrect action specified"
                echo "Usage: `basename $0` { start | stop } "
                exit 1
    esac
    shift
else
    echo "`basename $0`: no action specified"
    echo "Usage: `basename $0` { start | stop } "

```

```

    exit 1
fi

ORACLE_HOME=/vol/oracle/product/9iAS/1.0.2.2.2/6iserver; export ORACLE_HOME

## If you need more than one directory in your path, all directories should
## separated by ':'
PATH=$ORACLE_HOME/bin:"$PATH"; export PATH
LD_LIBRARY_PATH=$ORACLE_HOME/lib:/usr/openwin/lib:/usr/dt/lib:$ORACLE_HOME/ne

## You may need to set TWO_TASK or ORACLE_SID to connect to database
#TWO_TASK=; export TWO_TASK
#ORACLE_SID=; export ORACLE_SID

## setting for Forms runtime
# Forms Server looks in FORMS60_PATH for Forms to run
FORMS60_PATH=$ORACLE_HOME/forms60:"$FORMS60_PATH"; export FORMS60_PATH
FORMS60_OUTPUT=$ORACLE_HOME/tools/web60/temp; export FORMS60_OUTPUT
FORMS60_MAPPING=http://localhost:80/dev60temp; export FORMS60_MAPPING
#FORMS60_MAPPING=http://localhost:80; export FORMS60_MAPPING
FORMS60_REPFORMAT=html; export FORMS60_REPFORMAT

## Need to have PRINTER or ORACLE_PRINTER or REPORTS60_NO_DUMMY_PRINTER
# set if Forms will run a Report via RUN_PRODUCT
if [ "$PRINTER" = "" ]
then
    if [ "$ORACLE_PRINTER" = "" ]
    then
        REPORTS60_NO_DUMMY_PRINTER=; export REPORTS60_NO_DUMMY_PRINTER
    fi
fi

REPORTS60_PATH=$ORACLE_HOME/reports60/admin/templates:$ORACLE_HOME/tools/devd

## settings for Forms SSL mode

# If you're using the Forms Server in SSL (https) mode, uncomment
# the line starting with FORMS60_WALLET by removing the pound sign.
# Then replace the string <your wallet directory> with the
# name of the directory where you stored the wallet you created
# with Oracle Wallet Manager

# FORMS60_WALLET=/vol/oracle/product/9iAS/1.0.2.2.2/6iserver/forms60/wallet;

# This setting affects the domestic (United States) version of the Forms Serv
# when it is run in SSL (https) mode.  If FORMS60_HTTPS_NEGOTIATE_DOWN
# is true, the domestic version of the Forms Server will allow clients
# with export level security to connect.  If FORMS60_HTTPS_NEGOTIATE_DOWN
# is false, the domestic Forms server will refuse connections from
# client with export level security.  The default is false.
# The setting has no effect on the export version of Forms Server.

# FORMS60_HTTPS_NEGOTIATE_DOWN=false; export FORMS60_HTTPS_NEGOTIATE_DOWN

#Change Port 9001 to formsPortNumber
#echo "\nStopping Forms Server processes on port 9001"
#echodo f60ctl stop port=9001 mode=socket $*
```

```

echo "\nStopping Forms Server processes on user defined port number(default v.
echodo f60ctl stop port=9001 mode=http $*

#Change Port 9001 to formsPortNumber
#if [ "$action" = "start" ]
#then
#echo "\nStarting Forms Server processes on port 9001"
#echodo f60ctl start port=9001 mode=socket $*
#fi

#if [ "$action" = "ouistart" ]
#then
#echo "\nStarting Forms Server processes on port 9001"
#echo f60ctl start port=9001 mode=socket $*
#fi

if [ "$action" = "start" ]
then
echo "\nStarting Forms Server processes on user defined port number(default v.
echodo f60ctl start port=9001 mode=https log=/vol/oracle/logs/oracle_forms.lo
fi

if [ "$action" = "ouistart" ]
then
echo "\nStarting Forms Server processes on port 9001"
echo f60ctl start port=9001 mode=http $*
fi

# Stop load balancing server
# echo "\nStopping load balancing server..."

# pid=`ps -Af | grep d2ls60 | grep "9011 9021" | awk '{print $2}'`

# if [ "$pid" ]
# then
#     echodo kill -9 $pid
#     echo "Load balancing server stopped."
# else
#     echo "Could not find a running instance of load balancing server"
# fi

# if [ "$action" = "start" ]
# then
# Start load balancing server
# echo "\nStarting load balancing server..."
# echodo d2ls60 9011 9021 &
# echo "Load balancing server started."
# fi

# if [ "$action" = "ouistart" ]
# then
# Start load balancing server
# echo "\nStarting load balancing server..."
# echo d2ls60 9011 9021
# echo "Load balancing server started."
# fi

```

```

# Stop load balancing client
# echo "\nStopping load balancing client..."

# pid=`ps -Af | grep d2lc60 | grep "localhost 9011" | awk '{print $2}'`

# if [ "$pid" ]
# then
#   echo kill -9 $pid
#   echo "Load balancing client stopped."
# else
#   echo "Could not find a running instance of load balancing client"
# fi

# if [ "$action" = "start" ]
# then
#   Start load balancing client
#   echo "\nStarting load balancing client..."
#   echo d2lc60 localhost 9011 0 1 f60webm &
#   sleep 2
#   echo "Load balancing client started."
# fi

# if [ "$action" = "ouistart" ]
# then
#   Start load balancing client
#   echo "\nStarting load balancing client..."
#   echo d2lc60 localhost 9011 0 1 f60webm
#   sleep 2
#   echo "Load balancing client started."
# fi

if [ "$action" = "ouistart" ]
then
# Need to close off file descriptors for OUI config tool to work properly
# See bug 1182560 for details
exec 1>/vol/oracle/product/9iAS/1.0.2.2.2/install/forms60_server.log 2>&1 0<&
#f60ctl start port=9001 mode=socket $*
f60ctl start port=9001 mode=http $*

# d2ls60 9011 9021 &
# d2lc60 localhost 9011 0 1 f60webm &
fi

exit 0

```

## Step 5: Start Forms Services

I start the Forms Server with a Script outside the ORACLE\_HOME. Make sure that you have re:

```

oracle:493:/vol/oracle/admin >more maintain_forms.sh
#!/bin/bash
# Set The Developer 6i Home
DEV6i_HOME=/vol/oracle/product/9iAS/1.0.2.2.2/6iserver
if [ "$1" ]
then
  echo `date` >> /vol/oracle/logs/oracle_forms.log
  ${DEV6i_HOME}/forms60_server $1 >> /vol/oracle/logs/oracle_forms.log
else
  echo ""Usage: `basename $0` start | stop ""

```

```
fi
```

```
oracle:494:/vol/oracle/admin >./maintain_forms.sh start
oracle:496:/vol/oracle/admin >tail ../logs/oracle_forms.log
Developer:Forms/LogRecord
```

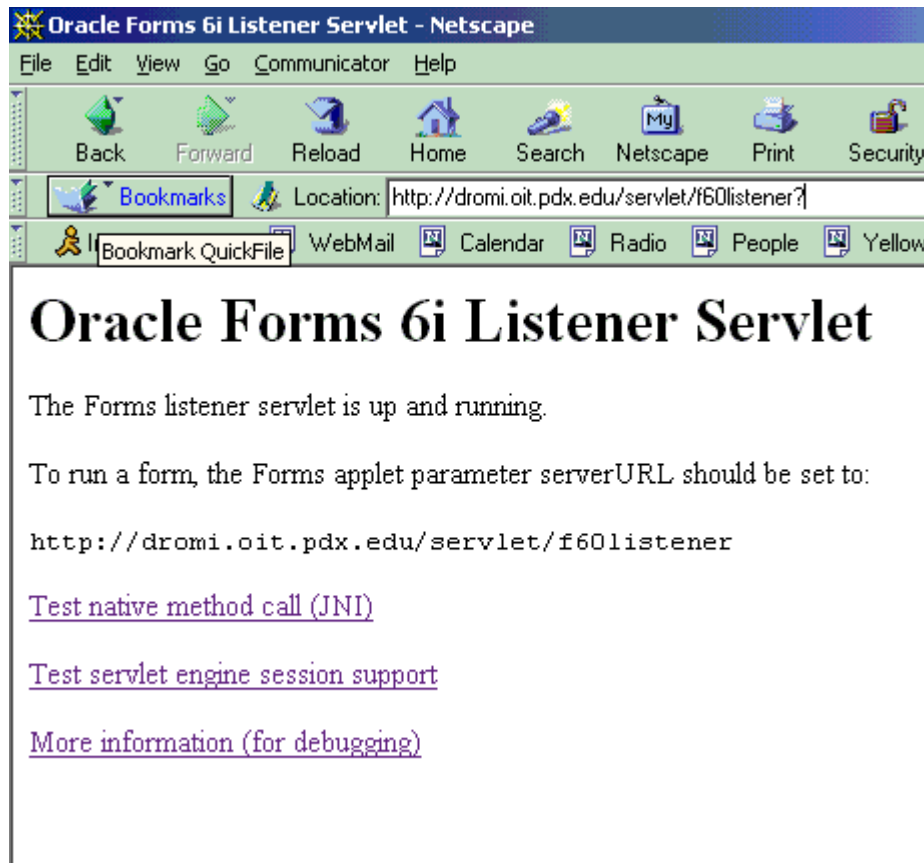
```
[Tue May 27 13:45:41 2003 PDT]::Server Start-up Data:
      Server Log Filename: /vol/oracle/logs/oracle_forms.log
      Server Hostname: dromi.oit.pdx.edu
      Server Port: 9001
      Server Pool: 1
      Server Process Id: 10813
```

```
Forms listener started on port 9001.
oracle:499:/vol/oracle/admin >ps -ef | grep f60
oracle 10815 10813 0 13:45:41 pts/1 0:00 f60webm webfile=HTTPS5,0,PID1081
oracle 10813 1 0 13:45:41 pts/1 0:00 f60srvm port=9001 pool=1 log=/vo
oracle 10826 9369 0 13:48:06 pts/1 0:00 grep f60
```

## Step 6: Test Services

### Listener Servlet:

`http://<localhost>:<port>/servlet/f60listener?`

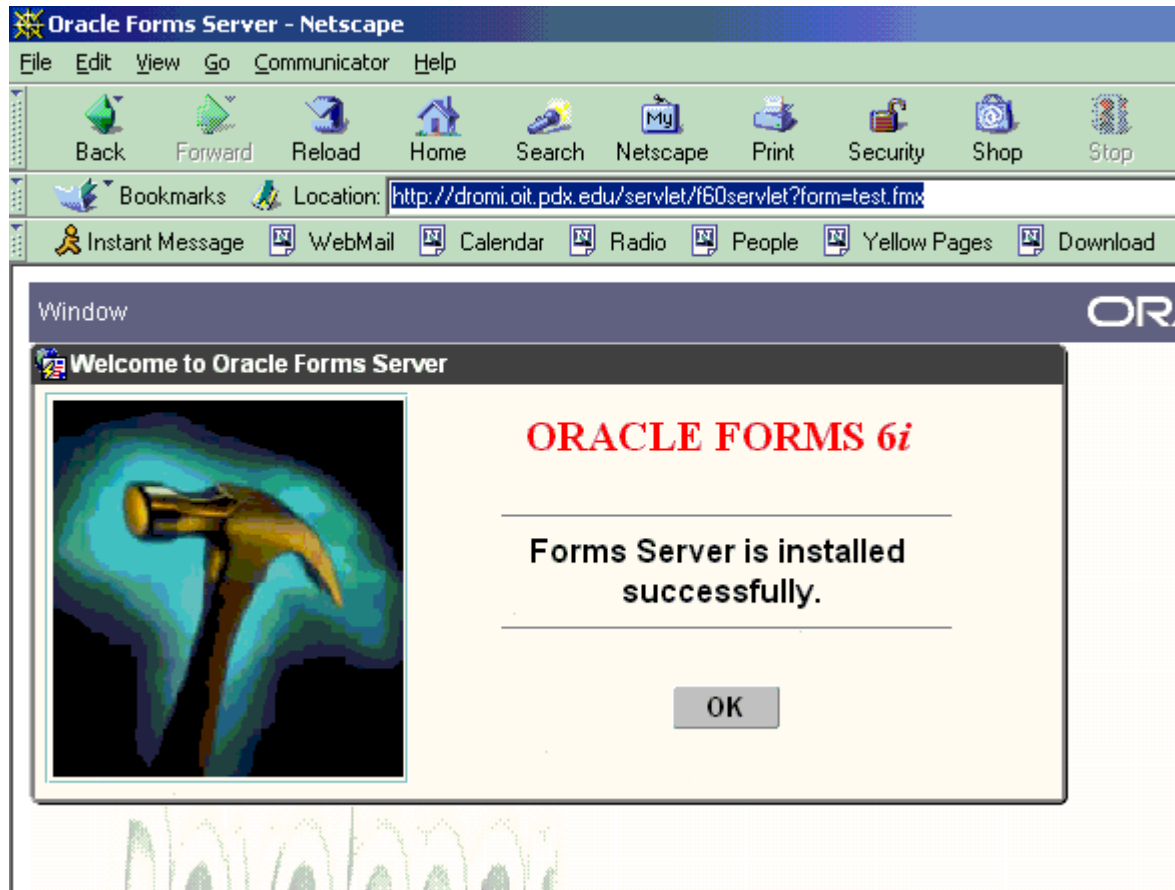


Make sure all Test Links Work

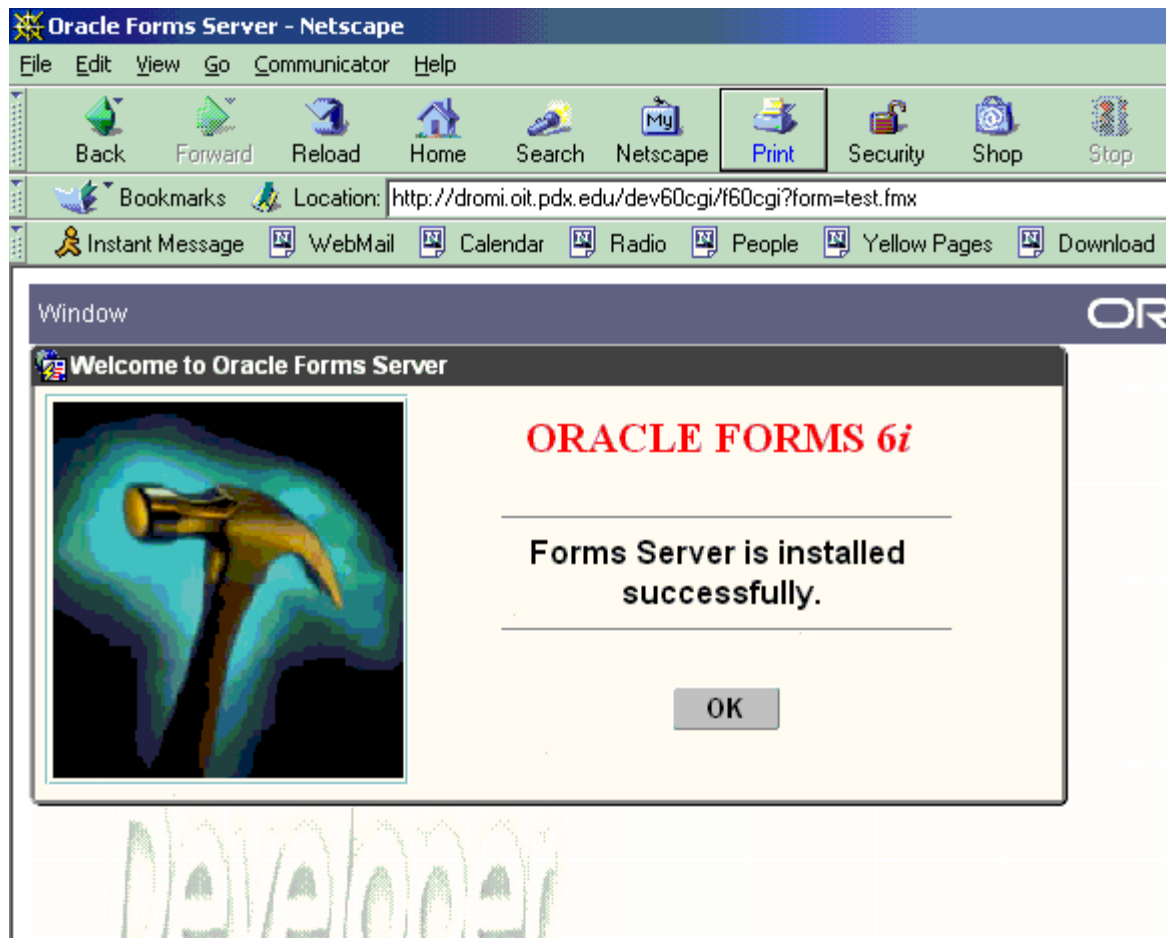


**Forms Servlet Implementation:**

<http://<localhost>:<port>/servlet/f60servlet?form=test.fmx>

**Forms CGI Implementation:**

<http://<localhost>:<port>/dev60cgi/f60cgi?form=text.fmx>



### Step 7: SSL-Enable Oracle Forms Services

To SSL-Enable Oracle Forms, a Certificate is needed

#### Creating the "Back-end" Certificate

Launch the Oracle Wallet Manager (OWM) from the command line:

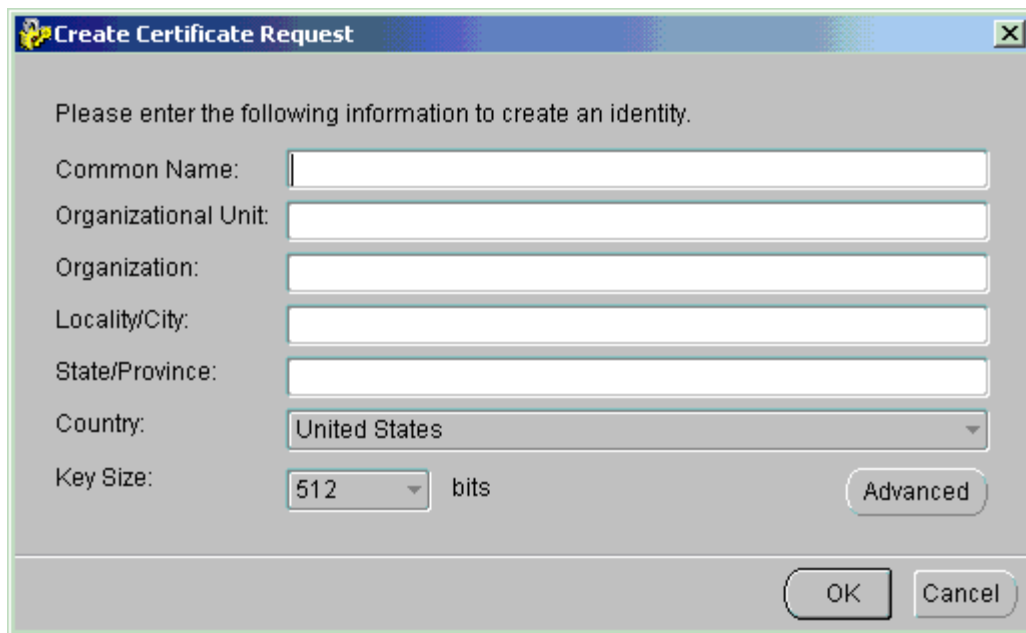
```
$IAS_HOME/bin/owm
```

The Oracle Wallet Manager should appear:



If you have not yet created a Wallet: Navigate to *Wallet >>New*. Choose a Wallet Location. Enter. Choose not to Create a Certificate Request when Prompted.

Otherwise, Navigate to *Wallet >> Open*. Choose the Wallet from which you would like to Issue. Issue the Certificate Request by Navigating to *Operations >> Add Certificate Request*:



Please enter the following information to create an identity.

Common Name:

Organizational Unit:

Organization:

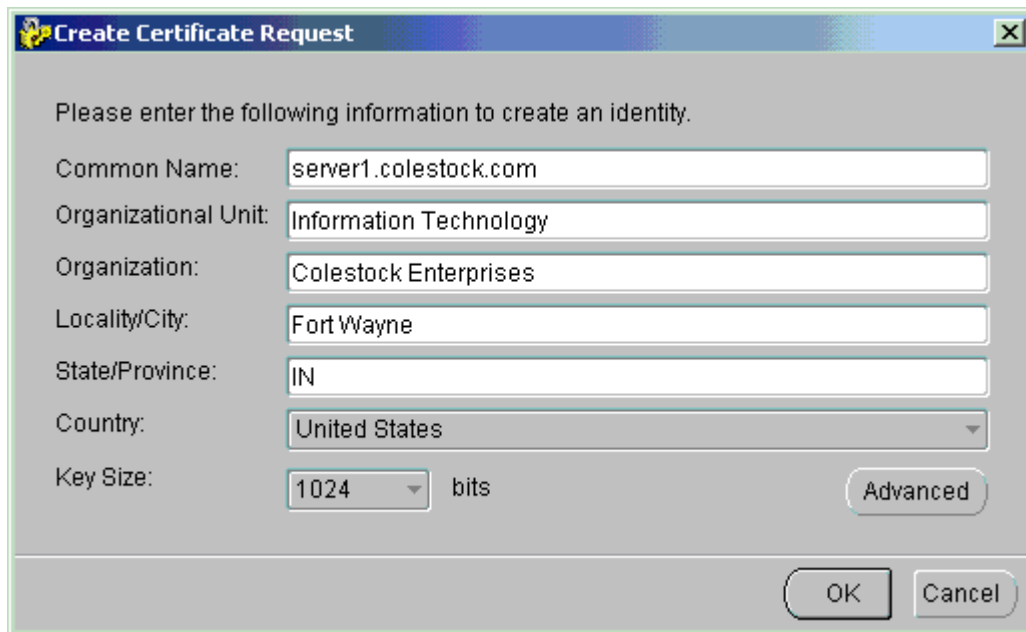
Locality/City:

State/Province:

Country:

Key Size:  bits

Enter values as appropriate, then press OK:



Please enter the following information to create an identity.

Common Name:

Organizational Unit:

Organization:

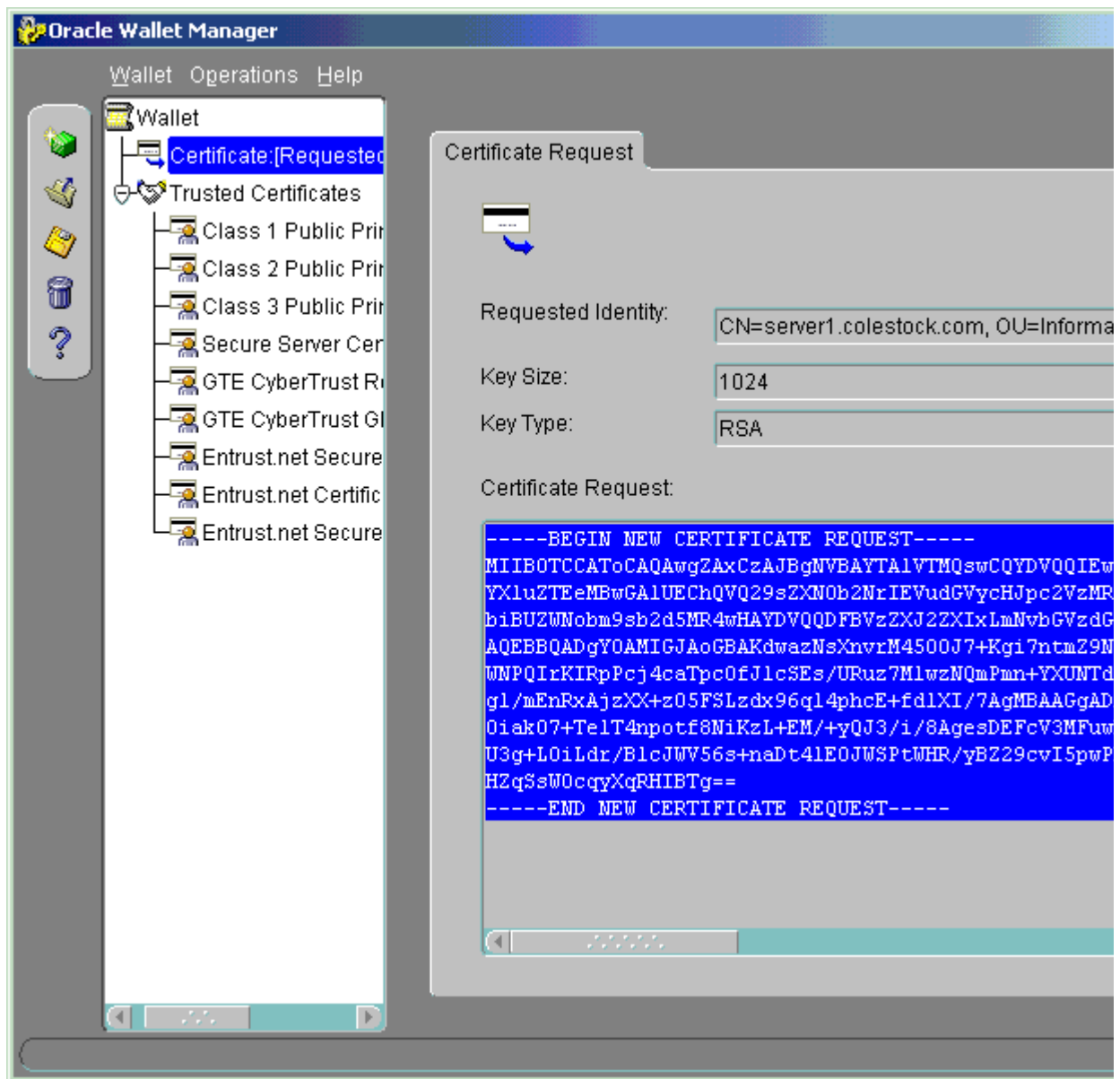
Locality/City:

State/Province:

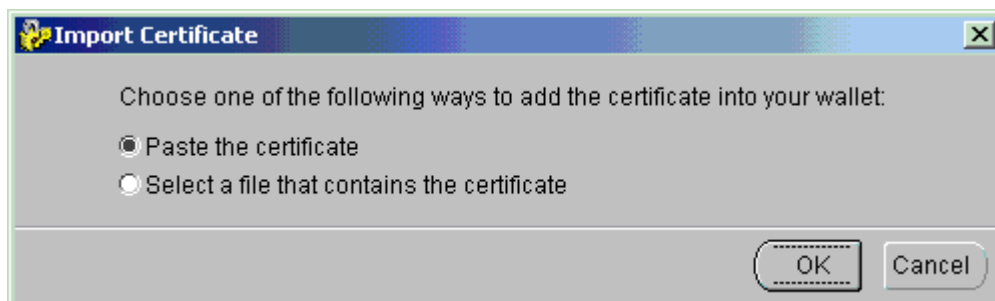
Country:

Key Size:  bits

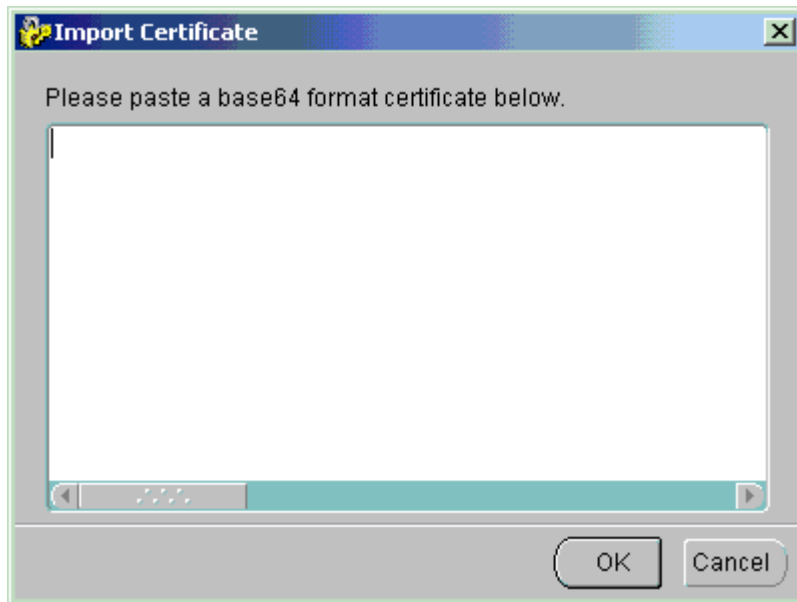
The Wallet Manager will Confirm the successful creation of the Request. You should now see a "Certificate: [Requested]" object in the left pane of the Oracle Wallet Manager. Right-click on this request. Copy the Certificate Request into a file and send this to your IT Security



Your Security Personnel should obtain a Signed Certificate and forward it to you.  
 Navigate to *Operations >> Import User Certificate*.  
 Choose whether to Cut-and-Paste or Select a File:



Select the File or Cut-and-Paste; Press OK:



Oracle will confirm successful Import.

You should now see that the left pane of the Wallet Manager now indicates "Certificate: [Ready]"

If your Certificate Authority is not an Authority trusted by default by Oracle's JInitiator then per:

Navigate to *Operations >> Export All Trusted Certificates*. Create the file generated as certdb.txt  
All Clients using the JInitiator will have to replace the existing certdb.txt file with this one in the  
Failing to do so will result in an Error accessing Oracle Forms via HTTPS (eg "SSL Handshake

### **Configuration Changes to the Forms Server:**

Alter \$DEV6i\_HOME/forms60\_server file to reflect:

```
FORMS60_WALLET=<Location of your Wallet> export FORMS60_WALLET
FORMS60_HTTPS_NEGOTIATE_DOWN=false; export FORMS60_HTTPS_NEGOTIATE_DOWN
```

Also change the argument "mode" in all calls to f60ctl in the script to reflect: mode=https

Alter \$DEV6i\_HOME/forms60/server/formsweb.cfg file to reflect:

```
connectMode=https
```

### **SSL Enable Apache:**

Apache also needs to be SSL-Enabled. If this is not already done, this would be a good time. Asl  
that reflects the host name/virtual host that corresponds to your service.

Afterwards, configure Apache as appropriate. The most basic configuration in the \$IAS\_HOME

```
<IfDefine SSL>
  Listen 443
</IfDefine>
```

```
<VirtualHost <your virtual host here>:443>  
  SSLEngine On  
  SSLCertificateFile <path to cert file>  
  SSLCertificateKeyFile <path to cert key file>  
</VirtualHost>
```

**Step 8: Patch Forms to Desired Patchset Version****Step 9: Deploy Your Application**