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# Extending EBS with APEX

Extending Oracle EBS with APEX 3/29/2016

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# EBS and APEX – Integration Simplified

- APEX is a supported product with EBS
- APEX is free to use
- Extend EBS with your web browser
- Excellent Interactive reporting tool



apex.oracle.com



Oracle Application Express

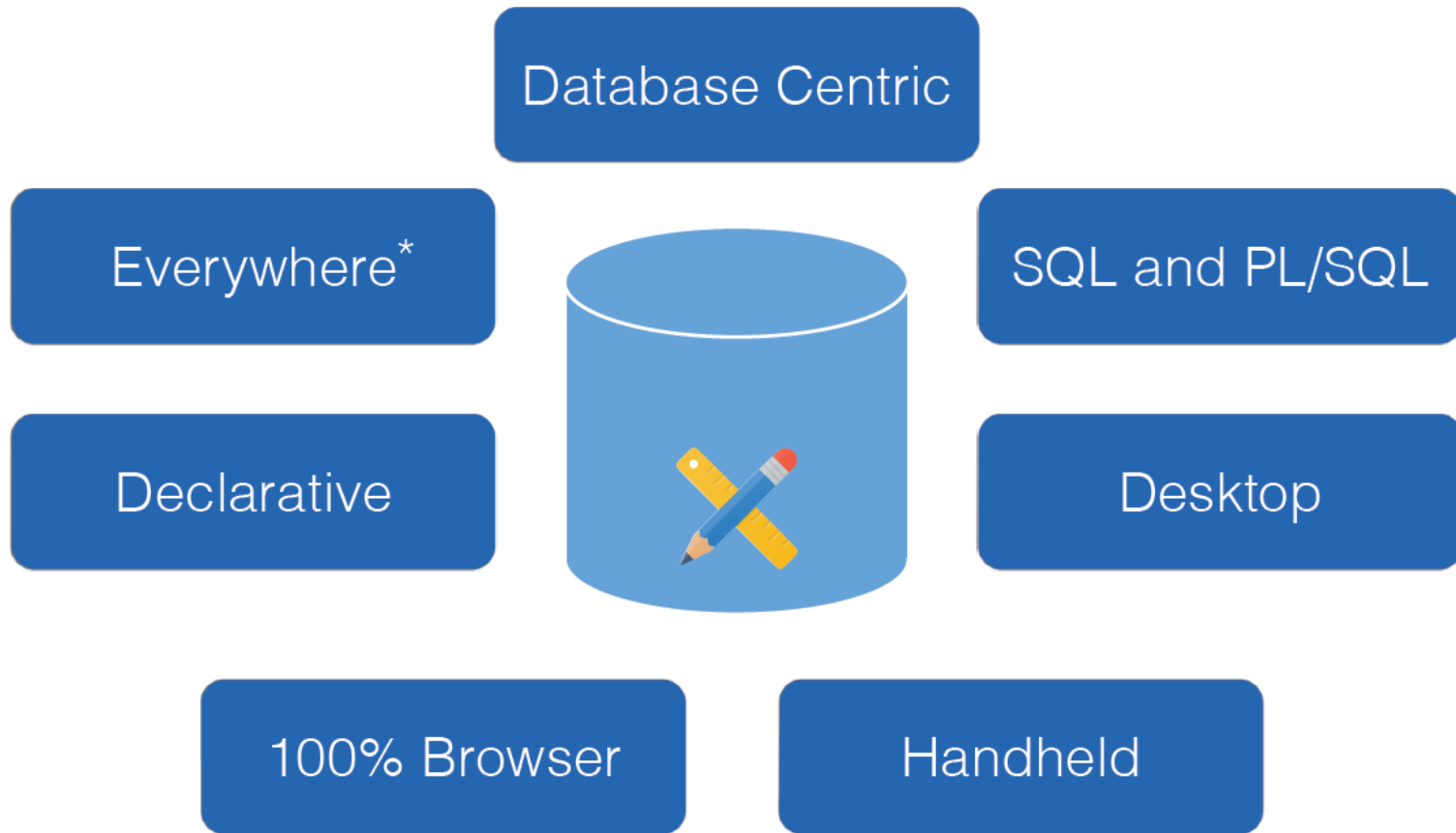
# Build applications using only your web browser.

Oracle Application Express enables you to design, develop and deploy beautiful, responsive, database-driven applications using only your web browser. See how you can take advantage of this [fully-supported, no-cost](#) feature of the Oracle Database.



Get Started

# APEX is...



# Oracle EBS Setup

The screenshot displays the Oracle EBS Suite (EBSO Dev) home page. At the top, there is a blue header with the Oracle logo and the text "ORACLE® E-Business Suite (EBSO Dev)". Below the header is an "Enterprise Search" bar with a dropdown menu set to "All", a search input field, and a "Go" button. To the right of the search bar is a link for "Search Results Display Preference".

A warning message is displayed below the search bar: **Warning** (with a yellow warning icon) "Low-level Diagnostic Logging is turned on. This may temporarily reduce performance." Below the warning is a link for "Oracle Applications Home Page".

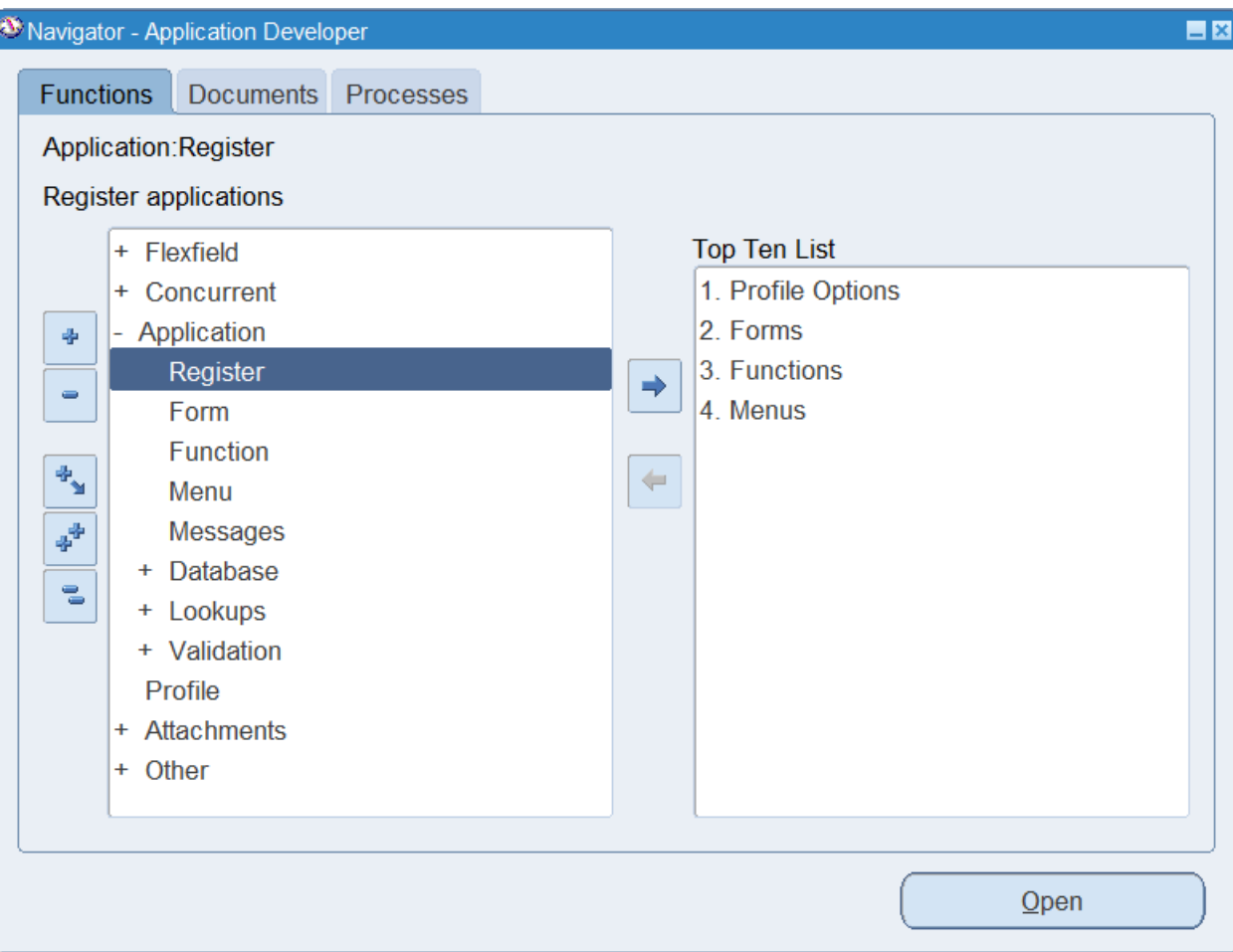
The main content area is divided into two panels. The left panel is titled "Main Menu" and contains a tree view of application components. A "Personalize" button is located at the top right of this panel. The tree view includes the following items:

- Account Manager
- Application Developer
  - Profile
  - Flexfield
  - Concurrent
  - Application
    - Register
    - Form
    - Function
    - Menu
    - Messages
    - Database
    - Lookups
    - Validation
  - Attachments
  - Other
- Application Diagnostics
- Customer Support Manager
- Formulator

The right panel is titled "Worklist" and contains a "Full List" button. Below the button is a table with the following columns: "From", "Type", "Subject", "Sent", and "Due". The table content is as follows:

From	Type	Subject	Sent	Due
There are no notifications in this view.				
✓ TIP <a href="#">Vacation Rules</a> - Redirect or auto-respond to notifications.				
✓ TIP <a href="#">Worklist Access</a> - Specify which users can view and act upon your notifications.				

Go to the Application Developer/Application menu to select the Function form.

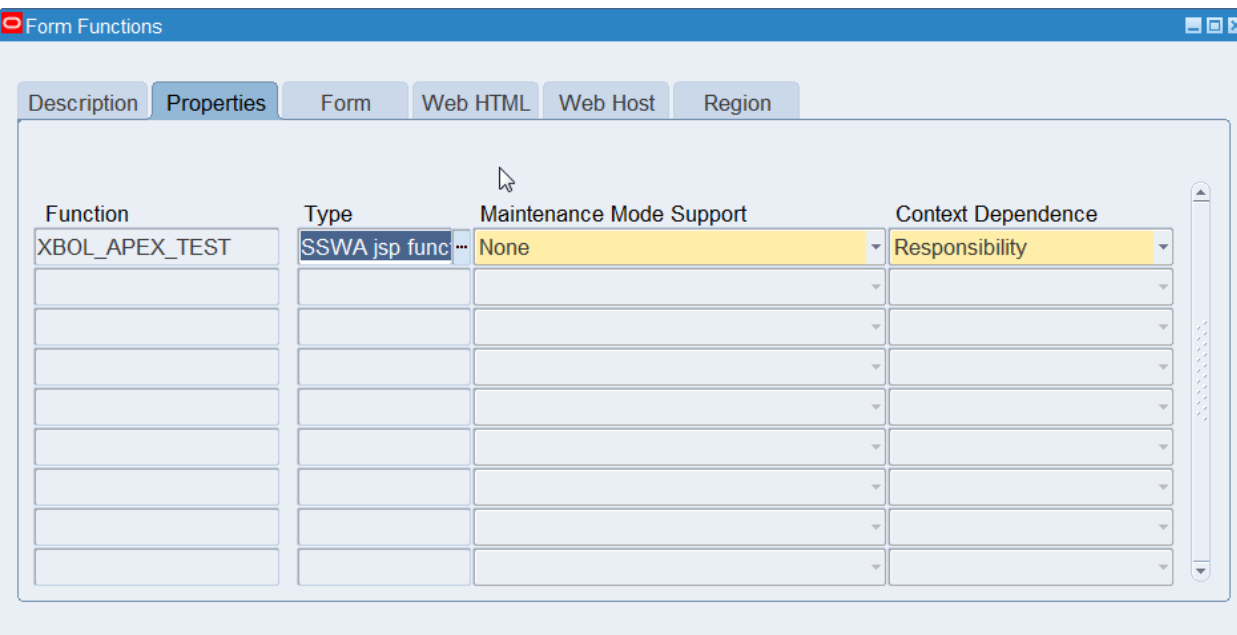


Form Functions

Description Properties Form Web HTML Web Host Region

Function	User Function Name	Description
XBOL_APEX_TEST	Call APEX DRP Prop65 Stock Report	





Note that the HTML Call will have very specific data to call a single APEX workspace application and page.

“GWY.jsp?targetAppType=APEX&p=101:3:.....:P101\_EBS\_RESP\_ID,P101\_EBS\_APP\_ID,P101\_EBS\_SEC\_GROUP:[RESPONSIBILITY\_ID],[RESP\_APPL\_ID],[SECURITY\_GROUP\_ID]”

This string calls an APEX workspace application 101, page 3, and passes 3 parameters to the page “P101\_EBS\_RESP\_ID”, “P101\_EBS\_APP\_ID”, “P101\_EBS\_SEC\_GROUP”.

Form Functions

Description Properties Form **Web HTML** Web Host Region

Function	HTML Call	MDS Reference Path
XBOL_APEX_TEST	GWY.jsp?targetAppType=APEX&p=101:3:.....P101_EBS_RES	

Menus

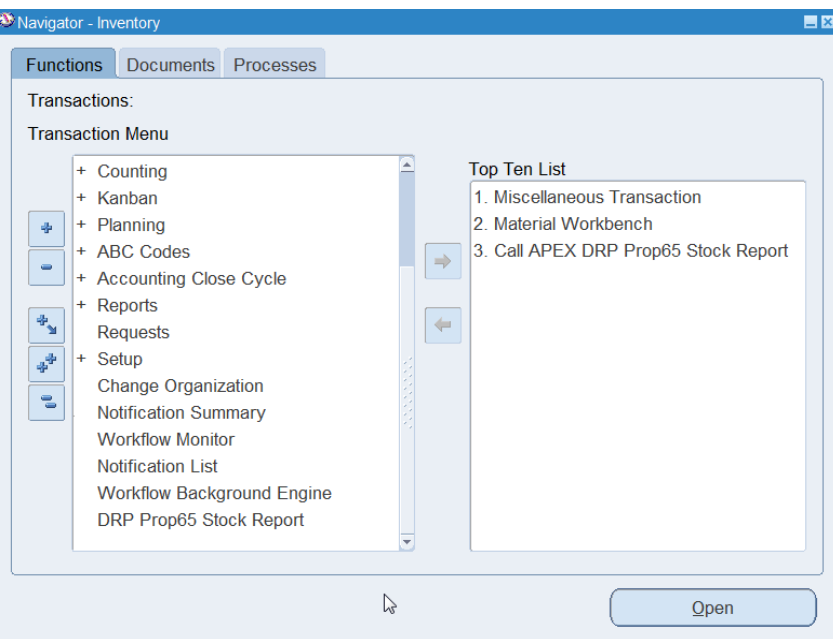
Menu: INV\_NAVIGATE View Tree...

User Menu Name: INV\_NAVIGATE

Menu Type: Standard

Description: Inventory Menu

Seq	Prompt	Submenu	Function	Description	Grant
110		E-signatures Process		Electronic Signatures Menu	<input checked="" type="checkbox"/>
115		Consigned Inventory Hom		OA Framework menu for Consigned	<input checked="" type="checkbox"/>
120			Select Available Inventory	Select Available Inventory	<input checked="" type="checkbox"/>
125			WMS Rules Workbench	WMS rules workbench	<input checked="" type="checkbox"/>
130			OPM QM Results View Fu	OPM QM Results View Function	<input checked="" type="checkbox"/>
135			View Quality Results	View Quality Results	<input checked="" type="checkbox"/>
140			Batch Step	OPM Batch Step	<input checked="" type="checkbox"/>
145			Lot Genealogy	OPM Lot Genealogy	<input checked="" type="checkbox"/>
150			View Message History		<input checked="" type="checkbox"/>
160	DRP Prop65 Stoc		... Call APEX DRP Prop65 S	Test	<input checked="" type="checkbox"/>



When I double click on the report, it spawns a new page within my browser and takes me to the following URL

[https://ebsnatudev.oracleoutsourcing.com/pls/apex/f?p=101:3:0:::P101\\_EBS\\_RESP\\_ID,P101\\_EBS\\_APP\\_ID,P101\\_EBS\\_SEC\\_GROUP:20634,401,0](https://ebsnatudev.oracleoutsourcing.com/pls/apex/f?p=101:3:0:::P101_EBS_RESP_ID,P101_EBS_APP_ID,P101_EBS_SEC_GROUP:20634,401,0)

Note how my 3 parameters have values that are passed into the page. Those 3 values are combined with the user\_id, and the EBS Initialize process is called to “authorize” the account for the report that is being executed. I use the following query in the Authentication routine for the APEX page to get the user\_id value.

Initial page when logging into the workspace environment within APEX.

ORACLE Application Express Workspace #INVENTORY (Logout)

Home Application Builder SQL Workshop Team Development Administration Search Application

Application Builder Application 101 Shared Components Authorization Schemes Page 1

Authorization Schemes Subscription by Component Utilization History

Go Actions Copy Reset Create

Name	Type	Caching	Updated
EBS_RESPONSIBILITY	PL/SQL Function Returning Boolean	Evaluate once per session	19 hours ago

1 - 1

Authorization Schemes

You manage authorization for applications, pages, and most other components using Authorization Schemes.

You associate an Authorization Scheme with an application, page, or other component on the component's attributes page.

Authorization Schemes are pass/fail checks. Common Authorization Scheme types include Exists, Not Exists SQL Queries, and PL/SQL Function Returning Boolean.

To enhance performance, the success or failure of an Authorization Scheme is cached on a per session or per page view basis.

Application Express 4.2.2.00.11

Workspace: #INVENTORY User: MONTYK Language: en | Copyright © 1999, 2013, Oracle. All rights reserved.

Click on the Name value "EBS\_RESPONSIBILITY" to edit the authorization code.

## Authorization Scheme

\* Scheme Type

```
DECLARE
CURSOR Get_Apps_Credentials IS
SELECT iss.user_id
FROM icx_sessions iss
, icx_session_attributes isa
WHERE iss.session_id = icx_sec.getsessioncookie
AND isa.session_id = iss.session_id
AND isa.name = '_USERORSSWAPORTALURL';

ln_User_Id      NUMBER DEFAULT 0;
ln_Resp_Id      NUMBER DEFAULT 0;
ln_App_Id       NUMBER DEFAULT 0;
ln_Sec_Group    NUMBER DEFAULT 0;
BEGIN
OPEN Get_Apps_Credentials;
FETCH Get_Apps_Credentials
INTO ln_User_Id;
IF Get_Apps_Credentials%NOTFOUND THEN
ln_User_Id := 0;
END IF;
CLOSE Get_Apps_Credentials;
```

\* PL/SQL Function Body

This code calls the query to retrieve from the EBS cookie the user\_id value for the user that is prompting the call for this APEX workspace/page. Because we are getting an EBS cookie to retrieve this user\_id value, this should provide a level of security for our reports and URL. If a hacker got the URL string for this report, it wouldn't work because the code to get the user\_id value would fail, causing authentication to fail.

```

DECLARE
CURSOR Get_User_Id IS
SELECT iss.user_id
FROM icx_sessions iss
,icx_session_attributes isa
WHERE iss.session_id = icx_sec.getsessioncookie
AND isa.session_id = iss.session_id
AND isa.name = '_USERORSSWAPORTALURL';
In_User_Id NUMBER DEFAULT 0;
In_Resp_Id NUMBER DEFAULT 0;
In_App_Id NUMBER DEFAULT 0;
In_Sec_Group NUMBER DEFAULT 0;
BEGIN
In_User_Id := xxnsp_security_pkg.Get_EBS_User_Id;
OPEN Get_User_Id;
FETCH Get_User_Id
INTO In_User_Id;
CLOSE Get_User_Id;
In_Resp_Id := NVL(TO_NUMBER(:P101_EBS_RESP_ID),0);
In_App_Id := NVL(TO_NUMBER(:P101_EBS_APP_ID),0);
In_Sec_Group := NVL(TO_NUMBER(:P101_EBS_SEC_GROUP),0);
IF In_Resp_Id <> 0 AND
In_User_Id <> 0 THEN
XXNSP_FND_UTILITIES_PK.apps_initialize(In_User_Id ,In_Resp_Id ,In_App_Id ,In_Sec_Group);
RETURN TRUE;
ELSE
RETURN FALSE;
END IF;
END;

```