

## Oracle Applications Release 11i Newsletter

The contents of this newsletter were contributed by **Solution Beacon** consultants who have accumulated extensive experience during the numerous installations, implementations, and upgrades of Release 11i that we have performed for our clients. Other articles are contributed by our partners and clients. We also welcome your participation in this newsletter. If you would like to contribute on any Release 11i topic, please send your contact information, topic, and a short abstract to [mweiss@solutionbeacon.com](mailto:mweiss@solutionbeacon.com).

*Mary Lou Weiss and Randy Giefer, Editors, Solution Beacon*

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### New Book: "Installing, Upgrading and Maintaining Oracle Applications 11i" is Available!

Looking for even more practical Release 11i information?

The experts at Solution Beacon and OnCallDBA collaborated to write a new book "Installing, Upgrading and Maintaining Oracle Applications 11i" or "When Old Dogs Herd Cats – Care and Feeding of 11i". The book provides in depth coverage about administering Oracle Applications Release 11i. Topics include 11i Concepts and Architecture, 11i New Administration Features, 11i Installation, Upgrading or Migrating to 11i, Maintaining 11i, Administering 11i, Setting Up the Concurrent Manager, Using the Concurrent Manager, Workflow Setup, Using Workflow Builder, Workflow Care and Feeding, and Tuning & Troubleshooting.

The book debuted at OAUG Connection Point 2003 in San Diego in September and ... during the month of November, you will receive a copy of the CD proceedings from the conference with each book order (while supplies last). Order your copy now from [www.solutionbeacon.com](http://www.solutionbeacon.com). The link is at the bottom of each webpage.

*Barbara Matthews, OnCallDBA, Karen Brownfield, John Stouffer and Randy Giefer, Solution Beacon*

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### 11.5.9 Upgrade Patch

Oracle released a new type of consolidated update patch on October 1, 2003 for customers with implementing or upgrading to E-Business Suite 11.5.9 and above: The 11.5.9 E-Business Suite Consolidated Update 1, Patch number 3126422. The Consolidated Update improves and streamlines the upgrade and maintenance processes, offering a 'one patch' update step to customers. All recommended patches for 11.5.9 will be consolidated into a single patch that is installed immediately following the 11.5.9 Maintenance Pack or Rapid Install.

The list of included patches is generated from the 11i Applications Recommended Patch List, Oracle MetaLink document, 123456.1. Customers will have the option of applying this single update or following the manual steps as outlined in the 11i Applications Recommended Patch List document to attain the latest recommended patch level. The Consolidated Update will only be created for E-Business Suite versions 11.5.9 and up; Oracle will not be releasing this type of patch for E-Business Suite versions prior to 11.5.9. The CU can be downloaded via the Patches tab on MetaLink. Also, please review the 11i Applications Recommended Patch List document 123456.1.

*John Stouffer, Solution Beacon*

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## Release 11.5.9 Document Available on MetaLink

You can now download a complete 11.5.9 doc library, or just pieces. This is available from the standard Documentation link on Metalink (Click the 'E-Business 11i' blue button on the left, then click Documentation). This opens a pop-up window link to appsnet (<http://www.oracle.com/appsnet/products/documentation/content.html>). From this page you can click on the whole CD, or the pieces you need. You will then be asked to log into OTN (Oracle Technology Network). If you are downloading in pieces, you will have to click on each individual product, which opens up a pdf file, and save the file. If you choose to download the entire CD, the standard Windows Download window opens and you can then choose Save and specify the location for the zip file. You have two choices for the CD, the original 396.3 MB version or the updated (updates or highlighted with "new" tag) 402.8 MB version.

Note: this CD only includes TRM manuals for those products where it is not available through eTRM. To download TRM's, click the 'Electronic Technical Reference Manuals (eTRMs)' link from the 'E-Business 11i' page, click 11.5.9, then click the desired option under Download Files.

*Karen Brownfield, Solution Beacon*

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## Real Application Clusters (RAC)

### Introduction

Real Application Clusters or RAC has received an intense marketing push from Oracle over the past few months. Not surprisingly, dispersal of sales information rarely translates into complete product understanding by the target audience. After speaking at a recent OAUG meeting, it was relayed to me that one manager's understanding of RAC is that it is a technology that would save money and might need to be implemented as soon as possible so the organization would start saving money right away. The Oracle RAC sales campaign left the manager with the impression RAC would save money. The point of any technology used by business should be to increase the bottom line either through increased revenue generation or decreased expenses.

However, a better understanding of RAC would help the manager make an optimal decision within the context of the company's computing requirements. The remainder of this article examines the what, why and how of RAC. What is RAC, why would an organization implement RAC, and how is RAC generally implemented.

## **What is RAC?**

Real Application clusters use 2 or more clustered computers to concurrently execute transactions against a shared database. Clustered computers are two or more connected computers managed by an operating system dependent clustering software. To illustrate how clusters could be used to horizontally increase processing power, consider an Oracle Applications Release 11i environment where some of the concurrent requests could be configured to run on one of the clustered computers while other concurrent requests could be configured to run on the other clustered computer.

RAC not only delivers the expanded scalability described above, it also provides a degree of high availability. If one of the clustered computers were to fail, the other cluster would be able to automatically continue processing. The degree of transparency of the failover depends on the application. However, at a purely SQL level, a query being executed on one of the failing clustered computers would be able to automatically failover to the other clustered node.

In a two computer clustered architecture, each computer would contain an instance of the database. The Oracle RDBMS memory footprint would reside on each computer while the data files would exist in only one location on shared disk storage. Thus, RAC is a combination of Oracle9i software, special operating system software, two or more computers and shared disk storage that provides multiple instances of a single database.

## **Why RAC?**

The [Oracle9i Real Application Clusters Concepts](#) for release 9.2 publication by Oracle (Part Number A96597-01) lists several benefits of RAC. The ones most directly related to a business case for RAC are:

- Lower Overall Cost of Ownership
- Expanded Scalability
- High Availability
- Transparency

If each of the above four benefits are requirements for an organization's computing environment, RAC would be the optimal choice. The need for each of the benefits would be the litmus test for choosing or not choosing RAC. For example, a standby database would deliver high availability. If high availability is the only requirement of the four benefits a standby database might be the best choice. However, it probably wouldn't be hard to argue that the other three benefits would be requirements for almost any computing environment and RAC would always be the superior technology when compared to a standby database except in the case of disaster recovery, unless RAC Guard (standby database) was also implemented with RAC. Below is a brief explanation of the four benefits mentioned above.

- Lower Overall Cost of Ownership
  - RAC allows the use of commodity hardware that can be expanded horizontally. In other words, multiple low cost Intel based computers running the appropriate version of LINUX can be clustered together at a cost that would be lower than a large proprietary computer.
- Expanded Scalability
  - As the demand increases for more cpu and memory, additional nodes (new intel based computers) can be added to the clustered environment.
- High Availability
  - As explained in the first section, RAC permits sql to be executed in uninterrupted fashion even if the computer initially executing the SQL fails.
- Transparency
  - This means that even though there are multiple computers, the database is accessible as one database. The clustered environment allows multiple instances of the database to appear as one database to the end user.

### How is RAC Implemented?

Implementing RAC with Release 11i can be challenging. It is extremely important that the operating system dependent software necessary for RAC is correctly installed and that specific RAC installation steps that would be unique to each platform and Release 11i version be followed with care. Shown below are the general steps that would be followed to implement Release 11i and RAC:

1. **Choose initial hardware.** Many companies size the hardware based on anticipated usage at the end of three years
2. **Implement the operating system dependent software.** This is required for some platforms and not required for other platforms. For example, Solaris would require the implementation of Sun Cluster software or Veritas Database Edition/Advanced Cluster. Intel based platforms such as LINUX and Microsoft would not require a separate installation.
3. **Install Release 11i.** If installing 11.5.9, the next 2 steps (steps 4 and 5) would be skipped.
4. **Install Oracle9i.** Recent 11i releases prior to 11.5.9 were delivered with Oracle8i. For those releases, an install of Oracle9i in a separate ORACLE HOME would be necessary.
5. **Upgrade Oracle8i that was delivered with Release 11i to Oracle9i.** The database files delivered with the Release 11i installation would be upgraded to Oracle9i in this step. Adjustments would need to be made to the ora files to support Oracle9i and to prepare for RAC.
6. **Configure RAC.** This last step in the process can vary depending on the version of Release 11i being implemented. For example, if 11.5.9 is being implemented (rather than upgraded), there would be no need to perform the preceding 2 steps. Also, if a clustered file system would be utilized, there is no need to convert the existing datafiles to raw devices. Currently, many of the popular platforms support use of clustered file systems—with some of those requiring the appropriate operating

system dependent software such as Veritas Database Edition/Advanced Cluster. However, if disk performance takes precedence over the slightly increased oracle database maintenance burden associated with raw devices, raw devices would still be utilized and the process of converting from cooked to raw files would be a significant portion of this step.

## Conclusion

This article examined the what, why and how of RAC. The essence of RAC is elimination of computing downtime with the added benefit of increased computing power on a commodity hardware platform. On a business level this will translate into either an increase in revenue generation (where computer uptime translates to additional revenue) or a decrease in expenses (where the efficiencies of computing verses manual effort translate into lower expenses). The intended outcome of RAC is identical to that of RAID, elimination of computer outages due to hardware problems. Recall that RAID addresses disk failure by utilizing redundant disks to eliminate outages caused by the loss of a single disk. RAC addresses CPU, memory and machine failure by utilizing multiple computers. On the strength of the lower overall cost of ownership benefit, RAC may well become as common as RAID.

*Kevin Dahl, Solution Beacon*

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## Using a Staged Applications System to Reduce Patching Downtime

A good reference for reducing patching downtime can be found on MetaLink Note 242480.1. The document gives a good overview, prerequisites as well as the various patching steps you should use to reduce your downtime.

*John Stouffer, Solution Beacon*

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## Oracle Network Test Form Used for Benchmarks

We have received several questions relating to the usefulness of Oracle's Network Test form tool. It is true that the form does provide somewhat limited functionality (especially if a single-node architecture is in place). The form results also do not provide true and accurate indications of network performance, as the form is not designed to be a replacement for other more robust network oriented tools. However, the form is free and can provide useful thresholds when establishing baselines for benchmarking performance. Here's how.

Execute this form and establish a baseline during: a) an idle system with no users, b) during a period of acceptable performance during a normal user load, and c) during a period of acceptable performance during a peak user load. Save these results (usually tack them to a cube wall) and compare them to the real-time output from the form when the classic

"performance is slow" support call comes in. Executing this form is just one of the many checks to be performed, but it can sometimes direct you to a problem area more rapidly.

*Randy Giefer, Solution Beacon*

## Password Management Functionality in Oracle Using Profiles (Part 1 of 2)

Oracle Applications allows you to manage your users and passwords with profiles. Here are some examples of this functionality:

### **Basic Password Functionality in Oracle**

**Account Locking.** One can manually lock a user account out of the database for any amount of time. One can also set Oracle to automatically lock a user account out of the database after they enter an incorrect password several times.

**Password Complexity Verifications.** Oracle8 and above comes with a default password complexity verification routine that checks if each password is complex enough to provide reasonable protection against the outside intruders who try to break into the system by guessing passwords. The DBA can specify alternative routines and parameters. The password verification schemes are stored in the database and gets exported/imported along with its profile definition.

**Password History.** Oracle8 and above can check a newly specified password, to ensure that it is not reused for the specified amount of time or for the specified number of password changes. So, one can specify that once a password is used, it cannot be used again in two months. The user's history table also can be exported/imported.

**Password Lifetime and Expiration.** This allows the database administrator to specify a passwords' lifetime, after which time the password expires automatically and must be changed before a login to database can be completed. On the first attempt to log in to the database account after the password expires, the user's account enters the "grace period", and a warning message is issued to the user every time he or she tries to log in until the grace period is over. The user is expected to change the password within the grace period. If the password is not changed within the grace period, then account may be locked out of the database and no further logins to that account are allowed without direct intervention by the DBA.

### **Creating Users**

The CREATE USER command sets the initial password for a user account

### **Describing User Attributes**

```
SELECT * FROM ALL_USERS
```

This will show all users, including the following information: username, user\_id, password (shown in encrypted form), the default tablespace, the temporary tablespace, the date and time that the user was created, and what profile the user is assigned to. It is the **profile** which will define the password functionality for the user account.

### ***Maintaining Restrictions via Profiles***

Restrictions on system and object resources are maintained via profiles

Some of them include: SESSION\_PER\_USER, CPU\_PER\_SESSION, CPU\_PER\_CALL, CONNECT\_TIME, IDLE\_TIME, LOGICAL\_READS\_PER\_SESSION, LOGICAL\_READS\_PER\_CALL, COMPOSITE\_LIMIT, IDLE\_TIME, and PRIVATE\_SGA.

### ***Creating Profiles***

When a user account is created, they are assigned to the DEFAULT profile (unless otherwise specified). To create a new profile, use the CREATE PROFILE command and list all restrictions along with their values.

Example: CREATE PROFILE profile\_name LIMIT SESSIONS\_PER\_USER 4;

### ***Assign a Profile to a User***

Once a profile has been created, one can associate users to the profile

ALTER USER username PROFILE profile\_name; It is through this method that different password options can be set for user accounts.

### ***Password-Related Options that can be defined for Profiles***

#### **FAILED\_LOGIN\_ATTEMPTS**

Locks account after the user enters an incorrect password for FAILED\_LOGIN\_ATTEMPTS times, cumulative.

#### **PASSWORD\_GRACE\_TIME**

Number (or fraction) of days that a user can login with an expired password until a password change occurs.

#### **PASSWORD\_LIFE\_TIME**

Number (or fraction) of days before a password expires.

#### **PASSWORD\_LOCK\_TIME**

Number (or fraction) of days that the user is locked out of the database after entering invalid passwords, greater than the number defined in FAILED\_LOGIN\_ATTEMPTS. UNLIMITED can also be specified, in which case the user is locked out of the database indefinitely until it is manually unlocked.

#### **PASSWORD\_REUSE\_MAX**

Number of times a user must change the password before it can be reused. For example, setting this to 3 requires a user must change the password to three other passwords before a password can be reused.

### **PASSWORD\_REUSE\_TIME**

Number (or fraction) of days before a password can be reused. For example, one can set this to 365 so a year must pass before you can reuse a password.

### **PASSWORD\_VERIFY\_FUNCTION**

Checks the password to see whether an intruder can easily break the password.

#### ***Default Profile Password Parameter Values***

Parameter	Default Value
FAILED_LOGIN_ATTEMPTS	3
PASSWORD_GRACE_TIME	10
PASSWORD_LIFE_TIME	60
PASSWORD_LOCK_TIME	1/1440 (1 minute)
PASSWORD_REUSE_MAX	UNLIMITED
PASSWORD_REUSE_TIME	1800
PASSWORD_VERIFY_FUNCTION	verify_function

When a user account is first created, it is assigned to the DEFAULT profile. The above seven password management options all have default values. If you do not wish to have these values, you may either change it for the DEFAULT profile or create your own customized profiles.

#### ***Creating a Sample Password Related Profile***

If you want to assign non-default password management options to user accounts, you can create a new profile. The following SQL statement below will lock a user account out of the database for one hour after failing to successfully login three times. Also, the password will automatically expire every thirty days.

```
CREATE PROFILE CUSTOM_PROFILE LIMIT
  PASSWORD_LIFE_TIME 30
  FAILED_LOGIN_ATTEMPTS 3
  PASSWORD_LOCK_TIME 1/24;
```

#### ***Password Management Options for a Profile***

The following SQL statement lists all defined password management options, along with their values for the custom profile created.

```
SELECT PROFILE, RESOURCE_NAME,
  RESOURCE_TYPE, LIMIT
FROM DBA_PROFILES
WHERE PROFILE= 'CUSTOM_PROFILE' AND
  RESOURCE_TYPE LIKE '%PASSWORD%';
```

PROFILE	RESOURCE_NAME	RESOURCE_TYPE	LIMIT
NORMAL_USERS	FAILED_LOGIN_ATTEMPTS	PASSWORD	3
NORMAL_USERS	PASSWORD_LIFE_TIME	PASSWORD	30
NORMAL_USERS	PASSWORD_REUSE_TIME	PASSWORD	DEFAULT



NORMAL_USERS	PASSWORD_VERIFY_FUNCTION	PASSWORD	DEFAULT
NORMAL_USERS	PASSWORD_LOCK_TIME	PASSWORD	.0416
NORMAL_USERS	PASSWORD_GRACE_TIME	PASSWORD	DEFAULT

**Stay tuned for more password management information on the Verify functionality in the next newsletter in December!**

*Naren Thota, Solution Beacon*

## Oracle Accounts Payables 1099 Updates

### IRS Mandated Changes for 2003

- **1096 Form:** Location of 1099-MISC check box was moved due to three additional check boxes: 1099-CAP, 1099-H check, and 5498-ESA.
- **Form 1099-MISC:** The 2003 General Instructions for Forms 1099, 1098, 5498, and W-2G, which has been temporarily withdrawn from the IRS web site until further notice, is not yet available.
- **Filing Form 1099-MISC Magnetically or Electronically:** Publication 1220, describing the magnetic and electronic filing specifications, is not yet released.

### Affected Versions Include

Affected versions of Oracle Payables 11.0 and 11i, please watch MetaLink and APNews for further updates once Publication 1220 becomes available. Deadlines and reporting requirements will become available once the IRS releases Publication 1220.

No 1099 patch is available for Oracle Payables 10.7 due to the de-support of this release, effective June 30, 2003. Please see Oracle Corporation Product Obsolescence De-support Notice for additional details on 1099 processing.

### Additional 1099 Information

For more information on Form 1099-MISC and Publication 1220: Specifications for Filing Forms 1098, 1099, 5498 and W-2G Electronically or Magnetically, please refer to the following Internal Revenue Service URL: [http://www.irs.ustreas.gov/prod/forms\\_pubs/index.html](http://www.irs.ustreas.gov/prod/forms_pubs/index.html).

### For further 1099 relevant information please see MetaLink for the following:

- 1099 setup and usage instruction
- 1099 troubleshooting guide
- 1099 frequently asked questions

*Ronda Ellis, Solution Beacon*

## InfoBundle11i

Oracle just released Patch 3083000 for 11.5.9 fresh installs that you will probably want to install so that what comes out on reports is more correct. You may also want to review the other AD Patches below in addition to Patch 3083000.

Patch 3083000 fixes a data issue with the Release 11.5.9 fresh install database that prevented the pre-seeded list of bug fixes in Release 11.5.9 from being copied into the current-view snapshot. As a result of this error, the prerequisite patch checking feature was incorrectly saying that prerequisite patches already included in Release 11.5.9 need to be applied.

The patch does not actually fix the snapshot data. It just fixes the problem that prevents the snapshot from being updated properly. The next patch applied after applying this patch will automatically fix the snapshot data.

<a href="#">3159674</a>	Applications DBA: Patch SHORT TERM FIX USING RULE-BASED OPTIOMIZATION IN ADPRUPDB.PLS
<a href="#">3150374</a>	Applications DBA: Patch SAC1159.17:MP:PREVENT CORRUPTION OF JRIMETA.DAT
<a href="#">3083000</a>	Applications DBA: Patch Release 11.5.9 bugfix list not copied into current-view snapshot
<a href="#">3105856</a>	Applications DBA: Patch UPDATE MANAGEMENT SYSTEM
<a href="#">3107315</a>	Applications DBA: Patch 8/20 CONSOLIDATED SNAPSHOT FIXES
<a href="#">3102959</a>	Applications DBA: Patch NEED TO CHECK IN ADDEFGEN.OC, AD.MK AND ADF18.DRV
<a href="#">3048938</a>	Applications DBA: Patch 11i.AD.H 2673262 (D2673262.DRV) FAILS ON INSTANCES WITH NON-STANDARD APPS_USERS
<a href="#">3033286</a>	Applications DBA: Patch CORE DUMP WHILE RUNNING PATCH 2985023
<a href="#">2644311</a>	Applications DBA: Patch UPDATE APPLPROD.TXT TO ADD NEW PRODUCTS FOR 11.5.9 MAINTENANCE PACK

*John Stouffer, Solution Beacon*

## Consolidated Tablespace MetaLink Notes

Please review the following top three MetaLink notes if you have questions about consolidated tablespaces:

248277.1	Oracle Applications Tablespace Model Feature Summary and Early Access Program Enrollment Request Template
248857.1	Oracle Applications Tablespace Model Release 11i – Tablespace Migration Utility
248173.1	New Oracle Applications Tablespace Model and Migration Utility

*John Stouffer and Jeff Holt, Solution Beacon*

## Custom Library Methodology

This article describes a methodology for implementing changes in the custom library that allows multiple developers to implement custom library changes concurrently, reduces the potential problem of reaching the maximum size limitation in CUSTOM.pll and results in a modular custom library implementation that is easier to debug and maintain.

The code required to customize Oracle Applications is placed in a separate library for each Oracle standard form requiring customizations. The seeded CUSTOM.pll will be modified to attach these customized libraries. Calls to the libraries will be placed in the CUSTOM package body. If you do not have extensive customizations and limit these customizations to only one developer per application, you may consider creating a separate library for each application rather than for each form. The level of modularity desired should be determined based on your unique circumstances.

An example of the modified portion of the CUSTOM package body for customization for 2 forms is shown in Figure 1.

**Figure 1 CUSTOM Package Body**

```
Form_name    varchar2(30) := name_in('system.current_form');
Begin
    If form_name = 'XXXXXAPXVDMVD' THEN
        xxxxxapxvdmvd.event(event_name);
    Elsif form_name = 'XXXXXOEXOEORD' THEN
        xxxxxoexoeord.event(event_name);
    end if;
end event;
```

Figure 2 contains an example of the custom package spec for the XXXXXAPXVDMVX.pll library created for the Enter Supplier form. Figure 3 contains an example of the custom package body for this new library.

**Figure 2 Package Spec**

```
PACKAGE XXXXXAPXVDMVX IS
    Procedure event(event_name VARCHAR2);
END;
```

**Figure 3 Package Body**

```
PACKAGE BODY XXXXXAPXVDMVX
IS
    PROCEDURE event (event_name VARCHAR2) IS
        BEGIN
            IF event_name = 'WHEN-NEW-FORM-INSTANCE' THEN
                SET_ITEM_PROPERTY('VENDOR_TYPE_DISP',REQUIRED,PROPERTY_TRUE);
            END IF;
        END event;
END XXXXXAPXVDMVX;
```

*Susan Behn, Solution Beacon*

## Platforms Renamed to Reflect Corporate Standard Names

Minor changes have been made to some platform names to match the corporate standard names used in CD and CD pack names as shipped by Oracle.

Old Platform Name	New Name
Apple Macintosh	Apple Mac OS
Data General AViiON IX86 Unix	Data General AViiON ix86 Unix
HP 9000 Series HP-UX 10.20	HP-UX PA-RISC 10.20
HP 9000 Series HP-UX 64bit	HP-UX PA-RISC (64-bit)
HP Alpha OpenVMS	HP OpenVMS Alpha
HP IA64 HPUNIX	HP-UX Itanium
HP Tru64 UNIX	HP Tru64 UNIX
HP-UX 11.0/32 bit	HP-UX PA-RISC (32-bit)
IBM AIX Based Systems (64-bit) 5L	AIX Based Systems
IBM AS/400 OS/400	IBM iSeries OS/400
IBM NUMA-Q DYNIX/ptx	IBM NUMA-Q DYNIX/ptx

IBM OS/390 (MVS)	IBM z/OS (OS/390)
IBM RS/6000 AIX	AIX RS/6000 (32-bit)
IBM RS/6000 AIX 64-bit	AIX RS/6000 (64-bit)
LINUX Intel	Linux x86
Linux IA64	Linux Itanium
Linux Intel 64-bit	Linux x86-64
Linux for S/390	IBM S/390 Based Linux
Linux for zSeries	IBM zSeries Based Linux
MS Windows NT/2000 Server	Microsoft Windows (32-bit)
SCO Unix	SCO UNIX
SGI 32-bit UNIX	SGI IRIX (32-bit)
SGI 64-bit UNIX	SGI IRIX (64-bit)
Sun Solaris OS (INTEL)	Solaris Operating Env. (x86)
Sun Solaris OS (SPARC)	Solaris Operating Env. (SPARC 32-bit)
Sun Solaris OS (SPARC) 64-bit	Solaris Operating Env. (SPARC 64-bit)

*John Stouffer, Solution Beacon*

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## Solaris TOP Replacement

prstat (Solaris >= 8): **prstat** is **top** ... and a lot more.

Both commands provide a screen's worth of process and other information and update it frequently, for a nice window on system performance. prstat has much better accuracy than top. It also has some nice options:

- "-a" shows process and user information concurrently (sorted by CPU hog, by default)
- "-c" causes it to act like vmstat (new reports printed below old ones)
- "-C" shows processes in a processor set
- "-j" shows processes in a "project"
- "-L" shows per-thread information as well as per-process
- "-m" and "-v" show quite a bit of per-process performance detail (including pages, traps, lock wait, and CPU wait)

The output data can also be sorted by resident-set (real memory) size, virtual memory size, execute time, and so on. prstat is very useful on systems without top, and should probably be used instead of top because of its accuracy (and some sites care that it is a supported program).

*Randy Giefer, Solution Beacon*

## Release 11.5.9 Changes to Workflow Setup

### Global Preferences

Gone is the requirement to sync up the Jinitiator Classid, Location, and Version or declare the global Language, Date Format, and Territory. For users whose source system is FND\_USR or PER (all users and employees), language is set through the profile option ICX: Language, territory through ICX: Territory, and date format through ICX: Date Format Mask.

There is an additional option for 'Send Me Electronic Mail Notifications' – 'HTML Mail with attachments' – If you choose this option, in addition to the notifications including the response buttons and any form links, there is also a link to the notifications web page. This link allows you to respond to the notification through the self-service form. This is useful when users are responding to notifications through web mail. Like any form link, it only functions if you are signed into the applications.

Added is the ability to sync up with LDAP security. This is typically meant to be used with standalone workflow (not integrated with the applications). However, you can use these parameters to integrate Oracle database users with workflow.

Although the upgrade/installation to 11.5.9 fills in a value for the 'Document Home Node' in the Global Preferences page, this functionality is still "reserved for future use".

### Directory Services

WF\_USERS, WF\_ROLES, WF\_USER\_ROLES used to be views across multiple tables. To increase performance Oracle now inserts records into WF\_LOCAL\_ROLES and WF\_LOCAL\_USER\_ROLES whenever certain types of records are added. Additionally these records are assigned a partition\_id to further identify the source and whether the role is a user of the applications. Then WF\_USERS is a view across WF\_LOCAL\_ROLES where USER\_FLAG='Y', WF\_ROLES is a view across WF\_LOCAL\_ROLES where USER\_FLAG='N', and WF\_USER\_ROLES is a view across WF\_LOCAL\_USER\_ROLES. Following are the partition\_id's, source of data (ORIG\_SYSTEM), and value for the user flag.

0 – Ad-hoc users/roles (users inserted temporarily through PL/SQL during a workflow, or users/roles added such as jobs) – ORIG\_SYSTEM must be declared by person writing code and can be 'WF\_LOCAL\_ROLES'. User flag = 'N'.

- 1 – Either users linked to employees (ORIG\_SYSTEM='PER'), or users not linked to employees (ORIG\_SYSTEM='FND\_USR'), User flag = 'Y'.
- 2 – Responsibilities, ORIG\_SYSTEM='FND\_RESP', User flag = 'N'
- 3 – Employees not linked to users, ORIG\_SYSTEM='PER\_ROLE', User flag = 'N'
- 4 – Positions, ORIG\_SYSTEM='POS', User flag = 'N'
- 5 – MarketView Approvals, ORIG\_SYSTEM='AMV\_APPR', User flag = 'N'
- 6 – MarketView Channels, ORIG\_SYSTEM='AMV\_CHN', User flag = 'N'
- 7 – Engineering Approval Lists, ORIG\_SYSTEM='ENG\_LIST', User flag = 'N'

- 8 – TCA Groups, ORIG\_SYSTEM='HZ\_GROUP', User flag = 'N'
- 9 – Persons (User flag = 'Y') or contacts (User flag = 'N'),  
ORIG\_SYSTEM='HZ\_PARTY'
- 10 – Federal HR group boxes, ORIG\_SYSTEM='GBX', User flag = 'N'
- 11 – ORIG\_SYSTEM='HTB-SEC'
- 12 – Position Control roles, ORIG\_SYSTEM='PQH\_ROLES', User flag = 'N'

This new Directory model can be applied as a patch to any release where you already have FND.D installed. The patch number is 2956353 – make sure you thoroughly read all the required prerequisites depending on other Oracle modules you have installed.

Once you have moved to this new model, you must periodically synchronize the model (Oracle seeds the synchronization to run daily). The synchronization program is actually a request set (available in System Administration request group) that is comprised of a program for each partition (no program currently exists for PQH\_ROLES or HTB\_SEC, although a patch for PQH\_ROLES is planned). Many of the sources have released patches that perform the synchronization automatically. Once you have applied the patch for that source, discontinue running the incremental synchronization program for that source. The patches for each source are listed in Metalink note 171703.1. Refer to this note frequently so that you will be aware as each source is patched to auto synchronization. One of the parameters to this request set is whether you want to log the changes in the redo log. Obviously omitting this log will increase performance, but omitting this log will require running bulk synchronization if the redo logs are ever re-applied due to any media failure. Do not run bulk synchronization for any system where the auto-synchronization patches have been applied.

### New Profile Options

Socket Listener Activated – set to Yes if you want users to be able launch forms from email notifications.

Socket Listener Port – at site level, set to port at which Workflow should launch attached forms. Can be set at user level if multiple users are sharing a machine simultaneously.

FND: Notification Reassign Mode – controls how users can reassign notifications – assignable at site, application, responsibility or user level. Values are:

Delegate – person to whom notification is sent acts on behalf of original recipient, but ownership remains with original recipient. Original recipient cannot choose Transfer.

Transfer – person to whom notification is sent acts instead of original recipient. May (depends on the workflow) have the effect of changing the approval hierarchy. Original recipient cannot choose Delegate.

Reassign – original recipient can choose either Delegate or Transfer.

### Notification Mailer

11.5.7 and 11.5.8 started the move to setting up the mailer using OAM. In both those releases, using OAM was optional, and the continued use of the wfmail.cfg and SendMail was still a viable

option. With 11.5.9, the use of OAM is required. The old c-based Mailer program has been replaced with a Java mailer and while SendMail or any SMTP system can still be used for outgoing notifications, incoming responses to notifications must come through an IMAP4 compliant system such as MicroSoft Exchange, Lotus Notes, or Oracle Mail. And if you want to view the attachments in an email, you need a email client that supports HTML, JavaScript and Frames. Note 231286.1 gives the instructions for setting up the Mailer with OAM. This note also references sources of UNIX-based IMAP4 compliant systems.

If you use Outlook Express, part of testing the notification mailer system must include checking whether the response to a notification copied the NID line completely (includes prefix NID and all info between the square brackets). Additionally you should change the template for emails that require a response to 'Workflow Open Mail with Outlook Express' or 'Orig. Workflow Open Mail with Outlook Express'.

The Notification system uses Business Events, so you must also set up the Business Event System.

### **New Workflow Menu Functions**

The Workflow User Web Applications responsibility has Worklist and Advanced Worklist functions. You can also add the Personal Worklist function which has options to personalize search and display.

Look for future newsletter articles to cover some of the setup steps in more detail as well as discuss other aspects of 11.5.9 workflow.

### **New Workflow Documentation**

The Workflow manual finally got too large to be contained in a single volume. It has been split into 5 volumes, "Oracle Workflow Administrator's Guide", "Oracle Workflow API Reference", "Oracle Workflow Developer's Guide", "Oracle Workflow User's Guide", and "Oracle Workflow Web Services Guide". See the 11.5.9 documentation article in this newsletter for instructions on how to find this documentation.

*Karen Brownfield, Solution Beacon*

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## **Auditing Groups between Versions**

Due to table structure changes between releases, Oracle does not support auditing between versions. Audit Groups cannot be re-enabled, therefore all Auditing Groups must be recreated in the new instance. If attempts have been made to run auditing processes, mismatched data probably exists. The easiest way to correct this is to clean up the auditing objects and then start fresh, as follows:

1. Use the commands below to remove the old audit groups, tables, views and triggers.
2. Recreate the audit groups in 11i.

```
connect applsys/apps
delete table <table_name>_A
connect apps/apps
drop synonym <table_name>_A
drop trigger <table_name>_ai, _ad, _au
drop procedure <table_name>_aup, adp, aip
drop view <table_name>_ac1, ac2,etc.
drop view <table_name>_av1, av2, etc.
```

This will wipe out all definitions of Audit Groups, they will all have to be redefined in the new instance.

```
truncate table fnd_audit_groups;
truncate table fnd_audit_columns;
truncate table fnd_audit_tables;
```

*John Stouffer, Solution Beacon*

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## 11i Instance Home Page Display

If you do not wish to see the detailed Menu when logging on to a Release 11i instance, you can change it by setting a personal profile option value. This will allow you to view the top level menu when you login, just like the old days!

The personal profile option can be found at: Self Service Personal Home Page mode:

Personal Profile option value: Personal Home Page

*John Stouffer, Solution Beacon from Vipul Gupta, University of Virginia*

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## Forms Listener Servlet

In past releases, Oracle Applications allowed the Forms Server to be configured for three different modes:

- o Socket – Default mode configured by Rapid Install during a fresh install. Good firewall security rules will block raw socket ports from being opened.
- o HTTP – Alternate mode allows connections to pass through firewalls that block socket mode. Insecure data transmission though, and is prone to network timeouts.
- o HTTPS - Good alternative to the other choices. However, somewhat complicated to configure.

Configuring Oracle Applications and the Forms Server to work properly in an environment protected by a firewall presented many problems to the DBA and the network administrator.

One source of these problems is the dedicated TCP port required for the forms server process to communicate to the JInitiator plug-in loaded in the browser. While HTTP and HTTPS modes addressed some firewall issues, they have several shortcomings:

- o The machine on which the Forms Server is running must be exposed at the firewall level.
- o Requires a separate TCP port open from the browser to the Forms Server.
- o The Forms Server process expects a persistent connection; if the connection is dropped the user has to restart the application.
- o In HTTPS mode, you need to install and configure a separate SSL certificate for the Forms Server, in addition to the SSL certificate used for the web server.

The Forms Listener Servlet addresses these problems. It is a Java servlet running on the web server that functions as the connection point between the client and the Forms process. The TCP ports are no longer exposed at the firewall. It uses the existing web server connection for communications to and from the JInitiator plug-in. This eliminates firewall issues due to the additional TCP port. Some other advantages are:

- o Improved firewall and proxy server support since direct connection between the client and the Forms Server Runtime process is not required.
- o No extra Forms Server process to manage (f60svr) because the forms listener servlet creates the Forms Runtime processes as needed.
- o No extra SSL certificate to purchase/install/configure for the Forms Server.
- o Allows you to use standard load balancing techniques, such as hardware based load balancing and reverse proxy instead of Forms Metric Server.

To implement the Forms Listener Servlet, you should be on Forms Patchset 9 or higher. Also, you must be on 9iAS version 1.0.2.2.2. If you are on 11i version 11.5.7 or higher, these are included with the standard install. If not, you will have to upgrade to 9iAS 1.0.2.2.2 first. Pay careful attention the extra steps mentioned in the readme.txt in each patch. The following patches need to be applied to implement Forms Listener Servlet:

1. FND minipack F (included in 11.5.8) or later is recommended.
2. Apply AD minipack F (included in 11.5.7) or later. AD minipack G (included in 11.5.8) or later is recommended.
3. Apply Oracle HTTP Sever patch 2674529 (included in 11.5.9). Note: you apply this patch using the Oracle Universal Installer (version 2.1 or higher), not the adpatch utility.
4. Apply "FND template rollup C" patch 2682863 or later. Currently, the latest version is "FND template rollup D" patch 2757379 (included in 11.5.9). However, 2757379 introduces the Dual Listener Configuration for the iAS techstack. You may want to make that patch a separate task.

The FND template rollup patch requires changes to configuration files. You should use the AutoConfig utility to manage configuration files. Enable AutoConfig prior to applying the FND template rollup patch. Check MetaLink document 201340.1 for more information. After applying the rollup patch, run AutoConfig. Then, follow these steps to implement Forms Listener Servlet:

1. Configure appsweb.cfg for Forms Listener Servlet and Forms Listener:
  - o add a servlet config section to the end of the appsweb.cfg

```
[servlet]
serverURL=/forms/formervlet
```
  - o To connect using the Forms Listener Servlet, the URL would be:  
<http://<host>.<domain>:<port>/dev60cgi/f60cgi?config=servlet>
  - o To connect using the Forms Listener, the URL would be:  
<http://<host>.<domain>:<port>/dev60cgi/f60cgi>
  - o Add the ?config=servlet parameter to ICX: Forms Launcher profile value to make Forms Listener Servlet the default forms mode.
2. Configure jserv.conf for Forms Listener Servlet:
  - o Uncomment the forms group line (by default, it is commented out):

```
ApJServGroup      FormsGroup      1      1
/d01/tst/tstora/iAS/Apache/Jserv/etc/forms.properties
```
  - o Uncomment the group mount line (by default, it is commented out):

```
ApJServGroupMount /forms      balance://FormsGroup/forms
```
  - o Uncomment the dms group mount line:

```
ApJServGroupMount /dmsForms      balance://FormsGroup/forms
```

You need to restart *iAS* after making the changes in step 2. Before attempting to login using Forms Listener Servlet, check to be sure that the servlet engine is running with the following url:

<http://<host>.<domain>:<port>/servlet/IsItWorking>

If there are problems, be sure that the `mod_oprocmgr` section in `httpd.conf` is correct. The OHS patch 2674529 changes this to use a dedicated port, separate from the apache https port. If the servlet test page displays correctly, then try to login using Forms Listener Servlet. If you updated ICX: Forms Launcher, it will be the default forms mode.

Until the resolution of bug 2940478, The Forms Server and web server must be installed on the same node.

Also, if you are using custom forms, you have to add the environment variable that defines the top directory for all custom applications to the `formervlet.ini` file. Otherwise, the custom forms will not display when they are selected from the navigation menu.

*Jeff Holt, Solution Beacon*

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## Remote Services Announcement

Solution Beacon is pleased to announce Remote Services. Remote Services is a new service offering that provides the insurance that your mission critical systems are constantly monitored and managed to help ensure their stability, reliability and availability 24 hours a day 7 days a week. Some key features of our Remote Services are:

- Ongoing Database Support and Maintenance
- Proactive Performance Tuning and Management
- Database and Application Systems Availability and Conditional Events Monitoring
- Proactive Database and Systems Capacity Planning
- Timely, Detailed Information Reports

Solution Beacon provides three levels of guaranteed support or we can create a custom support agreement tailored specifically for your systems. For more information contact us at [RemoteServices@solutionbeacon.com](mailto:RemoteServices@solutionbeacon.com) or 206-366-6606/888-603-9243 or visit us at [www.solutionbeacon.com](http://www.solutionbeacon.com).

*Peter Adamson, Solution Beacon*

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## Solution Beacon Announcements

**Robert Braden Jr.** has joined Solution Beacon as Business Development Manager. Bob has 15 years experience as a Business Development Manager and as Government, Healthcare and Educational market segment specialist. His expertise includes marketing plan implementation and strategic development skills as well as strong relationship management skills.

**Jerry Naples** has joined Solution Beacon as a Sr. Database Administrator. Jerry has 14 years in experience in the Information Technology arena and has performed a variety of roles including Partner and CIO of a consulting firm, Sales Engineer, Systems Programmer, Oracle Applications DBA and UNIX systems administrator. With his solid background, Jerry will be a great asset to Solution Beacon as a Sr. DBA and database tools expert.

*Art Dowd, Solution Beacon*

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## Solution Beacon ... On the Road

In addition to sponsoring the CD proceedings, Solution Beacon participated in multiple sessions at the **OAUG Connection Point 2003 conference in San Diego, September 14-17.**

## **SOLUTION BEACON WORKSHOPS:**

- *Installation & Administration* – John Stouffer
- *Maintenance & Patching* – John Stouffer
- *RAC* – Kevin Dahl
- *Workflow* – Karen Brownfield
- *Reimplement or Upgrade?* – Alicia Hoekstra, John Stouffer, Mark Clark (O2Works)
- *Upgrading* – John Stouffer
- *Performance Tuning* – Randy Giefer, Rich Butterfield (Outer Bay)
- *Tools* – Randy Giefer, John Stouffer
- *New Features* – Karen Brownfield, Keith McCormick, Ronda Ellis, Mark Clark (O2Works)

## **ENCORE PRESENTATIONS:**

- *Release 11i Upgrades: Lessons Learned (encore presentation of #1 rated paper presentation from Fall 2002 OAUG)*, John Stouffer and Alicia Hoekstra
- *Release 11i DBA – Teaching an Old Dog New Tricks (encore presentation of #3 rated paper presentation from Fall 2002 OAUG)*, Randy Giefer
- *Care and Feeding of Release 11i (encore presentation of #1 rated paper at DCOAUG Spring Conference)*, John Stouffer

## **PRESENTATIONS:**

- *To Patch or Not to Patch ... It's not a DBA Question*, Alicia Hoekstra and John Stouffer
- *Locations Leases, and Invoices – The basics of Property Manager (a 2-part training session)*, Karen Brownfield

## **PANELS:**

- *Financial Reporting, FSG, and ADI Panel*, Ronda Ellis, participant
- *Upgrade Panel*, Randy Giefer, participant
- *Concurrent Manager Panel*, Randy Giefer, participant

## **SIGS:**

- *Upgrade SIG*, chaired by John Stouffer
- *SysAdmin SIG*, chaired by Randy Giefer

## **GEOS:**

- *SCO AUG Geo*, chaired by Ronda Ellis & Alicia Hoekstra

Attendance was over 2,000 for the Conference and more than 550 attended at least one of the Release 11i Workshops. Thanks to all who attended the Conference and the Release 11i Workshops. Please send any suggestions you have for new technical and functional topics at the Workshops in 2004 to [mweiss@solutionbeacon.com](mailto:mweiss@solutionbeacon.com). We would appreciate your feedback and topics of interest so that we can provide workshops on subject that are most important to you.

October brought John Stouffer, Alicia Hoekstra, and Susan Behn presenting in multiple venues. At the Mid-Atlantic Association of Oracle Professionals (MAOP) Oracle Training Conference (OTC) held at George Washington University in Washington, DC, on October 15, John presented

his *Care and Feeding of Release 11i*, Susan presented *AOL Forms Development Standards*, and Alicia and John presented *To Patch or Not to Patch ... It's not A DBA Question*. That evening, John presented an encore of *Care and Feeding of Release 11i* at the DCOAUG meeting held in McClean, Virginia. Susan Behn presented on Logical Apps at the OAUG HRIS SIG conference in Florida October 23-24.

*Art Dowd, Solution Beacon*

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## One Voice. Many Benefits. OAUG Membership

Is it time to renew your OAUG membership?

The Oracle Applications Users Group (OAUG) is a global networking association that represents the interests of a global community of Oracle Applications users. OAUG's major function is to provide a forum that promotes communication, education, solutions, and the exchange of ideas among current and potential users of Oracle products.

With a wide range of activities, such as educational forums, an annual conference, publications, affiliated group events, and a variety of member services, the OAUG works to increase its members' knowledge and understanding of Oracle Applications and to communicate these issues and needs to Oracle Corporation.

We invite you to join the OAUG network and tap into unmatched information, education and networking opportunities. No other organization can connect you with a global community of thousands of active and informed Oracle Applications users.

Join online today at [www.oaug.org](http://www.oaug.org).

*Jonathan Dew, OAUG*

*Jeff Linden, Solution Beacon*

## On-line Learning – Can't miss Webinar

Please attend a special Webinar hosted by Logical Apps' co-founder, **Paul Brunskow** and Solution Beacon's **Susan Behn** as they present:

### A Best Practices Approach to Oracle Application Security

**Wednesday, November 19, 2003 at 1:30 PST, 4:30EST**

#### Registration URL:

[http://www.logicalapps.com/logicalapps/emailer/webinar\\_beacon.html](http://www.logicalapps.com/logicalapps/emailer/webinar_beacon.html)

This informative presentation discusses the hot topic of security with Oracle applications and how to easily enforce your company policies and procedures without creating a "customization" nightmare. Whether you are on 10.7, 11.0, or 11i, upgrades and migrations are in your future and customizations mean trouble. AppsRules will enable you to deploy advanced, role-based, security rules to selectively control access to forms without altering the underlying Oracle code. This allows you more flexibility in setting security levels, reduces your development burden, and lessens the customization migration difficulties waiting for you at your next upgrade.

**Who should attend:** Development Managers, IT Directors, Project Managers, Application Managers



*Art Dowd, Solution Beacon*

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## More On-line Learning – Webcast

### Data Migration Strategies for Oracle 11i Upgrades

**View it anytime!**

Need to learn more about the migration of application data during an Oracle Release 11i upgrade? Tune in to this webcast & learn proven data migration strategies based on successful Oracle Release 11i upgrades. Solution Beacon is sponsoring this webcast presented by **SearchOracle**, featuring **Rich Butterfield**, founder and Vice President of Corporate Strategy of Outer Bay Technologies.

#### Check it out at:

<http://searchoracle.techtarget.com/webcasts/0,289675,sid41,00.html>

*Art Dowd, Solution Beacon*

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## Coming in December ...

Watch for our December newsletter with articles on:

### Password Management Functionality in Oracle Using Profiles – Part 2

### Public Sector Issues: Are your Forms 6i extensions in Compliance with the American Disabilities Act?

### IMAP Configuration

Mary Lou Weiss and Randy Giefer, Editors, Solution Beacon

## Upcoming Solution Beacon Events

EVENT	DATE	LOCATION
Atl-OAUG Meeting (main session) – <i>Release 11i New Features</i> , Karen Brownfield	November 21, 2003	Atlanta, GA
Atl-OAUG Meeting (breakout session) – <i>Workflow</i> , Karen Brownfield	November 21, 2003	Atlanta, GA
AppsWorld 2004: Upgrade SIG Meeting, John Stouffer	January 26-29, 2004	San Diego, CA
AppsWorld 2004: SysAdmin SIG Meeting, Randy Giefer	January 26-29, 2004	San Diego, CA
AppsWorld 2004: SCO AUG Geo Meeting, Ronda Ellis	January 26-29, 2004	San Diego, CA
Atl-OAUG Meeting – <i>To Patch or Not to Patch ... It's Not a DBA Question</i> , Alicia Hoekstra and John Stouffer	March 19, 2004	Atlanta, GA
Atl-OAUG Meeting (technical breakout session) – John Stouffer	March 19, 2004	Atlanta, GA
DBA/Developer Conference at Herff-Jones, John Stouffer	Week of July 12, 2004	Indianapolis, IN

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