



Using LoadRunner with Oracle Applications Release 12

The Challenge

We recently load tested our first Oracle R12 release (Sales and Service modules for a nationwide provider of fire and safety equipment). The company was upgrading to R12 from 11.5.8 largely for performance reasons.

We knew we'd be "cutting new ground" with LoadRunner on R12. This became evident with our first test-record-and-playback, which failed even after finding and fixing all the missing correlations. We filed an SR with HP (SR# 9847270), and with their initial help, step by step we overcame all the nuances of coaxing vugen to record successfully, and then creatively working around its inability to recognize the full set of identifiers for a new java ITEM_TREE object.

This Practical Solution describes the challenges we encountered and how we overcame them. See the Technical Issues and Solutions section for the gory details.

[By the way, we used both LR 8.1.4 and 9.1 – both worked successfully, and scripts recorded in one version were runnable in the other].

Before You Start

As with 11i, remember that you must expose "Oracle Developer Names*" on the instance before recording. There's an HP technote on this, but here are the steps:

1. Launch Oracle, log in with Administrator privs, and select System Administrator responsibility
2. Select Navigator/Profile/System
3. Within the Find System Profile Values form:
 - a. Check the Display: Site
 - b. Enter Profile = ICX: Forms Launcher
 - c. Press the Find button
 - d. Update the site value by appending "?play=&record=names" at the end of the site level URL
4. Save your transaction.

* Failure to do this will result in generic field names that make scripting much more difficult and harder to maintain.

Lessons Learned

- HP Support can help!
- Oracle Metalink documents provide good info on R12 architecture and configuration
- If VUGen stumbles on a new object, try the QTP Object Spy.
- R12 can be installed in two distinct communication modes; make sure it's in the more efficient "socket mode" before you begin scripting.
- Porting scripts is a pretty common requirement – save crucial time at "show time" by parameterizing the instance-specific values up-front.



Technical Issues and Solutions

Issue: Determine if Oracle Forms communication should be configured in “**socket mode**”

In R12 the communication between the Forms java client and the Forms 10g server is by default configured in **servlet mode**. While this is the recommended deployment model for web forms, servlet mode is more bandwidth intensive and has a higher resource footprint on the JVMs.

Scripts recorded in servlet-mode are quite different than socket-mode. Failure to configure socket-level before script development will result in substantial script development rework. **Socket mode** allows desktop clients to access the Forms Server directly, by-passing the Apache web server. The key advantage of **servlet mode** is better load balancing across multiple app servers.

Three examples of script differences:

Statement in “servlet” mode	Equivalent statement in “socket” mode
web_url("frmservlet",...	None; this statement is no longer present
web_url("/lservlet;jsessionid=...	None; this statement is no longer present
nca_connect_server("{url}", "9097",...	nca_connect_server("{url}", "8007",...<note different port number>

Practical Solution:

Have your Oracle Systems Administrator assess your customer’s needs and point him to Oracle Metalink Document ID **384241.1**. If appropriate for this installation, have the system reconfigured in socket-mode before any serious script development.

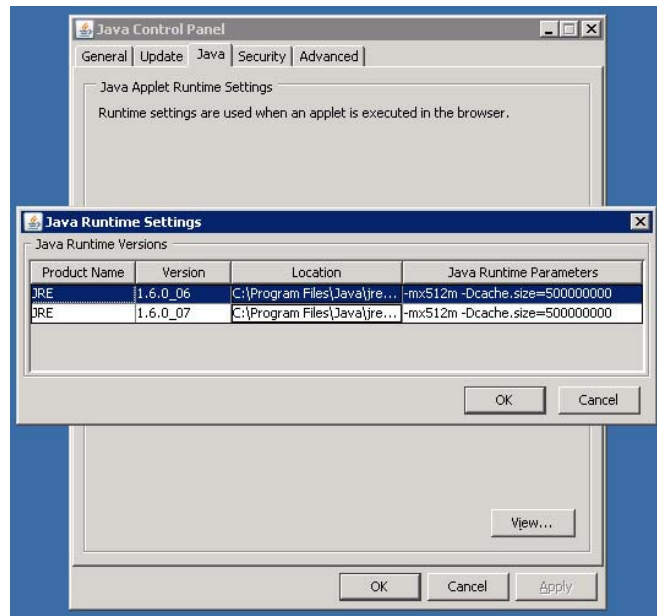
Issue: Java Runtime version and memory setting

Oracle R12 now loads the JInitiator file (runtime program for executing the Oracle java applet) from the Java JRE, instead of downloading it during the Oracle initialization process or installing it on your PC separately. Also, Forms 10g needs more desktop memory than Forms 6 to perform reasonably.

Practical Solution:

Upgrade the Java JRE to version 1.0.0_05 or later. Moreover, allocate at least 512 MB of memory, using the Java Control Panel, and add the parameter:

`-mx512m -Dcache.size=500000000.`





Issue: The correlation of ncx_ticket is different from 11i

In 11i, the correlation rule to correlate the key Oracle Forms session id, ncx_ticket, yields a web_reg_save_param statement with these left and right boundaries:

```
web_reg_save_param("p_ICX_Ticket", "LB=icx_ticket=", "RB=",LAST);
```

In R12, a new suffix appears on the LB and there is a new RB:

```
web_reg_save_param("p_ICX_Ticket", "LB=icx_ticket&gv15=", "RB=..&",LAST);
```

Practical Solution:

In the Recording Settings, modify the OracleApps 'icx' correlation rule with the above LB and RB to enable vugen to properly correlate icx_ticket automatically.

Issue: Playback failure on nca_object_action statements

Following the nca_connect statement there are two statements of this form:

```
nca_java_action("SR_DUP_GRID_DUP_GRID_0",...)
```

On playback, the script invariably fails at the first of these.

Practical Solution:

In each script directory, open the default.cfg file and in the [NCA_GENERAL] section add this line:

```
NCATimerWaitMode=0
```

Playback will now successfully process nca_object_action statements.

Issue: Failure to recognize certain new java objects on record

QTP has issues recording an R12 object called an ITEM TREE which was a list of expandable items that look like this:

```
+40907824  ITEM1  
+40907839  ITEM2
```

The following statements resulted after selecting an item during recording, but these would not play back:

```
nca_tree_select_item("ITEMTREE_ITEMTREE_0", "40907824  ITEM1  ");  
nca_tree_activate_item("ITEMTREE_ITEMTREE_0", "40907824  ITEM1  ");
```

If you encounter this object, or any other new object that vugen has trouble with, this tip may get you around the recording limitation.



Practical Solution:

We used QuickTest Pro's ObjectSpy to examine the ITEM TREE object and found that each menu item had a reference number that is selectable and plays back correctly. We then modified the VUgen code with the correct reference numbers:

```
nca_tree_select_item("ITEMTREE_ITEMTREE_0", "409");  
nca_tree_activate_item("ITEMTREE_ITEMTREE_0", "409");
```

This reference number is listed in the detail log files if you look carefully but they were not obvious during recording, but we recommend using ObjectSpy if you encounter any other objects that VUgen doesn't handle correctly.

Issue: Porting scripts between environments

A common situation is that you must develop scripts in one environment but conduct testing in another. This requires that your scripts be portable across environments.

Practical Solution:

There are several values that need to be parameterized in order to make your scripts portable. Parameterize and test these as early as possible to avoid frantic porting at test execution time!

The values to parameterize are:

1. Base url or app server ip
2. Web server port number which you initially connect to for login authentication
3. Forms server port number, which the nca_connect uses to connect to the Forms server
4. Configuration ("config" value in nca_connect)
5. Module (second 'path' value in nca_connect)

Examples of where these are used:

```
/*initial Oracle launch*/  
web_browser("ebsr12.com:9097",  
            DESCRIPTION,  
            ACTION,  
            "Navigate=http://{app_srv}:{port_web}/",  
            LAST);
```

```
/*Forms server connect*/  
nca_connect_server("{app_srv}", "{port_forms}",  
                  "module=/ebstop/{module}/apps/apps_st/appl/fnd/12.0.0/forms/US/FNDSCSGN fndnam=APPS  
record=names config='{config}' icx_ticket='{p_ICX_Ticket}..''  
resp='AR/CAN_CUSTOMER_MASTER_ADMIN' ...");
```

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