ERP- Oracle Apps

Lesson 10: Form Registration

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Lesson Objectives

➤ **At the end of the session you will be able to:**
  – Know about the Function Security
  – Define a New Menu Structure
  – Data groups
  – Integrate Applications with Custom Applications
  – Register the Forms, Functions and Create the Menu of Functions

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Form Registration

➤ When you develop your application components, you must place them in the appropriate directories on the appropriate machines so that Oracle Application Object Library can find them

➤ Compile the form on the OraApps Server using predefined commands to create the fmx file

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For example, reports written using Oracle Reports are typically placed in a subdirectory called reports on the concurrent processing server machine, while forms belong in separate subdirectories, depending on their territory and language (such as US for American English, D for German, and so on), on the forms server machine.

The fmx file of the form must be in all uppercase and must be located in forms/<language> subdirectory of your application directory structure.

For example : XXCOFI_TOP/forms/US where $XXCOFI_TOP is the product directory and maps to /ccnv01/oracle/ccnvappl/xxcofi/1.0.0

Form Registration Contd...

➢ To register a form, the pre-requisite is to register your application with Oracle Application Object Library

➢ The combination of the application name and form name uniquely identifies your form

➢ Note: The form cannot be compiled and run on the client machine

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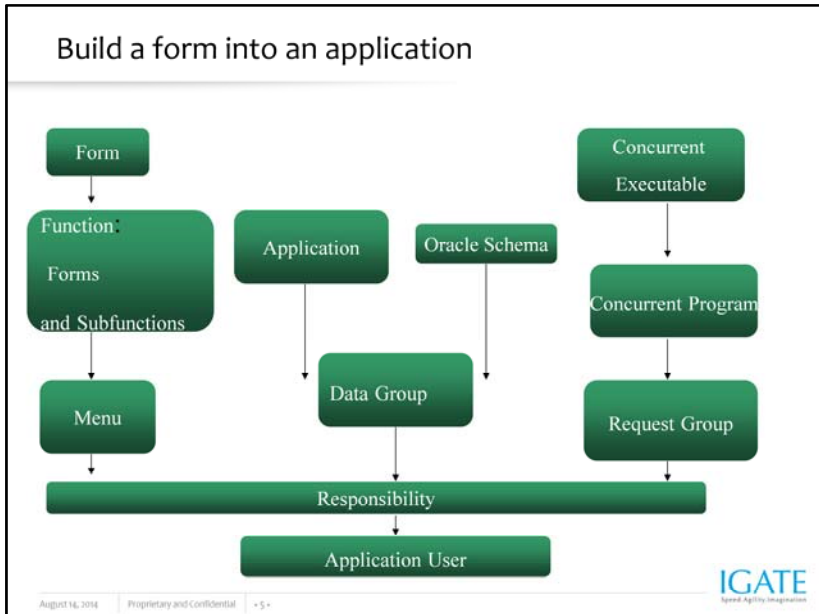
One of the most important functions of a system administrator is to manage security for the Oracle Applications environment. In Oracle Applications security is implemented by creating user signons and relating them to a responsibility. The responsibility specifies the actual access authorizations. I.e Users then have access to all the functionality associated with that responsibility. You can also create any custom responsibilities you need apart from the standard responsibilities.

Application Security: Overview

User Security
You authorize a user to sign on to Oracle Applications by defining an application user. You then assign one or more responsibilities to the new user.

Responsibility Security
A responsibility is a collection of authorizations that allow access to:
A specific application or applications
A set of books
A restricted list of windows, functions, and reports
Each user has one or more responsibilities, and several users can share the same responsibility.

A system administrator can assign standard or with Oracle Applications or create new custom responsibilities as needed.

Defining a New User
Security > **User** > **Define**
Define an authorized user of Oracle Applications by specifying a username and password. Grant application privileges by assigning one or more responsibilities to the user.

When you install Oracle Applications, a standard Applications user called SYSADMIN is created for you. Several default responsibilities are also created. You can also create custom responsibilities.

What Is a Data Group?
A data group is a collection of pairings of an application with an Oracle ID. Data groups automatically support concurrent processing and cross-application reporting. They guarantee that an application connects to a unique application database account.

Note: The installation process automatically defines data groups for Oracle Applications, so you only need to define additional data groups based on your specific requirements.

Application-Oracle ID Pairs
> An application can be listed only once in a data group.
> An Oracle ID can be paired with more than one application.
> A custom application registered with Oracle Applications can be included in a data group.

Data Groups and Application Object Library
Application Object Library owns the database tables referred to during concurrent processing and the standard submission of reports by any Oracle Application. Therefore all applications need access to the Application Object Library tables. When you are defining a data group, the application Application Object Library is automatically included. The Application Object Library's Oracle ID cannot be updated or deleted.

By defining a data group, you can determine which Oracle account (Oracle ID) an application's windows, reports, or concurrent programs connect to. Use data groups to grant application database account privileges to a responsibility and the requests that it submits

You can control the relationship among applications, forms, and concurrent programs by defining a data group.

Setting Up Function Security

Forms

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Functions: Forms and
Subfunctions

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Menus and Submenus

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Responsibilities

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Application Users
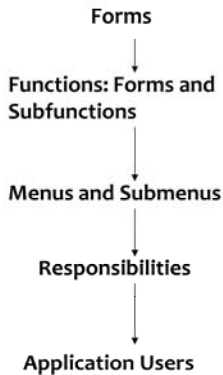
➢ Developer registers each form with AOL
➢ Developer registers the form again as a function
➢ Developer or system administrator adds functions (both forms and subfunctions) to a menu, often as a hierarchical structure of submenus
➢ The Menu is attached to a particular Responsibility; For example: Items is a menu under the Responsibility Inventory

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Function security is the mechanism by which user access to applications functionality is controlled.

Oracle Applications GUI-based architecture aggregates several related business functions into a single form. Because all users should not have access to every business function in a form, Oracle Applications provides the ability to identify pieces of applications logic as functions. When part of an application's functionality is identified as a function, it can be secured (i.e., included or excluded from a responsibility).

Application developers register functions when they develop forms. A System Administrator administers function security by creating responsibilities that include or exclude particular functions.

Terms

Function: A function is a part of an application's functionality that is registered under a unique name for the purpose of assigning it to, or excluding it from, a responsibility.

There are two types of functions: form functions, and non-form functions. For clarity, we refer to a form function as a form, and a non-form function as a subfunction, even though both are just instances of functions in the database.

Function Security Contd...

Menu Level 1
   Function
   Menu Level 2

      Function
      Menu Level 3
         Subfunction

      Function
   Menu Level 2
      Subfunction
   Menu Level 2
      Function
      Function

➤ Function: A set of executable code available as a menu option

➤ Subfunction: A subset of a form's functionality

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Function Security
You can manage security by controlling access to individual functions through menu definitions.
About Functions
A function is a set of code in Oracle Applications that is executed only if the name of the function is present in a list maintained within a responsibility.
There are two types of functions: a form function and a nonform function or subfunction. A subfunction represents a securable subset of a form's functionality.
Adding Functions to or Removing Functions from a Responsibility
Maintain menu structures while eliminating specific functionality.
Exclude individual functions from a responsibility.
Adding or Removing Menus of Functions
Use menus to group functions together.
Exclude groups of functions by excluding a menu from a responsibility.
Navigator Menu Displays
Navigator displays only the menu items needed for navigation. Because you cannot choose subfunctions from a menu, they are not displayed. Submenus consisting only of subfunctions are also not displayed.

Menus

➢ A menu is a hierarchical arrangement of functions and menus of functions
➢ Each responsibility has a menu assigned to it.

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Menu: A menu is a hierarchical arrangement of functions and menus of functions. Each responsibility has a menu assigned to it.

Menu Entry: A menu entry is a menu component that identifies a function or a menu of functions. In some cases, both a function and a menu of functions correspond to the same menu entry. For example, both a form and its menu of subfunctions can occupy the same menu entry.

Responsibility: A responsibility defines an application user's current privileges while working with Oracle Applications. When an application user signs on, they select a responsibility that grants certain privileges, specifically:
The functions that the user may access: Functions are determined by the menu assigned to the responsibility.
The concurrent programs, such as reports, that the user may run: The application database accounts that forms, concurrent programs, and reports connect to.

Defining a New Menu Structure

- Identify menu needs
- Print function security report for similar existing menus
- Plan the menu structure
- Start with a blank menu form
- Build the menu from bottom to top
- Print a function security report set to document the new menu
- Assign to the responsibility

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Exclusion of Functions and Menus
Use exclusion rules to customize a responsibility. You can exclude functions at any level.

> When you exclude a menu item from a responsibility, all menus and functions that are nested in that menu are also excluded.
> When you exclude a function from a responsibility, all occurrences of that function throughout the menu structure of a responsibility are excluded.

New Menu Structure
Use the Menus form to define menus pointing to functions that you want to make available to a new responsibility.
Make New Responsibilities, Not New Menus
If possible, apply exclusion rules to existing menus to customize a responsibility rather than constructing an entirely new menu structure.
Determine the Application Functionality Required
Different jobs require access to different function groups. Identify predefined menus, forms, and form subfunctions to use as entries when defining a new menu.

Plan Your Menu Structure

Start with a blank Menus form (blank screen). Menus cannot be copied. A menu saved under a different name overwrites the original menu (there is no Save As feature).

Start with the lowest-level menus. A menu must be defined before it can be selected as an entry on another menu.

Assign menus and functions to higher-level menus.

Document your menu structure by printing the Function Security Menu Report.

Assign the menu structure to a new responsibility by using the responsibilities form.

Create a new responsibility.
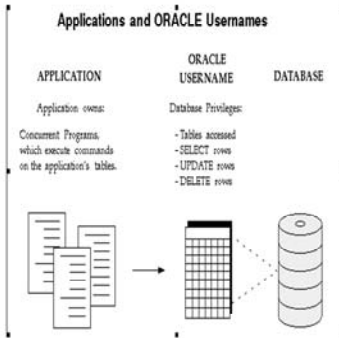
Defining Data Groups
Data groups specify your applications database connections.

Introduction to Data Groups
A data group is a list of Oracle Applications and the Oracle username assigned to each application. Each application in a data group must have an Oracle username assigned to it. An application may be listed only once in a data group.
An Oracle username and password allow access to an application's tables in an Oracle database. Each Oracle username in a data group determines the database tables and table privileges accessible by the corresponding application or applications.

Data Group's Purpose
Each responsibility has a data group associated with it. A data group serves two purposes:
1. It identifies the Oracle username that forms connect to when you select the responsibility.
2. Concurrent managers use a data group to match the application that owns a report or concurrent program (submitted by a user of the responsibility) with an Oracle username.

Data Groups Contd...

Using Data Groups with multiple product installations.
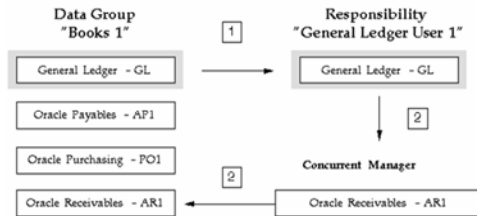
Data Group "Books 1"	1	Responsibility "General Ledger User 1"
General Ledger - GL	→	General Ledger - GL
Oracle Payables - AP1		2
Oracle Purchasing - PO1		Concurrent Manager
Oracle Receivables - AR1	2 ←	Oracle Receivables - AR1

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Using Data Groups with multiple Sets of Books
Use data groups to support multiple installations of an
Oracle Applications product (for example, Oracle Payables)
that supports multiple sets of books, where a different
application is associated with each set of books. See: Using
Data Groups with multiple product installations.
For example, with two installations of Oracle Payables
supporting two Sets of Books, use data groups to indicate
which Oracle Payables Oracle username to access from a
certain General Ledger responsibility.
Define a data group for each application installation (set of
books).
Define a responsibility for each application installation (set
of books), and assign the appropriate data group to each
responsibility.
Using Data Groups to include custom applications
Use data groups to include custom applications you develop
using Oracle's Application Object Library. To integrate a
custom application with Oracle Applications, you must
register the application using the Applications window. See:
Applications.

An example of using two Data Groups to support two
installations of Oracle Payables, Oracle Purchasing, and
Oracle Receivables is shown above.

Data Groups Contd...

Data Group "Books 2"

3

Responsibility "General Ledger User 2"

General Ledger – GL → General Ledger – GL

Oracle Payables – AP2

4

Oracle Purchasing – PO2

4 Concurrent Manager

Oracle Receivables – AR2 ← Oracle Receivables – AR2
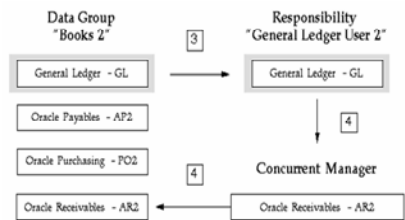
1 Data Group Books 1 is assigned to Responsibility General Ledger User 1.

2 A user of responsibility General Ledger User 1 submits an Oracle Receivables report, which runs accessing data with ORACLE ID AR1 privileges.

3 Data Group Books 2 is assigned to Responsibility General Ledger User 2. Note: both responsibilities attach to the same set of forms (same ORACLE ID).

4 A user of responsibility General Ledger User 2 submits an Oracle Receivables

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Basic Definitions

➢ **Form**
  – An Oracle Forms .fmx file located in their application basepath/forms/US (or appropriate language directory)

➢ **Function**
  – A function is a part of an application's functionality, registered under a unique name that can be assigned to a responsibility

➢ **There are two types of functions:**
  – Form functions (forms)
  – Subfunctions

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Basic Definitions Contd...

➤ **Form function**
  - Invokes an Oracle Forms form
  - A form has the unique property that users may navigate to it from the Navigate window

➤ **Subfunction**
  - It is a subset of a form's functionality

➤ **Menu**
  - A menu is a hierarchical arrangement of functions and menus of functions

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Basic Definitions Contd...

➤ **Menu Entry**
- A menu entry is a menu component that identifies a function or a menu of functions

➤ **Responsibility**
- When application users sign on, they select a responsibility that determines, among other things, the functions they may access
- Available functions are determined by the menu assigned to the current responsibility

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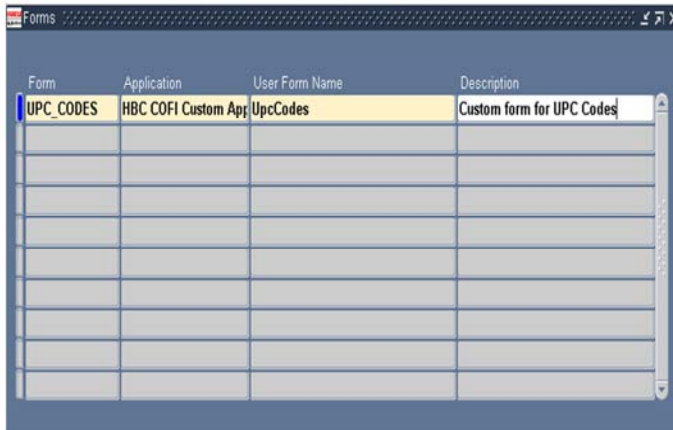
Register a Form with AOL Contd...

Form	Application	User Form Name	Description
UPC_CODES	HBC COFI Custom App	UpcCodes	Custom form for UPC Codes

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Enter the filename of the form (without the extension)

The application is the one that owns your form. The application tells Oracle Application Object Library where to find your form file

This is the form name you see when selecting a form using the Functions window

Register a Function with AOL Contd...

➤ Select function under Application
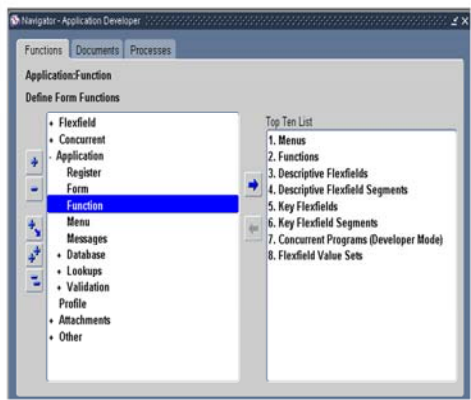
Register a Function with AOL Contd...
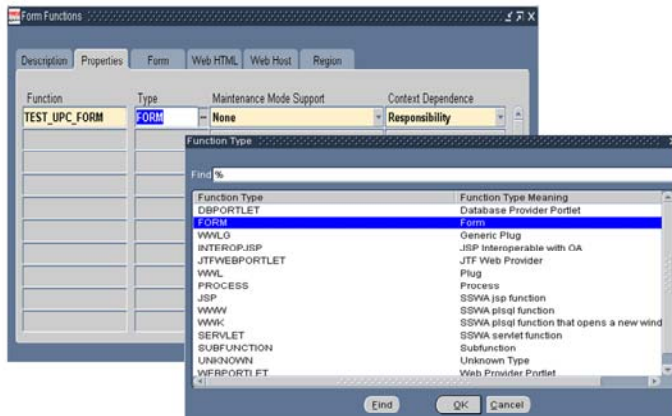
Function: Users do not see this unique function name, but you use it in your code when starting a form using function security routines or testing for function availability.
The function is a form type function which invokes the Oracle Forms file

Register a Function with AOL Contd...

If you are defining a user form, select the user form name and application of your form

Create a Menu of Functions

➤ **Select Menu under Application**
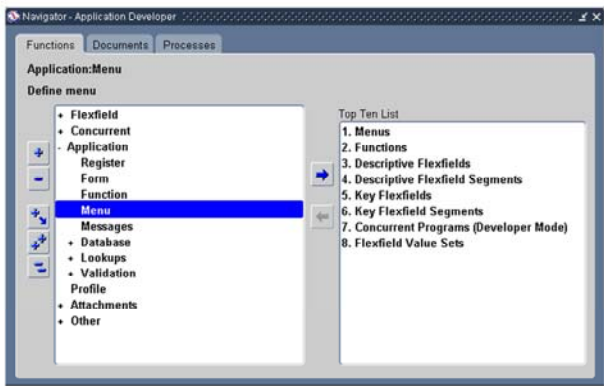
Create a Menu of Functions Contd...

Menu	INV_ITEMS				View Tree...

User Menu Name	INV_ITEMS
Menu Type	Standard
Description	Inventory Items Menu

Seq	Prompt	Submenu	Function	Description	Grant
8	Item Search		Items Search	Item Search	☑
9	Pending Status		Pending Status	Pending Status	☑
10	Documents		Inventory Documents	Maintain Inventory Documents	☑
11	Import	INV_ITEMS_OI		Item Open Interfaces Menu	☑
12	Delete Items	INV_BOMFDDEL_MENU	Inventory Delete Items	Delete Items	☑
13	Copy Item Attrib		Copy Item Attributes	Copy Item Attributes	☑
14	ICQ		ICQ		☑
15	Test Folder		Test Folder		☑
16	Test UPC		Test UPC		☑
17	Test UPC Form		Test UPC Form		☑

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Select Menu under Application
Press F11 to enter query mode, enter the menu name (wildcard allowed) for the Inventory responsibility and press ctrl-F11 to execute
Menu
Choose a name that describes the purpose of the menu
User Menu Name
A menu name that is used when a responsibility calls a main menu or when one menu calls the another
Sequence
      Enter a sequence number to specify where a menu entry appears relative to other menu entries in a menu
Navigator Prompt
      Enter a user-friendly , intuitive prompt that would be displayed by your menu in the Navigate window
      Leave the prompt blank for subfunctions that should not appear in the Navigator menu listing even though they are on the menu
Submenu
      Calls another menu, from which you can select menu entries
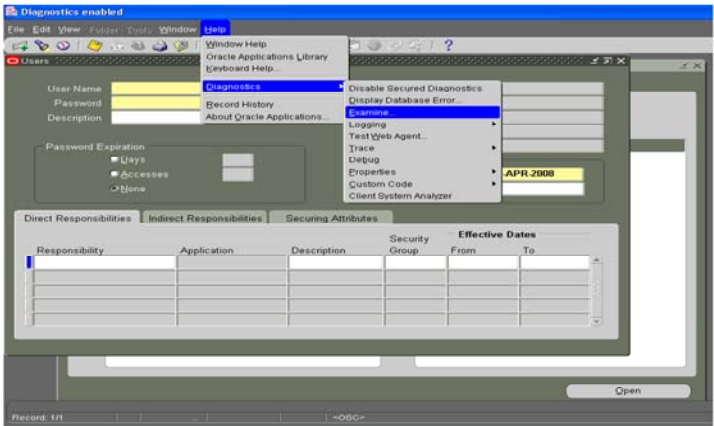Function
      Call a function that is to be included in the menu. A form function (form) appears in the Navigate window and allows access to that form.
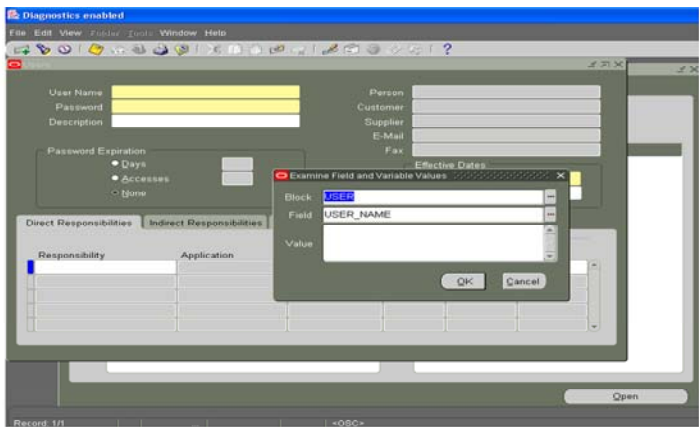Description
      Enter a description of the menu choice. This description appears in the Description field under the menu path in the Navigator

To Know Value of Columns
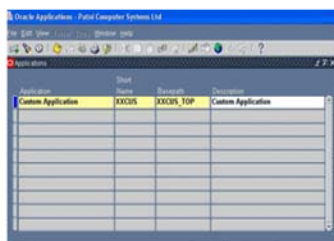
Integrate Applications with Custom Applications Contd…

➢ Create a custom directory tree for your custom schema as the APPLMGR user. Use the basepath parameter from the Application registration for the top level directory. This top level directory will reside just under APPL_TOP. The subdirectories under the custom directory may vary depending on the server type (forms server, concurrent processing server, etc…). Make sure that the rights/protections are open for the world (rwx)

➢ For example:

APPL_TOP (/appl/v1100000) | XXCUS_TOP
(/appl/v1100000/XXCUS) --> other product directories

----

bin forms html lib log mesg out reports
     US   US

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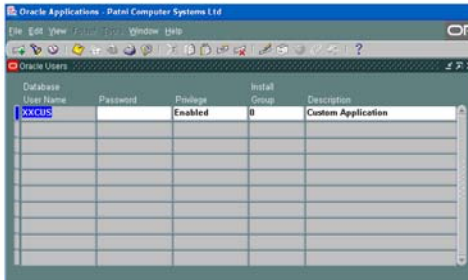## Integrate Applications with Custom Applications Contd...

➢ Modify the applications environmental file (example: APPLSYS.env) to include the custom schema basepath as the APPLMGR user

➢ For example: XXCUS_TOP="/appl/v1100000/XXCUS" export XXCUS_TOP

➢ Register the custom schema as an Oracle user

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Integrate Applications with Custom Applications Contd...

➤ Create the user in the RDBMS database using SQL*Plus under the system account. Give the user a default and temporary tablespace with quotas and then grant the CONNECT role

➤ For example: Connect to Oracle as System user

SQL> create user XXCUS identified by CUST default tablespace   USER_DATA temporary tablespace TEMP quota unlimited on   USER_DATA quota unlimited on TEMP;

➤   SQL> grant connect to XXCUS identified by CUST;

XXCUS is the product short name, CUST is the password for the custom schema, USER_DATA and TEMP are existing tablespaces

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Integrate Applications with Custom Applications Contd...

➢ Register the user with the Application Object Library.
➢ Log into Applications as the System Administrator and navigate to:
   Security -> ORACLE -> Register. For example:

Register an ORACLE username with Oracle Applications. An ORACLE username grants access privileges to the ORACLE database. This activity is performed by the DBA.

The installation process always registers your ORACLE username, so you need not register it unless you create a custom application using Oracle Application Object Library, or if you wish to associate an additional ORACLE username with Oracle Applications.

If you register an ORACLE username as a "restricted" ORACLE username, you submit a concurrent request to set up read-only privileges to the Oracle Application Object Library tables. An "enabled" ORACLE username has all privileges to those tables. A "disabled" ORACLE username has no privileges to those tables.

If you do not 'register and enable' your ORACLE username or if you disable a registered ORACLE username, the user cannot use Oracle Application Object Library features such as menus and flexfields.

You should not change the registration of any ORACLE usernames that the installation process registers, other than changing the passwords.

Passwords for the APPS Accounts

The applsys password must be identical to the password for the APPS accounts (APPS, APPS2, APPS3). The uniform passwords enable the different sets of books to operate correctly.

Integrate Applications with Custom Applications Contd...

➢ Add the custom schema to a data group. Log into Applications as the System Administrator and navigate to: Security -> ORACLE -> DataGroup

➢ It is recommended that you use the STANDARD datagroup and pair the custom schema with APPS or you can add a new data group. This depends upon the requirements
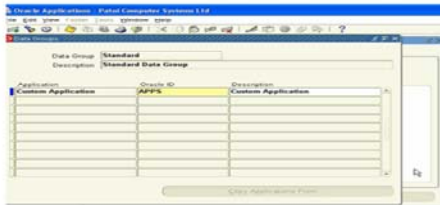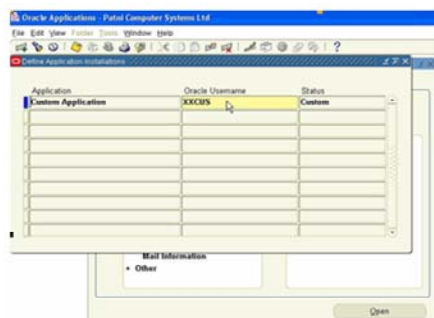
Since the application will be accessing the database objects with user apps, there should be synonyms in apps for the custom objects in the custom schema xxcus, AND apps should be given the necessary privileges select/insert/update/delete/execute) on the objects in xxcus.

Integrate Applications with Custom Applications Contd...

➢ Create your custom tables, indexes, views and sequences. It is suggested that you add WHO columns to your custom tables so that Oracle Applications can keep track of customizations

➢ Register your custom schema's tables (including flexfields) with the PL/SQL package AD_DD. You use the procedure AD_DD.register_table for the custom schema tables and AD_DD.register_column for the custom schema table columns

➢ Issue a commit after the pl/sql procedure is executed. The results can be seen in the application by navigating to Application→Database→Table using the Application Developer responsibility

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execute ad_dd.register_table (appl short name,table name,table type, next extent, % free, % used)

For example: $ sqlplus apps/apps
SQL> execute ad_dd.register_table ('XXCUS', 'CUST_TABLE' , 'T', 8,10, 90)
appl short name=XXCUS, table name=CUST_TABLE, table type=T, next extent=8, % free=10, % used=90

execute ad_dd.register_column (appl short name,table name,column name, column seq, column type, column width, null, translate)

For example: $ sqlplus apps/apps

SQL> execute ad_dd.register_column ('XXCUS', 'CUST_TABLE' , 'CUST_NO',1,'NUMBER',5,'N', 'N')

Here appl short name=XXCUS, table name=CUST_TABLE, column name=CUST_NO, column seq=1, column type=NUMBER, column width=5, null=N, translate=N.
Issue a commit after the pl/sql procedure is executed. The results can be seen in the application by navigating to Application→Database→Table using the Application Developer responsibility.

Integrate Applications with Custom Applications Contd...

➤ Run the custom schema against the APPS_DDL and APPS_ARRAY_DDL packages

➤ Run the scripts $AD_TOP/admin/sql/adaddls.pls, adaaddls.pls, adaddlb.pls and then adaaddlb.pls (in this order) under SQL*Plus:

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For example :

$ sqlplus apps/apps
SQL> @$AD_TOP/admin/sql/adaddls.pls
system_pword custom_schema
custom_schema_pword
SQL> @$AD_TOP/admin/sql/adaaddls.pls
system_pword custom_schema
custom_schema_pword
SQL> @$AD_TOP/admin/sql/adaddlb.pls
system_pword custom_schema
custom_schema_pword
SQL> @$AD_TOP/admin/sql/adaaddlb.pls
system_pword custom_schema
custom_schema_pword

Integrate Applications with Custom Applications Contd...

➤ **Integrate your database objects with the APPS schema by granting APPS the access to your custom schema's objects**
   – Grant all privileges from each custom data object to APPS
   – Create a synonym in APPS to each custom data object
   – Create custom code objects in APPS

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For example: $ sqlplus xxcus/cust

SQL> grant all on CUST_TABLE to APPS

For example: $ sqlplus apps/apps

SQL> create synonym APPS.CUST_TABLE for XXCUS.CUST_TABLE

$ sqlplus apps/apps
SQL> create function CUST_FUNCTION

Summary

➤ **In this session we covered about:**
  – Setting up the Function Security
  – Defining a New Menu Structure
  – Data groups
  – Integrate Applications with Custom Applications
  – Registering the Forms, Functions and Creating the Menu of Functions

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Summary

➤ **In this lesson, you should have learned how to:**
  – Descriptive flexfields gather additional information.
  – Design the descriptive flexfield to support the different needs of different users.
  – Define flexfield level attributes.
  – Define global segments for the Global Data Elements structure.
  – Define a reference or context field if using different contexts.

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