

# Oracle Applications NCA User Identification

Author: Andy Rivenes

Copyright AppsDBA Consulting, all rights reserved

Last Updated: 24 August, 1999

## 1. Overview

This paper will outline the steps involved in identifying users connected to an Oracle Applications database through the NCA application layer. In previous environments (e.g. character and SmartClient) it was a relatively straight forward process to map a client machine to an Oracle Applications user. The "Monitor Users" screen was even made available so this could be accomplished from within Oracle Applications. Unfortunately there is no direct way to accomplish this in an NCA environment since the database only understands the form connection (e.g. this is the same as SmartClient was, but now the form connection occurs on the application server and not the client desktop).

The missing piece in an NCA environment is the ability to map a browser connection to the forms process running on an application server. Oracle however, does provide the ability to do this through the forms server log file. If enabled, the log file records the IP address of the browser establishing the connection with the forms server. The following sections will detail the setup required to enable this feature, the SQL scripts that can be run to display the Oracle Applications level connection, the use of this information to interpret the forms server log, and some of the limitations that exist.

## 2. Setup

### 2.1 Forms Server

The setup involves enabling the forms server log with the "log=" parameter when the forms server is started.

Example:

```
$_ORACLE_HOME/bin/f45srvm port=9000 log=/u01/app/oracle/admin/f45srv.log &
```

### 2.2 SQL Scripts

The following SQL scripts will query session information about connected users:

1. fndusmap.sql - maps Oracle Applications session information, similar to the Monitor Users screen.
2. session\_info.sql - maps Oracle Server session information.

See Appendix A for the source for both of these scripts.

## 3. Identification

### 3.1 Overview

The following sections will detail the connection process and then show an example session identification. A real example will be used for a Release 10.7 NCA system with the application server running on NT and the database tier running on UNIX.

### 3.2 Connection Overview

In NCA a web browser or appletviewer establishes a connection with the web server. The web server then sends an HTML file back to the browser with a call to start a Java based Forms Client Applet. If the applet is already cached it is started, otherwise it is downloaded from the web server in the form of a .jar file. The Forms Client Applet then requests a connection to the Forms Server Listener which starts a new Forms

Runtime process. The Forms Runtime process then runs the initial FNDSCSGN form (e.g. the signon screen) and establishes a normal database connection through SQL\*Net.

An entry is made in the forms server log file when the database connection is established time stamping the client IP address, forms server connection ID, and database process ID. When the connection is terminated a final entry is also made.

The database contains session information and client info about the form connection on the application server. There is no concept of the browser as a "connection" as far as the database or Oracle Applications is concerned.

### **3.3 Client Browser Identification**

The **Apps** section shows a user connection to Oracle Applications as the user ARIVENES. Additional information about the database server process ids is shown next and then the key column is the "Client Process". This information provides the connection to the forms server.

The **Forms Server** section shows a small section of the log file with the information we are interested in. The best way to find these lines is to use "grep" on UNIX or search in some text editor the log file for the PID number from the first half of the "Client Process" field. These lines show us that the client in question connected at 11:31:07 on 11/23/98 with a connect id of 10 and a PID of 46. By looking back one line we see that connect id 10 requested connection to the forms server at 11:31:03 from IP address xxx.xxx.20.25. This maps back to my PC.

### 3.4 Database Information

**Apps:**

```

User Name      Application Responsibility Form      Oracle Server      Client      Client      Client
Process        Process        Process        Process        Process        Process        Process
-----        -----        -----        -----        -----        -----        -----
ARIVENES      100 INACTIVE DEDICATED APPS      100 27548      Oracle      46:101      NT\NTS007      e:\orant\bin\f45web32.exe

```

**v\$session:**

```
SQL> @\oradba\sql\sess_info
```

```

Oracle
User Name      Process Status      Server      DB User      Server      Client
Process        -----        -----        -----        -----        -----        -----
APPS           100 INACTIVE DEDICATED APPS           oracle      27548      Oracle

Client      Client
Process      Machine
-----      -----
46:101      NT\NTS007      Terminal      Program
-----      -----
46:101      NT\NTS007      e:\orant\bin\f45web32.exe

```

### 3.5 Forms Server Log

**Forms Server:**

```

[11/23/98 11:31:03 ]::Connection Request [ConnId=10, Addr=xxx.xxx.20.25:23568]
[11/23/98 11:31:07 ]::Client Connected [ConnId=10, PID=46]

```

<some period of time>

```
[11/23/98 11:33:53 ]::Client Disconnected [ConnId=10, PID=46]
```

SmartClient - Check

```
SQL> @fndusrmap
```

```

User Name      Application Responsibility Form      Oracle Server      Client      Client      Client
Process        Process        Process        Process        Process        Process        Process
-----        -----        -----        -----        -----        -----        -----
ARIVENES      73 8499      OraUser      13551:01      xxx.xxx.20.25      D:\ORAWIN\BIN\F45RUN.EXE

```

SQL> @sessinfo

User Name	Oracle Process Status	Server	DB User	Server OS User	Server Process	Client OS User
Client Process Machine	Terminal	Program				
APPS 13551:01 xxx.xxx.20.25	73 INACTIVE DEDICATED APPS Windows PC D:\ORAWIN\BIN\F45RUN.EXE			oracle	8499	OraUser

## 4. Summary

To summarize, the IP address of the browser connection can be found through the use of the Forms Server log file. This requires mapping the database user's session information to find the forms server connection id. There are at least two limitations:

1. DHCP may make tracing the IP address back to the desktop difficult.
2. If more than one forms server is being used, then all logs will have to be searched until the connection id is found. This id may not be unique.

## 5. Appendix A - SQL Scripts

### 5.1 fndusrmap.sql

```
-- FILE:      fndusrmap.sql
--
-- DESCRIPTION:
--           This script will map Oracle Application users currently logged on
--           to the system.
--
-- AUTHOR:    Andy Rivenes, arivenes@appsdba.com, www.appsdba.com
--
-- DATE:      11/06/98
--
-- REQUIREMENTS:
--
-- MODIFICATIONS:
--
--
SET PAGESIZE 9999;
SET VERIFY off;
SET FEEDBACK off;
SET LINESIZE 132;
--
-- ACCEPT reqid CHAR PROMPT 'Enter Request ID --> ';
--
COLUMN uname          HEADING 'User Name'          FORMAT A12;
COLUMN shrtnam        HEADING 'Application'        FORMAT A11;
COLUMN respnam        HEADING 'Responsibility'      FORMAT A14;
COLUMN frmnam         HEADING 'Form'               FORMAT A10;
COLUMN sid            HEADING 'Oracle|Process'     FORMAT 9999999;
COLUMN spid           HEADING 'Server|Process'     FORMAT 99999999;
COLUMN suser          HEADING 'Client|OS User'     FORMAT A8;
COLUMN process        HEADING 'Client|Process'     FORMAT A8;
COLUMN smach          HEADING 'Client|Machine'     FORMAT A8;
COLUMN sprog          HEADING 'Program'            FORMAT A15   WORD_WRAPPED;
COLUMN cli            HEADING 'Client|Info'        FORMAT A15   WORD_WRAPPED;
--osuser, process, machine, program, client_info - v$session
SELECT usr.user_name uname,
       app.application_short_name shrtnam,
       resp.responsibility_name respnam,
       form_name frmnam,
       vsess.sid sid,
       vproc.spid spid,
       vsess.osuser suser,
       vsess.process process,
       vsess.machine smach,
       vsess.program sprog,
       vsess.client_info cli
FROM   applsys.fnd_logins l,
       applsys.fnd_application app,
       applsys.fnd_login_responsibilities lresp,
       applsys.fnd_login_resp_forms lform,
       applsys.fnd_responsibility resp,
       applsys.fnd_form frm,
       applsys.fnd_user usr,
```

```

        v$process vproc,
        v$session vsess
WHERE l.login_id = lresp.login_id (+)
      AND l.login_id = lform.login_id (+)
      AND app.application_id (+) = resp.application_id
      AND l.user_id = usr.user_id
      AND lresp.responsibility_id = resp.responsibility_id (+)
      AND lresp.resp_appl_id = resp.application_id (+)
      AND lform.form_id = frm.form_id (+)
      AND lform.form_appl_id = frm.application_id (+)
      AND l.end_time IS NULL
      AND lresp.end_time IS NULL
      AND lform.end_time IS NULL
      AND l.spid = vsess.process
      AND l.login_name = vsess.osuser
      AND vproc.addr = vsess.paddr (+)
/

```

## 5.2 session\_info

```

-- FILE:    sess_info.sql
--
-- AUTHOR:  Andy Rivenes, arivenes@appsdba.com, www.appsdba.com
-- DATE:    11/18/1998
--
-- DESCRIPTION:
--          Query to display session information.
--
-- REQUIREMENTS:
--
-- MODIFICATIONS:
--
COLUMN usr          HEADING 'Username'   FORMAT A20;
COLUMN sid          HEADING 'DB SID'     FORMAT 9999999;
COLUMN status      HEADING 'Status'     FORMAT A8;
COLUMN server      HEADING 'Server'     FORMAT A9;
COLUMN schema      HEADING 'Schema'     FORMAT A30;
COLUMN osuser      HEADING 'OS User'    FORMAT A15;
COLUMN process     HEADING 'Process'    FORMAT A9;
COLUMN machine     HEADING 'Machine'    FORMAT A20;
COLUMN terminal    HEADING 'Terminal'   FORMAT A10;
COLUMN program     HEADING 'Program'    FORMAT A40;
SELECT a.username usr,
       a.sid sid,
       a.status status,
       a.server server,
       a.schemaname schema,
       a.osuser osuser,
       a.process process,
       a.machine machine,
       a.terminal terminal,
       a.program program
FROM v$session a
WHERE a.type != 'BACKGROUND'
ORDER BY a.status DESC
/

```