

R12.x Oracle E-Business Suite Essentials for Implementers

Student Guide

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Overview

Chapter 1

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R12.x Oracle E-Business Essentials for Implementers: Overview

1

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Objectives

Objectives

After completing this lesson, you should be able to do the following:

- Define the purpose of this course
- Identify the topics covered in this course
- Locate additional reference material for the topics covered in this course

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Course Purpose

Course Purpose

- The R12.x Oracle E-Business Suite Essentials for Implementers course provides a functional foundation for any E-Business Suite Fundamentals course.
- In the course, there will be demonstrations and hands-on practice, which reinforce the fundamental concepts.

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Purpose of the Course

The course covers major components of the R12.x E-Business Suite architecture and the user interface.

After completing this course, you will be able to:

- Recognize the shared entities within R12.x E-Business Suite and the key business flows and integration points between products in R12.x E-Business Suite
- Explain Flexfield concepts such as defining, creating, and discussing enhancements to the flexfields
- Explore the Multi-Org Access Control (MOAC) feature, its key components that provide better benefits and solutions to Enterprises
- Obtain an overview of Oracle Workflow, the components that comprise workflow, and how to monitor a process in the workflow monitor
- Explain how alerts are used in R12.x E-Business Suite
- Recognize the features of Oracle Fusion Business Intelligence for Oracle Applications

What Is Included in the Course?

What Is Included in the Course?

- Navigating in the R12.x user interface
- E-Business Suite (EBS) product footprint and architecture
- Fundamentals of System Administration
- Fundamentals of Flexfields
- Overview of shared entities and integration
- Fundamentals of Multiple Organizations (Multi-Org) and MOAC
- Fundamentals of Oracle Workflow and Oracle Alert
- Recognizing the features of Oracle Business Intelligence (Oracle BI) Applications

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What Is Included in the Course?

Navigating in the R12.x User Interface

- The user interface (UI) significantly enhances usability and productivity of Oracle E-Business Suite.
- The UI brings together some of the best UI concepts from a host of Oracle Applications.
- The user interface is a subclass of Browser Look and Feel (BLAF).

Introduction to EBS Product Footprint and Architecture

- The course communicates information about functionalities in the specified release of the Oracle E-Business Suite.
- Oracle E-Business Suite is a fully integrated, comprehensive suite of business applications for the enterprise.
- Oracle Applications Architecture is a framework for multitiered, distributed computing that supports Oracle Applications products.
- In this model, various servers or services are distributed among three levels or tiers.

Overview of Shared Entities and Integration

- This recognizes the shared entities within R12.x E-Business Suite and the key business flows and integration points between products in R12.x E-Business Suite.

Fundamentals of Multiple Organizations (Multi-Org) and MOAC

- Define Multi-Org.
- Discuss the types of organizations supported in the Multi-Org model.
- Explain the Multi-Org entities.
- Explain how Multi-Org secures data.
- Identify key implementation considerations.
- Explain Multi-Org Access Control.
- Explain Multi-Org Preferences.
- Explain Enhanced Multi-Org Reporting.

Fundamentals of Flexfields

- Discuss Flexfields.
- Define value sets.
- Define key flexfields.
- Define descriptive flexfields.
- Enter values.

Fundamentals of System Administration

- Understand the layers of access control in Oracle.
- Define Function Security.
- Define Data Security.

Fundamentals of Oracle Workflow and Oracle Alert

- Get an overview of Oracle Workflow.
- Understand the components that comprise Workflow.
- Learn how to monitor a process on the Workflow monitor.
- Get an overview of the Oracle Alert process.

Overview of Oracle Business Intelligence Products

Oracle Business Intelligence Products provides:

- Role-based dashboards with preconfigured, action-driven analytics
- Delivered integration with E-Business Suite transactional applications
- Lower total cost of ownership and rapid deployment
- Extensibility and scalability

E-Business Suite: Documentation

- Oracle Applications Concepts
- Major E-Business Suite product families
- Oracle Applications Multiple Organizations Implementation Guide
- Oracle Applications Flexfields Guide
- Oracle Applications System Administrator's Documentation Set
- Oracle Applications User's Guide
- Oracle Workflow Guides
- Oracle Business Intelligence User's Guide

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E-Business Suite: Documentation

You can obtain additional information for the topics in the slide from the following links:

http://download.oracle.com/docs/cd/B53825_02/current/html/docset.html

Other Resources

Other Resources

- My Oracle Support
- Open World
- Appsnet
- Oracle Technology Network (OTN)

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Other Resources

My Oracle Support (formerly MetaLink)

Using My Oracle Support, you can:

- Log, view, access, and monitor Service Requests (SRs) online
- Search a global repository of technical knowledge
- Get automatic skill-based routing of your SRs
- Query the bug database for known issues
- Download patches and patch sets

Navigate to <http://metalink.oracle.com/> for more information.

Open World

Open World is a hands-on learning environment full of innovative technology, training, solutions, strategy, and education. Navigate to <http://www.oracle.com/openworld/index.html> for more information.

Appsnet

Appsnet is an online community for users and implementers of Oracle Applications. Navigate to <http://www.oracle.com/technology/community/apps/index.html> for more information.

Oracle Technology Network

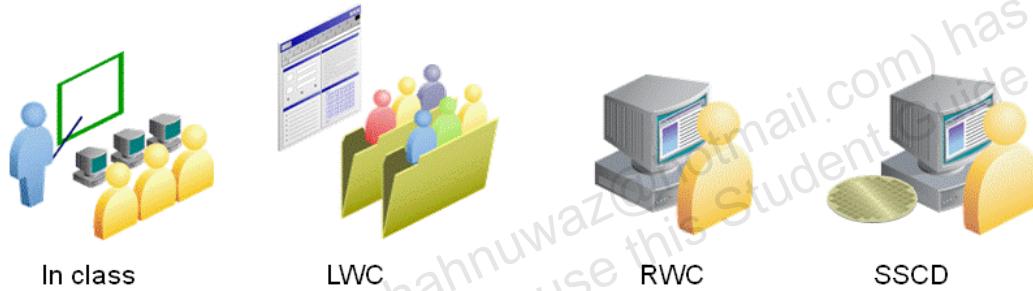
It is a comprehensive technical resource. Navigate to
<http://www.oracle.com/technology/index.html> for more information.

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Oracle University Courses

Oracle University Courses

- Instructor-Led Training (ILT)
- Live Virtual Class (LVC)
- Recorded WebClass (RWC)
- iLearning (Oracle University Knowledge Center [OUKC])
- Self-Service CD-ROM (SSCD)



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Oracle University Courses

The main site for information regarding Oracle University and a host of Oracle education resources is <http://www.oracle.com/education/>.

Instructor-Led Training (ILT)

Oracle's most popular and comprehensive learning format, ILT provides students with hands-on experience to match job requirements and to prepare students for Oracle Certification exams. From in-class demonstrations to hands-on labs, Oracle University Instructor-Led Training provides a dynamic learning environment.

For more information about ILTs, see the following Web site:

http://education.oracle.com/pls/web_prod-plq-dad/show_desc.redirect?redir_type=33

Instructor-Led Training: Private ILT

Private events are designed to maximize the learning experience and suit the specific needs of any implementation team, IT department, or other technology groups. Oracle private events are the ideal solution for a team of employees needing the same kind of training, who can be trained together, keeping the travel to a minimum.

For more information, go to http://education.oracle.com/pls/web_prod-plq-dad/show_desc.redirect?redir_type=37.

Live Virtual Class (LVC)

Oracle University's Live Virtual Class is comparable to the traditional in-class training—without the need to incur travel expenses. With world-class technology, top-rated instructors, cutting-edge curriculum, and hands-on labs, it offers an exciting combination of traditional content and interactive learning.

For more information about LVCs, go to http://education.oracle.com/pls/web_prod-plq-dad/db_pages.getpage?page_id=233.

iLearning (Oracle University Knowledge Center)

OUKC offers on-demand access to self-paced courses with topics covering Oracle technologies. Students can use the Knowledge Center to:

- Prepare to become an Oracle Certified Professional
- Explore advanced technology topics
- Get implementation expertise
- Get trained to use Oracle E-Business Suite Applications

For more information about courses available in OUKC, go to

http://education.oracle.com/pls/web_prod-plq-dad/db_pages.getpage?page_id=160.

Self-Study CD-ROM (SSCD)

For training at your own pace, at any time and place, Oracle University's Self-Study CD-ROMs (SSCD) are available as individual courses. The collection of titles covers Oracle products as well as related IT topics. Some titles cover the same content as the ILTs and can be used to reinforce classroom learning, whereas others expand on general and special topics. Comprehensive, engaging lessons use the latest multimedia and instructional design to provide hands-on training. SSCDs are an ideal way to train if you cannot attend class or prefer to learn on your own.

For more information about SSCD training options, see

http://education.oracle.com/pls/web_prod-plq-dad/show_desc.redirect?redir_type=35.

Summary

Summary

After completing this lesson, you should be able to:

- Understand the target audience and purpose of this course
- Identify the topics in this course and list them
- Gather inputs from where you can access additional reference material for this course

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Navigating in R12.x Oracle Applications

Chapter 2

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Navigating in R12.x Oracle Applications

Navigating in R12.x Oracle Applications

2

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Objectives

Objectives

After completing this lesson, you should be able to do the following using the “SWAN” user interface:

- Log in to Oracle Applications
- Navigate from Personal Home page to Applications
- Create Favorites and set Preferences
- Choose a responsibility
- Use Forms and Menus
- Enter data using Forms
- Search for data using Forms
- Access online Help
- Run and monitor Reports and Programs
- Log out of Oracle Applications

ORACLE

Objectives

Navigating from Personal Home Page to Applications

This lesson discusses how to access and navigate within Oracle Applications Release 12.1 by using the “SWAN” user interface (UI). You learn to enter, retrieve, and search for information in the form of a query, create and set Favorites and Preferences, access online Help, and run Reports and Programs.

Look and Feel of the “SWAN” UI

Overview: The “SWAN” UI greatly improves the look and feel of Oracle E-Business Suite, significantly enhancing usability and productivity. The “SWAN” UI brings together some of the best UI concepts from Oracle E-Business Suite, PeopleSoft, and JD Edwards applications.

Features: It is a subclass of Browser Look and Feel (BLAF) and replaces the former look and feel. Oracle E-Business Suite will use only the “SWAN” look and feel starting from R12. This look and feel applies to the whole Oracle E-Business Suite.

Oracle Application Framework (OAF) Applications

Because the relevant changes are made in the underlying technology layer, most products do not require any direct changes to be made. The key features of the technology layer for OAF products can be summarized as follows:

- The overall color usage is contemporary and compelling, which reduces eye strain and provides a more pleasant look and feel.
- The login screen complements the updates to the overall look and feel.
- The font is Tahoma 9 pt. This makes better use of the available screen area.
- All buttons and tabs have a gradient background to increase their visibility on the screen as clickable elements.
- The button text and overall shape have been designed to reduce the amount of space required for their display.
- Buttons are standard HTML buttons instead of images.
- Background colors of page elements ensure better visual separation of screen elements.
- The entire icon suite has a sophisticated style that integrates visually with the overall interface design.
- The page footer background is designed to make it more readily distinguishable from other page elements.
- The Navigator is styled to be consistent with the other UI components.
- Page tabs are placed to the left of the screen for better scanning and a clearer relationship with associated subtabs.

Forms Applications

The forms color scheme is consistent with the OAF products. Field values are set to normal weight, providing further consistency between products, and reducing the visual complexity of application screens. As noted previously, for OAF products, these features have been incorporated in the technology layer and, therefore, are applicable to individual products and to the position or layout of any field within forms.

Logging In to Oracle Applications

Logging In to Oracle Applications



Logging In to Oracle Applications

Starting Oracle Applications

The first step in starting Oracle Applications is to enter the appropriate URL for your site in an Oracle Applications-certified browser. After starting Oracle Applications, the first window you see is the login window. You need an Oracle Applications username and password to log in to Oracle Applications, which is most likely different from the username and password you use to log in to your computer.

If you are not sure of your Oracle Applications username and password, consult your system administrator. Oracle Applications security is based on your Oracle Applications username. Your username connects you to your responsibilities, which control your access to applications, functions, reports, and data.

Navigating from Personal Home Page to Applications

Navigating from Personal Home Page to Applications

Forms Based applications

The screenshot shows the 'Find Assets' application window. It has several sections for filtering assets: 'By Asset Detail' (Asset Number, Tag Number, Serial Number, Warranty Number, Status), 'By Book' (Book dropdown set to 'ADB ACE', Dates in Service), 'By Assignment' (Employee Name, Expense Account), 'By Source Line' (Supplier Name, Invoice Number, PO Number, Project Number), and 'By Lease' (Lease Number, Description). At the bottom are buttons for Clear, Additions, QuickAdditions, and Find.

Self-Service Applications

The screenshot shows the 'Expense Reports' application window. It features a navigation bar with links for 'Expenses', 'Expenses Home', 'Expense Reports', and 'Credit Card Transactions'. A note states: 'IMPORTANT NOTE: You will temporarily not be able to use the 'Duplicate' function in the Expense Report option. Note, you will still be able to duplicate line level transaction.' Below is a section titled 'MANAGING YOUR CREDIT CARD TRANSACTIONS' with a link to guidelines. The main area is titled 'Track Submitted Expense Reports' with a note: 'If you have questions on the Expense Reporting process or payment questions, please contact your expense report manager.' A table lists expense reports with columns for Report Number, Report Submit Date, Last Report Status, and Days Activit. One row is shown: 'IDCW26822942 15-Feb-2009 Paid 2'. A note at the bottom right says: 'If the status is Pending Your Resolution, you were sent a notification.'

Navigating from Personal Home Page to Applications

After you log in to Oracle Applications, your E-Business Suite Home page is displayed. From here, you can:

- Access E-Business Suite Applications (professional or self-service)
- View and respond to notifications
- Set personal user preferences
- Navigate to other frequently used functions or Web pages

Note: The exact appearance of your windows may vary depending on which interface you use and how it is configured at your site.

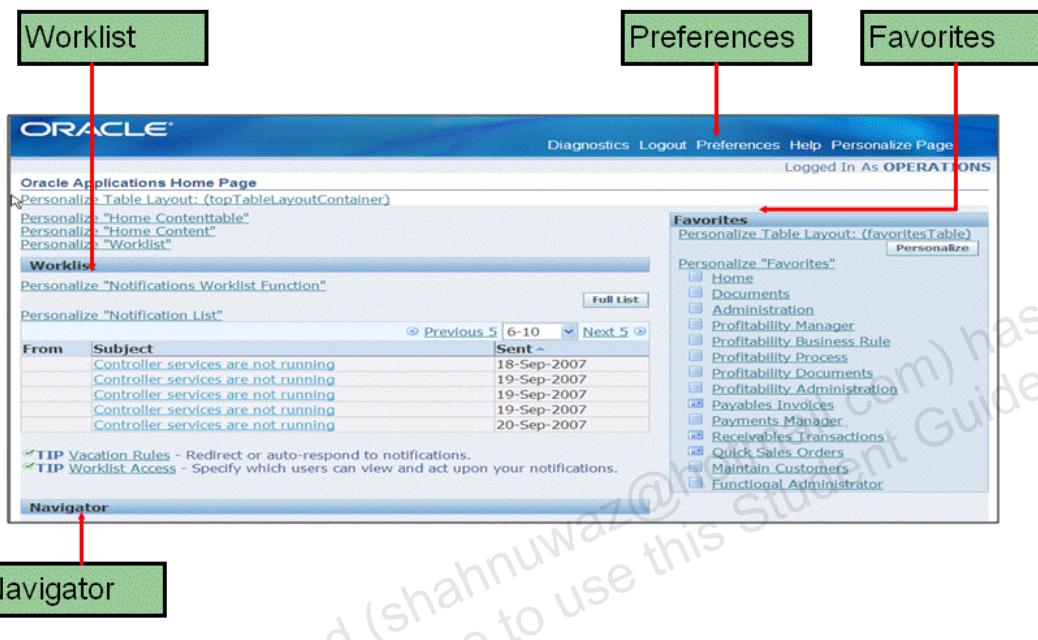
Two Types of Interfaces

Oracle E-Business Suite applications are either forms based or HTML based. Forms based applications are optimized for processing a large volume of transactions. HTML based applications, sometimes referred to as "Self-Service Applications," are optimized for ease of first-time use. For example, to enter a batch of journals, E-Business Suite provides a forms based application. To submit an expense report, E-Business Suite provides an HTML based application.

Refer to the guided demonstration - *Logging In to and Navigating Oracle Applications (Professional and Self-Service Interface) (Required)*.

Creating Favorites and Setting Preferences

Creating Favorites and Setting Preferences



Creating Favorites and Setting Preferences

The E-Business Suite Home page is your entry point to Oracle E-Business Suite. From this page, you can:

- Create Favorites
- Set Preferences
- Use Worklists
- Access E-Business Suite functions from the Navigator

Create Favorites

Customize your Favorites by adding links to frequently used functions and Web sites. To add or remove links, select the Edit Favorites option. In R12.x, end users can also define Favorites in the Oracle E-Business Suite as links to Web sites outside the Oracle E-Business Suite, and such URL links open in a new browser window. Thus, the original browser window remains showing the Oracle E-Business Suite session.

Set Preferences

Select Preferences to set personal options. Options include language, territory, time zone, notification style, accessibility setting, and formats for dates and numbers. You can also reset your password from the Preferences page. Optionally, specify a Start page for all future

sessions from available pages (organized by responsibility). Set additional preferences by using user profile options.

Use Worklists

The Worklist displays your notifications.

Select the Subject to respond to or select Full List to see all your notifications.

Note: The Use Worklist option may not be available by default on the Personal Home Page.

Access E-Business Suite Functions

Use the Navigator to access Oracle E-Business Suite functions grouped by responsibility.

Note: A responsibility is a level of authority in Oracle E-Business Suite. It enables your access to those functions and data appropriate for your enterprise role. You can have one or more responsibilities.

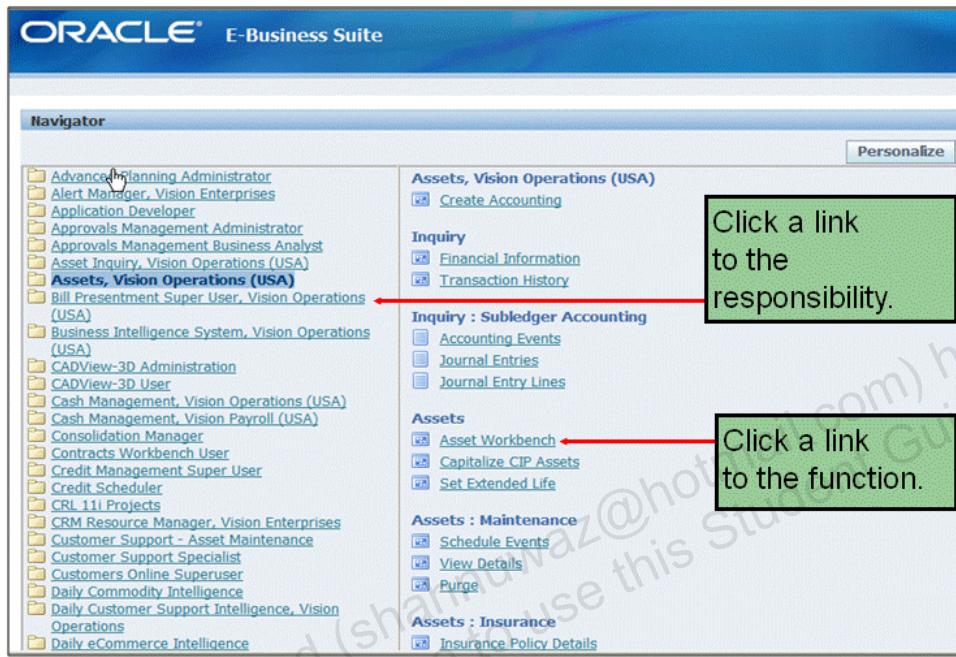
To access a function:

- Select a responsibility to view its menu of functions
- Select the function to launch

Refer to the guided demonstration - *Creating Favorites (Required)*.

Choosing a Responsibility

Choosing a Responsibility



Choosing a Responsibility

Each user has at least one responsibility and several users can share the same responsibility. Your system administrator can assign you any of the standard responsibilities or create custom responsibilities as per the business requirements. Each responsibility would be associated with a single application, such as HRMS, General Ledger, and so on. You can access either Professional Applications or Self-Service Applications, but not both, based on the responsibility you are using. Click the link in the Application section to select your responsibility, and then click the underlined link to open a specific function.

Note: The exact appearance of your window may vary depending on which interface you are using and how it is configured at your site.

Responsibility Relationships: Many to One

Responsibility Relationships: Many to One

The diagram illustrates the concept of 'Responsibility Relationships: Many to One'. It features a green cartoon character sitting at a yellow desk, looking at a computer monitor. Two red lines extend from the character to two separate boxes: 'Accounts Payable' on the left and 'Payroll' on the right. Above the character's head is a large blue question mark, symbolizing the process of determining which responsibilities apply to the user.

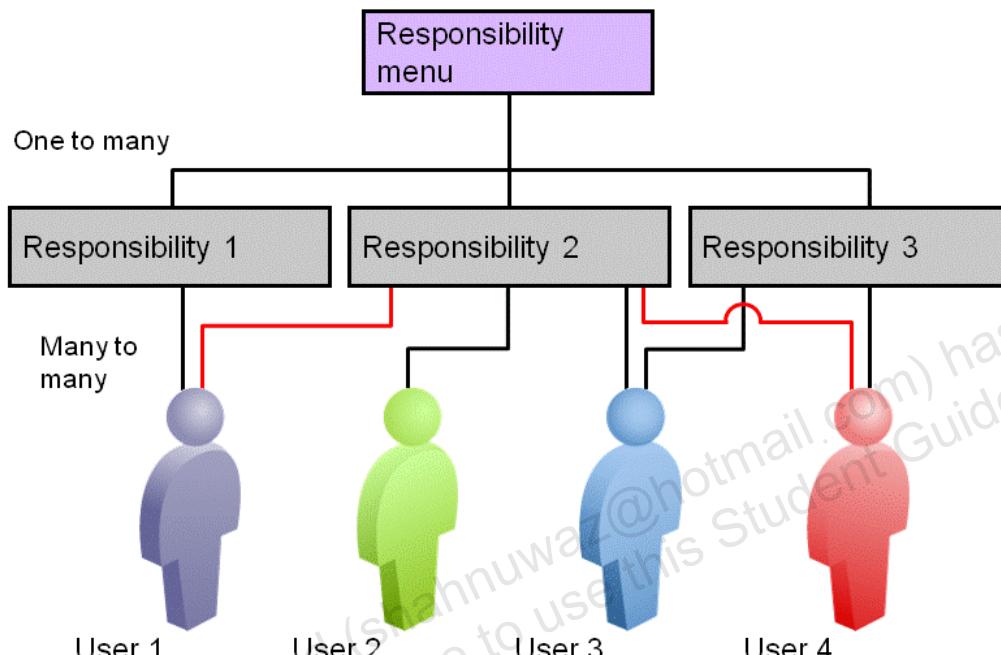
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Responsibility Relationships: Many to One

After you have used the login form to begin the login process, you must tell the system what type of access you will be using. A responsibility is a set of data, menus, and forms that define your particular level of authority when you use the system. For example, you would want the Accounts Payable department of your company to access the invoice forms of the system, but you would not want them to be able to access any payroll information. Another example is that the controller of a department would want to have access to all the data that his or her employees can use, so the controller would want access to both accounts payable and payroll information.

Responsibility Relationships

Responsibility Relationships



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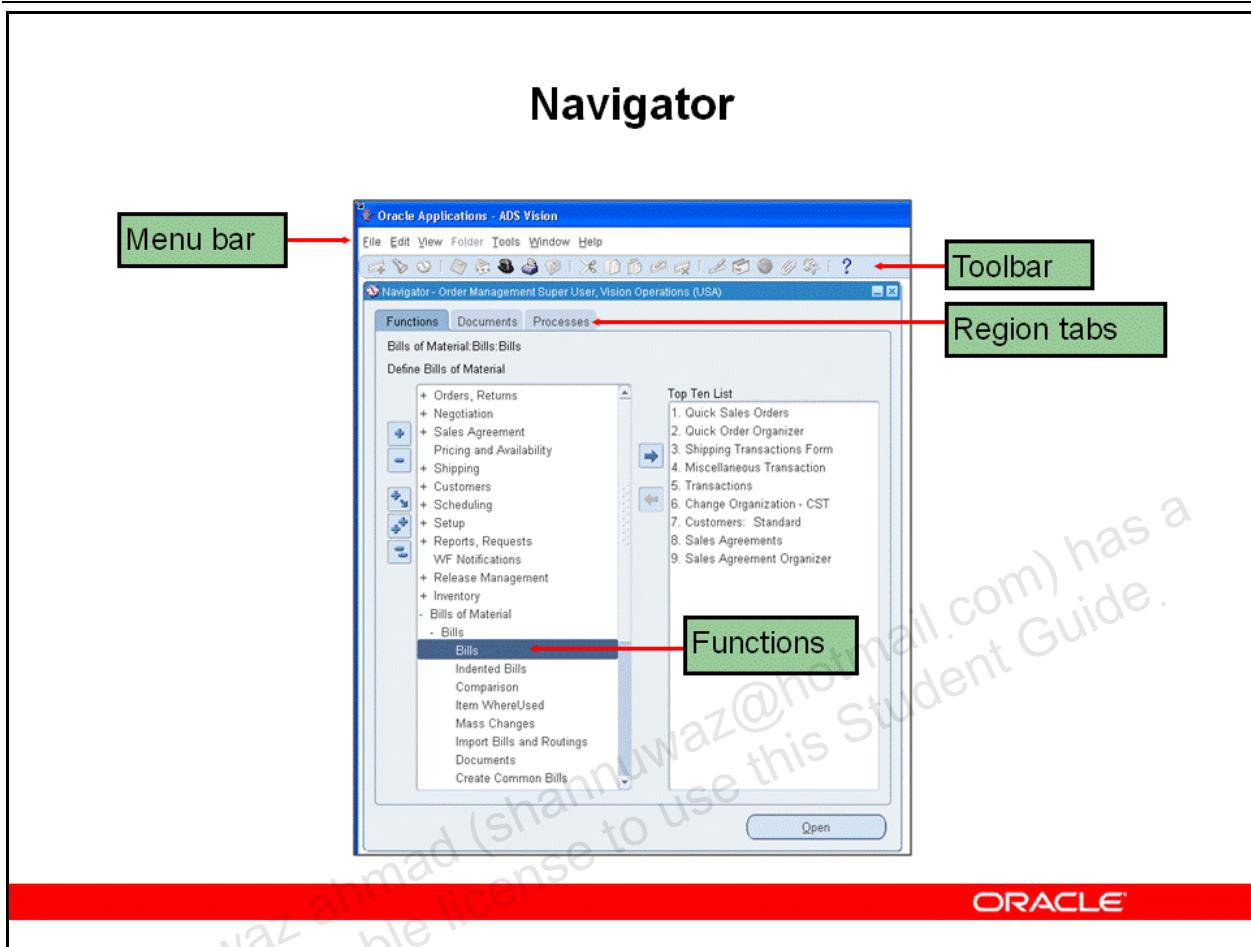
Responsibility Relationships

Properties

The following is a list of the types of responsibilities and their particular properties that can be defined in Oracle Applications by your system administrator:

- A specific application (or applications), such as Oracle General Ledger
- A Ledger, such as Vision Operations, used for financial reporting which is made up of the Chart of Accounts, Currency, Calendar, and Accounting Convention
- An organization, such as Vision Services or Vision Distribution
- A restricted list of windows to which you can navigate. For example, a responsibility may allow certain Oracle Financials users to enter invoices, but not to enter names of suppliers (vendors) or customers.
- A restricted list of functions you can perform. For example, two responsibilities may have access to the same window, but the window of one responsibility may have additional functional buttons.
- Reports in a specific application. Your system administrator can assign groups of reports to one or more responsibilities, so the responsibility you select determines the reports that you can submit.

Navigator



Navigator

The Navigator window displays the name of the responsibility you select in the title bar. Use this window to navigate to a form, so you can perform a specific business flow. You can navigate to the forms that are displayed in a navigation list at the left of the Navigator window. You can click the tabs to access the different regions.

Navigator Region Tabs

The Functions tab displays all the applications functions that you can access for the responsibility selected. If you have a document, such as a particular purchase order, invoice, or sales order that you want to access later, you can create a link to the document by using the Navigator's Document feature.

The Navigator's Document feature allows you to create as many links as you want and save them in the Documents region of the Navigator window. When you use a link to open a document, Oracle Applications opens the document in the appropriate form window. You can access the Document region using the tab control.

The Processes region of the Navigator (the "Process Navigator") automates business flows across Oracle Applications forms. It allows you to model and execute complex business processes through an easy-to-use graphical user interface. The business processes enabled through the Process Navigator can cross product boundaries and include complete business cycles.

The Process Navigator guides you step by step through each required function in a business process. In addition to providing a visual map of a business process, the Process Navigator can launch the appropriate Oracle Applications forms or standard reports at each step.

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Expanding or Collapsing the Navigation List

Expanding or Collapsing the Navigation List

- Select one of the following methods to expand an item to its next sublevel window:
 1. Double-click the item.
 2. Select the item and click Open.
 3. Select the item and click Expand.
- To collapse an expanded item:
 1. Double-click the expanded item
 2. Select the item and click Collapse

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Expanding or Collapsing the Navigation List

Each user can access the Oracle Applications forms in several ways so that they can use the system quickly, according to their own computer style. Use the various buttons in the Navigator to manipulate the list items.

Expanding or Collapsing Several Items

Expanding or Collapsing Several Items

To expand or collapse several items at once, click one of the following buttons:

- **Expand All Children:** Expands all the sublevels of the currently selected item. 
- **Expand All:** Expands all the sublevels of all expandable items in the navigation list. 
- **Collapse All:** Collapses all currently expanded items in the navigation list. 

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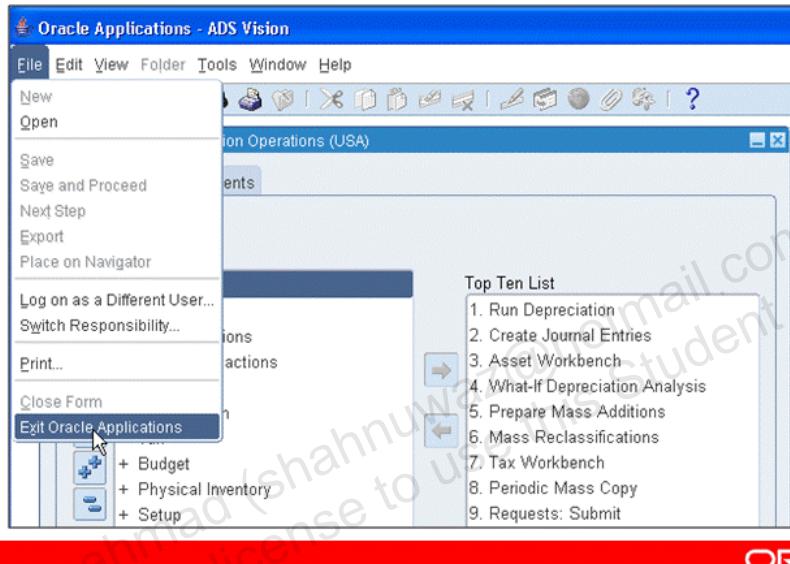
Expanding or Collapsing Several Items

Each user can access the Oracle Applications forms in several ways so that he or she can use the system quickly, according to his or her own computer style. Use the various buttons in the Navigator to manipulate the list items.

Logging Out of Oracle Applications

Logging Out of Oracle Applications

- From the File menu, select Exit Oracle Applications.
- Use this method to ensure that your username is cleared from system access.



Logging Out of Oracle Applications

It is important to exit the system in this manner to ensure that your username is cleared from system access.

You can also close the multiple-document interface (MDI) window or use the [F4] function key.

You can log out of Personal Home page completely by clicking the Logout link.

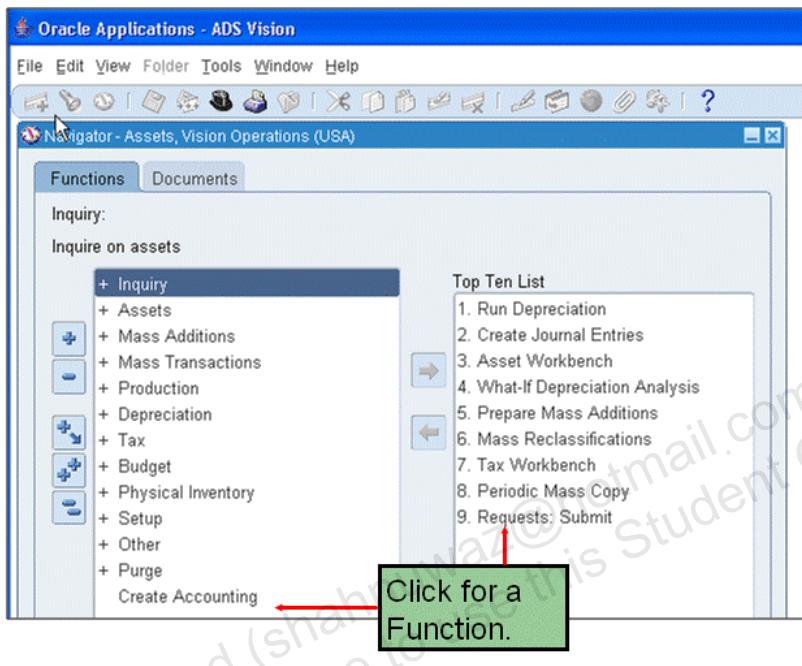
Using Forms and Menus

Using Forms and Menus

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Navigating to a Form

Navigating to a Form

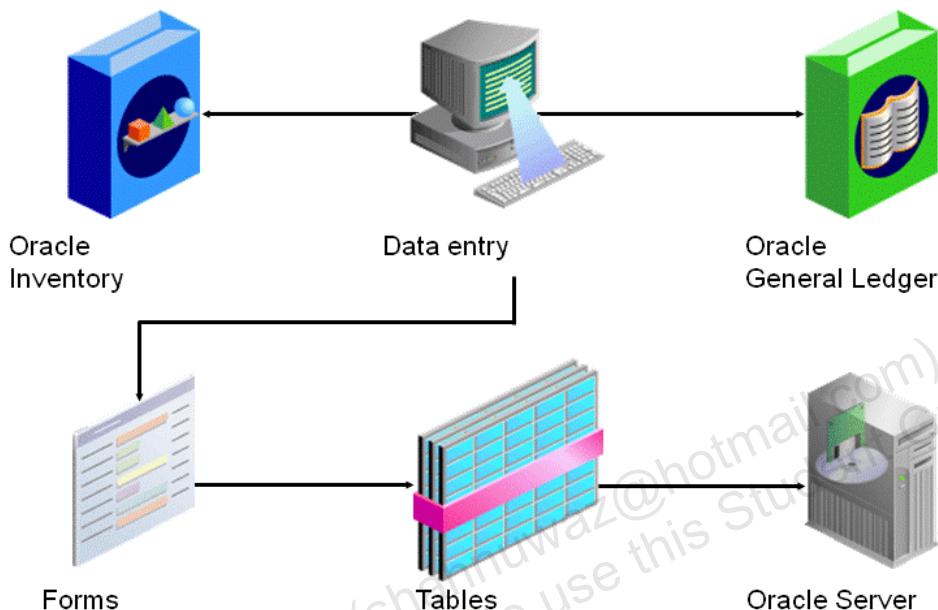


Navigating to a Form

Use the Navigator window to navigate to a form that allows you to perform a specific business activity. The Navigator window is always open during your forms session of Oracle Applications and displays the name of your current responsibility on its title bar.

Data Flow Across Oracle Applications

Data Flow Across Oracle Applications



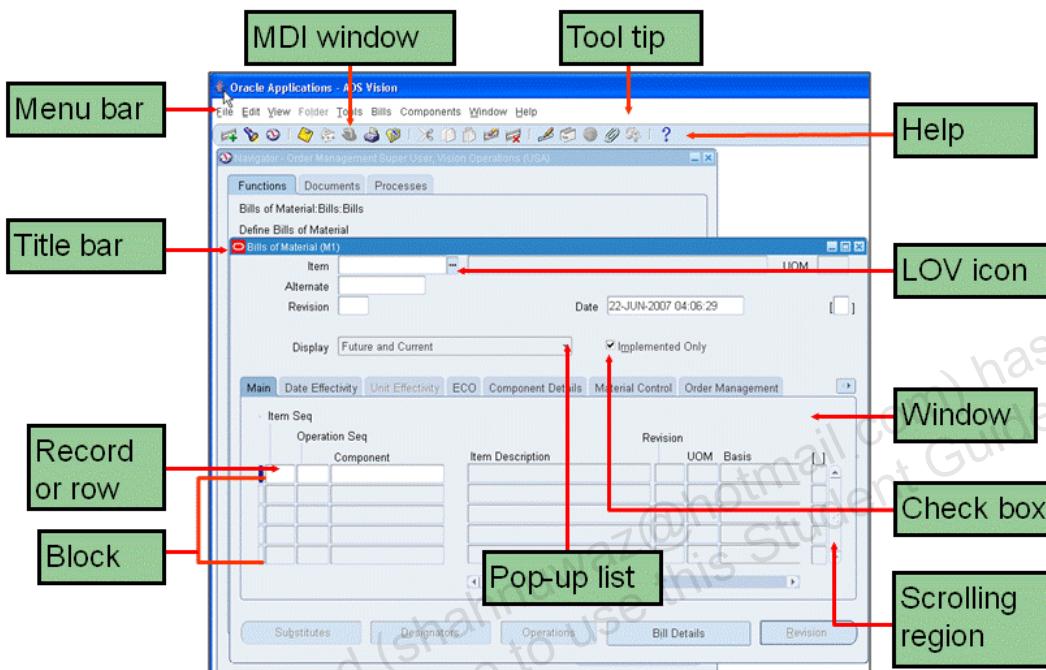
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Data Flow Across Oracle Applications

Oracle Applications is a tightly integrated suite of application products that share a common look and feel. Using the menus and windows of Oracle Applications, you can access all the functions necessary to manage your business information. Oracle Applications software is highly responsive to users by providing full point-and-click capability. You use your mouse or keyboard to operate graphical controls such as pull-down menus, buttons, pop-up lists, check boxes, or tabs. An Oracle Applications “form” is a user’s interface to business data stored in the database. You may have called it a “screen” in other applications. You navigate between and within forms to enter information to and access information from the database.

Form Terminology

Form Terminology



Form Terminology

Oracle Applications Release 12.1 works in a Web-enabled environment. It is important to understand the terminology of the components within an Oracle Applications form:

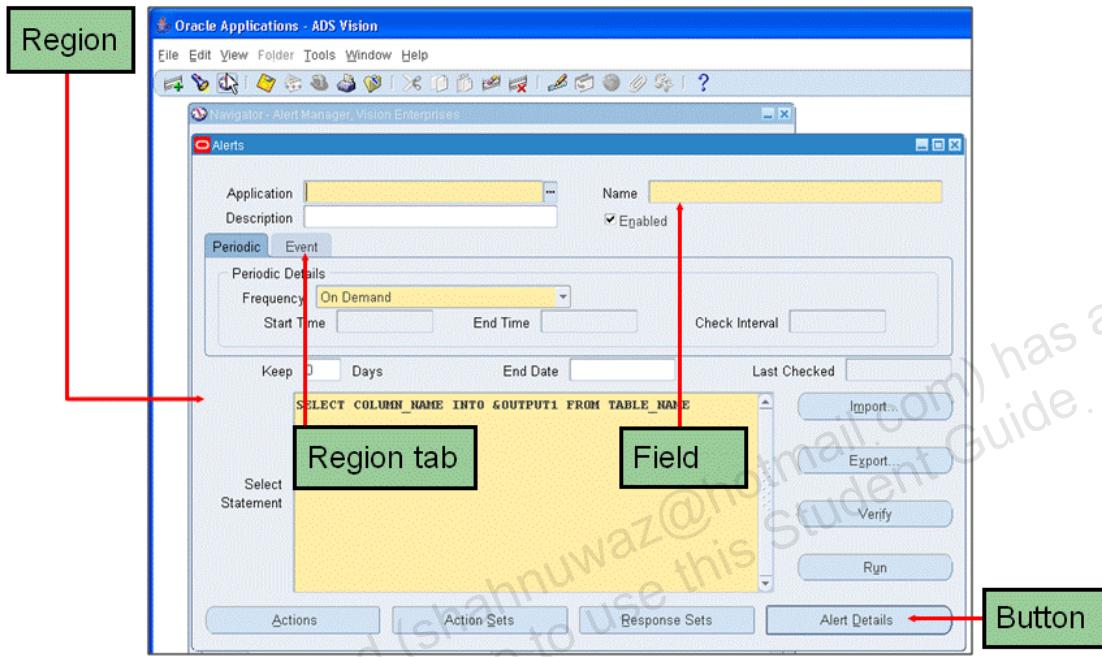
- **Menu Bar:** Use pull-down menus from this menu bar to navigate to other forms or perform actions within a form.
- **Window:** It is an area where the user interacts with an application. (Many windows can be open at one time and you can access these “overlapping” windows to perform data entry or data search activities.)
- **Window title:** The text in the title bar that indicates the name of the window and usually gives context information pertinent to the information in that window.
- **MDI window:** It is a master container window that houses all windows, toolbars, and application windows.
- **Tool tip:** It is an iconic bubble help that you can use to determine the function of a button on the toolbar.
- **Record or row:** It is a set of one or more related data items from a table or view that are grouped for processing.
- **Check box:** It is a box in which you can toggle between an “on/off” or “yes/no” state for a particular value.

- **LOV icon:** It is an icon that you can click to display a list of values (LOV) for the current field.
- **Pop-up list:** It is a pop-up list that lets you select a single value from a short list.
- **Scrolling region:** It is a region containing a scroll bar, in which to view other fields.
- **Block:** It is an area of information relative to a specific business function or entity.

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Form Terminology

Form Terminology



Form Terminology (continued)

- **Region:** It is a logical grouping of fields set apart from other fields by an outline.
- **Region tab:** It is a collection of regions that occupy the same space in a window, where only one region can be displayed at a time.
- **Field:** It is an area in a window that displays data or enables you to enter data.
- **Button:** It is a graphic element that initiates a predefined action when you click it.

Refer to the practice - *Logging In to Oracle Applications, Navigating through Responsibilities and Menus, Closing a Form (Required)*.

Refer to the practice - *Switch Responsibility (Required)*.

Field Colors

Field Colors

Field color	Description
White	Allows data entry
Yellow	Requires data entry
Grey	Does not allow data entry
Blue	Indicates the fields to use in “Query-Enter” mode

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Field Colors

Each block contains fields you use to enter, view, update, or delete information. A field prompt describes each field by telling you what kind of information appears in the field or what kind of information you should enter in the field. Fields are color coded to indicate their type as follows:

- **White fields:** Allow data entry
- **Yellow fields:** Require data entry; indicate a mandatory field
- **Grey fields:** Do not allow data entry and usually default to preset values depending on the form
- **Blue fields:** Indicate fields to use in “Query-Enter” mode

The term “field” generally refers to a text field, an area in a window that either displays data or allows you to enter data. However, a field can also include a button, a check box, an option group, or a pop-up list.

Creating and Saving a New Record

Creating and Saving a New Record

New



(M) File > New

Save



(M) File > Save

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Creating and Saving a New Record

To Create a Record

Select New from the File menu or use the New toolbar icon. After you enter data for your new record, select Save or “Save and Proceed” from the File menu to save the record to the database. Selecting “Save and Proceed” automatically advances you to the next record.

Refer to the guided demonstration - *Creating and Saving a Record (Required)*.

Editing and Deleting a Record

Editing and Deleting a Record

Edit



(M) Edit > Record

Delete



(M) Edit > Delete

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Editing and Deleting a Record

To Edit a Record

Select Record from the Edit menu. This action allows any change to be made to the selected record from your editable screen.

Note: Fields protected against any update cannot be edited.

To Delete a Record

Select Delete from the Edit menu. This erases the current record from your screen and returns your cursor to the first field of the next record.

To Save Your Deletion from the Database

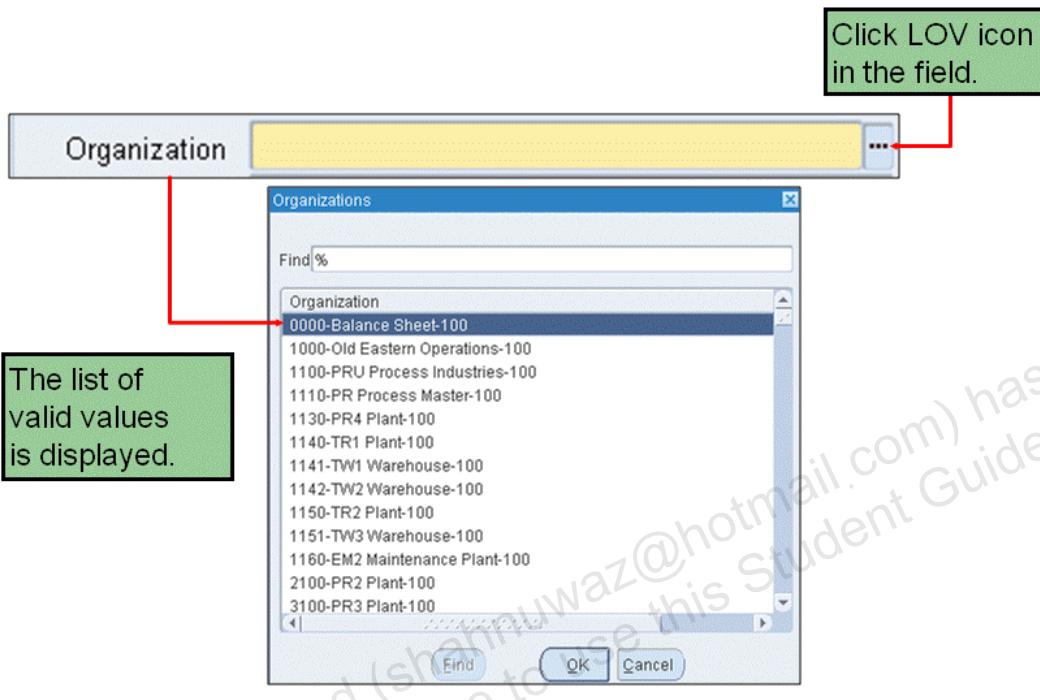
Select Save or “Save and Proceed” from the File menu.

Note: All records cannot be deleted in this manner. Those records which cannot be deleted need to be end dated and such end-dated records cannot be used further.

Refer to the guided demonstration - *Retrieving and Deleting a Record (Required)*.

Using a List of Values

Using a List of Values



Using a List of Values (LOV)

A field that has a predefined list of valid values displays an LOV icon. Click this icon to view the valid field values. If a list contains more than 100 values, you are prompted to enter a Find string to limit the list.

Note: Lists that require a Find string do not use the autoreduce feature.

To Select a Value from a List

Select a value or reduce the list using one of the following methods:

Without placing your cursor over the Find field, enter the initial characters of a value to autoreduce the list to those items matching the characters entered. Press Backspace to reexpand the list. If your entry reduces the list to a single value, the list window closes and inserts the value into the field. In the list window, enter any group of characters in the Find field and click the Find button.

Note: Use the wildcard character (%) to represent any number of characters and the underscore (_) to represent a single character. Do not enter a wildcard character by itself. This will match all records.

LOV: Shortcuts

LOV: Shortcuts

- AutoSelection
- List Search
- Long-List Fields
- Power List

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LOV: Shortcuts

To select a value from a list for a field, click the LOV icon in the field to display a list. Select the value directly from the list by using some of the methods described below:

- Without clicking in the Find field, enter the first character or characters of a value to reduce the list to only those values that match the characters you enter. This is also known as AutoSelection.
- Search for a value by clicking in the Find field, then enter your search criteria in the Find field, and click the Find button.
- Select a value directly from the list by using the mouse to scroll through the list and then double-click the value to choose it, or click the value once and then click OK to select it.
- After you select a value, the list window closes and inserts the value into the current field. To close a list window without choosing a value, click Cancel.

To Use Power List

Power List enables you to enter a search string or partial value in an LOV field without opening the list window. Enter the initial characters of a value in the field and press Tab. Power List completes the entry for you. Your entry can include wildcard characters. If more than one value matches the characters you specify, a list window appears containing those values.

Using Calendar

Using Calendar



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Using Calendar

Values in a date field can be entered directly or you can use a calendar to enter a valid value in a date field if the field displays the List icon. If your date field supports time, you can also use the Calendar window to select a valid time with the date.

1. Place your cursor in a date field.
2. Click the list of values associated with a date field to display the Calendar window. The date value that appears below the calendar is called the selected date, which is either the value already in the field, the default value of the field, or the current system date.
3. Click a date.

Note: Disabled buttons represent invalid days, which cannot be selected. Similarly, if a date field is display-only, you can display the Calendar window for the field, but you cannot change the date shown on the calendar.

4. Click OK to accept the selected date and close the window.
5. Click Cancel, if you want to close the window without selecting a date.

Clearing Data

Clearing Data

Clear



- (M) Edit > Clear > Record
- (M) Edit > Clear > Field
- (M) Edit > Clear > Block
- (M) Edit > Clear > Form

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Clearing Data

You can clear data from the screen at almost any time.

Typically, you will use this feature when you start to enter data in a field and then change your mind.

Oracle Applications will think you are in the middle of processing a record and will not allow you to proceed with the next task until you clear the field.

The data you clear is simply erased from the screen and not deleted from the database.

Note: If the data is new and has never been saved to the database, it will be lost permanently when you clear it from the screen.

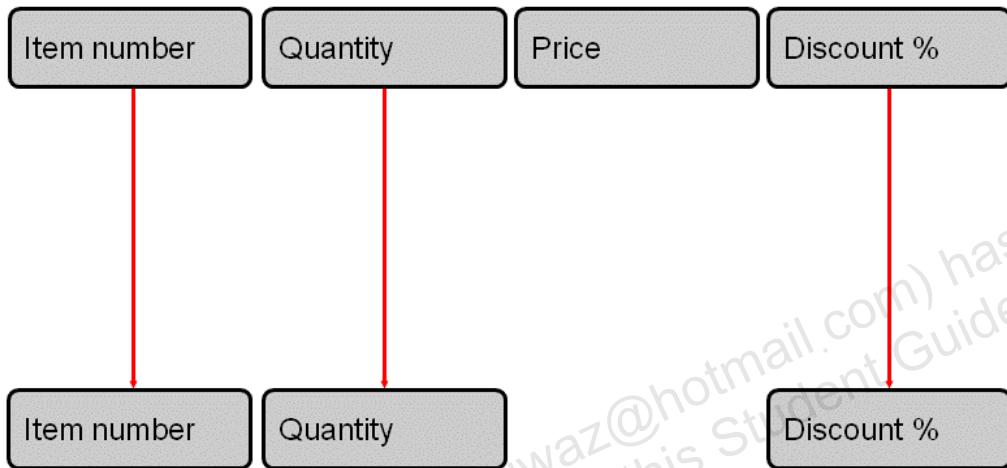
(M) Edit > Clear and then select the appropriate option, to clear a field, record, block, or form.

You can also clear some or all data from a field by highlighting the data and selecting Edit > Cut.

Copying Data from a Record

Copying Data from a Record

Verify your data because all the fields may not copy.



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Copying Data from a Record

To save time during data entry, you can duplicate data from a previous record if much of the data needs to be repeated again in the new record. You can use Cut, Copy, and Paste from the Edit menu or you can use the following techniques:

Copying a Field Value from the Previous Record

1. Enter a new record or query an existing record in your form.
2. Select File > New or click the New icon to insert a new record after the existing record.
3. Place your cursor in the field whose value you want to duplicate.
4. Select Edit > Duplicate Field Above to copy the field value from the previous record into the current record.

Copying All Field Values from the Previous Record

1. Follow steps 1 and 2 mentioned above.
2. Select Edit > Duplicate Record Above to copy all field values from the previous record into the current record.

Note: Depending on the record storage in the database and relevant database tables, not all fields may be copied when you use this feature.

Searching for Information

Searching for Information



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Searching for Information

In Oracle Applications, you can quickly retrieve and review all the available information in your database without having to remember the information displayed in the windows, or without having to print lengthy reports to see the data. Instead, you can simply run a search to obtain the information you want, and then review the data online in the same window you used to enter the data.

By using the query function in Oracle Applications, you can satisfy the following information the search needs:

- Gain instant, online access to all your application information. You can find information quickly and easily, without having to use complex query language.
- Search for a specific record or for a group of records based on the criteria you enter. You can retrieve this information directly, without having to review all the information in your application database.
- Search for information using criteria of different types or lengths, including a single letter, a single word, or a group of characters, or anything else you want to enter.
- Find out how much information is available that matches your search criteria before a search for a single piece of information yields 10,000 results.

Query Versus Find

Query Versus Find

Query mode	Find mode
Menu bar, F11	Menu bar, Toolbar
Existing window	Find window
Wildcards	List of values as well as wildcards
Query count	No find count

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Query Versus Find

Query Mode

- In Query mode, you can use the menu bar to access a query, or you can press F11 to enter a query and press and hold Ctrl + F11 to execute a query.
- You use the existing window to prepare your search criteria for the query. You can enter specific information in any field to narrow your search.
- When using wildcards to prepare your search criteria, you can use all query operators to narrow your search.
- In query mode, you can check to see how many records match your criteria even before retrieving the data that matches your query.

Find Mode

- In Find mode, you use the menu bar to access the Find window, or you click the icon on the toolbar.
- You use a new window, the Find window, to prepare your search criteria.
- The list of values is available in many fields in Find mode.
- The Query Count feature is not available in Find mode.

Using Find Mode

Using Find Mode

Click the Find icon on the toolbar:

- Click the Find button on the Form.
- Specify your search criteria.
- Review the retrieved records.



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Using Find Mode

To search for records in your current block or window, use the Find window. The Find window contains fields for entering search criteria. These fields are specific to the current block and often validate the search criteria you enter against a list of valid values.

Generally, a Find window is displayed for those blocks that have many records or for those blocks that can be best searched using criteria in more than one field.

How to Use Find Mode

Select View > Find or click the Find icon on the toolbar.

1. Enter your search criteria in the appropriate fields of the Find window. If a field does not provide a list of values for you to choose from, you can enter wildcard characters (%) and (-) in the search phrase. You cannot, however, use query operators (such as >, <, and so on) in a Find window.
2. Click the Find button to find any matching records.
3. Click the Clear button to clear the current search criteria from the Find window, so you can enter new search criteria.
4. Click the New button to enter a new record in your current block if your search finds no matching records. Not all windows support Find.

Using Query Mode

Using Query Mode

(M) View > Query By Example > Enter:

- Enter the search criteria.
- (M) View > Query By Example > Run
- (M) View > Query By Example > Cancel

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Using Query Mode

How to Use Query Mode

1. Select View > Query By Example > Enter.
2. Enter the search criteria in any of the fields (indicated by blue) that can be queried, using wildcard characters and query operators as necessary. You can also select View > Query By Example > Show Last Criteria to display the search criteria used in your last search, if you performed one.
3. Select View > Query By Example > Run to perform the search.
4. Select View > Query By Example > Cancel to cancel from Enter Query mode.

How to Obtain a Query Count

1. Perform steps 1 and 2 mentioned above.
2. Select View > Query By Example > Count Matching Records to display the number of records a Query By Example search retrieves.

Refer to the practice - *Creating, Saving, Searching, Editing, and Deleting a Record (Required)*

Query Operators

Query Operators

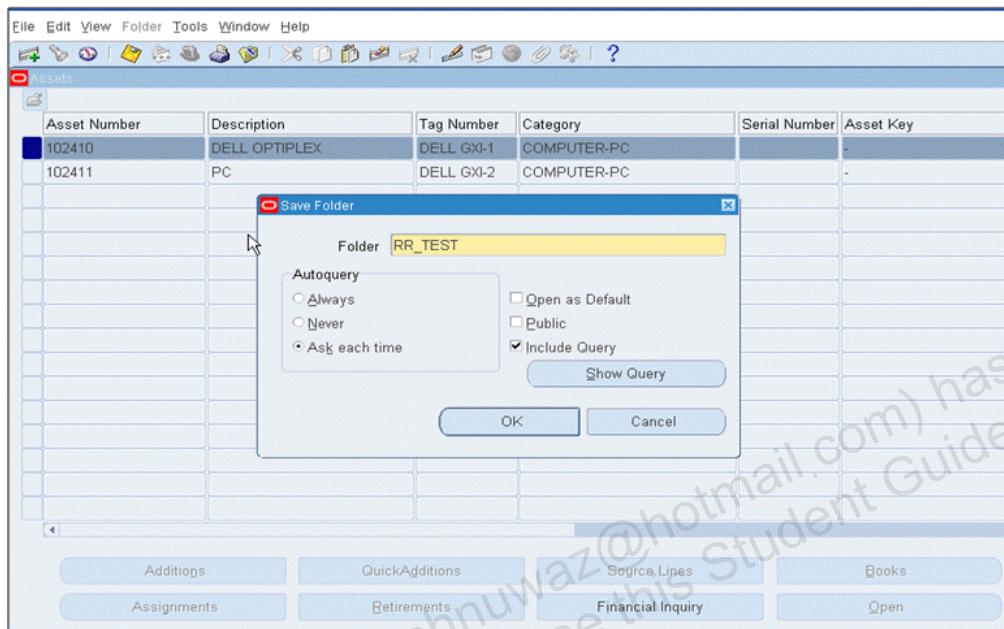
Operator	Meaning	Example
=	Equal to	= 'Janet' = 107
!=	Not equal to	!= 'Janet' != 107
>	Greater than	>99.1 > 'Joan'
>=	Greater than or equal to	>=55
<	Less than	<1000.00
<=	Less than or equal to	<= 100
#BETWEEN	Between two values	#BETWEEN 1 and 100

Query Operators

You can use any of the query operators listed in the table shown in the slide. You can also use the percentage (%) wildcard character to represent any character or group of characters. For example, use “Manuf%” to represent Manufacturing, Manufacturer, and so on. You can also use the underscore (_) character to represent any single character. For example, “Product_” can represent ProductA or Product1.

Folder Forms

Folder Forms



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Folder Forms

Folders allow for a user to include, exclude, resize, move, rename, or order fields in a multirow block, such that it is more suitable for specific user needs. You can save and load these definitions for later use.

Many standard forms include this functionality and it is a handy tool that users can easily manipulate so that they can create their own custom criteria. Users can define their search criteria in a query and also select options such as, always, never and ask each time for using these queries.

For example, the Assets manager needs to view all the assets pertaining to the Primary Corporate book, whereas other users may want to access asset books particular only to certain regions.

After a folder is created and saved, it is linked to a responsibility so that when the user logs in to that responsibility, the folder is available.

Using the Folder Tools options in Folders, the user can also select the fields to be displayed, change their order of display, and also modify the size of the columns.

Personalized Searches in OA Framework

Personalized Searches in OA Framework

End User Personalized Searches:

- Change the number of rows displayed in a table
- Hide or show regions and items
- Change the layout order of regions and items within the boundaries of the parent region
- Define up to three sorting levels for tabulated data
- Filter (restrict query) tabular data
- Change item labels and region headers
- Enable totals for table columns, when applicable

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Personalized Searches in OA Framework

Oracle Applications has a layered architecture, where each layer encapsulates the maximum reusable set of features without creating dependencies on higher layers. This enhances reusability of functionality and makes possible global customizations. The task of customizing an Oracle Application can fall into any one of the following categories:

Configuration, Personalization, Extensibility, and Interoperability

Personalization refers to declaratively customizing the user interface (UI) look and feel, layout, or visibility of the page content to suit a business need or a particular user preference.

Personalization examples include customizing:

- The color scheme of the UI
- The order in which table columns are displayed
- A query result

The built-in personalization UI facilitates a variety of personalization features at a number of different levels within the different user groups, such as developers, end users, and administrators.

Unlike Administrators, users can create and save several personalized views that can be retrieved conveniently at a later time. That said, end-user personalized views are limited in

scope to Query regions with search results tables. For these regions, end users can personalize any of the following features:

- Change the number of rows displayed in a table.
- Hide or show regions and items (results table columns are a popular example).
- Change the layout order of regions and items within the boundaries of the parent region (order of results table columns are a popular example).
- Define up to three sorting levels for tabulated data.
- Filter (restrict query) tabular data.
- Change item labels and region headers.
- Enable totals for table columns, when applicable.

In Oracle Applications, the following page elements may be end-user personalized:

- Views panel of a Search page
- LOV Choice List

In OA Framework-based applications, tables are used to display results from a search. The region above the table generally contains the search panel where you specify the search criteria. You may see any one of these possible search panels above a table:

- **Simple Search:** Allows you to specify simple search criteria
- **Simple Search or Advanced Search:** Buttons allow you to toggle between a simple search panel and an advanced search panel to specify search criteria.

If a table is personalizable, it will support user-personalizable searches that you can save as Views. The saved views can be selected from the Views panel, which you access using the Views button on the main search page.

An LOV Choice List is a hybrid between a pop-up list and a List of Values. If the LOV Choice List is implemented with a Personalize button, you can personalize the LOV Choice List by adding, removing, or reordering values in the list.

In R12.x, Search (Query) regions have been enhanced to allow additional upgrade safe personalizations. Administrators can now personalize the Save Search button in search regions. Search mappings can now be personalized to add more search criteria fields that correspond with columns in search results tables.

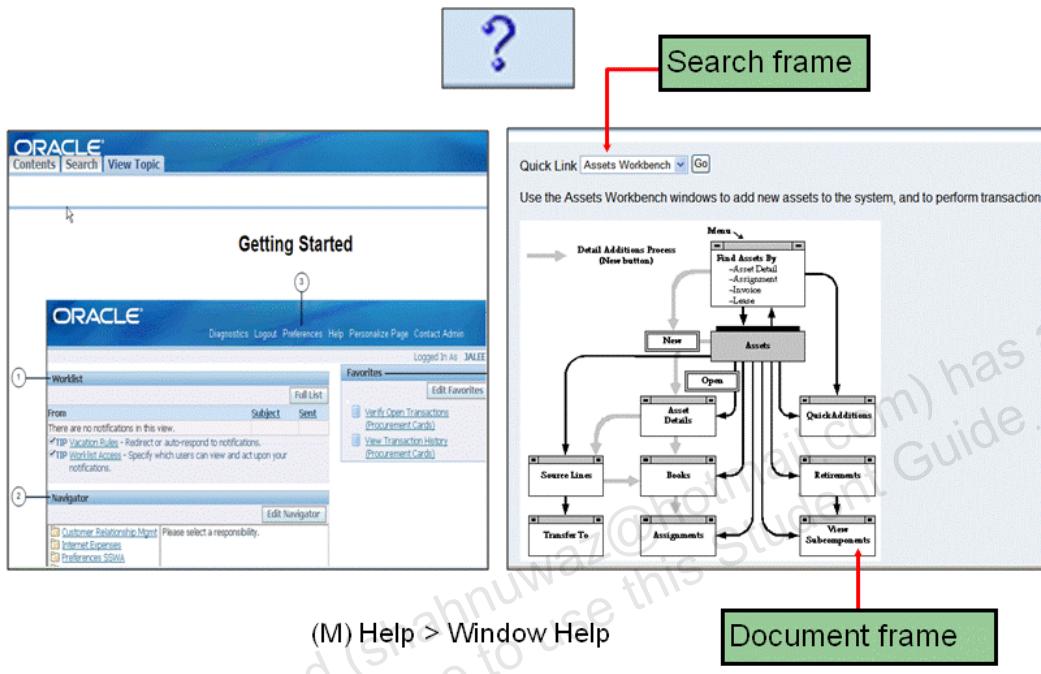
Accessing Online Help

Accessing Online Help

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Using Window Help

Using Window Help



Using Window Help

To get help:

- Select Window Help from the Help menu, click the Help button on the toolbar, or press Ctrl + H to display help for the current window
- Navigate to the Contents tab to display online Help for any of the Oracle Applications products

Note: You can also choose *Oracle Applications Library* from the Help menu.

Click a product name to display the list of top-level topics in that product's online documentation. Click a topic of interest.

Navigate to the Search tab to find specific Oracle Applications information. Enter your search criteria in the text field and click the Go button. For more search options, click the Advanced Search link.

Searching for Help

You can perform a search to find the Oracle Applications help information you want:

- Select Window Help from the Help menu or click the Help button on the toolbar.
- Navigate to the Search tab, enter your search criteria in the text field, and then click the Go button to perform a simple search. For more search options, click the Advanced Search link.

A list of titles, ranked by relevance and linked to the documents, is returned from your search. Click whichever title seems to best answer your needs to display the complete document.

Tip: If the selected document does not fully answer your questions, click the browser's Back button to return to the list of titles and try another one.

About Oracle Applications

You can obtain details about the version of Oracle Applications you are using, your login information, and details about the current form you are using with the About Oracle Applications window. This information is useful if you have an error message and need assistance from your system administrator or Oracle support representative when you report a problem.

How to Display Version Information for Oracle Applications

Select Help > About Oracle Applications.

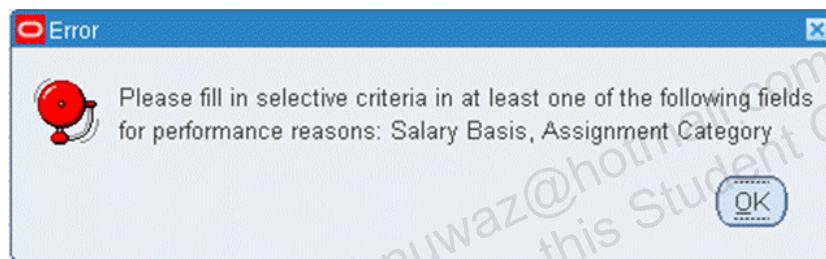
Click OK to close this window when done.

Refer to the practice - *Reviewing the Help Menu Item (Required)*.

Error Messages

Error Messages

- To give you a hint, the application displays a short message in the message line.
- To inform you of an error, the application displays an error window.
- A History button also appears in the error window if an error of a more serious nature occurs.



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Error Messages

Generally, messages and errors are preceded by a message or error code:

- Codes that are prefixed by FRM arise from Oracle forms, the underlying product that provides Oracle Applications with its graphical user interface.
- Codes that contain the prefix ORA arise from the Oracle database.
- Codes that are prefixed by APP arise from Oracle Applications.

These codes help your system administrator or Oracle support representative diagnose the errors that you may encounter.

Record History: A feature that allows a user to view data about a particular record, such as who created the record and when, and who most recently updated the record and when. Record History is now available for Oracle Application Framework-based pages.

Record history displays the following information about the record that has been previously saved:

- Who created the record
- Date of creation
- Database table or view where the record resides
- Who last changed the record using Oracle Applications

- Date of the last change
- User's login

How to Learn About the Current Record

Select Help > Record History. A dialog box appears that shows you information about the current record. Click OK to close the window.

Running Reports and Programs

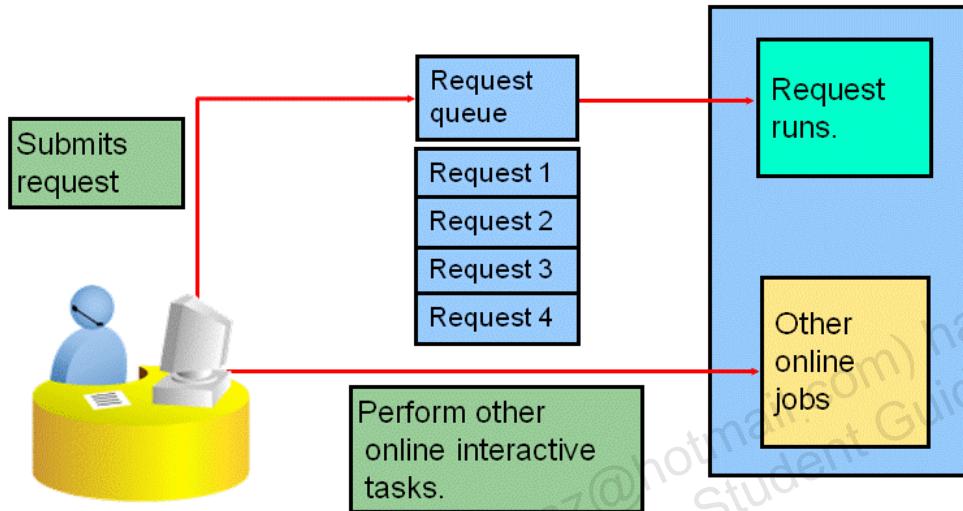
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Running Reports and Programs

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Using Concurrent Processing

Using Concurrent Processing



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Using Concurrent Processing

You can run a noninteractive, data-dependent function such as a report or program simultaneously with online operations. With concurrent processing, you can complete noninteractive tasks without interfering with the interactive work that you perform at your terminal.

An example of concurrent processing occurs when you use the Post Journals window in your Oracle General Ledger application. After you specify the journal batches to post and click Post, the application uses concurrent processing to post the journal batch entries without further involvement from you. Meanwhile, your terminal is still available for you to continue doing other work in Oracle Applications.

Oracle Applications runs all of its reports and programs as concurrent processes whether you submit them using the Submit Requests window, or using a product-specific submission window. Your system administrator can customize concurrent processing to optimize the performance of Oracle Applications.

In R12.x, Concurrent Processing allows for registration of business events to be fired at various stages of a request life cycle. Concurrent Processing provides hooks to call other routines at various stages of a concurrent request's life cycle.

Running Reports and Programs

Running Reports and Programs

- **Concurrent processing:**
 - Run noninteractive tasks, such as reports and programs.
 - It does not interfere with the interactive work you perform on your computer.
- **Standard Request Submission (SRS):**
 - Use the SRS interface to run reports and programs.
 - View report output online.
 - Schedule reports and programs.
 - View log information.

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Running Reports and Programs

Concurrent Processing and Standard Request Submission

Concurrent processing helps you satisfy the following business needs:

- Continue working at your computer when running data-dependent reports and programs.
- Fully use the capacity of your hardware by executing many application tasks at once.

Standard Request Submission lets you satisfy a related set of business needs. You can:

- Use a standard interface to run your programs and reports
- Control access to different reports and programs
- View report output online
- Automatically run programs, reports, or request sets at specific time intervals
- View a log file that summarizes the completion information about all the reports and programs in a request set

Request Sets

Reports and concurrent programs can be assembled into request sets. Request sets define run and print options, and possibly, parameter values, for a collection of reports or concurrent programs.

End users, with the appropriate privileges, and system administrators can define request sets. A system administrator has request set privileges beyond those of an end user. Request sets can be run from forms based applications and HTML based applications.

Request sets are a quick and convenient way to run several reports and concurrent programs with predefined print options and parameter values. Request sets group requests into stages that are submitted by the set. The order in which the stages are submitted is determined by the status of previous stages.

Refer to the guided demonstration - *Running a Single Request Report (Required)*.

Refer to the Practice - *Running Reports and Programs (Required)*.

Business Intelligence (BI) Publisher

Business Intelligence (BI) Publisher

- Formerly known as XML Publisher
- Comprehensive enterprise reporting solution
- Built on open standards
- Separates data from Presentation
- Cost effective and scalable

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Business Intelligence (BI) Publisher

Oracle Business Intelligence Publisher (BI Publisher, formerly XML Publisher) is an enterprise reporting solution to author, manage, and deliver all types of highly formatted documents eliminating the need for costly point solutions.

It is built on open standards. Technical developers can create data models against practically any data source and use BI Publisher APIs to build custom applications leveraging existing data sources and infrastructure.

A key feature of BI Publisher is that it separates the data from the presentation. This means that while the technical team can define the data sources, functional end users can specify the report layout using tools such as Microsoft Word. The same data source can be used by multiple report templates.

This helps end users easily design report layouts using familiar desktop tools, dramatically reducing the time and cost needed to develop and maintain reports. BI Publisher can generate thousands of documents per hour with minimal impact to transactional systems. These reports can be viewed online or scheduled for delivery to a wide range of destinations.

The defined reports are stored in a report repository (in the file system or in a database). BI Publisher supports scheduling, archiving of report output, and delivery via many channels, including email.

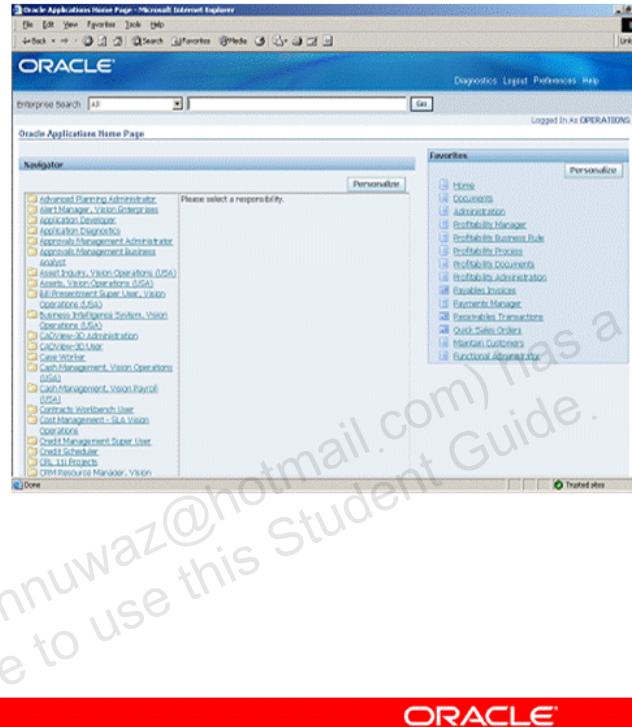
Refer to the guided demonstration - *Running a Business Intelligence (BI) Publisher Report (Required)*.

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Integration with Oracle Secure Enterprise Search

Integration with Oracle Secure Enterprise Search

- Integrates E-Business Suite with Secure Enterprise Search
- Allows users to search E-Business Suite products by using a simple interface (similar to internet search)



Integration with Oracle Secure Enterprise Search

Oracle Secure Enterprise Search is a stand-alone product from Oracle, which enables secure, high quality, easy-to-use search across all enterprise information assets. Key features include:

- The ability to search and locate public, private, and shared content across Intranet Web servers, databases, files on local disk or on file servers, IMAP email, document management systems, applications, and portals
- Highly secure crawling, indexing, and searching
- A simple, intuitive search interface leading to an excellent user experience
- Excellent search quality, with the most relevant items for a query shown first, even when the query spans diverse public or private data sources
- Analytics on search results and understanding of usage patterns
- Sub second query performance
- Ease of administration and maintenance leveraging your existing IT expertise

R12.x includes the integration with Secure Enterprise Search.

Traditional searching in E-Business Suite required the user to ask the following questions:

- What product do I want to access?
- What form should I access?

- Using Query by Example, what field shall I search on?
- What information am I seeking?

Under the new search, the user can simply enter the search text. The user can select “All” objects or specific objects for the search. The list of searchable objects is configurable.

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Quiz

Quiz

You select the Menu option Query By Example > Run to directly retrieve the records.

- a. True
- b. False

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Answer: b

Quiz Specifications: This statement is False. You should first select the Menu option Query By Example > Enter to enter a search criteria and then select the Menu option Query By Example > Run.

Quiz

Quiz

Which color fields require you to enter data in them?

- a. White
- b. Yellow
- c. Grey
- d. None of the above

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Answer: b

Quiz Specifications: Yellow color fields require you to enter data in them.

Quiz

Quiz

Users cannot define Favorites in Oracle E-Business Suite as links to Web sites outside Oracle E-Business Suite.

- a. True
- b. False

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Answer: b

Quiz Specifications: This statement is False. In R12.x, end users can also define “Favorites” in Oracle E-Business Suite as links to Web sites outside Oracle E-Business Suite, and those URL links open in a new browser window. Thus, the original browser window remains showing the Oracle E-Business Suite session.

Quiz

Quiz

Using concurrent processing, you can run non-interactive, data-dependent functions such as reports or programs simultaneously with online operations.

- a. True
- b. False

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Answer: a

Quiz Specifications: This statement is True. With concurrent processing, you can complete non-interactive tasks without interfering with the interactive work that you perform at your terminal.

Summary

Summary

After completing this lesson, you should have learned how to:

- Log in to Oracle Applications
- Use Forms and Menus
- Create Favorites and set Preferences
- Use functionality of the buttons and tabs that appear in the Navigator window and other forms
- Understand Form terminology and characteristics
- Create, save, edit, and delete record using Forms
- Search for data and enter data using Forms
- Access online Help
- Submit Concurrent and SRS requests
- Log out of Oracle Applications

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Introduction to Oracle Applications R12.x

Chapter 3

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Introduction to Oracle Applications R12.x

3

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Course Objectives

Course Objectives

After completing this lesson, you should be able to describe the following:

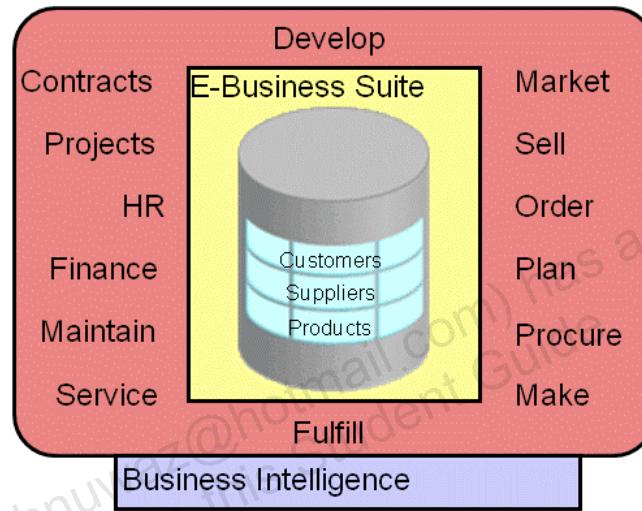
- Footprint of R12.x E-Business Suite
- Benefits of R12.x E-Business Suite
- R12.x E-Business Suite architecture
- Major components of the architecture
- File system and database structure
- Oracle E-Business Suite Integrated SOA Gateway

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Complete E-Business Suite from Oracle

Complete E-Business Suite from Oracle

- Automate key internal business processes.
- Extend automation and collaborate with your trading partners.
- Drive continuous improvement with real-time intelligence.



Complete E-Business Suite from Oracle

Oracle E-Business Suite is a comprehensive set of enterprisewide business applications that run entirely on the Internet. Here, you have the choice to either implement one module or the entire suite. Oracle E-Business Suite (EBS) helps an enterprise make smarter decisions with better information, share unified information across the enterprise, reduce Information Technology (IT) expenses, and enable businesses to run more efficiently.

Oracle EBS extends support for internal processes beyond enterprise boundaries to include customers, suppliers, and other trading partners. Collaboration enables you to include your customers and suppliers early on—in product development, planning, procurement, order fulfillment, and other business processes. You can easily share real-time information with partners, such as designs, forecasts, orders, and delivery status.

Linking your enterprise with your customers and suppliers offers global visibility and enables bidirectional flow of business information. For instance, your customers can easily configure, price, and order products in real-time on a Web store; and the order information flows seamlessly to order management and shipping for fulfillment.

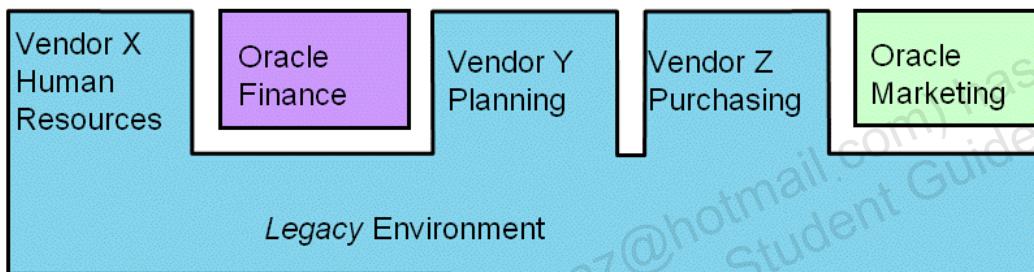
Similarly, suppliers can get self-service access to orders, schedules, and payment status on their personalized portal, which is accessible through a simple Web browser. Connecting enterprises enables you to rapidly respond to dynamic market conditions while improving your ability to meet customer commitments.

Integrated, Yet Modular

Integrated, Yet Modular

The open applications solution enables you to:

- Leverage investment in existing technology
- Eliminate disparate systems as needed



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Integrated, Yet Modular

Managing a heterogeneous environment with multiple connections between solutions is expensive and complex. Whenever you update a point solution, you must go back and review all the integration points and potentially update the integration software itself.

Oracle EBS is engineered to work as an integrated system on a common IT infrastructure. Therefore, you can directly pass information from one application to another without incurring incremental integration costs.

Oracle's applications are not only integrated, they are also modular. Based on your business needs, you can implement one module, several modules, or the entire suite. Oracle's open, standards-based architecture allows you to easily integrate into a heterogeneous environment, enabling you to fully leverage your investment in existing applications.

Benefits of Oracle E-Business Suite

Benefits of Oracle E-Business Suite

- Available in multiple languages
- Supports multiple currencies
- Supports flexible management of business processes
- Has a common data model
- Supports statutory and customary local requirements
- Is built on open standards
- Collaborates with trading partners



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Benefits of Oracle E-Business Suite

- Oracle E-Business Suite supports multiple languages, all currencies, and many regulatory requirements in a single database. You can install all languages in the same Unicode instance. Trading partners can receive business documents in a language of their choice; users can view and enter dates, numbers, and currencies in a format they prefer. There is no separate version of the EBS for the U.S., Japan, or France.
- Oracle EBS is the first and only comprehensive set of enterprise applications that is integrated around a single, common data model. The unified information architecture of Oracle EBS enables consolidation of data from Oracle and non-Oracle applications, and allows a consistent definition of customers, suppliers, partners, employees, and all business entities across the enterprise. You can create a single, global definition that allows everyone (worldwide) to have access to the same data. The single, common data model ensures that accurate and consistent information and transaction flows across all applications.
- Oracle EBS extends internal process support beyond enterprise boundaries to include customers, suppliers, and other trading partners. Linking your enterprise with your customers and suppliers offers global visibility and enables bidirectional flow of business information.

Information-Driven Applications

Information-Driven Applications

Philosophy behind Oracle E-Business Suite

- Start with a common data model that produces a single definition of key business entities (customers, suppliers, products, and so on).
- Build a robust suite of applications designed to work together.
- Support modular deployment of tailorable business flows.
- Promote low-cost integration with service oriented, standards-based architecture.

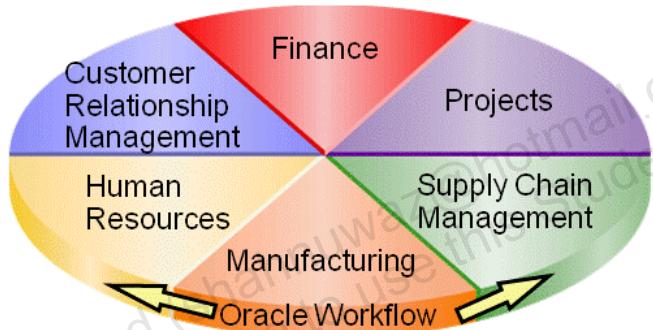


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Major Oracle Application Product Families

Major Oracle Application Product Families

- Oracle Financials
- Project Management Product
- Supply Chain Planning and Management
- Oracle Manufacturing: Discrete and Process Management
- Human Resources Management System
- Customer Relationship Management



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R12.x E-Business Suite Footprint

R12.x E-Business Suite Footprint

Financials	Corporate Performance Mgmt.
General Ledger Receivables Payables Assets Cash Management Global Consolidation System Advanced Collections Internet Expenses iReceivables Treasury Lease Management Internal Controls Manager Financials Centralized Solution Set (FINS) Financial Services Accounting Hub (FSAH)	Daily Business Intelligence (DBI) Balanced Scorecard Financials & Sales Analyzer Enterprise Planning and Budgeting Profitability Manager Financial Consolidation Hub Oracle Business Intelligence Applications (OBI Apps)

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R12.x E-Business Suite Footprint

You can access the following URLs for more information about the specific Oracle Applications products (listed in parenthesis):

- <http://www.oracle.com/applications/e-business-suite.html> (E-Business Suite Applications)
 - <http://www.oracle.com/applications/financials/intro.html> (Oracle Financials)

R12.x E-Business Suite Footprint

R12.x E-Business Suite Footprint

Human Resources Management	Projects
Human Resources Self-Service Human Resources Advanced Benefits Compensation Workbench iRecruitment Payroll Performance Management Time and Labor Workforce Scheduling Approvals Management Learning Management iLearning Tutor DBI for HR	Project Costing Project Billing Project Resource Management Project Collaboration Project Management Project Portfolio Analysis Project Contracts DBI for Projects

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R12.x E-Business Suite Footprint (continued)

You can access the following URLs for more information about the specific Oracle Applications products (listed in parenthesis):

- http://www.oracle.com/applications/human_resources/intro.html (Human Resources Management System)
- <http://www.oracle.com/applications/projects/intro.html> (Projects)

R12.x E-Business Suite Footprint

R12.x E-Business Suite Footprint

New in R12.x

Supply Chain Planning	Supply Chain Planning
Advanced Supply Chain Planning Constraint Based Optimization Inventory Optimization Global Order Promising Collaborative Planning Strategic Network Optimization Demand Management Advanced Forecasting & Demand Management Predictive Trade Planning Deduction and Settlement Management Trade Promotion Optimization <i>Advanced Planning Command Center.</i>	<i>Demand Signal Repository</i> <i>Service Parts Planning</i> <i>Manufacturing Operations Center</i>
Order Management	
	Order Management Advanced Pricing Release Management Sales Contracts Configurator iStore Supply Chain Planning and Order Management Intelligence <i>Deal Management</i>

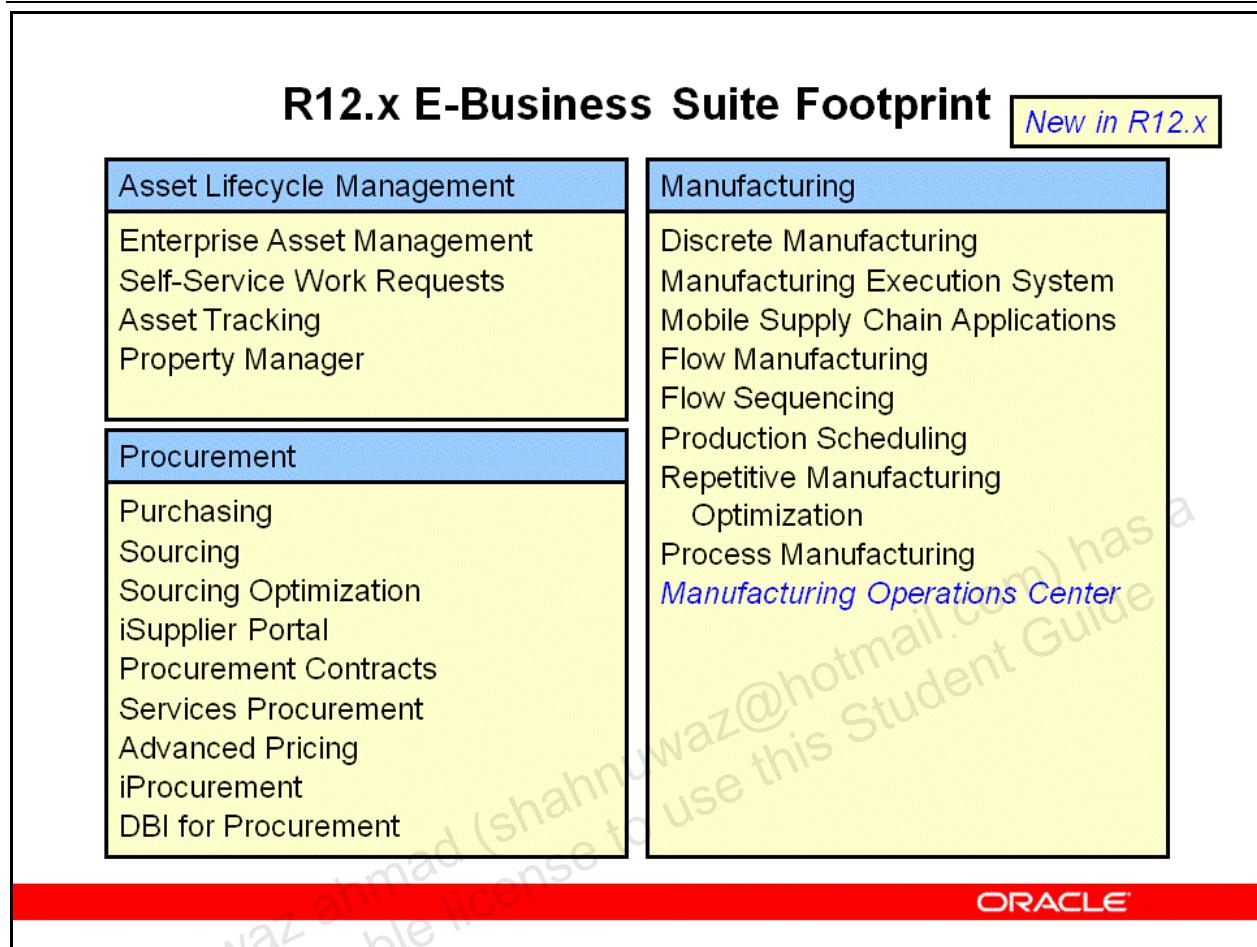
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R12.x E-Business Suite Footprint (continued)

You can access the following URLs for more information about the specific Oracle Applications products (listed in parenthesis):

- <http://www.oracle.com/applications/scm/index.html> (Supply Chain Planning)
- http://www.oracle.com/applications/order_mgmt/intro.html (Order Management)

R12.x E-Business Suite Footprint



R12.x E-Business Suite Footprint (continued)

You can access the following URLs for more information about the specific Oracle Applications products (listed in parenthesis):

- <http://www.oracle.com/applications/maintenance/eam.html> (Asset Lifecycle Management)
- <http://www.oracle.com/applications/scm/index.html> (Procurement)
- <http://www.oracle.com/applications/manufacturing/intro.html> (Manufacturing)

R12.x E-Business Suite Footprint

R12.x E-Business Suite Footprint

New in R12.x

Logistics	Product Lifecycle Management
Inventory Management Mobile Supply Chain Applications Warehouse Management Transportation Management Transportation Operational Planning Logistics Inventory Visibility Forwarding & Brokering Operations Freight Payment, Billing & Claims Transportation Sourcing Transportation Cooperative Routing Fusion Transportation Intelligence	Product Lifecycle Management Product Data Synchronization for GDSN and UCCnet Services CADView-3D
	Master Data Management (Hubs) Customer Hub Product Hub <i>Site Hub</i>

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R12.x E-Business Suite Footprint (continued)

You can access the following URLs for more information about the specific Oracle Applications products (listed in parenthesis):

- <http://www.oracle.com/applications/logistics/intro.html> (Logistics)
- <http://www.oracle.com/applications/plm/intro.html> (Product Lifecycle Management)
- <http://www.oracle.com/master-data-management/index.html> (Master Data Management)

R12.x E-Business Suite Footprint

R12.x E-Business Suite Footprint

New in R12.x

Marketing and Sales	Service
Marketing Trade Management Advanced Pricing TeleSales Field Sales Sales for Handhelds Quoting Partner Management Proposals Incentive Compensation Marketing & Sales Intelligence <i>Deal Management</i>	TeleService Service Contracts Field Service Spares Management Advanced Scheduler Mobile Field Service Depot Repair iSupport Service Intelligence
	Interaction Center Technology Advanced Inbound Telephony Advanced Outbound Telephony Email Center Scripting

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R12.x E-Business Suite Footprint (continued)

You can access the following URLs for more information about the specific Oracle Applications products (listed in parenthesis):

- <http://www.oracle.com/applications/crm/index.html> (Customer Relationship Management including Marketing, Sales, Service, and Interaction Center Technology)

Oracle Applications R12.x Architecture

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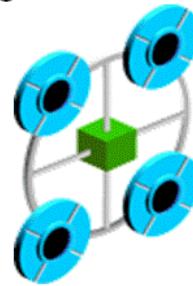
Oracle Applications R12.x Architecture

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Understanding the Oracle Applications R12.x Architecture

The following topics are included in the Oracle Applications R12.x architecture:

- Business architecture
- Technical architecture



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Understanding the Oracle Applications R12.x Architecture

It is easy to talk about the technical architecture of R12.x EBS at the very first. In fact, most presentations on R12.x architecture do just that. But, the technical architecture is important to support the business needs of R12.x E-Business Suite.

It is, in fact, the business architecture that supports the business needs of the company. Though it may seem to be just a marketing issue, in an integrated E-Business Suite, the software must support the business needs by being engineered to do so from the start.

It is only after the business needs have been addressed that the technical architecture can be determined. In most cases, the technical architecture will be dictated by the business needs. If you do not use this engineering approach, your technical architecture will dictate the business needs that you can fulfill.

Business Architecture: Oracle Applications R12.x

Business Architecture: Oracle Applications R12.x

R12.x EBS has five principles that drive its business architecture:

- Modern foundation
- Complete
- End-to-end integration
- Global
- Rapid implementation



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Business Architecture: Oracle Applications R12.x

R12.x EBS has five principles that drive its business architecture. The principles are as follows:

1. **R12.x EBS is built on a “modern foundation.”** Oracle has embedded all of its new R12.x development into open, scalable standards. These standards include using Java/J2EE, HTML, JavaScript (JSP), Internet-accessibility, and centralized management.
2. **R12.x EBS is a complete e-business system.** The R12.x E-Business Suite provides a comprehensive solution for manufacturing, supply chain management, financial, project, human resource management, marketing, sales and service processes, thereby providing a 360-degree view of the company.
3. **R12.x E-Business Suite provides a comprehensive solution through an integrated architecture.** Crucial to the Oracle Applications R12.x architecture, R12.x’s integration is engineered into the product, thereby providing a fully integrated package—one that is not realized through system integrations and customizations.
4. **R12.x E-Business Suite is fully globalized.** R12.x E-Business Suite is accessible via global networks. It accommodates multiple languages and currencies; supports international features, such as flexible date formats and multiple radix support; supports data in the Unicode Character Set (UTF-8); and has accounting and business localizations built into it.

5. **R12.x E-Business Suite brings considerable tools to the implementation task.**
These tools include a rapid installation tool, patch application tools, and a host of configuration files and customizable Help files to allow the customer to configure the system to meet their needs. All these tools help to significantly reduce implementation time.

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Technical Architecture: Oracle Applications R12.x

Technical Architecture: Oracle Applications R12.x

The following topics are included in the technical architecture of Oracle Applications R12.x:

- Forms based
- Self-service (HTML/JSPs)
- Business Intelligence
- Mobile



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Technical Architecture: Oracle Applications R12.x

The R12.x technical architecture is a direct response to the business needs of the customer. In support of these business needs, R12.x has developed four architectural modes for users that are accessed and controlled through the Personal Home Page (PHP) or Portal.

PHP becomes the gateway through which the user has rights to access all the information to which they have been granted access. Thus, R12.x administrative tasks are simplified while operations costs are reduced.

The architectural modes equate to common classes of users. Forms based users are typically people involved in the transactional operations of an organization. They are full-time users who need and demand a robust, full-featured interface.

Self-service users are infrequent users who want their interface with R12.x to be as simple and as quick as possible. Most users fall in this category.

Business intelligence users are senior executives who want an easy-to-use interface that can be used to reveal critical business information. By using a browser, the business intelligence products eliminate the need for users to learn a new system. If they are familiar with browsing, they know the basics of the business intelligence interface.

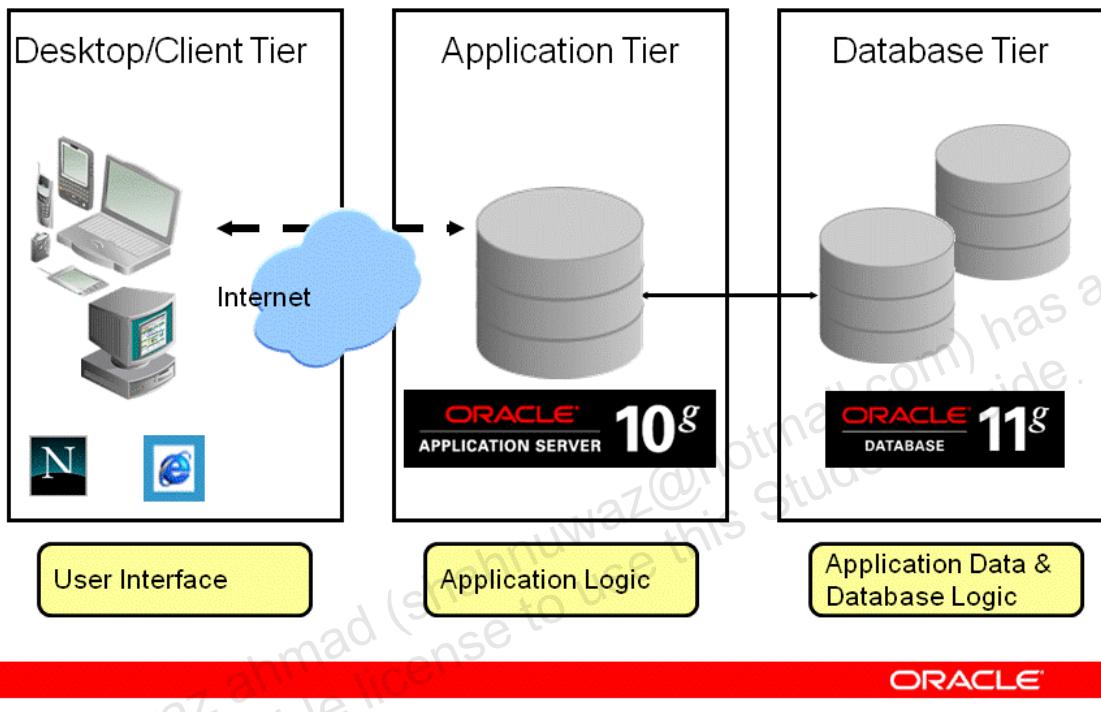
Finally, mobile users cover a surprisingly large range of users whose jobs are likely to keep them away from a readily available, network-connected computer. These users can range from

sales representatives through inventory users. By utilizing the mobile interface, they are able to send and receive information at points where it is important and convenient for them.

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Basic Technical Architecture of Oracle Applications R12.x

Basic Technical Architecture of Oracle Applications R12.x



Basic Technical Architecture of Oracle Applications R12.x

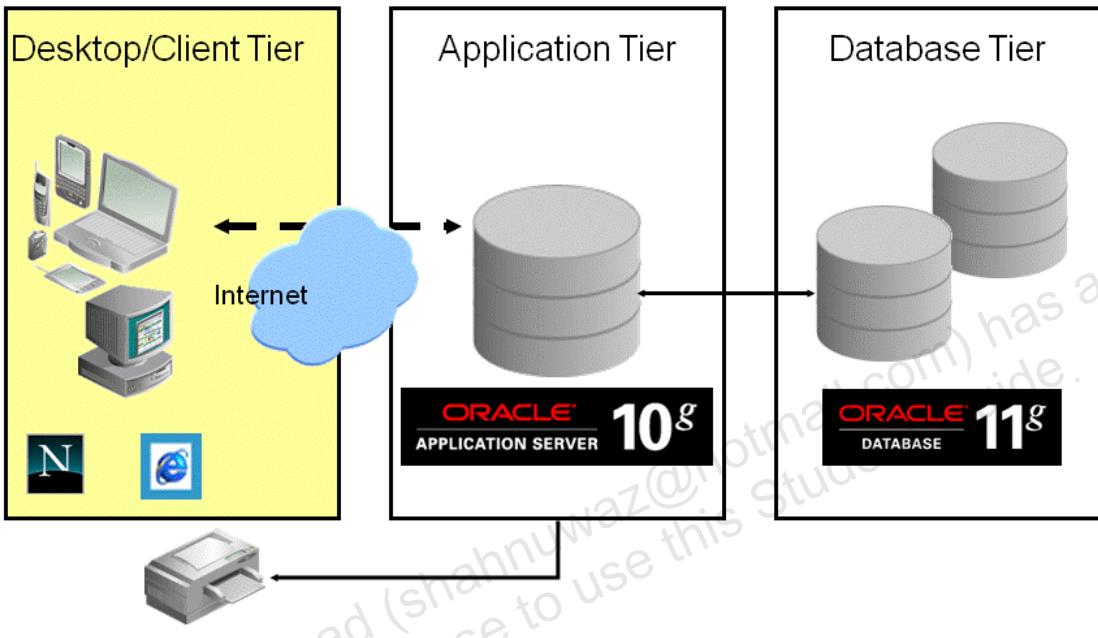
A tier is a logical grouping of services, spread across more than one physical machine. Oracle E-Business Suite consists of a three-tier architecture. The diagram in the slide represents the basic technical architecture of R12.x E-Business Suite.

- **Desktop/Client tier** provides the user interface that could comprise desktop computers, laptops, or mobile devices (such as PDAs). Its purpose is to capture and/or display information to the user.
- **Application tier** sometimes referred to as the middle-tier, is responsible for holding the application logic that supports and manages the various Applications components.
- **Database tier** supports and manages the Oracle database and is responsible for storing and retrieving application data.

Note: The connection between the application tier and desktop tier can operate successfully over a wide area network (WAN), because the desktop and application tiers exchange a minimum amount of information—for example, field value comparison differences. In a global operation that has users at various locations, requiring less network traffic reduces the telecommunications costs and improves response times for users.

Desktop/Client Tier

Desktop/Client Tier



Desktop/Client Tier

The client interface is provided through HTML for the newer HTML based applications, and via a Java applet in a Web browser for the traditional Forms based interface.

The desktop tier is responsible for forms. They can be displayed using Java (Forms based access) or HTML/JavaScript (self-service, business intelligence, or mobile access).

The Web listener will download many Java Archive files (.jar files) to your computer, where they are cached. The first time these files are required, it will take longer to start the R12.x session because these files need to be downloaded. Subsequently, the cache will greatly increase the speed of the startup.

You will need to download the JAR files again only when they have been updated and the copy in the cache is no longer valid. For any of the additional modes, the browser is inherently capable of handling the HTML and JavaScript. No additional downloads are necessary.

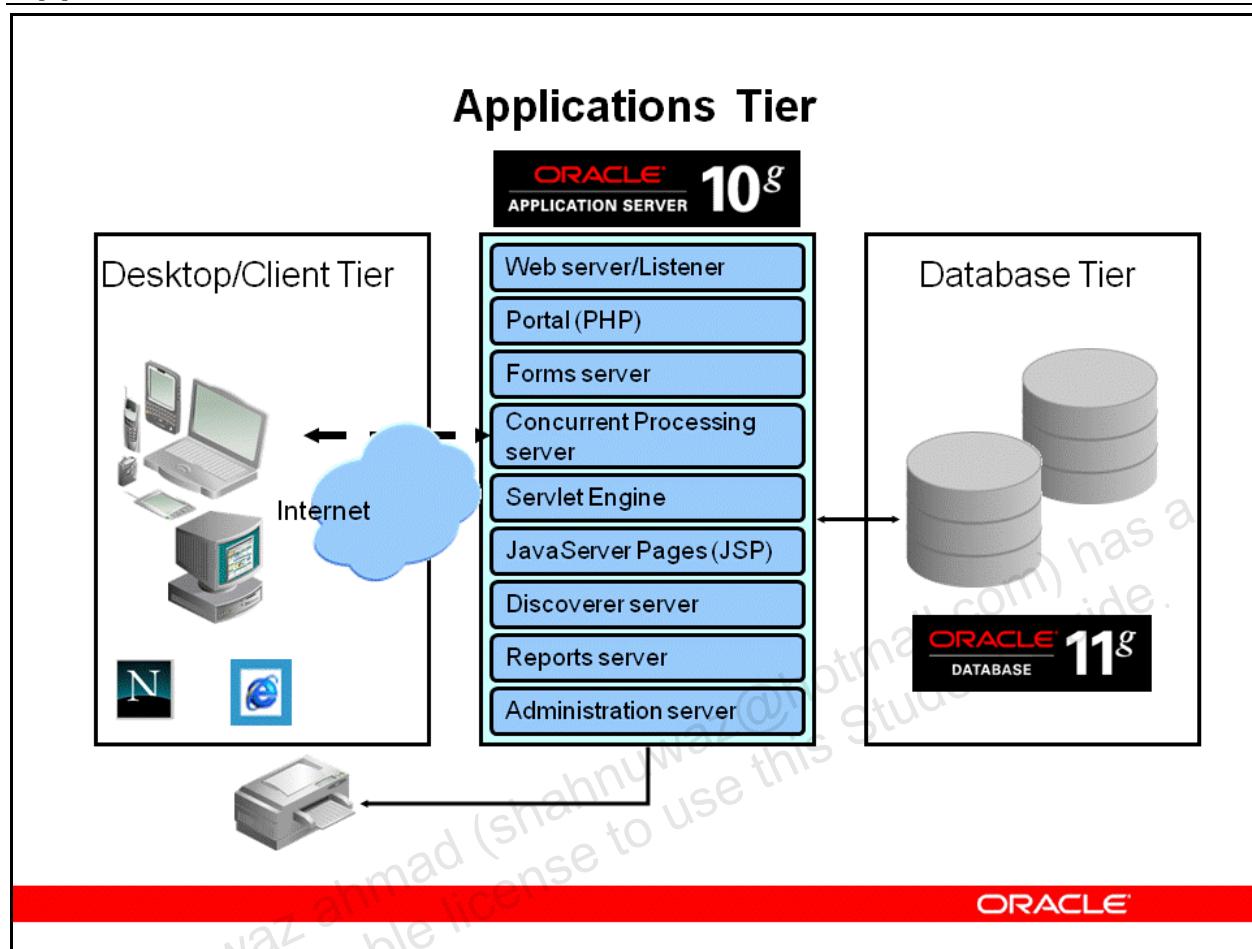
Note: The Forms based mode can communicate to the forms server using sockets, HTTP, or HTTPS protocols. This allows the Forms based mode to be deployed in a number of circumstances. HTTP or HTTPS is also used for the other modes. However, they are not as efficient as sockets.

- HTTP is a nonpersistent protocol that is the basis for a vast majority of Internet traffic. Therefore, each time you communicate with the server, you must open the connection,

communicate, and then close the connection. This nonpersistent protocol is the source for many HTTP-related performance challenges.

- Hypertext transfer protocol secure (HTTPS) adds encryption to HTTP and helps to secure information traffic, especially over the Internet. However, because encryption is added, the performance challenges may be further increased.
- Sockets is a persistent protocol in which a connection is opened for a session and stays open until the session ends. Therefore, communication can occur between a desktop and server without going through the OPEN/CLOSE steps each time. HTTP/HTTPS may be preferred over sockets when sending traffic over a public network such as the Internet, whereas Sockets may be the preferred protocol for Forms based traffic.

Applications Tier



Applications Tier

The applications tier is responsible for storing and executing most of the business logic associated with R12.x. It also provides all the nondatabase services required in an R12.x instance (for example, Web listeners, Forms servers, Reports servers, Concurrent Processing, and so on). The application tier is the key tier consisting of a host of services within the R12.x architecture.

It is simpler to state that all components that are not part of either the desktop tier (that is, Forms display) or the database tier are assigned to the applications tier.

Prominently, six servers comprise the application tier for Oracle Applications:

- **Web server:** The Oracle HTTP Server (powered by Apache) acts as the Web server. It processes the requests received over the network from the desktop clients, and includes additional components such as:
 - Web Listener
 - Java Servlet Engine
 - JavaServer Pages (JSP)

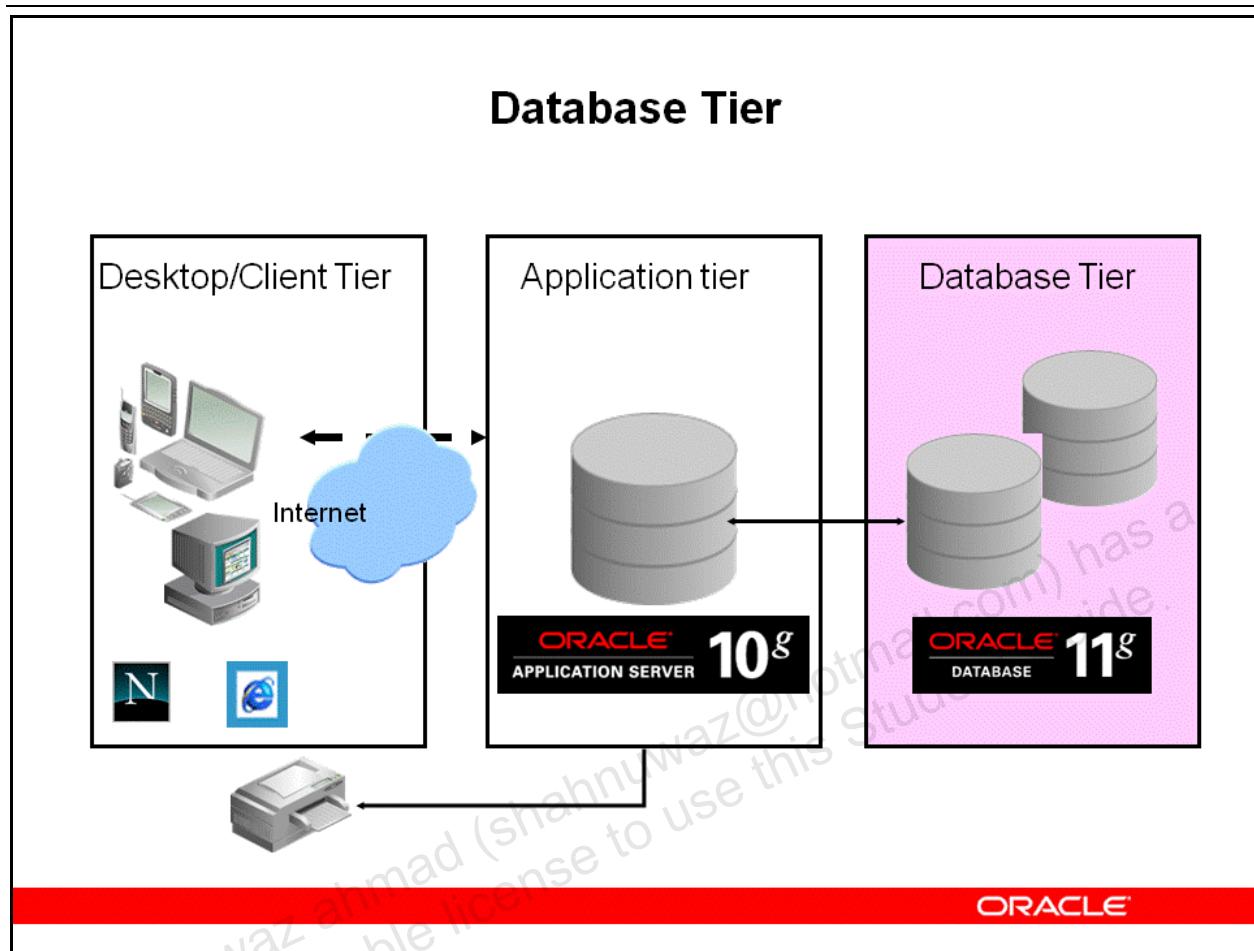
The Web Listener component of the Oracle HTTP Server accepts incoming HTTP requests (for particular URLs) from client browsers.

- **Forms server:** The Forms server hosts the Oracle Applications forms and associated run-time engine that supports the professional interface. It is a component of the Oracle Developer 6*i*, which mediates the communication between the desktop client and the Oracle database server, displaying client screens and initiating changes in the database according to user actions. It caches data and provides it to the client as required—for example, when scrolling through multiple order lines that exceed the limitations of a single screen. The Forms server communicates with the desktop client using these protocols:
 - Standard HTTP network connection
 - Secure HTTPS network connection
 - TCP/IP connection
- **Reports server:** The Reports server is automatically installed on the same node as the Concurrent Processing server, and its reports are contained in the same directory as the concurrent processing reports. However, reports generated by the Reports server are monitored and administered separately from the concurrent processing reports. It dynamically selects the language of the report at run time, so that users see the reports in the language they prefer.
- **Discoverer server (optional):** The Discoverer server complements the Reports server by allowing performance of ad hoc queries and analysis of the resulting query output. It also allows users to perform projections based on possible changes to the business environment or other strategic factors.
- **Concurrent Processing server:** User interactions with Oracle Applications data are conducted via HTML based Applications or the more traditional Forms based Applications. However, there are reporting programs and data update programs that need to run either periodically, or on an ad hoc basis. These programs that operate in the background while users continue to work on other tasks, may contain a large number of data-intensive computations, and run using the *concurrent processing* architecture. To ensure that resource-intensive concurrent processing operations do not interfere with interactive operations, they are run on a specialized server, the *Concurrent Processing server*. Processes that run on the concurrent processing server are called *concurrent requests*.
- **Administration server:** The Administration server is located on the node on which you maintain the data model and the data in your Oracle Applications database. You perform the following operations from this server:
 - Upgrading Oracle Applications
 - Applying database patches to Oracle Applications
 - Maintaining Oracle Applications data

Note: The Oracle HTML based (formerly known as Self-Service) Applications:

- Do not use Oracle Forms for the interface
- Are designed in pure HTML and JavaScript
- Dynamically generate HTML pages by executing Java code
- Use a metadata dictionary for flexible layout
- Operate by direct connection to the Web server

Database Tier



Database Tier

The database tier contains the Oracle database server, which stores all the data maintained by Oracle Applications, as well as the online Help information. More specifically, the database tier contains the Oracle data server files and Oracle Applications database executables that physically store the tables, indexes, and other database objects for your system. In general, the database server does not communicate directly with the desktop clients, but with the servers on the application tier, which mediates the communications between the database server and the clients.

The database tier is responsible for the storage, retrieval, and management of all the data associated with your R12.x instance. This means that any SQL or PL/SQL will ultimately be executed on the database tier machine. The database tier is involved in almost everything, because, regardless of the mode, all data is queried, inserted, updated, or deleted on the database tier.

The database tier can now significantly benefit from Oracle's clustering technology, by spreading the database activity across a cluster of machines.

The Network

The Network

- Although the network is not a tier of R12.x E-Business Suite's three-tier architecture, it is a critical component that makes it all work.
- R12.x EBS allows access through multiple channels including internal networks (LANs/WANs) and external networks (Internet/VPNs).
- All the choices in the network, good or bad, will ultimately affect your performance.



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The Network

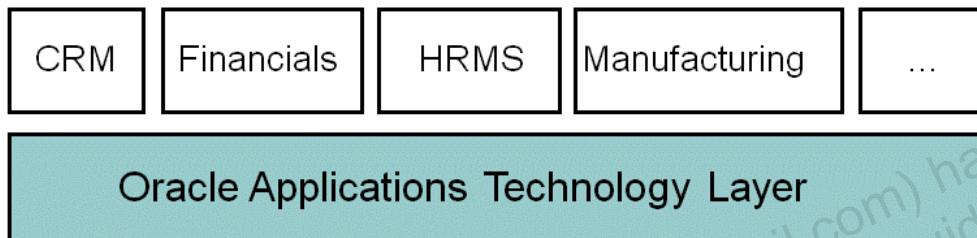
Most discussions about architecture make little, if any, reference to the network. And yet, it can have a great impact on your performance. The network is the most important but the least visible component of the R12.x architecture. The connection links themselves can vary from slow-speed dial-up connections to high-speed fiber optic channels.

For example, you can have a fast PC running on an R12.x instance with a good applications tier and a clustered database tier, but still end up with bad results. If you are using a slow connection either directly from that machine (for example, a dial-up connection) or a shared connection with considerable traffic (a corporate T-1 line that already has considerable bandwidth usage), you can experience poor performance. This problem cannot be attributed to a tier because it is a network-related issue.

Oracle Applications Technology Layer

Oracle Applications Technology Layer

The Oracle Applications technology layer is an integrated collection of components used by all Oracle Applications modules:



The various components of the Applications technology layer are discussed in the following slides.

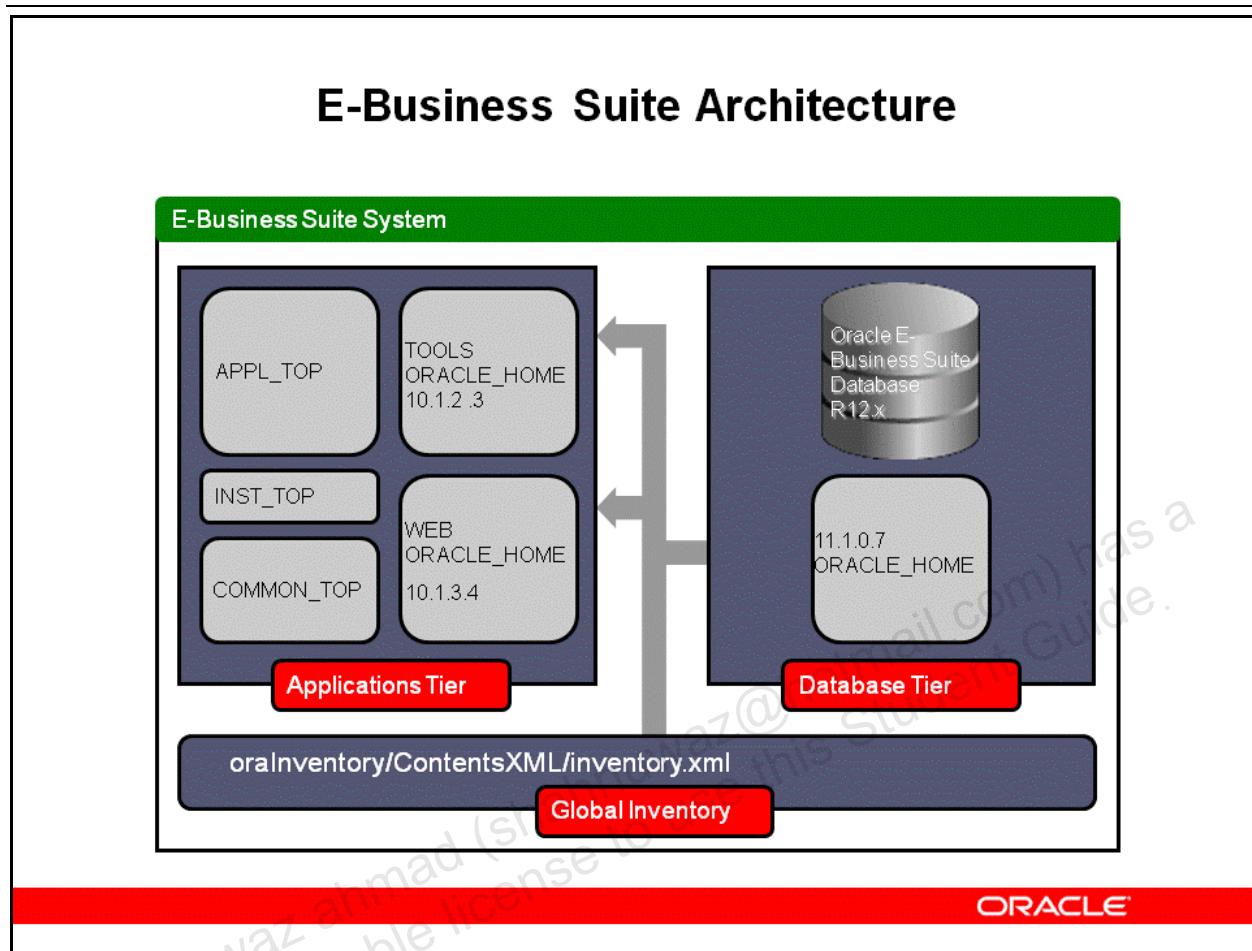
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Oracle Applications Technology Layer

The Oracle Applications technology layer is an integrated collection of components whose functionality is applicable to all Oracle Applications modules. Components in the Oracle Applications technology layer include:

- Applications DBA (AD)
- Application Object Library (FND)
- Applications Utilities (AU)
- Common Modules (AK)
- Workflow (WF)
- Alert (ALR)
- OA Framework (FWK)
- Oracle XML Publisher (XDO)

E-Business Suite Architecture



E-Business Suite Architecture

Oracle Homes

There are three Oracle Homes to consider in an E-Business Suite R12.x instance.

- Database Oracle Home: Release 12.1 utilizes the latest 11gR1 database version (11.1.0.7).
- Tools Oracle Home (10.1.2.3): Release 12.1 still utilizes Oracle Forms and other older Oracle technologies to deliver some functionality.
- Web Oracle Home (10.1.3.4): Release 12.1 uses Oracle Application Services 10gR3 (Oracle AS 10.1.3.4), Oracle JDeveloper 10.1.3.4 for Web-based OA Framework applications, as well as Java SE Development Kit (JDK) 6.0.

E-Business Suite File System: Application Tier

Oracle Applications uses components from different Oracle products. The product files are stored in several top-level directories, including the following:

- The **apps/apps_st/app** (**APPL_TOP**) directory contains the product directories and files for Oracle Applications.
- The **apps/apps_st/comn** or **(COMMON_TOP or COMN_TOP)** directory contains directories and files used across products.

- The **apps/tech_st/10.1.2** directory contains ORACLE_HOME used for the Applications Technology stack tools components.
- The **apps/tech_st/10.1.3** directory contains ORACLE_HOME used for the Applications Technology stack Web and Java components.

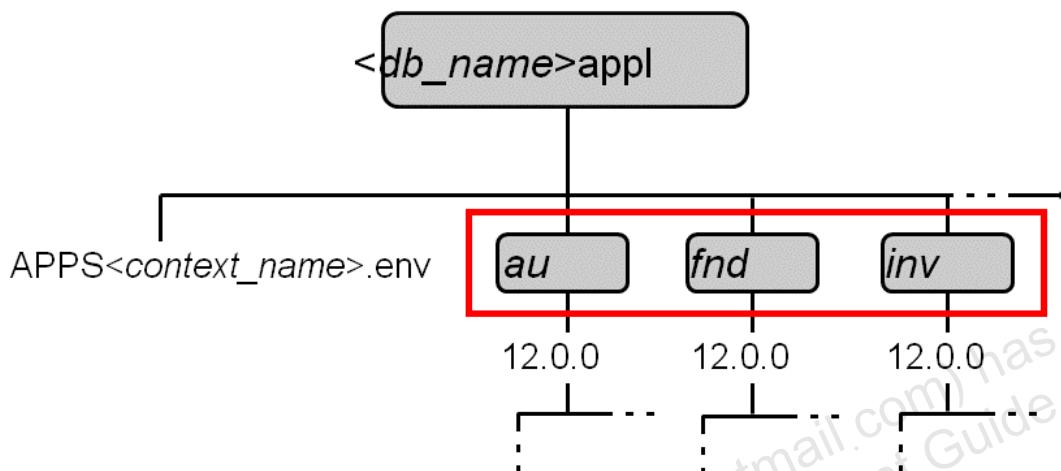
E-Business Suite File System: Database Tier

E-Business Suite uses components from different Oracle products. The product files are stored in several top-level directories, including the following:

- The **db/apps_st/data (DATA_TOP)** directory is located on the database node machine, and contains the system tablespaces, redo log files, data tablespaces, index tablespaces, and the database files.
- The **db/tech_st/11.1.0** directory is located on the database node machine, and contains the ORACLE_HOME for Oracle Database 10g.

E-Business Suite Product Directories

E-Business Suite Product Directories



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E-Business Suite Product Directories

APPL_TOP is an environment variable that points to the top level of the file system tree for the E-Business Suite product directories. Each product has its own subdirectory under APPL_TOP, and the E-Business Suite base release is typically reflected in the name of the subdirectory. For R12.x, the base release is 12.0.0.

The directory path for a particular product is defined by the value of the environment variable <PROD>_TOP, where <PROD> is the short name of the product schema. For example, the slide displays three product directories, au, fnd, and inv. If the directory path to APPL_TOP is /d01/prodappl, the paths to these product directories would be specified in the APPS<CONTEXT_NAME>.env file as follows:

- APPL_TOP=/d01/prodappl
- AU_TOP=/d01/prodappl/au/12.0.0
- FND_TOP=/d01/prodappl/fnd/12.0.0
- INV_TOP=/d01/prodappl/inv/12.0.0

All E-Business Suite products, regardless of the license status, are installed in the database and the file system. Files for unlicensed products should not be removed. The individual APPL_TOP and <PROD>_TOP directories are initially established during installation.

Finally, multiple releases and product versions must not be installed in a single APPL_TOP directory. It is acceptable for multiple servers to share a single APPL_TOP. But, multiple APPL_TOPs are not supported within the same file system.

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Oracle Applications Manager

Oracle Applications Manager

Oracle Applications Manager is a key system administration tool:

The screenshot shows the Oracle Applications Manager web interface. At the top, there's a blue header bar with the Oracle logo and the text "Applications Manager". Below it is a navigation bar with links for "Support Cart", "Setup", "Home", "Logout", and "Help". The main content area is divided into several sections: "System Configuration" (with links for "Hosts", "AutoConfig", and "License Manager"); "Application Services" (with links for "Generic Services", "Request Processing Managers", "Transaction Managers", "Parallel Concurrent", and "Programming Setup"); "Workflow" (with links for "Home", "Work Item Metrics", "Agent Activity", "Background Engines", "Notification Mailer", "Service Components", and "Purge"); "Concurrent Requests" (with links for "Submit New", "Pending", "Running", and "Completed (Last Hour)"); "Service Fulfillment Manager" (with a single link "Service Fulfillment Manager"); and "Others" (with links for "Applications Manager Log" and "Knowledge Base"). A tip message at the bottom left says "TIP Only the items to which you have access are clickable." At the very bottom, there's another blue footer bar with the same set of links as the top bar, followed by copyright information: "Copyright 2001, 2006 Oracle Corporation. All Rights Reserved." and "About Oracle Applications Manager Version 2.3.1".

Oracle Applications Manager

Oracle Applications Manager (OAM) is a sophisticated tool that supports managing and monitoring of an Oracle Applications system from an HTML based central control console.

Among other tasks, Oracle Applications Manager can help you to:

- Configure and administer your system
- Diagnose and correct problems
- Manage patches
- Monitor and tune performance
- Monitor system security

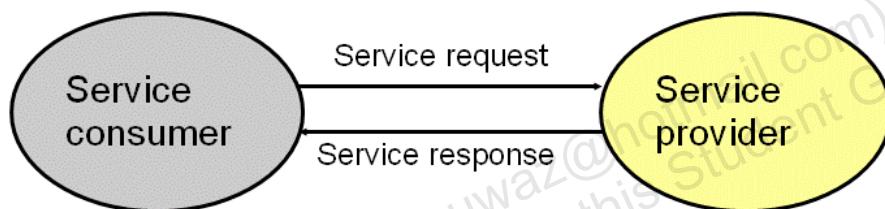
OAM is built into Oracle Applications and complements the features of Oracle Enterprise Manager.

Service-Oriented Architecture

Service-Oriented Architecture

Service-Oriented Architecture (SOA) is:

- An architectural style for integrating loosely coupled interacting software services
- A set of components (services) that can be invoked
- Enabled through a set of standards



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Service-Oriented Architecture

The World Wide Web Consortium (W3C) defines Service-Oriented Architecture (SOA) as: “a set of components which can be invoked, and whose interface descriptions can be published and discovered.”

SOA is an architectural style designed to integrate loosely coupled services. Loose coupling is possible by using standards-based technology that enable platform independence and interaction based on the request-response architecture provided by the Internet. Several standards from the W3C have come together to enable SOA to be realized.

Essentially, SOA is a collection of services that communicate with each other using standards-based technology.

The function provided by a service is a unit of work performed by a service provider to achieve desired end results for a service consumer. The provider and consumer roles are implemented through software components.

Services

A service can be defined as a well-defined, self-contained business function executed through a set of standard protocols and technologies that:

- Operate independently from the context or state of other services
- Represent a unit of work performed by a component or part of an automated subprocess

Oracle E Business Suite Integrated SOA Gateway

- Provide robust, consistent integration framework with extensive infrastructure based on SOA principles.
- Integrate loosely coupled and heterogeneous applications.
- Contain prebuilt and reusable business services.
- Provide native service enablement capability within Oracle E-Business Suite.
- Use native services as building blocks to create composite services.
- Enforce function security and role-based access control security to allow only authorized users to execute administrative functions.
- Enable Web service invocation from Oracle E-Business Suite.

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Oracle E-Business Suite Integrated SOA Gateway

Building on top of Oracle Fusion Middleware and service-oriented architecture (SOA) technology, Oracle E-Business Suite Integrated SOA Gateway (ISG) provides a customer-focused robust communication and integration infrastructure between independently managed components and loosely coupled applications. This infrastructure not only allows greater and effective business integration between heterogeneous applications, but also facilitates the development and execution of complex business processes into highly flexible and reusable Web services. With this standardized and interoperable Web service platform, Oracle E-Business Suite Integrated SOA Gateway provides a powerful framework that accelerates dynamic business processes and service integration between applications over the Web.

Oracle E-Business Suite Integrated SOA Gateway is a complete set of service infrastructure. It supports almost all integration interface types and services invoked within Oracle E-Business Suites no matter if they are native packaged interfaces or the services that are orchestrated using native services. With this prebuilt, reusable business services and service-oriented components, Oracle E-Business Suite Integrated SOA Gateway provides a capability of allowing various users to perform different tasks and to monitor and manage service integration throughout the entire service deployment life cycle.

Quiz

Quiz

You can implement only a minimum of five R12 E-Business Suite modules for an enterprise.

- a. True
- b. False

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Answer: b

Quiz Specifications: This statement is False. Based on your business needs, you can implement one module, several modules, or the entire suite.

Quiz

Quiz

The connection between the application tier and the desktop tier can operate successfully over a wide area network (WAN).

- a. True
- b. False

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Answer: a

Quiz Specifications: This statement is True. This is because the desktop and application tiers exchange a minimum amount of information.

Quiz

Quiz

In E-Business Suite Architecture, the tier which is responsible for holding the application logic and supports and manages the various Applications components is:

- a. Desktop tier
- b. Client tier
- c. Application tier
- d. Database tier

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Answer: c

Quiz Specifications: The Application tier, sometimes referred to as the middle-tier, is responsible for holding the application logic that supports and manages the various Applications components.

Quiz

Quiz

Which of the following tasks does Oracle Applications Manager helps in managing and monitoring?

- a. Configure and administer your system.
- b. Diagnose and correct problems.
- c. Monitor and tune performance.
- d. Assign responsibilities to user.
- e. Monitor system security.

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Answers: a, b, c, e

Summary

Summary

In this lesson, you should have learned to describe:

- The basic architecture of Oracle Applications
- The major components of the architecture
- The Oracle Applications file system
- The Product subdirectory structure and their roles
- Oracle E-Business Suite Integrated SOA Gateway

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Fundamentals of System Administration

Chapter 4

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Fundamentals of System Administration

4

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Course Objectives

Course Objectives

After completing this lesson, you should be able to do the following:

- Describe the layers of access control in Oracle Applications security
- Define Function Security
- Use Menu and Function Security to modify responsibilities
- Define Data Security
- Set profile options

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Introduction to Application Security

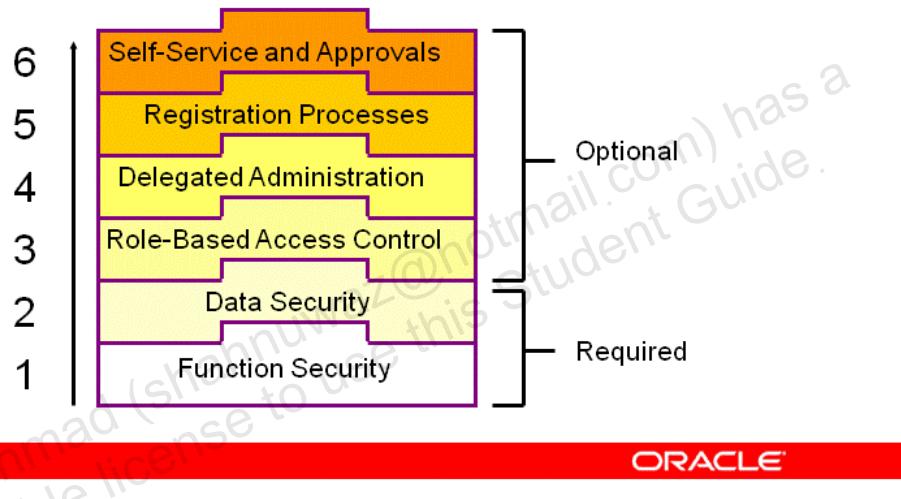
Introduction to Application Security

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Successive Layers of Access Control

Successive Layers of Access Control

Access Control is implemented in successive layers and each layer builds upon the one that precedes it.



Successive Layers of Access Control

Access Control with Oracle User Management is implemented in successive layers and each layer builds upon the one that precedes it. Organizations can, optionally, uptake the various layers depending on the degree of automation and scalability they want to build upon the existing Function and Data Security models.

There are six layers of access control. The Core Security layers include:

- Function Security
- Data Security

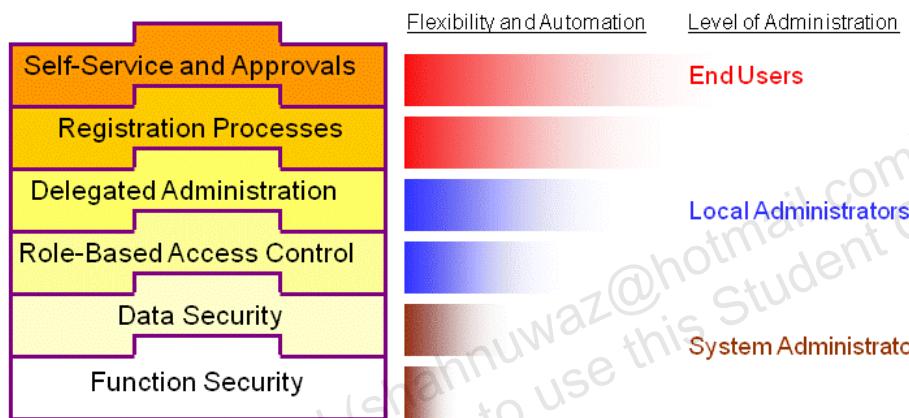
The next four layers are part of Oracle User Management:

- Role-Based Access Control
- Delegated Administration
- Registration Processes
- Self-Service and Approvals

Increasing Flexibility and Scalability

Increasing Flexibility and Scalability

In Oracle User Management, each layer of access control adds an increasing level of administrative flexibility and scalability.



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Increasing Flexibility and Scalability

In general, access control with Oracle User Management begins with basic system administration tasks, and then progresses to more distributed, local modes of administration, ultimately enabling users to perform some basic, predefined registration tasks on their own. Details of the various levels of access control, and the increasing level of flexibility and automation that they provide are discussed later in the lesson. However, the following general guidelines may be considered for now:

System Administrator

Oracle's Function Security and Data Security mechanisms constitute the base layers of the security system, and contain the traditional system administration capabilities. Organizations can, optionally, add more layers to the system depending on the degree of flexibility they want. By themselves, Function Security and Data Security limit the scope of Oracle User Management to basic system administration by granting access to specific menus and to the data accessed from within those menus.

Local Administrators

When Role-Based Access Control and Delegated Administration are added to the Data Security and Function Security layers, system administration tasks can be distributed to local administrators who manage a subset of the organization's users.

End Users

Registration Processes and Self-Service and Approvals distribute system administration further by automating some registration tasks so that end users can perform them.

Function Security

Function Security

Function Security, the base layer of Access Control in Oracle Applications, restricts user access to individual menus and menu options within the system but does not restrict access to the data contained within those menus.

Function Security

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Function Security

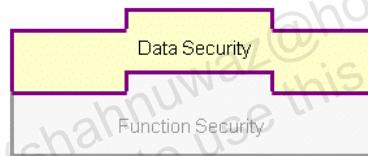
Function Security is the base layer of access control in Oracle Applications. It restricts user access to individual menus and menu options within the system, but does not restrict access to the data contained within those menus. For example, an organization can use Function Security to provide its sales representatives with the required menus and menu options for querying customers. It can also control access to specific components of those pages such as a button on a sales forecasting page.

Data Security

Data Security

Data Security:

- Is the next layer which builds on Function Security
- Provides access to the data a user can view and the actions a user can perform on that data
- Restricts access to individual data displayed on the screen after the user has selected a menu or menu option



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Data Security

The second layer represents Data Security. Working in conjunction with Function Security, Data Security provides additional access control on the data a user can see and what actions a user can perform on that data, within Oracle Applications.

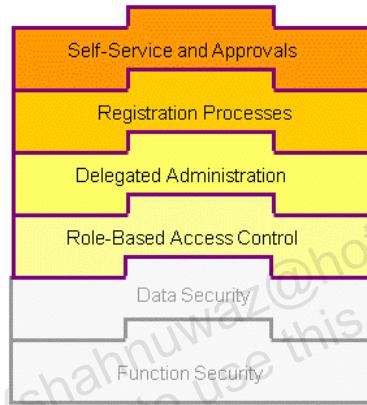
Data Security Policies restrict the actions or operations that can be performed on a specific business object (for example, inventory items). Data Security Policies can reflect access to:

- **All Instances:** All instances of an object represent all rows in the database object. For example, you have an “inventory item” object in the database. Creating a data security policy for all instances of your object results in providing access to every single inventory item that you have catalogued in the database.
- **An Instance Set:** An instance set is a related set of instances of an object. This corresponds to a set of rows for the database object. Using your object example, an instance set can be constructed to include all inventory items with a shelf life of seven days.
- **A Specific Instance:** A specific instance generally corresponds to a single row in the database. A specific instance is generally identified by a primary key value for the object. Using your example, you can enter a unique serial number for the inventory item. This returns only one inventory item from the database.

Oracle User Management Layers of Access Control

Oracle User Management Layers of Access Control

Oracle User Management is implemented using the next four layers of access control.



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Oracle User Management Layers of Access Control

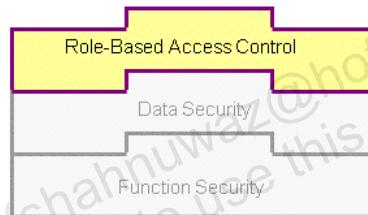
The next four layers of access control are used in Oracle User Management, an optional component in the implementation of Oracle Applications.

Role-Based Access Control (RBAC)

Role-Based Access Control (RBAC)

RBAC is the next layer and builds upon Data Security and Function Security:

- Access control is defined through roles.
- User access to applications is determined by the roles granted to the user.



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Role-Based Access Control (RBAC)

A role can be configured to consolidate the responsibilities, permissions, function security and data security polices users require to perform a specific function. This is accomplished with a one-time setup, in which permissions, responsibilities, and other roles are assigned to the role. Users are not required to be assigned the lower level permissions directly because permissions are implicitly inherited based on the roles assigned to the user. When making a mass update in a production system an organization simply changes the permissions or role inheritance hierarchy defined for a role. The users assigned that role subsequently inherit the new set of permissions.

Role Categories

Administrators can create role categories to bundle roles and responsibilities to simplify the process of searching for roles and responsibilities. For example, all the roles related to sales and marketing can be included in the Sales & Marketing category.

Role Inheritance Hierarchies

Roles can be included in role inheritance hierarchies that can contain multiple subroles and superior roles. With role inheritance hierarchies, a superior role inherits all the properties of its subrole and any of its subroles.

Example

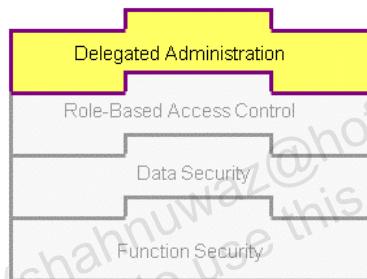
Organizations can define roles that closely mirror their business situation. For example, an organization can create an “Employee” role and assign that role to its employees. It can also create an “External” role and assign that role to customers and suppliers. Further examples may include specific roles such as “Support Agent,” “Sales Rep,” and “Sales Managers.” In these examples, each role contains a specific level of access privileges that restricts its assignees to the scope of their job functions. Some members of the organization are probably assigned more than one role. A sales representative is assigned the Employee and Sales Representative roles and a Sales Manager is assigned the Employee, Sales Representative, and Sales Manager roles. Roles and role assignments are stored in the workflow directory, which is interpreted by the security system at run time.

Delegated Administration

Delegated Administration

Delegated Administration

- Is a privilege model that builds on the RBAC system
- Provides organizations with the ability to assign the required access rights for managing roles and user accounts



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Delegated Administration

With delegated administration, instead of exclusively relying on a centralized administrator to manage all the users, an organization can create local administrators with sufficient privileges to manage a specific subset of the organization's users and roles. This provides organizations with a tighter, more granular level of security and the ability to easily scale their administrative capabilities.

Administration Privileges

Administration Privileges determine the users, roles, and organization information that delegated administrators (local administrators) can manage. Each privilege is granted separately, yet the three work in conjunction to provide the complete set of abilities for the delegated administrator.

User Administration Privileges

A local administrator must be granted User Administration Privileges to determine the users and people that the local administrator can manage. Local administrators can be granted different privileges for different subsets of users. For example, a local administrator can be granted privileges only to query one set of users, and full privileges (including update and reset password) for another set. Local administrators cannot query users for whom they do not have administration privileges.

Role Administration Privileges

Role Administration Privileges define the roles that local administrators can directly assign to and revoke from the set of users they manage.

Organization Administration Privileges

Organization Administration Privileges define the organizations a local administrator can view in the system. This privilege enables an administrator to search for people based on their organization, if the local administrator has additionally been granted access to view the people in that organization (User Administration Privileges). Depending on the user administration privileges, an administrator may have the ability to register new people for that organization.

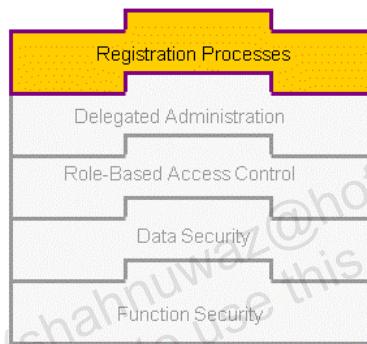
Example

Organizations can internally designate administrators at division or even department levels, and then delegate administration of external users to people within those (external) organizations. These delegation policies are defined as Data Security Policies. The set of data policies defined as part of delegated administration are known as Administration Privileges.

Registration Processes

Registration Processes

Registration processes are predefined registration components that enable end users to perform some of their own registration tasks.



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Registration Processes

Oracle User Management contains the following registration processes:

Self-Service Account Requests

Commonly referred to as Self-Service Registration, self-service account requests provide a method for persons to request a new user account. Consider the case where customers may need to register before they can purchase an item from an online store. After the customer has completed the registration process, the customer obtains both a user account and the necessary role or roles to access some portion of the Web site on which they registered.

Requests for Additional Access

Users can request for additional access through the Oracle User Management Access Request Tool (ART) available in the global preferences menu. Requests for Additional Access uses the same Oracle User Management infrastructure and processing logic as Self-Service Account Requests.

Account Creation By Administrators

Administrators can benefit from existing registration processes designed to streamline the process of creating and maintaining user access. Registration Processes of this type are geared toward administrators, especially delegated administrators, to ensure consistent application of the client's user security policies. Each account creation registration process can be made

available to select local administrators. Local administrators can perform these tasks for users within their own organizations.

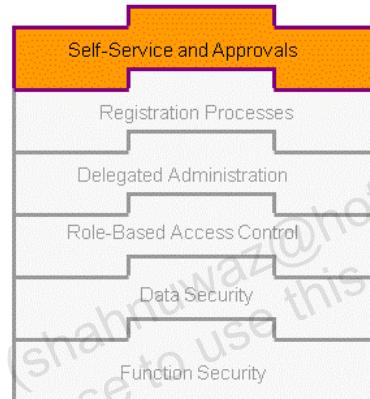
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Self-Service and Approvals

Self-Service and Approvals

End users can perform the following self-service registration tasks:

- Obtain new user accounts.
- Request for additional access to the system.
- Reset passwords.



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Self-Service and Approvals

After the registration processes have been configured as required, individuals can subsequently perform self-service registration tasks such as obtaining new user accounts or requesting for additional access to the system. In addition, organizations can use the Oracle Approvals Management engine, to create customized approval routing for these requests.

Example

An organization may enable users to request a particularly sensitive role, however, before the user is granted the role, the organization can specify that two approvers, a manager and a vice president, must first provide their approval.

Function Security

Function Security

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Function Security

Function Security

- Defines an application
- Creates responsibilities and users

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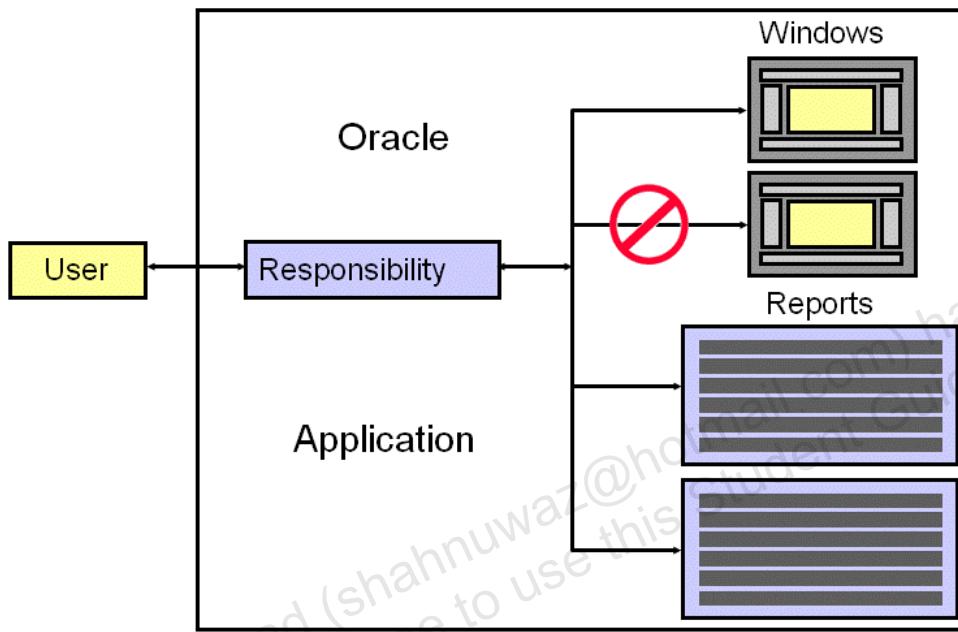
Function Security

Function Security restricts user access to individual menus of functions, such as forms, HTML pages, or widgets within an application. It allows you to define a user and assign one or more responsibilities to the user, with each responsibility having an associated menu. Function Security, by itself, restricts access to various functions, but it does not restrict access to the data that a user can see or the actions that a user can perform on the data.

This lesson discusses the definition of users, responsibilities, and menus.

Application Security: Overview

Application Security: Overview



Application Security: Overview

In an Oracle Application, the System Administrator manages security by creating user sign-ons and assigning them to one or more responsibilities. Users then have access to all the functionalities associated with that responsibility.

User Security

You authorize a user to sign-on to Oracle Applications by defining an application user with one or more responsibilities assigned.

Responsibility Security

A responsibility is a collection of authorizations that allow access to:

- A specific application or applications
- A Ledger
- 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 users any of the standard responsibilities provided with Oracle Applications, or create new custom responsibilities as required.

Self-Service Applications Security

Oracle Self-Service Web Applications use columns, rows, and values in database tables to define the information that users can access. Table columns represent “attributes” assigned to a responsibility. These attributes are defined in the Web Application Dictionary.

Users

A user is defined as a human being. Although the concept of a user can be extended to include machines, networks, or intelligent autonomous agents, the definition is limited to a person here. You authorize a user to sign-on to Oracle Applications by defining an application user with one or more responsibilities assigned.

Use of Menu and Function Security to Modify Responsibilities

Use of Menu and Function Security to Modify Responsibilities

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Importance of Responsibilities

Importance of Responsibilities

Responsibilities determine:

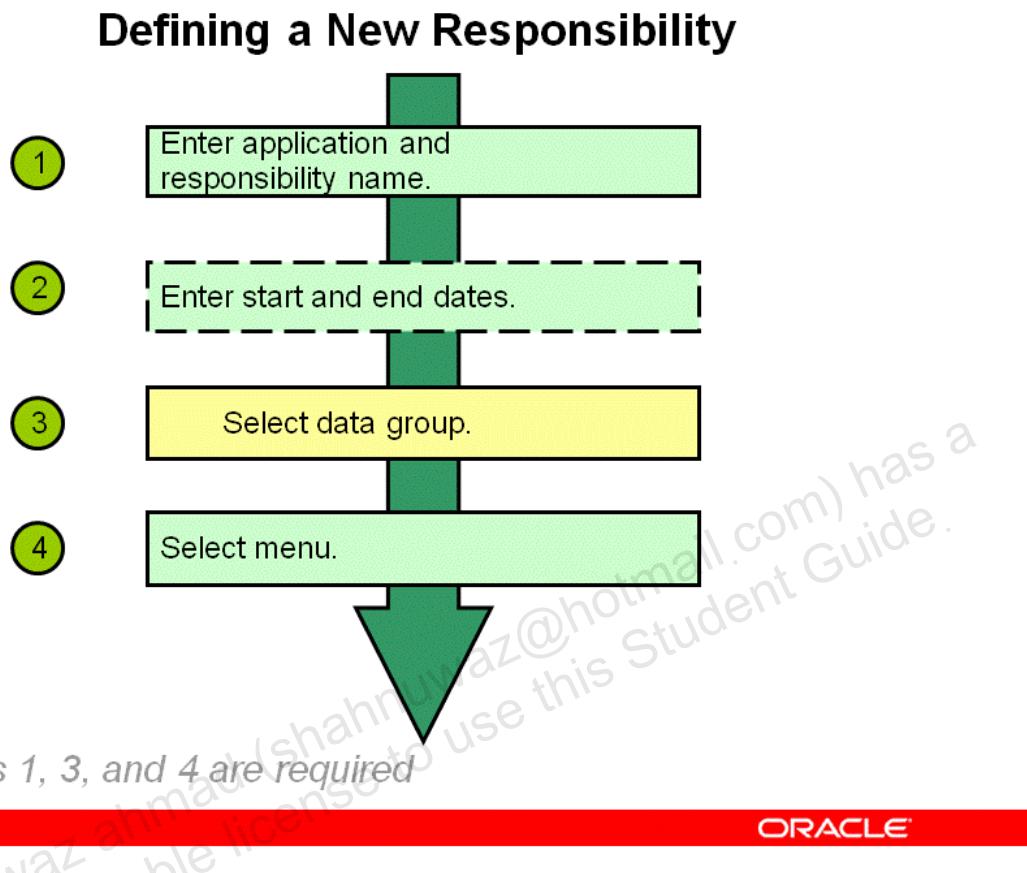
- Menus and Forms access
- Available reports
- Applicable Ledgers
- Associated Operating Unit
- Accessible applications

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Importance of Responsibilities

Each application user is assigned at least one responsibility. A responsibility determines whether the user accesses Oracle Applications, Self-Service Web Applications, or Mobile Applications. In addition, a responsibility determines the application functions that a user can use, the reports and concurrent programs that the user can run, and the data that those reports and concurrent programs can access.

Defining a New Responsibility



Defining a New Responsibility

- Assemble the components of application privileges to create a responsibility.
- Define the responsibility by assembling a menu and defining any function security.

You must assign the following to your new responsibility:

- A data group. It defines the mapping between Oracle Applications products and Oracle database IDs. A data group determines which Oracle database accounts a responsibility's forms, concurrent programs, and reports connect to.

Note: Data groups are used for backward compatibility only. Oracle Application Framework functionality does not support data groups. For almost all cases, you should accept the default value in defining a responsibility.

- A menu. It supplies access to forms within an application.

You can assign the following:

- Any function or menu exclusions to control access to the functionality of the application
- A report security group to control access to reports and concurrent programs

Note: These features are for backward compatibility only.

A responsibility determines whether the user accesses Oracle Applications or Oracle Self-Service Web Applications, the application functions that a user can use, the reports and

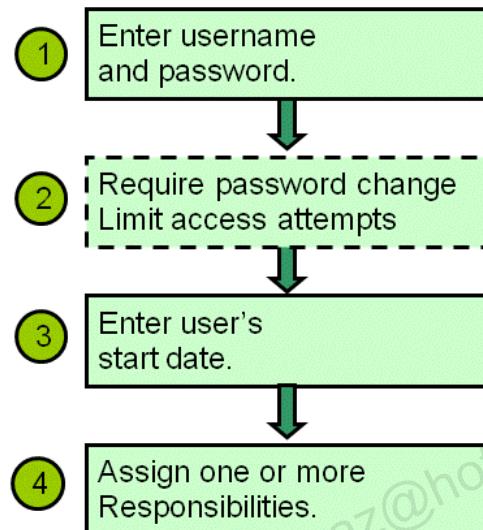
concurrent programs that the user can run, and the data that those reports and concurrent programs can access.

Generally, you relate new application users to predefined responsibilities. However, you can customize an existing responsibility or create new responsibilities to accommodate the needs of different users or different categories of users.

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Defining a New Application User

Defining a New Application User



Steps 1, 3, and 4 are required

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Defining a New Application User

(N) Security > User > Define

Note: All navigation paths, unless otherwise specified, are from the System Administrator responsibility.

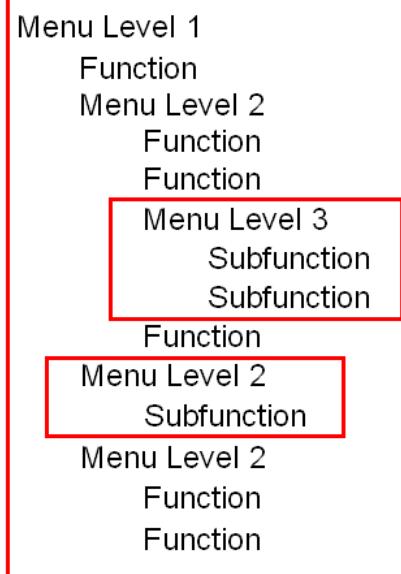
Though defining user accounts may be the last task you complete when setting up function security for your installation, this task is covered first here for you to complete the following sections by logging in to Oracle Applications with your own user account.

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. The user will be able to access functions and reports by using the assigned responsibilities.

Refer to the practice - *Creating a New User (Required)*.

Function Security

Function Security



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 on a responsibility-by-responsibility basis.
- There are two types of functions: a form function or form, and a nonform function or subfunction. A subfunction represents a securable subset of a form's functionality.
Note: Oracle User Management uses the concept of role. Roles control the level of access to the various data and functions within an application, instead of the traditional responsibility.

Data Security

Data Security

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Data Security

Data Security

- Data Security and its components
 - Objects, object instances, object instance sets
- Data Security privileges:
 - Grants
 - Permissions

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Data Security

Data Security is the next layer of access control and builds on Function Security. Data Security provides access control within Oracle Applications on the data a user can access, and the actions a user can perform on that data. Oracle Applications restricts access to individual data that is displayed on the screen after the user has selected a menu or menu option. For example, Data Security restricts the set of users that a local administrator can access within Oracle User Management. Data Security Policies can only be defined for applications that have been written to utilize the Data Security Framework.

Data Security Policies restrict the actions or operations that can be performed on a specific business object (for example, inventory items). Data Security Policies can reflect access to:

- **All Instances:** All instances of an object represent all the rows in the database table or view. For example, you have an object, “inventory item,” in the database. Creating a Data Security Policy for all instances of the object results in providing access to every inventory item that you have catalogued in the database.
- **An Instance Set:** An instance set is a related set of instances of an object. This corresponds to a set of rows in the database. Using your object example, an instance set can be constructed to include all inventory items with a shelf life of seven days.
- **A Specific Instance:** A specific instance generally corresponds to a single row in the database, and is generally identified by a primary key value for the object. Using your

example, you can enter a unique serial number for the inventory item. This returns only one inventory item from the database.

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Data Security Components: Objects

Data Security Components: Objects

- **Object:**
 - An object is a system entity subject to access control.
 - It usually corresponds to a table.
- **Object Instance**
 - It is a particular instance of an object.
- **Object Instance Set**
 - It is a group of object instances.

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Data Security Components: Objects

(N) Functional Developer responsibility > Objects

An object is a system entity on which an operation can be performed.

In Oracle Applications, an object typically maps to records in relational tables or views, Forms or HTML pages, and UI widgets. Examples in Oracle Applications include: a person, a machine, and a file.

Examples of operations include: Create, Update, Escalate, Approve, and Reject. In Oracle Applications, operations are implied by a permission definition. Permission is defined as an operation on an object—for example, Invoke Service Request Form, Update Order, Approve Expense Report, and Query Customers.

An object instance is a specific example of an object, such as Project Number 123 or User JDOE. An object instance generally corresponds to a row in the database, and is identified by a set of one or more primary key values as defined by the object. Related object instances can be grouped together into an object instance set.

Grants

Grants

Grants:

- Define the access given to users through responsibilities
- Can provide access to a limited set of data or a set of an application's functionality
- Which handle business objects are part of Data Security
- That deal with a set of an applications functionality are part of Function Security

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Grants

(N) Functional Administrator Responsibility > Grants

Grants are used to provide specified users with access to specific objects or functions.

Grants which handle business objects are called Data Security Policies.

Grants can also be used to control access to an application's functionality. For example, you can use a grant to secure an aspect of a menu, page, or other widget within the application. For example, you want to provide access to a set of administrative menus to a select group of users.

The grantee defines who is granted access. The grantee can be one of three types:

- A group of users
- A specific user—for example, Joe Smith
- All users (global)—all the users of the system, except the Guest account

Permissions and Permission Sets

Permissions and Permission Sets

A permission is defined as an approval to perform an operation on an object.

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Permissions and Permission Sets

The Role-Based Access Control (RBAC) model defines permissions as “an approval to perform an operation on one or more RBAC-protected objects,” what has been referred to as functions earlier. Permissions can be grouped into permission sets, which can be granted to users or roles. Permission assignments, or Grants, reflect the access granted to users through roles.

Set Profile Options

Set Profile Options

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Set Profile Options

Set Profile Options

- Set profile option values.
- Use user profile option settings.
- Use system profile option settings.
- Discuss profile categories.

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Set Profile Options

System Administrators control various profile options in Oracle Applications that determine how the applications look, feel, and operate. In this lesson, you learn how to specify the profile option values.

Profile Hierarchy Types

Profile Hierarchy Types

There are three hierarchy types:

- Security
- Organization
- Server

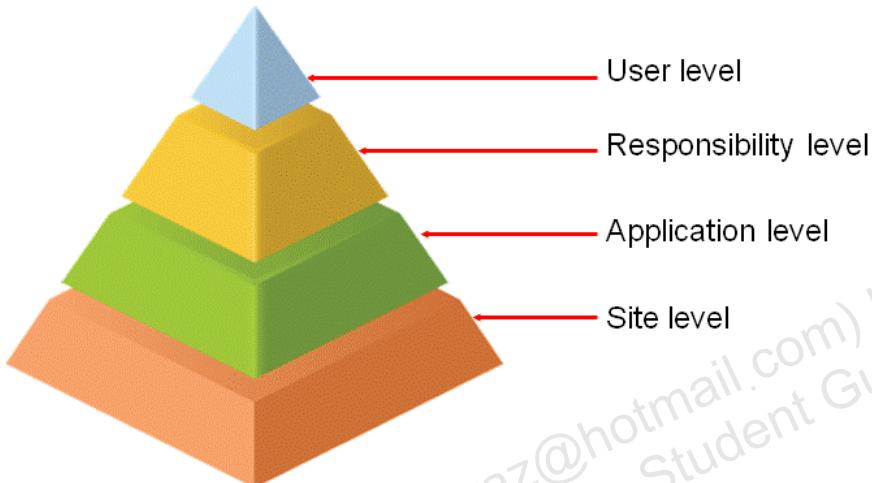
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Profile Hierarchy Types

Of the three hierarchy types, the Security type is the most widely used.

Profile Hierarchy Levels: Security

Profile Hierarchy Levels: Security



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Profile Hierarchy Levels: Security

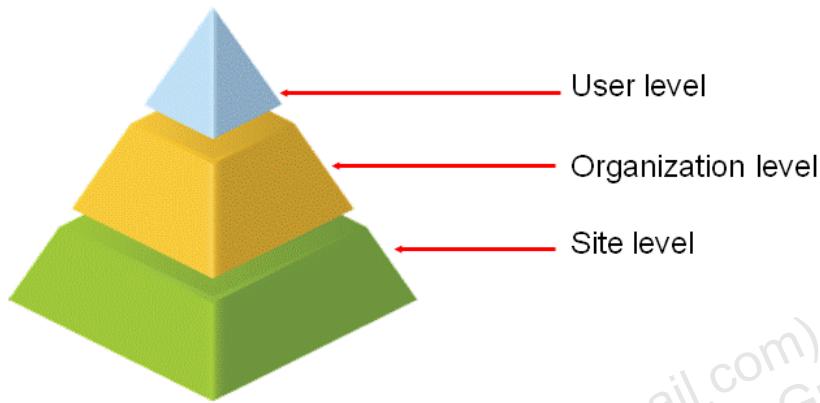
You can set user profiles at different levels by using one of the three hierarchies.

Most profile options use the Security hierarchy, in which setting a user profile affects application users across one of the four different levels.

- **Site Level:** Site-level settings apply to all the users at an installation site. To display the name of your installation site, select About Oracle Applications from the Help menu.
- **Application Level:** Application-level settings apply to all the users of the specified application. For example, a profile can be set that applies to all Oracle General Ledger users. Profile options that can be set at the application-level override options set at the site level.
- **Responsibility Level:** Responsibility-level settings apply to all the users currently signed in under the responsibility. For example, a profile can be set that applies to all the users of the Oracle General Ledger budget supervisor responsibility. Profile options that can be set at the responsibility level override options set at the site and application levels.
- **User Level:** User-level settings apply to individual users, identified by their application usernames. For example, a user profile can be set that applies only to user JDoe. Profile options set at the user level override all the other options.

Profile Hierarchy Levels: Organization

Profile Hierarchy Levels: Organization



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Profile Hierarchy Levels: Organization

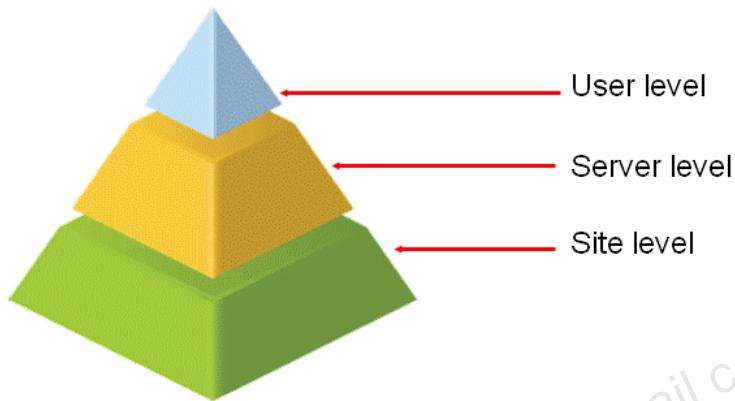
The second hierarchy type is Organization, where organization refers to an Operating Unit. For example, clerks in different organizations may need to have different values for a given profile option, depending on their organization, but clerks in the same organization use the same value.

The Organization hierarchy type allows System Administrators to set a profile option at the organization level, so that all the users within that organization use the profile option value set once at the organization level.

Profiles using the Organization type use the hierarchy Site - Organization – User, where a user-level option overrides the organization-level option, which, in turn, overrides the site-level option.

Profile Hierarchy Levels: Server

Profile Hierarchy Levels: Server



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Profile Hierarchy Levels: Server

The Server hierarchy type is used when the system needs to determine the server on which the user's session runs. For example, the profile "Applications Web Agent" can be defined using the Server hierarchy type. The setting of this profile option can differ for an internal server and an external one. Cookie validation, for example, can then be done against the value of this profile option.

Profiles using the Server type use the hierarchy Site - Server - User, where a user-level option overrides the server-level option, which, in turn, overrides the site-level option.

Personal Profile Values

Personal Profile Values

Depending on the responsibility, many users can change their personal options:

- Navigate to Profile > Personal to see a list of the profiles already defined.
- If the User Value field is unprotected, you can select a value for this profile option from the list of values, or enter a value directly.

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Personal Profile Values

For further information about using the Personal Profile Values Window, see:

(Link) Help > (T) Contents > User's Guide > Getting Started > Introduction > User Profile Options

The FND_PROFILE_OPTION_VALUES table stores values for user profile options. Each row includes values that identify the profile option; the profile level; and the user, responsibility, application, organization, server, or site for which the profile value is set. There is one row for each profile option setting (at each level, for each user, and so on).

System Profile Options

System Profile Options

The System Administrator can set profile options at any level:

- Navigate to Profile > System to see the Find System Profile Values window.
- You can set a profile value at the user, responsibility, site, or application level for profile options using the Security hierarchy type.

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System Profile Options

For profiles using the Security hierarchy type, if you choose to set a value at the application, responsibility, or user level, you must also specify the particular application, responsibility, or user. Any values defined at a level lower than the level chosen are also displayed.

Likewise, for profiles using the Organization hierarchy, if you choose to set a value at the organization or user level, you must also specify the particular organization or user.

For profiles using the Server hierarchy type, if you choose to set a value at the server or user level, you must also specify the particular server or user. Any values defined at a level lower than the level chosen are also displayed.

For a complete description of the fields in the System Profile Values Window, see:

(Link) Help > (T) Contents > Applied Technology > Oracle Applications System Administration > Maintenance > Setting Profile Options > System Profile Values window

Profile Categories

Profile Categories

Profile options can be grouped into categories based on their functional areas. Administrators can then easily search on the profiles by category when they need to view or update them.

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Profile Categories

(N) Functional Administrator responsibility > Core Services > Profile Categories

Profile options can be grouped into logical categories based on their functional areas and can be associated with more than one category.

You can create new or update existing profile categories.

Refer to the guided demonstration - *Setting Profile Options (Optional)*.

Quiz

Quiz

In Oracle User Management, identify the layer where access control is defined through roles, and user access to Application is determined by the roles granted to the users.

- a. Function Security
- b. Data Security
- c. Role-Based Access Control
- d. Delegated Administration
- e. Registration Processes

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Answer: c

Quiz

Quiz

In Oracle User Management, identify the layer which provides access to the data a user can view and the actions a user can perform on that data.

- a. Function Security
- b. Data Security
- c. Role-Based Access Control
- d. Delegated Administration
- e. Registration Processes

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Answer: b

Quiz Specifications: Data Security provides access control within Oracle Applications on the data a user can access, and the actions a user can perform on that data.

Quiz

Quiz

In Oracle User Management, identify the layer which provides the organization the ability to assign sufficient privileges to local administrators instead of relying exclusively on a centralized administrator.

- a. Function Security
- b. Data Security
- c. Role-Based Access Control
- d. Delegated Administration
- e. Registration Processes

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Answer: d

Quiz Specifications: With delegated administration, instead of relying on a central administrator to manage all its users, an organization can create local administrators and grant them sufficient privileges to manage a specific subset of the organization's users and roles.

Quiz

Quiz

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 on a responsibility-by-responsibility basis.

- a. True
- b. False

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Answer: a

Quiz Specifications: This statement is True. 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 on a responsibility-by-responsibility basis. There are two types of functions: a form function and a subfunction.

Quiz

Quiz

Securing attributes allows you to control database rows, which are displayed in inquiries based on the values assigned to the user.

- a. True
- b. False

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Answer: a

Summary

Summary

In this lesson, you should have learned how to:

- Describe the layers of access control in Oracle Applications security
- Define applications, responsibilities, and users in Function Security
- Use Menu and Function Security to modify responsibilities
- Define components of Data Security
- Describe user and system profile options

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Fundamentals of Flexfields

Chapter 5

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5 Fundamentals of Flexfields

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Objectives

Objectives

After completing this lesson, you should be able to do the following:

- Describe flexfields
- Define value sets
- Define key flexfields
- Define descriptive flexfields

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Agenda

Agenda

- Overview of flexfields
- Creating value sets
- Defining the key flexfield structure
- Defining the descriptive flexfield structure

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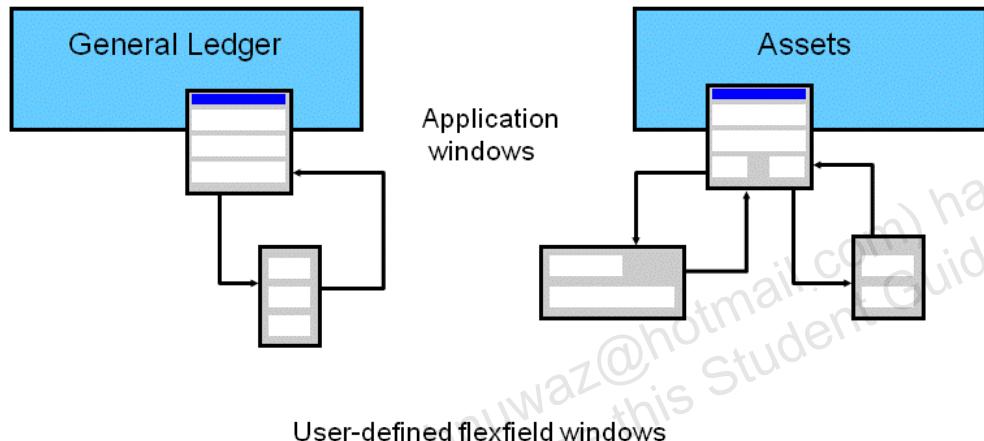
Overview of Flexfields

Overview of Flexfields

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Using Flexfields to Configure Applications

Using Flexfields to Configure Applications



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Using Flexfields to Configure Applications

A flexfield is a configurable field that opens in a window from a regular Oracle Applications window. Defining flexfields enables you to customize Oracle Applications to your own business environment. You can easily define flexfields to modify or extend Oracle Applications without programming. By using flexfields within Oracle Applications, you can:

- Structure certain identifiers required by Oracle Applications according to your own business environment
- Collect and display additional information for your business as required

Flexfields are important because they are used throughout Oracle Applications. Flexfields provide many opportunities for simple modification and configuration of standard Oracle Applications processing. Members of the implementation team as well as system administration personnel should be familiar with the concepts and procedures of flexfields to design and support an Oracle Applications environment that meets the needs of all of its users.

Benefits of Flexfields

Benefits of Flexfields

Flexfields enable the following benefits:

- Configuration of applications to support your accounting, product, and other codes
- Construction of intelligent keys
- Configuration of applications to capture additional data
- Use of the application to validate values and value combinations entered by the user
- Support for multiple field structures depending on data context

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Key and Descriptive Flexfields

Key and Descriptive Flexfields

Key flexfields build unique entity identifiers.

Item Information		
Category	COM	Computer
Item	876	Monitor
Color	LTN	Light tan

Payment Type	CC
Store	54321
Dept	987
Number	4958-2938-4747
Exp. Dt	12 - 2011

Descriptive flexfields gather additional information.

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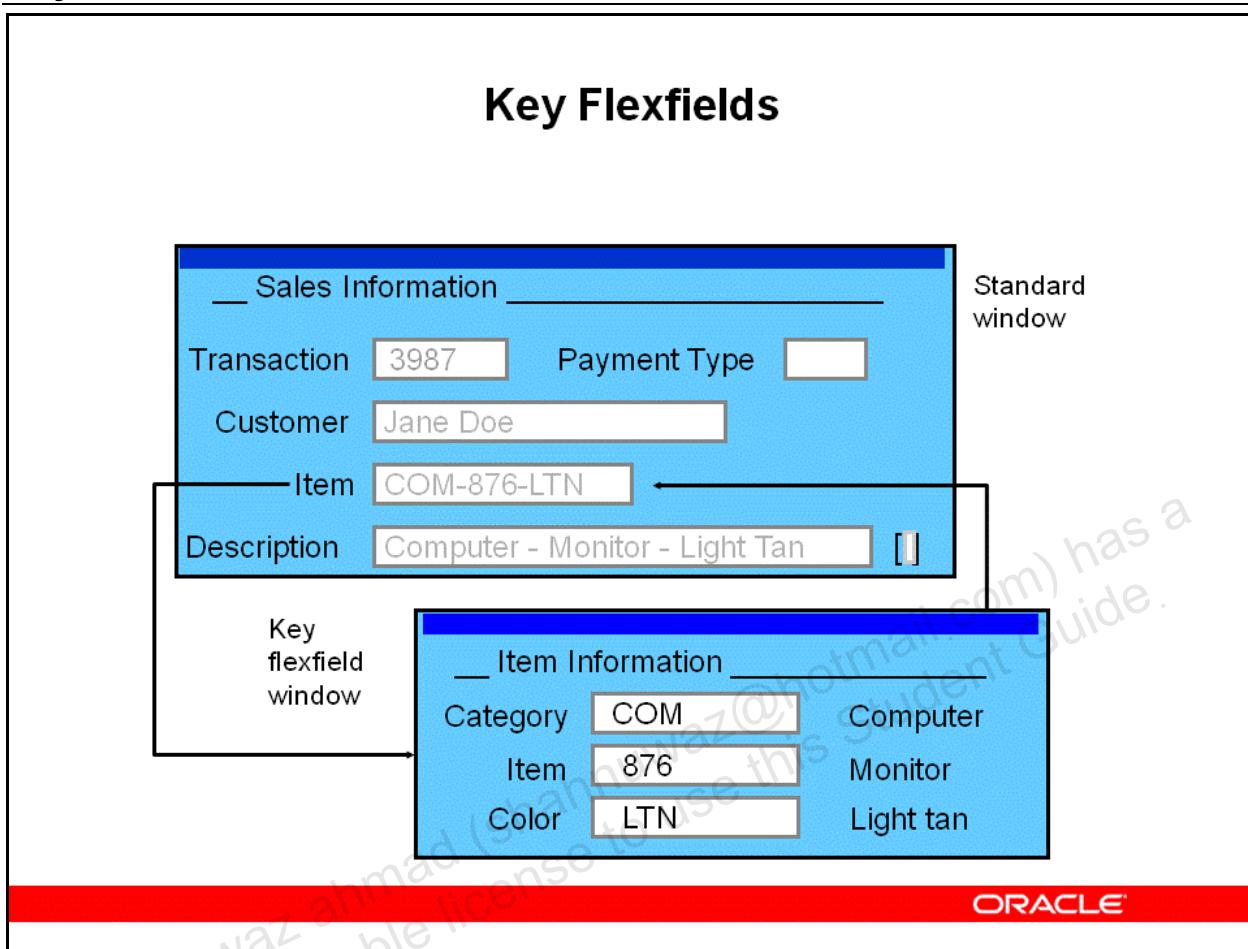
Key and Descriptive Flexfields

There are two types of flexfields: key and descriptive. Each type is discussed in greater detail in the following slides. The main differences between the two are:

- Key flexfields are used to define your own structure for many of the identifiers required by Oracle Applications and drive reporting.
- Descriptive flexfields are used to gather additional information about your business entities beyond the information required by Oracle Applications.

Note: In some cases, descriptive flexfields are reserved for product-specific functionality. For example, the Flexible Address Format.

Key Flexfields



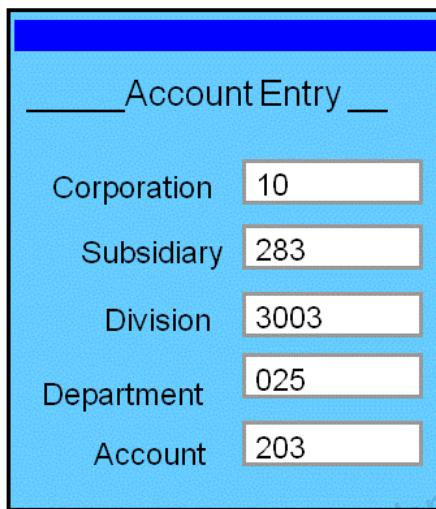
Key Flexfields

- In Oracle Applications, you use key flexfields as identifiers for entities. Generally, the identifier you create using a key flexfield is required by the owning application (for example, the Accounting Flexfield builds the account number used by General Ledger).
- A key flexfield appears as a normal field on a form. Any existing value for the key appears in the field as a concatenated value having segment separators.
- You can use the Flexfields:Open Key Window profile option to specify whether you want the key flexfield window to be opened automatically when you navigate to the key flexfield on the base form. This profile option is visible and can be updated at the user level.
- A key flexfield structure usually consists of multiple segments, each of which contains meaningful information. The resulting combinations of values from these segments therefore function as intelligent keys.

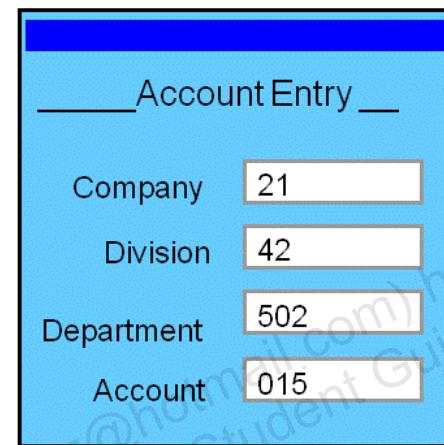
Using Key Flexfields to Build Intelligent Keys

Using Key Flexfields to Build Intelligent Keys

Business A



Business B



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Using Key Flexfields to Build Intelligent Keys

Intelligent keys are multipart codes where the value in each individual part contains meaningful information. Each combination of values can, therefore, identify a particular business entity or class of entities. Such intelligent key structures are used throughout Oracle Applications. Because you define the key flexfield structure yourself, it reflects the organization of your business.

Accounting Flexfield: Example

One important key flexfield is the Accounting Flexfield. The example in the slide shows how two hypothetical businesses can define Accounting Flexfield structures, which reflected their different accounting structures. Business A's accounting structure has five segments, whereas Business B's accounting structure has four segments.

Additional Key Flexfield Features

You can define value sets to control the permitted values for each segment of the key. You can also define cross-validation rules to control the permitted combinations of segment values within the key.

Key Flexfield: Examples

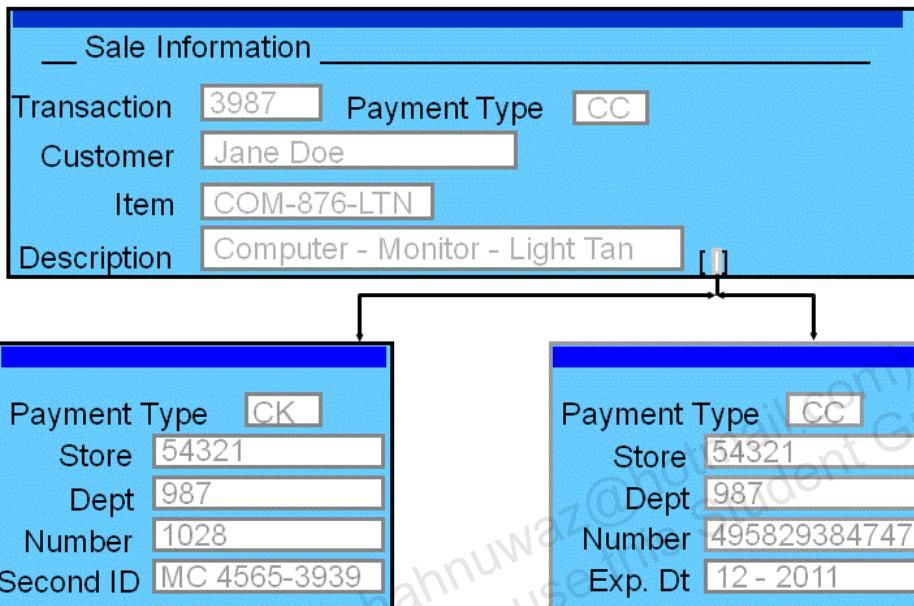
Key Flexfield: Examples

- General Ledger
 - Accounting Flexfield
- Assets
 - Asset Key Flexfield
 - Location Flexfield
 - Category Flexfield
- Service
 - Service Item Flexfield
- Human Resources
 - People Group Flexfield
 - Job Code Flexfield
- Receivables
 - Territory Flexfield
 - Sales Tax Location Flexfield
- Inventory
 - Item Categories
 - System Items
 - Sales Orders
 - Item Catalogs

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Descriptive Flexfields

Descriptive Flexfields



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Descriptive Flexfields

You use descriptive flexfields to collect information beyond what is collected by Oracle Applications. By using descriptive flexfields, you can gather additional specialized information required by your business. However, the use of descriptive flexfields is optional.

A descriptive flexfield appears on a form as a field enclosed within brackets. You can use the Flexfields:Open Descr Window profile option to specify whether you want the descriptive flexfield window to be opened automatically when you navigate to the bracketed field, if the flexfield is enabled. This profile option is visible and can be updated at the user level.

A descriptive flexfield can use multiple structures. You can define:

- A basic structure that gathers additional information for all entities
- Several different structures that gather specialized information for different types of the same general entity
- A combination of the above two. This structure can gather general information about all entities, and then optionally gather certain information about certain types of entities.

The example shows a descriptive flexfield that gathers different payment information based on the type of payment: check (CK) or credit card (CC).

Descriptive Flexfield: Examples

Descriptive Flexfield: Examples

The following are examples of instances where descriptive flexfields are used:

- Storing supplier numbers from converted suppliers
- The Flexible Address Format
- Storing order information with an invoice
- Storing project information with an invoice
- Storing vehicle information associated with the asset category “Vehicle”
- Name of the customer service representative responsible for the sales order
- Web link to map property or location in Property Manager

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Key and Descriptive Flexfields: Comparison

Key and Descriptive Flexfields: Comparison

Key flexfields

- Owned by one application; used by many
- Required to set up, not always required to use
- Supports intelligent keys
- Identifies entities
- Drives reporting

Descriptive flexfields

- Associated with tables in a specific application
- Setup optional
- No intelligence, stores additional information
- Captures additional information only

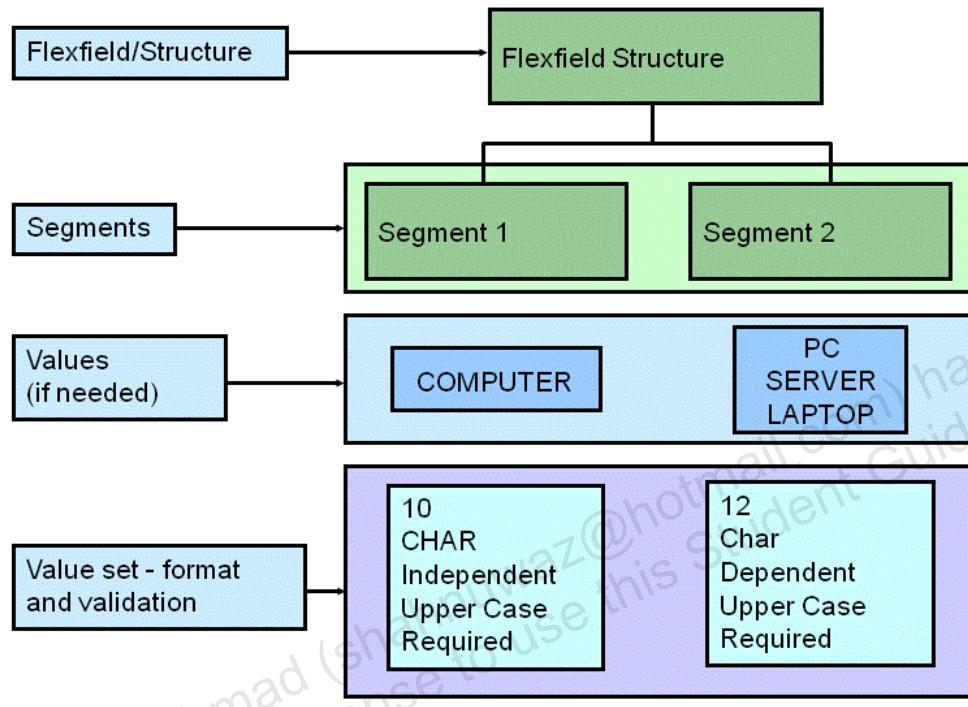
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Key and Descriptive Flexfields: Comparison

Refer to the guided demonstration - *Entering an Item, Discussing Key and Descriptive Flexfields (Required)*.

Components of a Flexfield

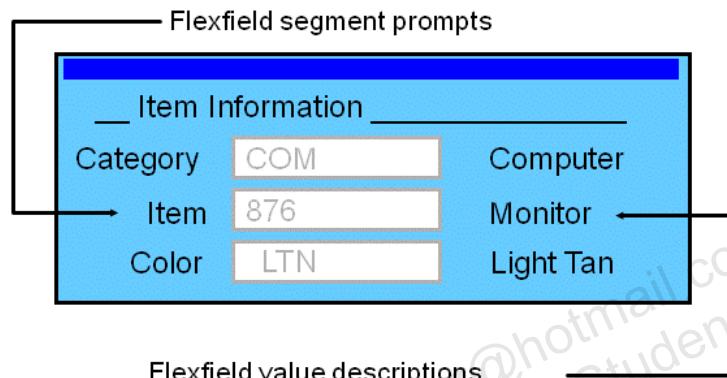
Components of a Flexfield



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Segment Prompts and Value Descriptions

Segment Prompts and Value Descriptions



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Segment Prompts and Value Descriptions

In addition to defining the segments and structures that make up the flexfield, you can also define the appearance of the flexfield. You can also specify names and descriptions for the segments appearing in the window as well as display the size for the fields.

Refer to the guided demonstration - *Entering an Asset, Discuss Context Sensitivity (Required)*.

General Steps to Implement a Flexfield

General Steps to Implement a Flexfield

- Plan flexfield segments, structures, value sets, and values.
- Define value sets.
- Define the flexfield structure.
- Define values.
- Define security and cross-validation rules, if necessary.

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General Steps to Implement a Flexfield

Use the following steps when defining both key and descriptive flexfields:

- Plan your flexfield structure and layout. Remember many flexfields use more than one structure, and each structure can consist of different segments. Also plan any value sets and their values.
- Define flexfield value sets. Value sets describe the permitted values for the flexfield segment. If you create your value sets first, you can refer to them when you are defining your flexfield segments in the following step.
- Define flexfield segments and structures. Use the plan that you designed earlier.
- Define values for your value sets.
- For key flexfields, define the security and cross-validation rules as necessary.

Creating Value Sets

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Creating Value Sets

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Planning a Value Set

Planning a Value Set

- Determine basic attributes of the set.
- Select the appropriate validation type.

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Planning a Value Set

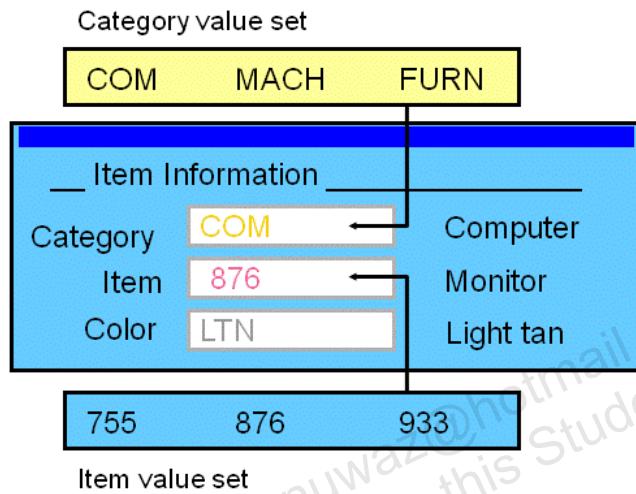
There are two steps to planning your value set:

- Determine the basic attributes for the set. Select the conditions that all the values must fulfill to be considered as valid values. The conditions include data type (Character, Numeric), value length, and minimum and maximum values, if appropriate.
- Select the appropriate validation strategy. Select the type of validation that is most appropriate for the data. Validation types are discussed in the following slides.

For some value sets, it does not make sense to try and provide a complete list of all the approved values. For example, a segment containing customer telephone numbers probably does not need a list of values, because each new customer will have a new telephone number that you do not know at design time.

Validating Input Using Value Sets

Validating Input Using Value Sets



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Validating Input Using Value Sets

Value sets allow you to control the values for a segment or a report parameter. A value set is a definition of the values approved for entry or display by a particular flexfield segment. A value set may also contain a list of actual approved values.

Value Sets Describe Acceptable Types of Values

- Some value sets permit a limited range of values; some permit only certain values; others have minimal restrictions.
- Different flexfields can share the same value set. For example, a value set containing the names of regional offices can be used by many different flexfields.
- Different segments of the same flexfield can use the same value set. For example, a date value set. Segments defined to different structures of the same flexfield can also share a value set. Many of the report parameters used with Standard Request Submission (SRS) forms use shared value sets.
- Depending on the validation type, a value set may or may not need defined values.

Value Set Attributes

Value Set Attributes

- Name: Unique value set name (Do not use XX-, XX_ , XXX-, XXX_ , or any Oracle reserved name.)
- Description: Free-form descriptive text
- List type
 - List of Values
 - Long List of Values
 - Pop-up list
- Security type
 - No security
 - Hierarchical
 - Non-hierarchical

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Value Set Attributes

Value Set Name

If an Oracle Application's predefined value set has the same name as a user-defined value set, the user-defined value set is overridden during an upgrade. Therefore, follow these naming guidelines:

- Do not use the patterns of either two or three characters followed immediately by a hyphen or an underscore. These patterns are reserved by Oracle Applications.
- Do not use spaces in your value set name.
- Include a custom or site prefix in the value set name to make it unique.

Oracle always provides a list of reserved value set names before an upgrade. Make sure to check this list against your existing value sets.

Description

You can give your value sets descriptive text information.

List Type

- Select List of Values if your value set should not provide the LongList feature in Oracle Forms Applications. A user will not see a Poplist in Oracle Self Service Applications. In general, use a list of values when 10 to 200 values are expected.
- Select the Long List of Values if your value set should provide the LongList feature in Oracle Forms Applications. The LongList feature requires a user to enter a partial segment value before the list of values retrieves all the available values. You may not enable LongList for a value set that has a validation type of None. A user will not see a Pop-up list in Oracle Self Service Applications. In general, use a long list of values when more than 200 values are expected.
- Select Poplist if your value set should not provide the LongList feature in Oracle Forms Applications, but should provide a Poplist in Oracle Self Service Applications. In general, use a Poplist when lesser than 10 values are expected.

Security Type

- **No Security:** All security disabled for this value set
- **Hierarchical Security:** Hierarchical security is enabled. With hierarchical security, the features of value security and value hierarchies are combined. With this feature, any security rule that applies to a parent value also applies to its child values.
- **Non-Hierarchical Security:** Security is enabled, but the rules of hierarchical security do not apply. That is, a security rule that applies to a parent value does not “cascade” to its child values. Special validation value sets allow you to call key flexfield user exits to validate a flexfield segment or report a parameter using the flexfield-within-a-flexfield mechanism. You can call flexfield routines and use a complete flexfield as the value passed by this value set.

Types of Value Sets

Types of Value Sets

- **None:** Validation is minimal.
- **Independent:** Input must exist on the previously-defined list of values.
- **Dependent:** Input is checked against a subset of values based on a prior value.
- **Table:** Input is checked against values in an application table.
- **Special:** Value set uses a flexfield itself.

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Types of Value Sets

You can define several types of value sets depending on how you need your values to be checked. All value sets perform minimal checking; some value sets also check against the actual values, if you have provided any.

None: Does not provide a list of values. A None value set performs only minimal checking of, for example, data type and length.

Independent: Performs basic checking but also checks a value entered against the list of approved values that you define

Dependent: Associated with an independent value set, dependent value sets ensure that all dependent values are associated with a value in the related Independent value set

Table: Lists of approved values are obtained from existing applications tables. When defining your table value set, you specify a SQL query to retrieve all the approved values from the table.

Special: Provides another flexfield as a value set for a single segment

Types of Value Sets

Types of Value Sets

- **Pair:** Two flexfields together specify a range of valid values.
- **Translatable Independent:** Input must exist on previously-defined list of values; translated value can be used.
- **Translatable Dependent:** Input is checked against a subset of values based on a prior value; translated value can be used.

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Types of Value Sets (continued)

Pair: Provides a flexfield range as the value set for a pair of segments

Translatable Independent: Similar to an Independent value set in that it provides a predefined list of values for a segment. However, a Translatable Independent value set can contain display values that are translated into different languages.

Translatable Dependent: Similar to a Dependent value set in that the available values in the list and the meaning of a given value depend on the independent value that was selected in a prior segment of the flexfield structure. However, a Translatable Dependent value set can contain display values that are translated into different languages.

Planning Data Format Validation

Planning Data Format Validation

- Format Type: Value data type
- Maximum Size: Maximum permitted size for a value
- Precision: Number of decimal places
- Numbers Only: Entry of numbers 0–9 only
- Uppercase Only: Lowercase input becomes uppercase
- Right-Justify and Zero-Fill: Shifts number to right, pads from left
- Maximum/Minimum Value: Beginning and ending values of a range

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Planning Data Format Validation

Format Type: Select the available data types from the list of values.

Maximum Size: Specify the maximum size of the value. The maximum size must be less than or equal to the size of the underlying column in the base application.

Precision: For numeric data, specify the number of decimal places.

Numbers Only: Select Numbers Only to accept only digits.

Uppercase Only: Select Uppercase Only to force any lowercase input to become uppercase.

Right-Justify and Zero-Fill: Select these options to shift a number to the right and then pad from the left with zeros. This is an alternate format for alphanumeric numbers.

Maximum/Minimum Value: To define a range of values for a value set, specify a beginning value and an ending value.

Defining Value Sets

Defining Value Sets

Use existing value sets when possible.

Define value set.

Define list of values if appropriate.

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Defining Value Sets

The procedure for defining value sets is shown in the slide. You should always check the existing value sets to see if there is an existing value set that you can use.

Using Predefined Value Sets

- Choosing a predefined value set limits the necessary maintenance of values.
- Most predefined value sets are table-validated value sets.
- A useful value set is Yes_No, containing the values Yes and No.
- Never alter value sets provided by Oracle Applications, especially the SRS value set.

Defining a New Value Set

Use the Value Sets window to enter:

- Value Set Name and attributes
- Format Validation options
- Validation Type

Refer to the practice - *Creating Value Sets (Required)*.

Defining the Key Flexfield Structure

Defining the Key Flexfield Structure

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Planning a Key Flexfield

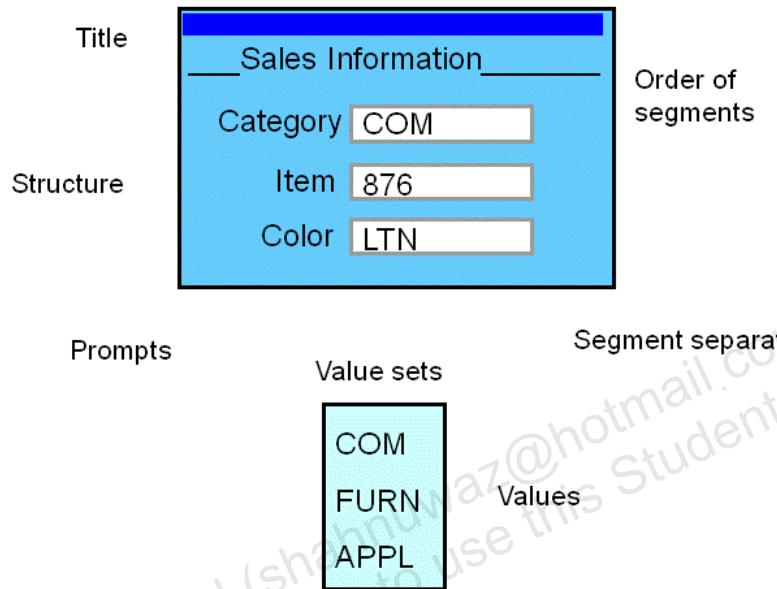
Planning a Key Flexfield

- Identify the target flexfield, the information required by Oracle Applications, and any qualifiers.
- Plan the flexfield structure, behavior, and appearance.
- Define the key flexfield structures.
- Define any value sets required and their values.
- Define security rules when appropriate.
- Define cross-validation rules when appropriate.
- Define shorthand aliases as needed.

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Designing the Key Flexfield Layout

Designing the Key Flexfield Layout



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Designing the Key Flexfield Layout

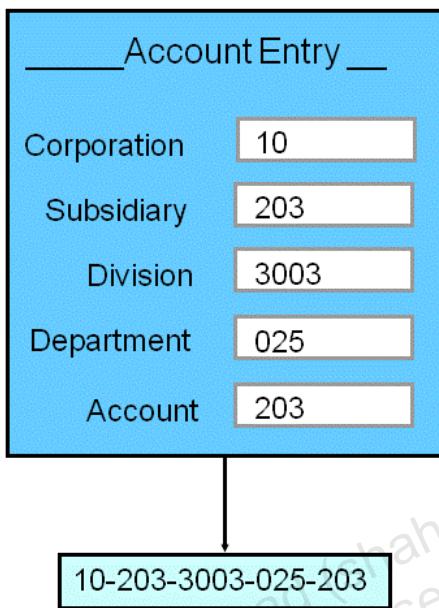
Design the structures that are needed and the segments for each structure:

- Identify the structure titles.
- Plan the number and order of segments.
- Identify the segment separator.
- Determine the value sets and the values that are to be used.
- Plan the window prompts.

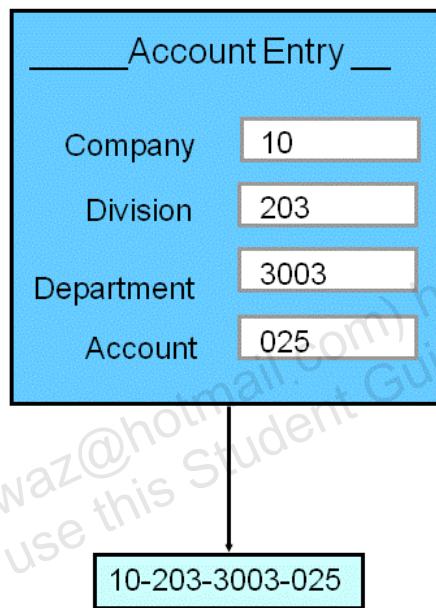
Key Flexfield Structure

Key Flexfield Structure

Business A



Business B



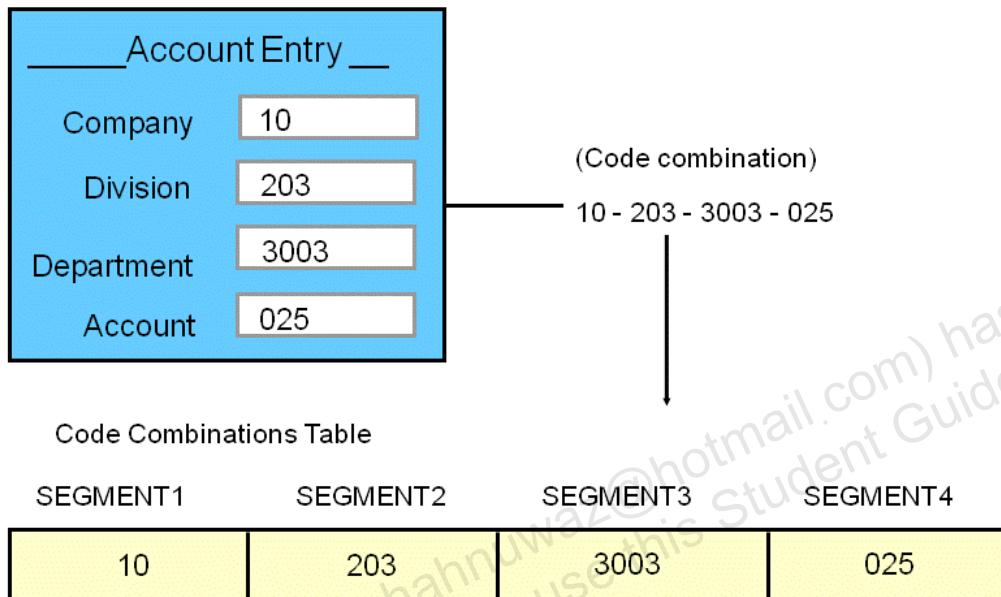
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Key Flexfield Structure

Key flexfields typically consist of several segments. The values provided by these segments make up the code combinations that function as intelligent keys for use by Oracle Applications.

Storing Code Combinations

Storing Code Combinations



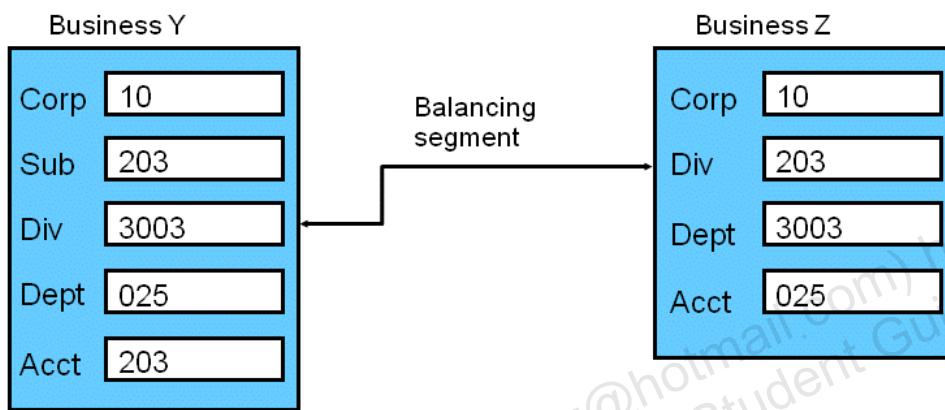
Storing Code Combinations

Each flexfield stores its code combinations in a database table called a code combinations table. In the combinations table, there is one column for every key flexfield segment. These columns are usually named SEGMENTn, where n is a number. There are a set number of SEGMENT columns available for each key flexfield. You assign a key flexfield segment to a particular SEGMENT column when you define the key flexfield.

Each row in the combinations table (that is, each unique combination of segment values) is identified by a unique ID value stored in a unique ID column. This column functions as the primary key for the combinations table. For key flexfields that have multiple structures, there is also a structure ID column.

Key Flexfield Qualifiers

Key Flexfield Qualifiers



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Key Flexfield Qualifiers

Both descriptive flexfields and key flexfields allow the user to design the flexfield structures and their segments. With descriptive flexfields, neither the information gathered nor the way in which the information is structured is used internally by Oracle Applications. Key flexfields, however, are different.

Oracle Applications use certain pieces of information collected by some key flexfield segments internally. For example, General Ledger needs to know which segment in the Accounting flexfield to use for balancing operations. But because the location of the balancing segment in the Accounting flexfield can be configured, the application must have a way of locating the segment that it needs within any Accounting flexfield structure.

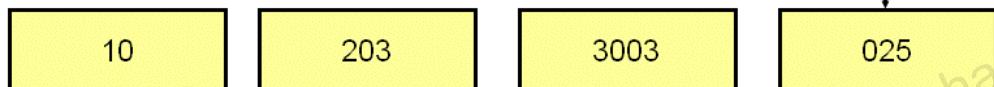
Being able to locate particular segments in a key flexfield structure is the purpose for qualifiers. A qualifier is a label attached to a particular key flexfield segment so that it can be located by the application requiring its information.

Types of Key Flexfield Qualifiers

Types of Key Flexfield Qualifiers

Flexfield qualifiers:

Identify a particular segment.



(Balancing
segment)

Segment qualifiers:

Identify a particular value.

(Allow posting)

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Types of Key Flexfield Qualifiers

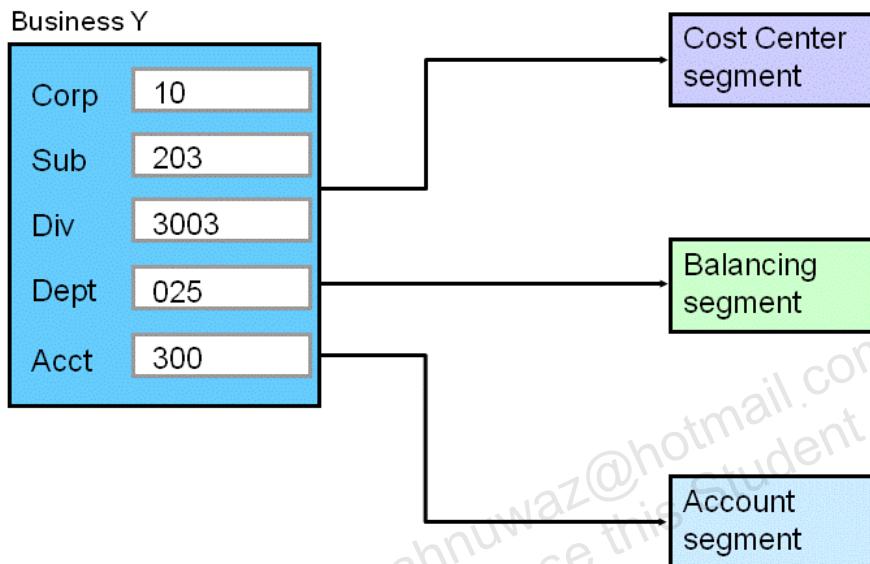
There are two types of qualifiers:

- Flexfield qualifiers identify a segment in a flexfield.
- Segment qualifiers identify a value in a segment.

The slide shows both types of qualifiers assigned to an Accounting flexfield combination.

Key Flexfield Qualifiers Identify Key Flexfield Segments

Key Flexfield Qualifiers Identify Key Flexfield Segments



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Key Flexfield Qualifiers Identify Key Flexfield Segments

Flexfield qualifiers may be unique, global, or required:

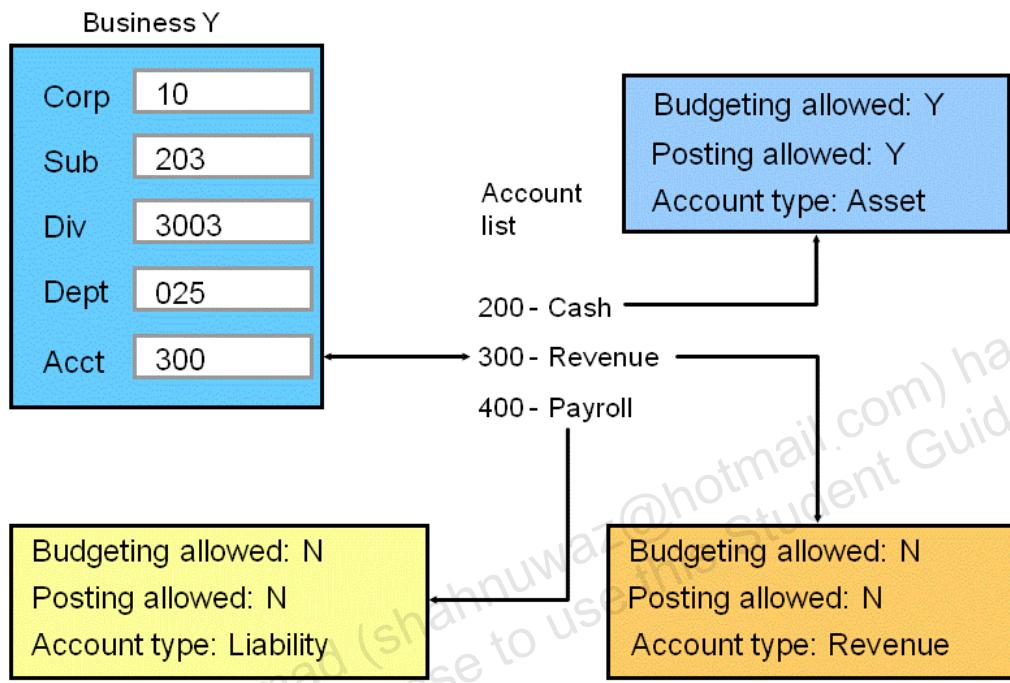
- **Unique:** “Is this the segment that this flexfield can have only one of?”
- **Required:** “Is this the segment that this flexfield must have to do its work?”
- **Global:** “Is this a segment?” Global qualifiers exist as “carriers” for segment qualifiers.

Assigning Flexfield Qualifiers to Segments

- Global qualifiers need not be assigned because they apply automatically to every segment in the flexfield.
- Assign flexfield qualifiers when you define segments.

Identifying Values in Flexfield Segments with Segment Qualifiers

Identifying Values in Flexfield Segments with Segment Qualifiers



Identifying Values in Flexfield Segments with Segment Qualifiers

A segment qualifier is similar to the segment asking each value the question, “What type of value are you?”

For example, the account number 300 may be used within a company as a revenue account.

Use the following segment qualifiers with the Accounting flexfield:

- Allow Budgeting
- Allow Posting
- Account Type: Asset, Expense, Liability, Ownership/Stockholder’s Equity, or Revenue

Defining Flexfield Qualifiers

- Use the Flexfield Qualifiers window to assign qualifiers to segments as appropriate for the flexfield.
- Not all flexfields use qualifiers with segments.

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Segment Defaults: Examples

Segment Defaults: Examples

Default Type	Default Value
Constant	Any literal value
Current date	Current time
Current time	Current time or current date/time
Field	Default Value field value
Profile	Value of profile in Default Value
Segment	Value in prior segment
SQL statement	Result of SQL query

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Segment Defaults: Examples

Default Type: Constant

Default Value: The constant specified

Example: USA

Result: USA

Default Type: Current Date

Default Value: The date at the time of entry

Example: Mar 01, 2009

Result: MAR 01, 2009

Default Type: Current Time

Default Value: The Date/Time at the time of entry

Example: 14:30:00, Mar 01, 2009

Result: 14:30:00, MAR 01, 2009

Default Type: Field

Default Value: The value in the specified field. Use the Block:Field format.

Example: ORDER:LINE

Result: 3

Default Type: Profile

Default Value: The value of the specified profile option. Use the application name of the profile option.

Example: LEDGER_ID

Result: 101

Default Type: Segment

Default Value: The value returned by the specified, previous segment

Example: Company

Result: 01

Default Type: SQL Statement

Default Value: The value returned by the specified SQL statement. The statement must return a single value. \$PROFILE\$ and \$FLEX\$ can be used in the statement.

Example: SELECT NAME FROM EMP WHERE JOB=CEO

Result: Jones

Refer to the practice - *Creating a Structure for a Key Flexfield and Adding Value Sets (Required)*.

Refer to the practice - *Testing the Flexfield (Required)*.

Other Key Flexfield Features

Other Key Flexfield Features

- Dynamic insertion of new values
- Cross-validation of segment value combinations
- Security on value access
- Aliases to speed up data entry

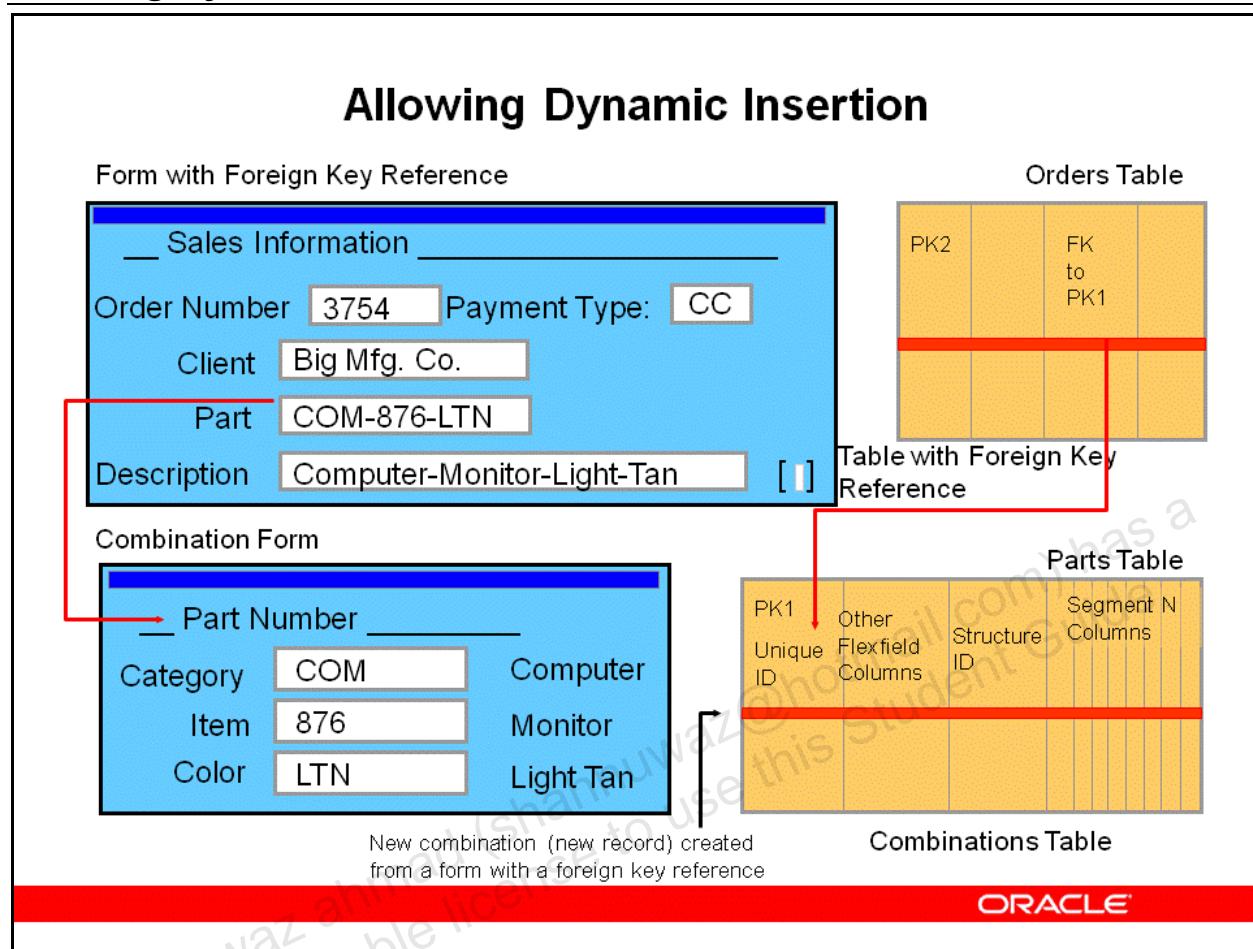
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Other Key Flexfield Features

There are other capabilities of key flexfields that are available for use. You should consider using these capabilities where appropriate:

- Dynamic insertion of new values
- Cross-validation of segment value combinations
- Security on values accessible
- Aliases to speed up entry of frequently used value combinations

Allowing Dynamic Insertion



Allowing Dynamic Insertion

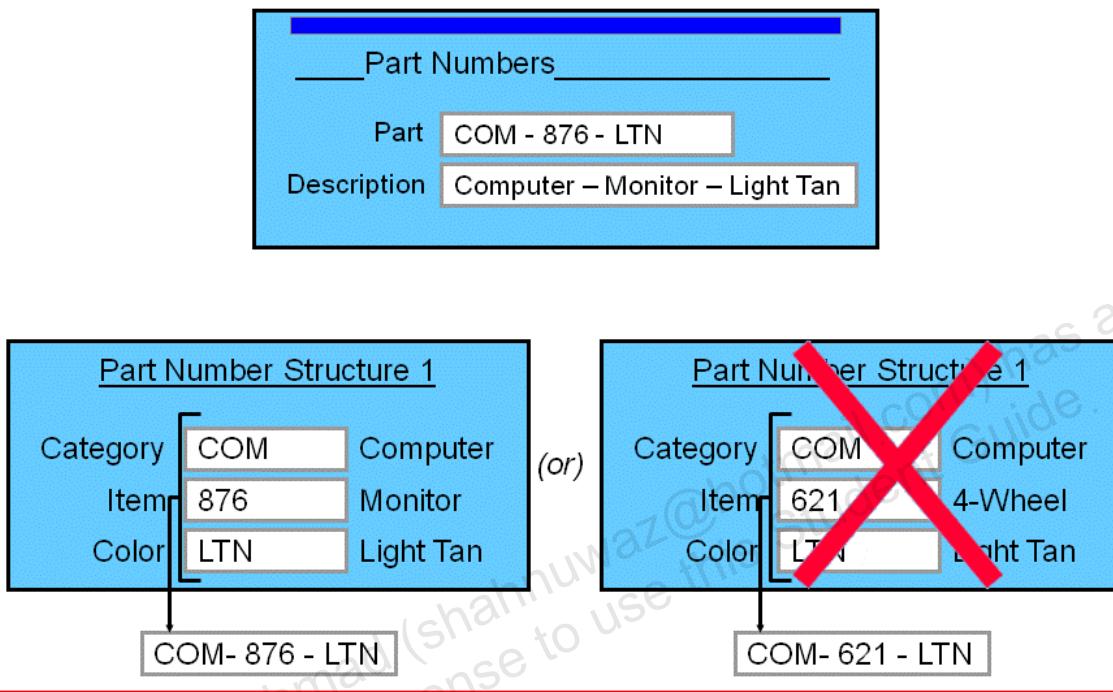
Dynamic insertion is the insertion of a new valid combination into a combinations table from a form other than the combinations form. If you allow dynamic inserts when you set up your key flexfield, a user can enter a new combination of segment values using the flexfield window from a foreign key form. Assuming that the new combination satisfies any existing cross-validation rules, the flexfield inserts the new combination into the combinations table, even though the combinations table is not the underlying table for the foreign key form. The slide shows a Sales Information form, where the flexfield, Part No. is a foreign key. The flexfield inserts the new combination of Part No. into the Parts Table even though the Parts Table is not the underlying table for the Sales Information form.

For some key flexfields, dynamic inserts may not be allowed. Sometimes it may not make sense for an application to allow a user to be able to create a new combination from any form other than the combinations form.

Dynamic inserts may not be technically possible for some key flexfields. If the combinations table contains mandatory columns that are not maintained by the flexfield, dynamic inserts would not be possible. If the combinations table contains mandatory nonflexfield columns, the flexfield would not be able to complete the entire row in the combinations table from the foreign key form (because the base table of the foreign key form is not the combinations table).

Cross-Validating Values

Cross-Validating Values

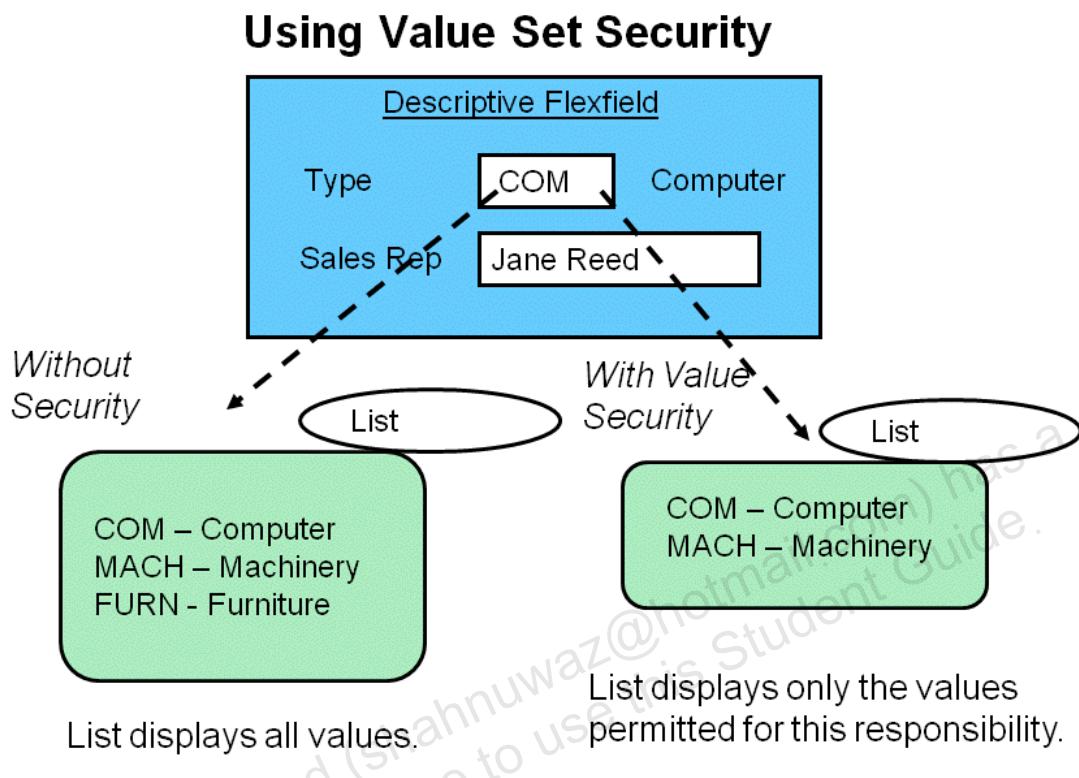


Cross-Validating Values

Cross-validation (also known as cross-segment validation) controls the combinations of values you can create when you enter values for key flexfields. A cross-validation rule defines whether a value of a particular segment can be combined with specific values of other segments. Cross-validation is different from segment validation, which controls the values you can enter for a particular segment.

You use cross-validation rules to prevent the creation of combinations that should never exist (combinations with values that should not coexist in the same combination). For example, if your organization manufactures both computer equipment and vehicles such as trucks, you might want to prevent the creation of “hybrid” part numbers for objects such as “truck keyboards” or “CPU headlights.”

Using Value Set Security



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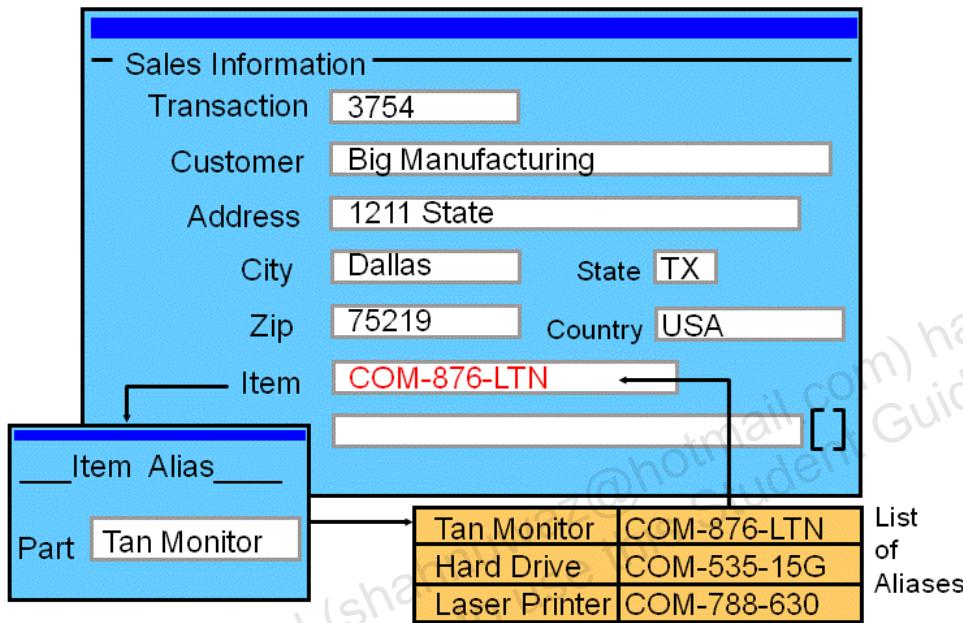
Using Value Set Security

Flexfield Value Set Security gives you the capability to restrict the set of values a user can use during data entry. With easy-to-define security rules and responsibility level control, you can quickly set up data entry security on your flexfield segments. Based on your responsibility and access rules that you define, Flexfield Value Security limits what values you can enter in flexfield pop-up windows. Flexfield Value Security gives you greater control over who can use restricted data in your application. When you use Flexfield Value Security, users see only values they are allowed to use; restricted values do not appear in lists of values associated with the flexfield.

You can define security rules for each segment for which you want to restrict data entry. Within a rule, you specify ranges of segment values to include and exclude from use. You can create many rules for the same segment, and assign the rules to different responsibilities. You also define the error message you see if you try to enter a value for which you do not have access. If you define no security rules for a segment, you can enter any value you have defined into that segment.

Using Shorthand Aliases

Using Shorthand Aliases



Using Shorthand Aliases

You can enable users to enter data faster and more easily with shorthand aliases. An alias is a label for a particular combination of key flexfield segment values. You should give aliases for combinations that are entered frequently. You can then enter the alias into the flexfield to automatically populate the values for the segments.

Planning Decisions

Planning Decisions

- Multiple structures
- Resources available
- Qualifiers required
- Dynamic inserts
- Cross-validation
- Shorthand aliases
- Value checking
- Value security

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Planning Decisions

Multiple structures

- Does the application support different segment structures?
- How many structures are needed?

Resources available

- How many segment columns are available?
- What are the segments needed?

Qualifiers required

- What flexfield qualifiers does the flexfield use or need?
- Do segments correspond to each required qualifier?

Dynamic inserts

- Are dynamic inserts feasible?
- Who can create new combinations?

Cross-validation

- Should cross-validation be enabled?
- Is protection from invalid combinations required?

Shorthand aliases

- Should shorthand flexfield entry be enabled?
- Are many combinations used repeatedly?

Value checking

- Which are the value sets available?
- How should the segments be validated?

Value security

- Which segments should use flexfield value security?
- Are some segment values privileged or applicable only for some users?

Freezing and Compiling the Definition

Freezing and Compiling the Definition

- Save after freezing to automatically compile the flexfield definition.
- Freeze and compile after making any changes to the definition. Changes take place immediately.
- You can see your changes immediately. Other users must exit the system or change responsibilities before they can see the effected changes.

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Defining the Descriptive Flexfield Structure

Defining the Descriptive Flexfield Structure

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Identifying a Descriptive Flexfield

Identifying a Descriptive Flexfield

- The presence of a descriptive flexfield on a form is indicated by brackets. Whenever you see this, there is a descriptive flexfield defined for use with that form.
- In some cases, there may be multiple descriptive flexfields associated with the same form.

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Determining the Descriptive Flexfield Name

Determining the Descriptive Flexfield Name

1. Click a field in the same block in which the descriptive flexfield appears.
2. Select Help > Diagnostics > Examine.
3. A window showing information about the selected field appears.
4. Note the name of the block in which the field is located.

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Determining the Descriptive Flexfield Name

Additional Ways to Determine the Descriptive Flexfield Name

- Click the Block list of values button to display a list of the available blocks for this form. Select \$DESCRIPTIVE_FLEXFIELD\$.
- Click the Field list of values button to display a list of the descriptive flexfields for this form. Each entry is prefixed by the name of the block in which the descriptive flexfield appears. Find the entries for the block whose name you determined in step 2.
- Select the flexfield that you want to implement from the entries for that block. The username of the descriptive flexfield appears in the Value field.

Determining Available Resources

Determining Available Resources

Use the list of values for the Column field in the Segments Summary window to determine how many segments you can plan to use.

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Determining Available Resources

You must identify the number of ATTRIBUTE columns in the underlying table to determine the number of segments you can plan for.

Find the flexfield definition and navigate to the Segments Summary window for that flexfield. Use the list of values on the Column field to display a list of the ATTRIBUTE columns. You will use this list of values again later to assign a segment to an underlying column, but you can also use it now for planning. The columns are numbered sequentially, so the highest numbered column tells you how many segments you can use.

Identifying Your Information Needs

Identifying Your Information Needs

- What additional information needs to be captured?
- Is there any information that you need to capture each time?
- Is there information that you need to capture on an ad hoc basis?
- Can the need for capturing ad hoc information be conditioned on a value in a base window?
- How much control over window processing do you want to give the user?

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Identifying Your Information Needs

When you know the resources available to you, you can begin to plan the layout of the flexfield.

First determine your information needs. Some of the questions that you must ask are shown in the slide. But, before you can start designing the flexfield structure, you should know the information that is to be gathered by this flexfield, and how the information would be used.

Identifying the Necessary Information

Identifying the Necessary Information

Store number

Check number

Credit card number

Expiration date

Down payment

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Identifying the Necessary Information

Assume that you are planning a descriptive flexfield that will gather additional information about sales payment. Some of the possible data items that might interest you are displayed in the slide.

Grouping Information by Usage

Grouping Information by Usage

Situation 1: Store number Down payment
(finance)

Situation 2: Store number Check number
(check)

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Grouping Information by Usage

After you have identified all the items of information that you want to gather, organize them by usage. Are all the items used all the time? Are all the items used in the same way?

The slide shows three different payment situations and the items of information appropriate for each situation.

Isolate Common Information

Isolate Common Information

Situation 1:
(finance)

Store number

Situation 2:
(check)

Store number

Situation 3:
(credit card)

Store number

Used by
all tasks

Down payment

Check number

Credit card number

Expiration
Date

Varies by
task

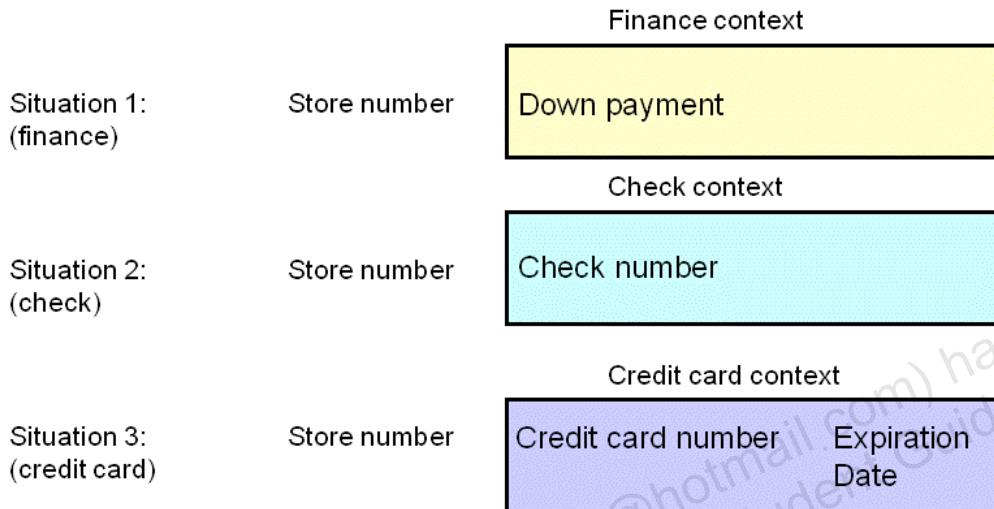
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Isolate Common Information

After you have organized the items of information by usage, isolate any items that occur in all situations. You define the information used by all tasks in one structure and the information that varies by task in another, task-specific structure.

Determine Different Contexts

Determine Different Contexts



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Determine Different Contexts

After you have removed the commonly occurring information, you can organize the remaining information into groups according to the type of information being gathered or the way the information is being used. These different groups of information are called contexts.

When you have determined the items of information that are always appropriate and the different contexts with each of their pieces of information, you are ready to begin defining your flexfield.

Descriptive Flexfield Components

Descriptive Flexfield Components

- Global segment: Displays information that is common to all contexts
- Context-sensitive segment: Displays information that is appropriate only to a particular context
- Reference field: A field in the application window whose value is used to determine contexts
- Context field: A field in the structure whose value is used to determine contexts

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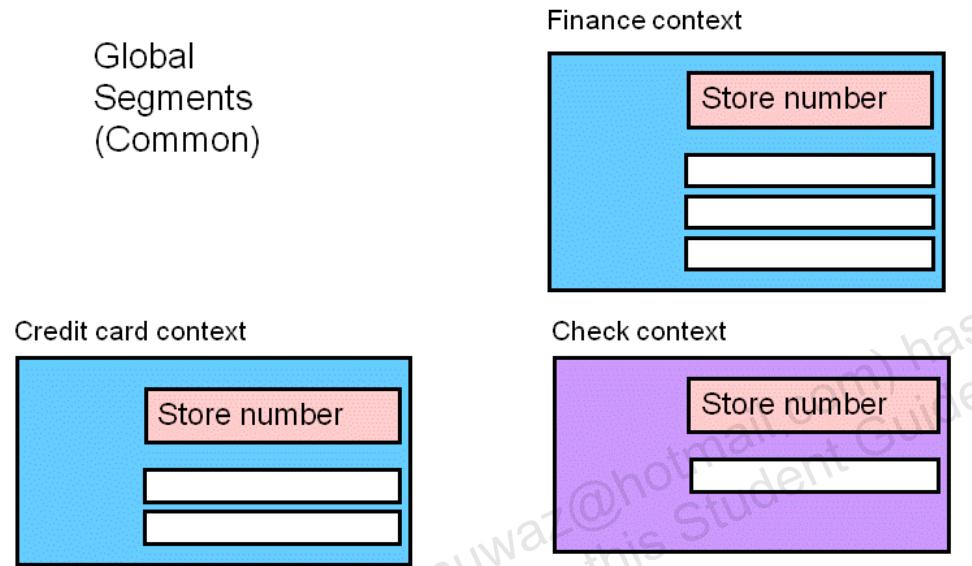
Descriptive Flexfield Components

Descriptive flexfields are constructed from segments. Each segment contains one item of information. Because the same flexfield can be used by different contexts, and each context needs different items of information, you need to design different layouts for the same flexfield to support the different contexts.

Specify your layout in terms of global segments and context-sensitive segments.

Using Global Segments

Using Global Segments



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Using Global Segments

Global segments are segments that appear regardless of context. Continuing the payment information example, the slide shows that the store number is appropriate for all contexts, therefore, can be identified as a global segment.

Global segments are the easiest to define. However, they may use up the allotted columns. Columns used for global segments cannot hold context-sensitive segments.

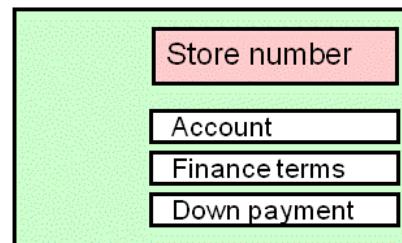
You can add context-sensitive segments later if columns are available, but enabled global segments always appear.

Context-Sensitive Segments

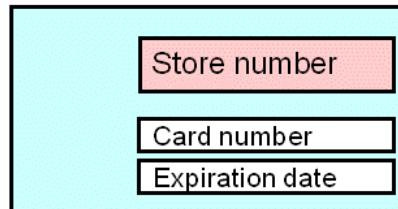
Context-Sensitive Segments

Context-Sensitive
Segments
(Vary by context)

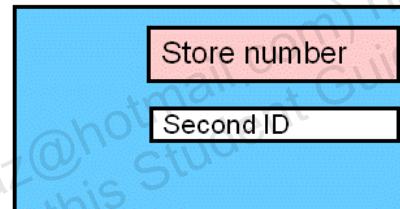
Finance context



Credit card context



Check context



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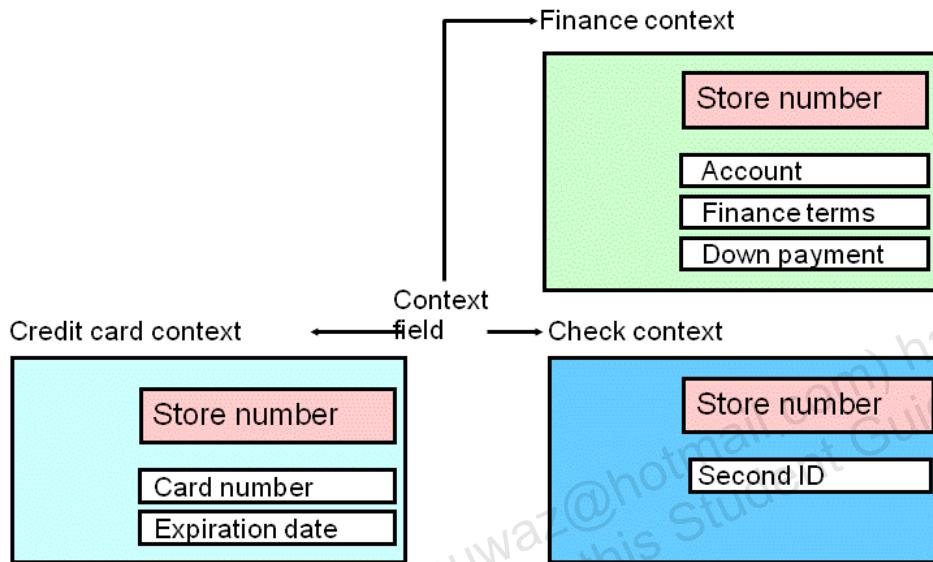
Context-Sensitive Segments

Context-sensitive segments occur depending on the context.

The slide shows the sample contexts, and the segments that are unique to each of them.

Distinguishing Between Contexts

Distinguishing Between Contexts



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Distinguishing Between Contexts

If your descriptive flexfield uses different contexts, you must decide how to distinguish between them. You must identify a field whose value can distinguish between contexts. This field is called the context field.

In some cases, you can use an existing field as the context field; in other cases, you must create a segment on the descriptive flexfield.

Using Reference and Context Fields

Using Reference and Context Fields

- **Reference Field:** A field on the existing form whose value is used to automatically distinguish between contexts
- **Context Field:** A field created in the descriptive flexfield structure that is used to allow the user to manually select different contexts

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Using Reference and Context Fields

There are two design options for distinguishing between contexts:

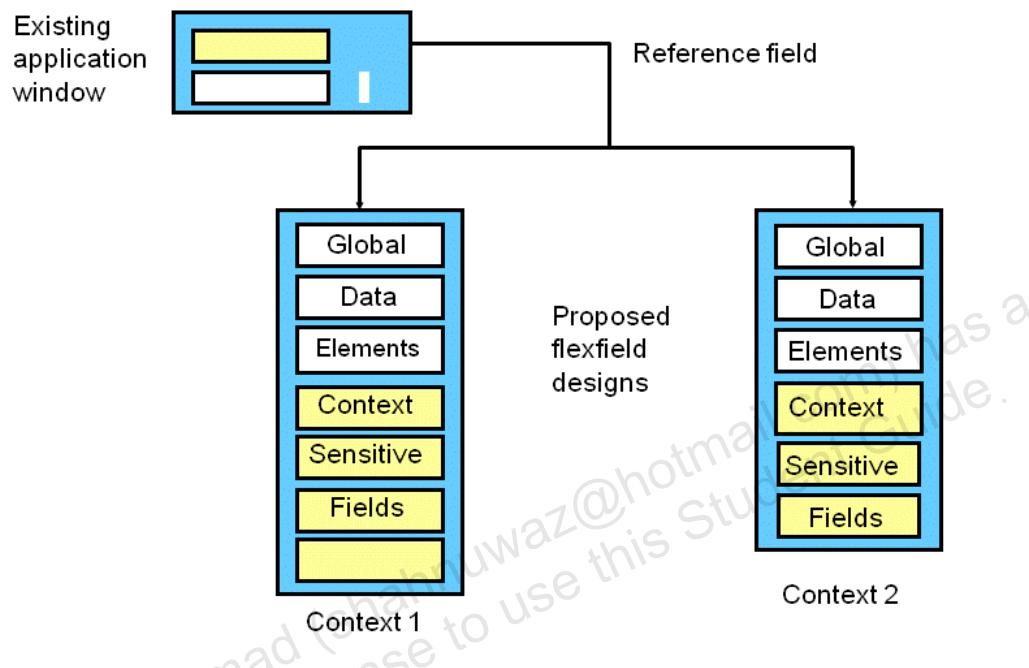
- If there is an existing field on the base window or an existing profile option whose value can be used to distinguish between contexts, it can be used as a reference field.
- If there is not an existing field or profile option available, you may choose to allow users to manually select the context.

Note

- You can use profile options to determine context by using the `$PROFILE$.profile_option_name` syntax.
- (Help) Oracle Applications Flexfields > Overview of Implementing Table-Validated Value Sets > Bind Variables

Using Reference Fields

Using Reference Fields



Using Reference Fields

Reference fields are fields in an existing window whose values can determine the context that a descriptive flexfield uses, under the following conditions:

- The field must be defined so that it can be referenced. Not all fields in a window can be used as a reference field.
- The values appearing in the reference field should be known and predictable.
- Because the same descriptive flexfield can appear in different windows, any field used as a reference field for that descriptive flexfield must appear in the same windows. Also, the reference field must have the same internal name in all the forms where the flexfield is used.

Identifying Referenceable Columns

Identifying Referenceable Columns

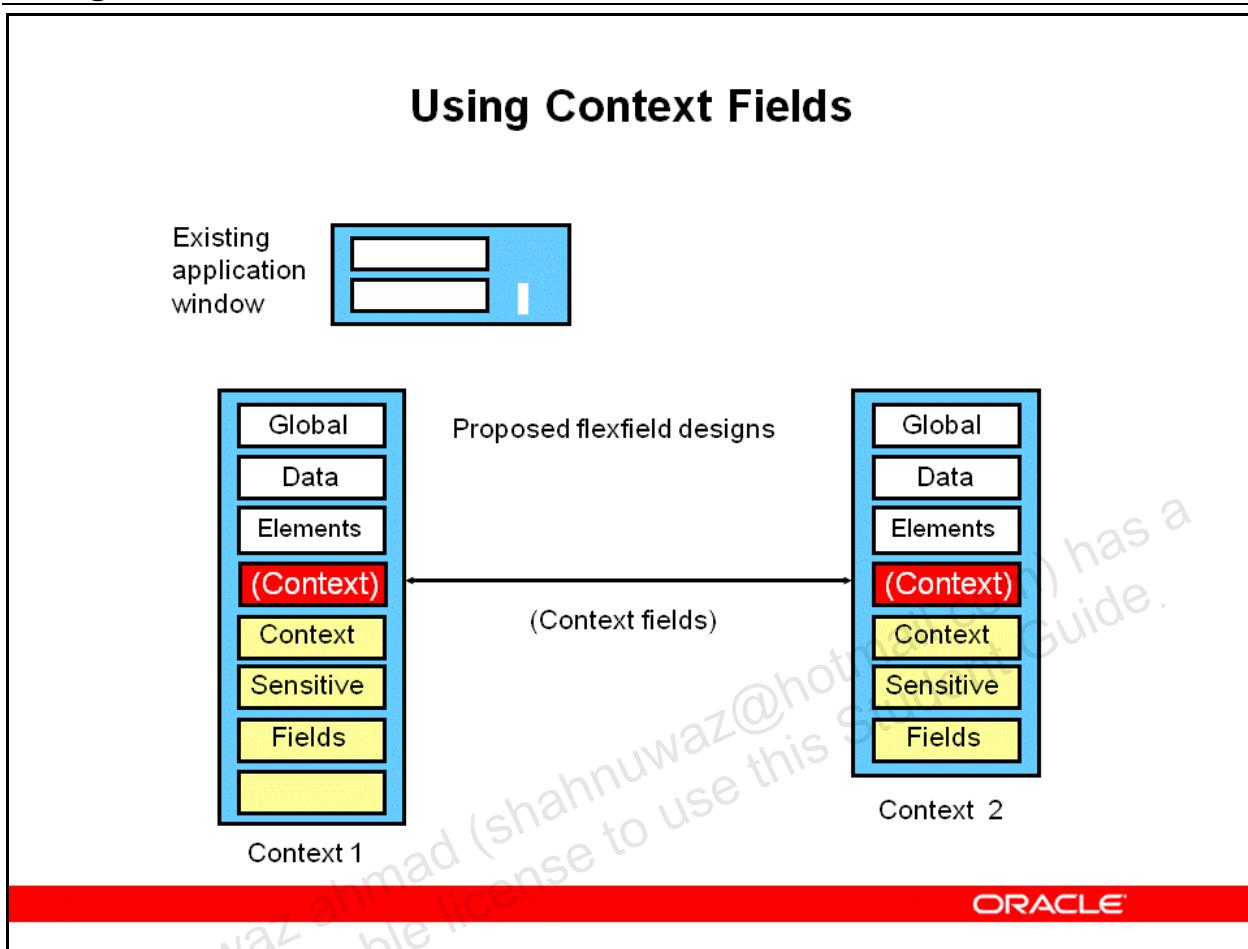
Use the list of values for the Reference Field in the Descriptive Flexfield Segments window to determine the fields that are available for use as reference fields for this descriptive flexfield.

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Identifying Referenceable Columns

The list of values for the Reference Field displays the fields in the base window that are most likely to be referenced. Other fields may also be referenceable as long as all the forms that use the descriptive flexfield have the same name for the reference field.

Using Context Fields



Using Context Fields

Sometimes there is no field in the existing window that is appropriate for use as a reference field. In this case, you need to create a column in the descriptive flexfield itself to hold and display the different possible context values.

- A context field is an additional field appearing in the descriptive flexfield.
- The user can display the appropriate context by selecting a value from the pop-up list for the context field.
- A context field is not a segment.
- A context field has a context field prompt.
- The response, called a context field value, determines which group of context-sensitive segments appears next.
- Each value for the context field can correspond to a separate context-sensitive structure.
- Context fields do not always display. Non-displayed context fields derive values from a default or a reference field, and the user cannot change the context field value.

Locating the Flexfield Definition

Locating the Flexfield Definition

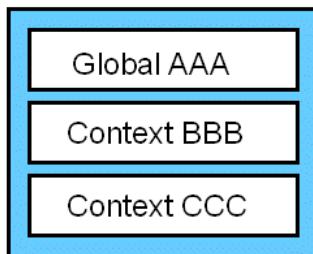
- Use the Descriptive Flexfield Segments window to locate the target flexfield definition by finding the application that owns the definition and the flexfield title.
- A flexfield may appear in more than one window. However, defining the flexfield once automatically defines it for all locations.
- After you access the definition, you can start making the changes. If the flexfield is already frozen, unfreeze it first.

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Storing Descriptive Flexfield Segments

Storing Descriptive Flexfield Segments

Structure A



Structure B



CONTEXT	ATTRIBUTE1	ATTRIBUTE2	ATTRIBUTE3
Structure A	Global AAA	Context BBB	Context CCC
Structure B	Global AAA	Context DDD	

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Storing Descriptive Flexfield Segments

As mentioned earlier, the segments that make up a descriptive flexfield are stored in columns in the underlying tables. Each segment stores its data in one of the ATTRIBUTE columns. This does not mean, however, that every segment on the flexfield needs its own column. As shown in the slide, context-sensitive columns from different contexts can share the same column. The value in the CONTEXT column distinguishes between the context segments.

Freezing and Compiling the Definition

Freezing and Compiling the Definition

Use the Descriptive Flexfield Segments window to:

- Freeze the flexfield definition by selecting the **Freeze Flexfield Definition** check box
- Compile the flexfield definition by clicking the **Compile** button

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Freezing and Compiling the Definition

Freeze the flexfield information to notify the application to begin using the flexfield.

Compiling the flexfield stores the information efficiently. If the compile detects any problems, a warning message is displayed.

Flexfields automatically compile the flexfield definition at every commit on the form. The request for view generation automatically follows compilation.

You see your own changes immediately. However, other users must exit or change responsibilities to see the new definitions take effect.

Refer to the practice - *Defining a Descriptive Flexfield with Context-Sensitive Segment (Required)*.

Quiz

Quiz

Which of the following statements is true about a Key Flexfield?

- a. It is used as identifiers for entities.
- b. The flexfield structure usually consist of multiple segments, each of which contains meaningful information.
- c. It is used to collect additional specialized information required by your business.
- d. It appears on a form as a field enclosed within brackets.

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Answers: a, b

Quiz

Quiz

Which of the following statements is true about Value Sets?

- a. Value sets permit a limited range of values or only certain values and some have minimal restriction.
- b. Different flexfields can share the same value set.
- c. Different segments of the same flexfield cannot use the same value set.
- d. Depending on the validation type, a value set may or may not need defined values.

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Answers: a, b, d

Quiz

Quiz

Each flexfield stores its code combinations in a database table called a code combinations table.

- a. True
- b. False

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Answer: a

Quiz Specifications: This statement is True. Each flexfield stores its code combinations in a database table called a code combinations table. In the combinations table, there is one column for every key flexfield segment.

Quiz

Quiz

Intelligent keys are multipart codes where the value in each individual part contains meaningful information.

- a. True
- b. False

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Answer: a

Quiz Specifications: This statement is True. Intelligent keys are multipart codes where the value in each individual part contains meaningful information. Each combination of value can, therefore, identify a particular business entity or class of entities.

Quiz

Quiz

Global segments are segments that appear regardless of context.

- a. True
- b. False

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Answer: a

Summary

Summary

In this lesson, you should have learned how to:

- Describe flexfields
- Define value sets
- Define key flexfields
- Define descriptive flexfields

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Shared Entities and Integration

Chapter 6

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Shared Entities and Integration

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Objectives

Objectives

After completing this lesson, you should be able to recognize the following:

- Shared entities within R12.x E-Business Suite
- The key integration points and business flows between products in E-Business Suite (EBS)

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What Are Shared Entities?

What Are Shared Entities?

- Shared entities in R12.x EBS enable one-time definition of an object and the use of that object across several products.
- Shared entities are “owned” by a single product for table purposes only.

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What Are Shared Entities?

Shared entities are not formally defined within the user guide of any single product. But when you implement multiple products, you find that multiple products reference the same entity. However, it is important to know what these large structures are, and to involve experienced team members when you implement EBS.

The following slides provide details about where the shared entity is first defined and the applications within which it is shared. However, “ownership” of data is at the company’s discretion. For example, which business unit will be responsible for the supplier file, Payables or Purchasing?

An exception is employee information. If Human Resources is installed, employee data can only be recorded in Human Resources.

Shared Entities in E-Business: Examples

Shared Entities in E-Business: Examples

Entity	Description
AOL	Application administration
Ledger	Accounting information records
Unit of Measure	Method of quantifying items
Items	Raw materials, finished goods, or services
Suppliers	Vendors you buy from
Customers	Buyers of the end product
Sales Force	Individuals credited with sales revenue
Banks	Institution for financial transactions
Employees	Personnel who perform assigned tasks
Locations	Business sites (addresses)
Organizations	Logical unit entities

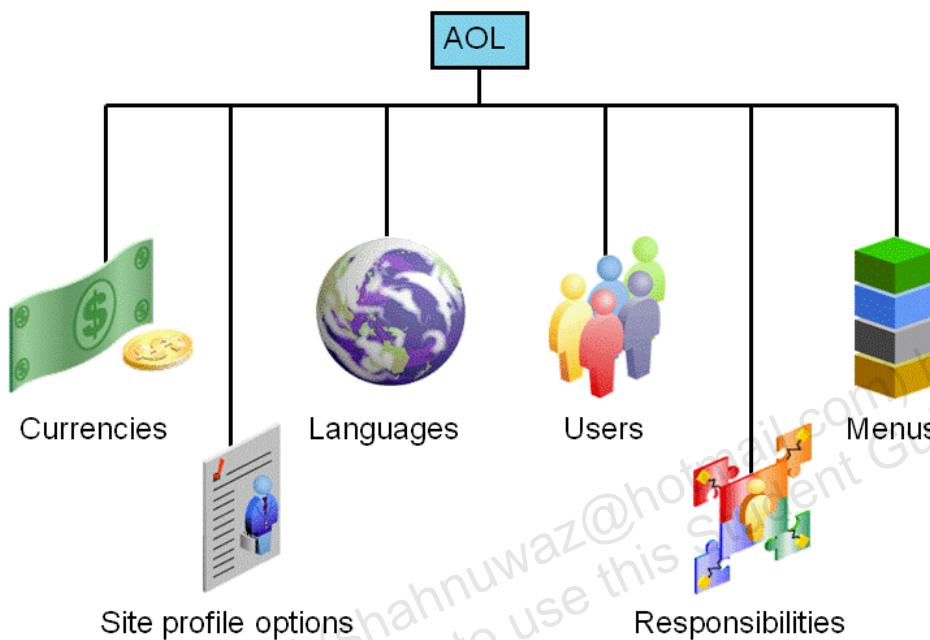
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Shared Entities in E-Business: Examples

The list of shared entities in the slide is not exhaustive and is only intended to give you an example of how shared entities are used throughout and across the R12.x E-Business Suite. A complete list of shared entities is outside the scope of this course and such a list does not exist within the documentation. However, the list in the slide represents the major shared entities used in R12.x EBS. As such, it is a useful source of learning and reference.

Application Object Library (AOL)

Application Object Library (AOL)



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Application Object Library (AOL)

Oracle Application Object Library (AOL) provides Oracle EBS with a robust infrastructure for security, application administration, and configuration. Oracle AOL supports a mode in which a user account is automatically created for Single Sign-On (SSO) authenticated users when they first visit a page in Oracle EBS.

Currencies: If you perform a multicurrency implementation, the currency that you are planning to deploy must be enabled in AOL.

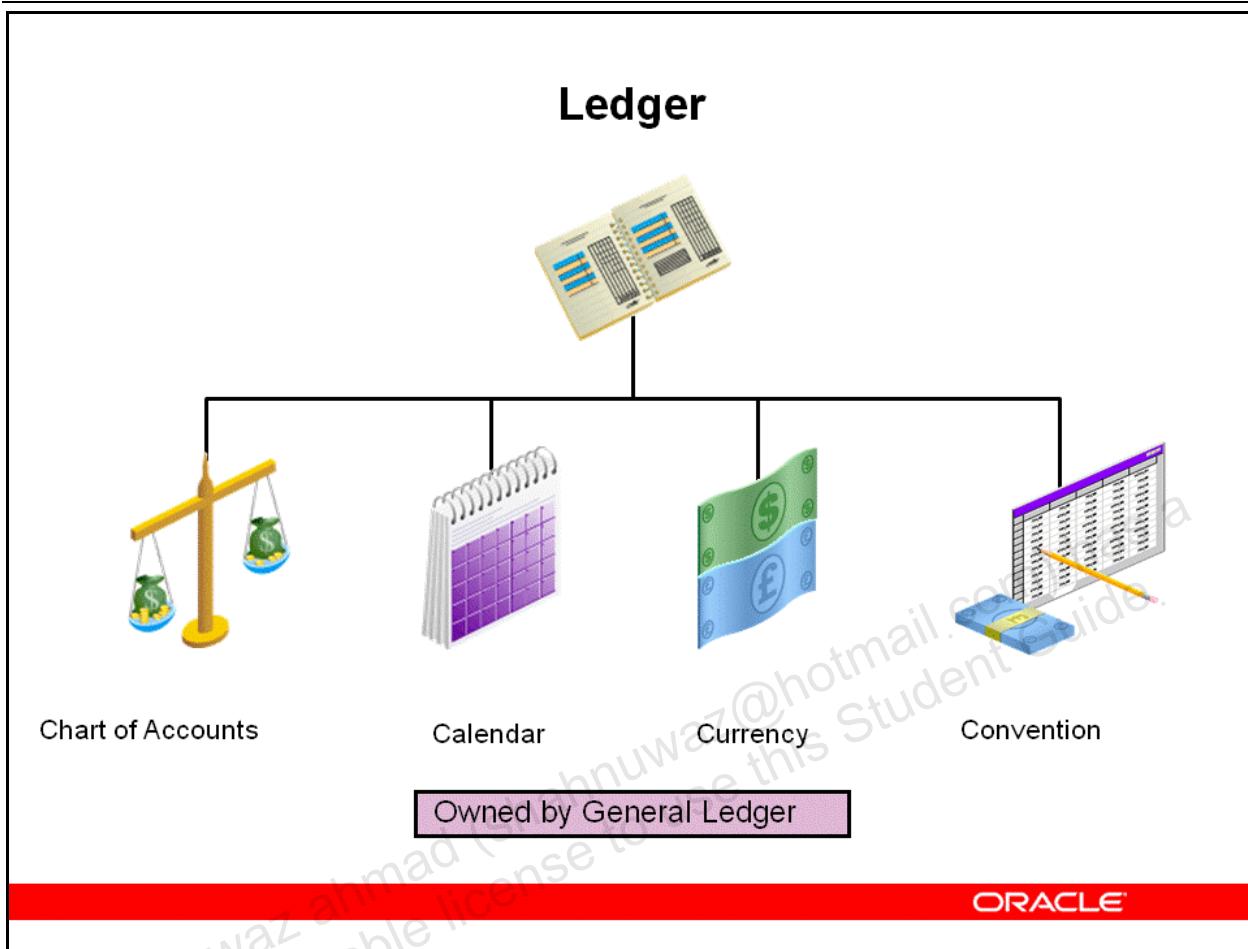
Languages: The languages that you are planning to deploy must be enabled in AOL.

Users: AOL provides the functionality for creating a user. A user must have a username with one or more responsibilities assigned.

Responsibilities: Users are assigned responsibilities that provide access to specified modules in EBS.

Menus: Responsibilities have menus associated with them. Menus determine the functions available to a responsibility, as well as the actions that a user can perform using their assigned responsibility.

Ledger



Ledger

Owner: General Ledger

Ledger provides the means to collect and quantify financial data. Following are the four primary elements to a Ledger:

- Chart of Accounts
- Calendar
- Currency
- Convention

Chart of Accounts

- Chart of accounts is the account structure that you define to fit the specific needs of your organization.
- You can select the number of account segments as well as the length, name, and order of each segment.

Accounting Calendar

- Accounting calendar defines the accounting year and the periods that it contains.
- You can define multiple calendars and assign a different calendar to each ledger.

Currencies

- You select the functional currency for your ledger as well as other currencies used in reports and business transactions.
- General Ledger converts monetary amounts entered in a foreign currency to functional currency equivalents by using the supplied rates.

Accounting Convention

- These refer to methods or procedures employed generally by accounting practitioners. They are based on custom and are subject to change as new developments arise.

Ledger represents one of the main entities within Multiple Organizations Hierarchy. Ledger information is used by all EBS applications. Some products use currency information, others use calendar data, and still others use the chart of accounts and convention information.

Units of Measure

Units of Measure

- Length
- Base Unit = 1 cm
- 1 m = 100 cm
- 1 km = 100,000 cm



Units of Measure are used by a variety of functions and transactions to express the quantity and measurement of items.

Units of Measure

Responsibility: Inventory, Vision Operations (USA)
(N) Setup > Units of Measure

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Units of Measure

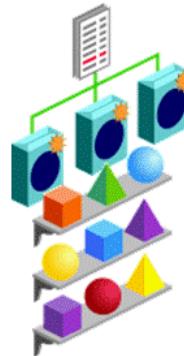
Owner: Inventory

Units of Measure are used to quantify items. They are grouped with similar characteristics to Units of Measure Classes, such as quantity, weight, time, and volume. Units of Measure also include conversion mechanisms that enable you to perform transactions in units other than the primary unit of the item being transacted.

The values defined in the Units of Measure window provide the list of values available in the Units of Measure fields in other applications windows. Units of Measure are not inventory organization specific.

Items

Items



You can define and control all items in an inventory. After the items have been defined, they are assigned to organization.

Responsibility: Inventory, Vision Operations (USA)

(N) Items > Master Items

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Items

Owner: Inventory

Items are parts that you buy or sell, or with which you transact.

You can choose whether to have centralized or decentralized control of your items through a variety of item attributes (such as description, lead time, units of measure, lot control, saleable versus purchasable, and so on). Much of the information about an item is optional. You define only the information that you need to maintain the item.

Refer to the practice - *Defining/Creating an Item (Required)*.

Suppliers

Suppliers



Suppliers are the individuals or companies from which you procure goods and/or services.

Responsibility: Payables, Vision Operations (USA)

(N) Suppliers > Entry

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Suppliers

Owner: Payables

Set up suppliers to record information about individuals and companies from whom you purchase goods and/or services. Additionally, you can enter the employees whom you reimburse for expense reports.

When you enter a supplier that conducts business from multiple locations, you store supplier information only once, and enter supplier sites for each location. You can designate supplier sites as Pay Sites, Purchasing Sites, RFQ Only Sites, or Procurement Card sites. For example, for a single supplier, you can buy from different sites and send payments to different sites. Most supplier information automatically defaults to all the supplier sites to facilitate supplier site entry. However, you can override these defaults and have unique information for each site.

Refer to the guided demonstration - *Creating a Supplier in Payables and Accessing from Purchasing (Required)*

Customers

Customers



Customers are buyers of the end products and/or services.

Responsibility: Receivables, Vision Operations (USA)

(N) Customers > Customers

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Customers

Owner: Receivables

Customers are stored as part of the Trading Community Architecture (TCA). The two levels within TCA related to customers are:

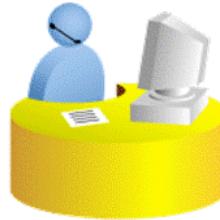
- Party level
- Customer account

When you enter a customer that conducts business from multiple locations, you store customer information only once and enter customer sites for each location. For each entered customer site, you can designate the usage of the site as bill-to, ship-to, marketing, and so on. Further, many fields within the customer record provide defaults to applications such as Receivables, Order Management, and Projects.

Refer to the practice - *Creating a Customer in Receivables and Accessing it from Order Management and Inventory (Required)*.

Sales Force

Sales Force



Sales Force comprises individuals credited with sales revenue.

Responsibility: CRM Resource Manager, Vision Enterprises

(N) Maintain Resources > Resources

Responsibility: Order Management Super User, Vision Operations (USA)

(N) Setup > Sales > Sales persons

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Sales Force

Owner: Sales

Sales Force is how Oracle EBS applications identify sales personnel. An employee must be defined as a sales person within the Human Resources application, as well as within the Resource Manager in CRM Application Foundation to have access to certain CRM applications.

In Oracle EBS, sales people capture the sales credit information across many applications. The sales credit information is, in turn, used to form the basis for sales compensation calculations and to assign revenue accounting.

Sales Force personnel are also used for team analysis, determination of territory alignment, and assignment of sales leads.

Employees

Employees



Employees are individuals employed by the company to perform certain tasks.

Responsibility: Human Resources, Vision Enterprises

(N) People > Enter and Maintain

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Employees

Owner: Human Resources

Human Resources establishes employees to keep track of personnel information such as skills, benefits, jobs, and statuses. After the employees are defined in the system, they can be used for approval activities, processing expense transactions, and assigning of fixed assets.

Note: If the Human Resources application has not been previously selected and licensed, any application requiring employees will have limited access to employee tables.

Refer to the practice - *Creating a New Employee and Associating it to a User (Required)*.

Banks

Banks



Internal bank accounts are created in Cash Management and are shared across modules with payment and receipt transactions.

Responsibility: Cash Management, Vision Enterprises

(N) Setup > Banks > Banks

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Banks

Owner: Cash Management

You should use a Cash Management responsibility with all grants and permissions to create and maintain bank accounts. Bank accounts for internal use in Payables, Receivables, Treasury and Global Financials are consolidated from Release 12 onwards. This allows users to define and keep track of all bank accounts in E-Business Suite in one place and explicitly grant account access to multiple operating units/functions and users.

Bank account access in this model can be granted to multiple operating units, thus eliminating the redundant duplicate bank account setup under different operating units in case these operating units share the same bank account. This also simplifies the reconciliation process because one bank account in the system corresponds to one bank account at the bank.

Locations

Locations



Locations are physical addresses that may represent your company's addresses or your customer's addresses.

Responsibility: Human Resources, Vision Enterprises

(N) Work Structures > Location

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Organizations

Organizations



Organization is an entity designation used to partition data into logical units.

Responsibility: Human Resources, Vision Enterprises

(N) Work Structures > Organization > Description

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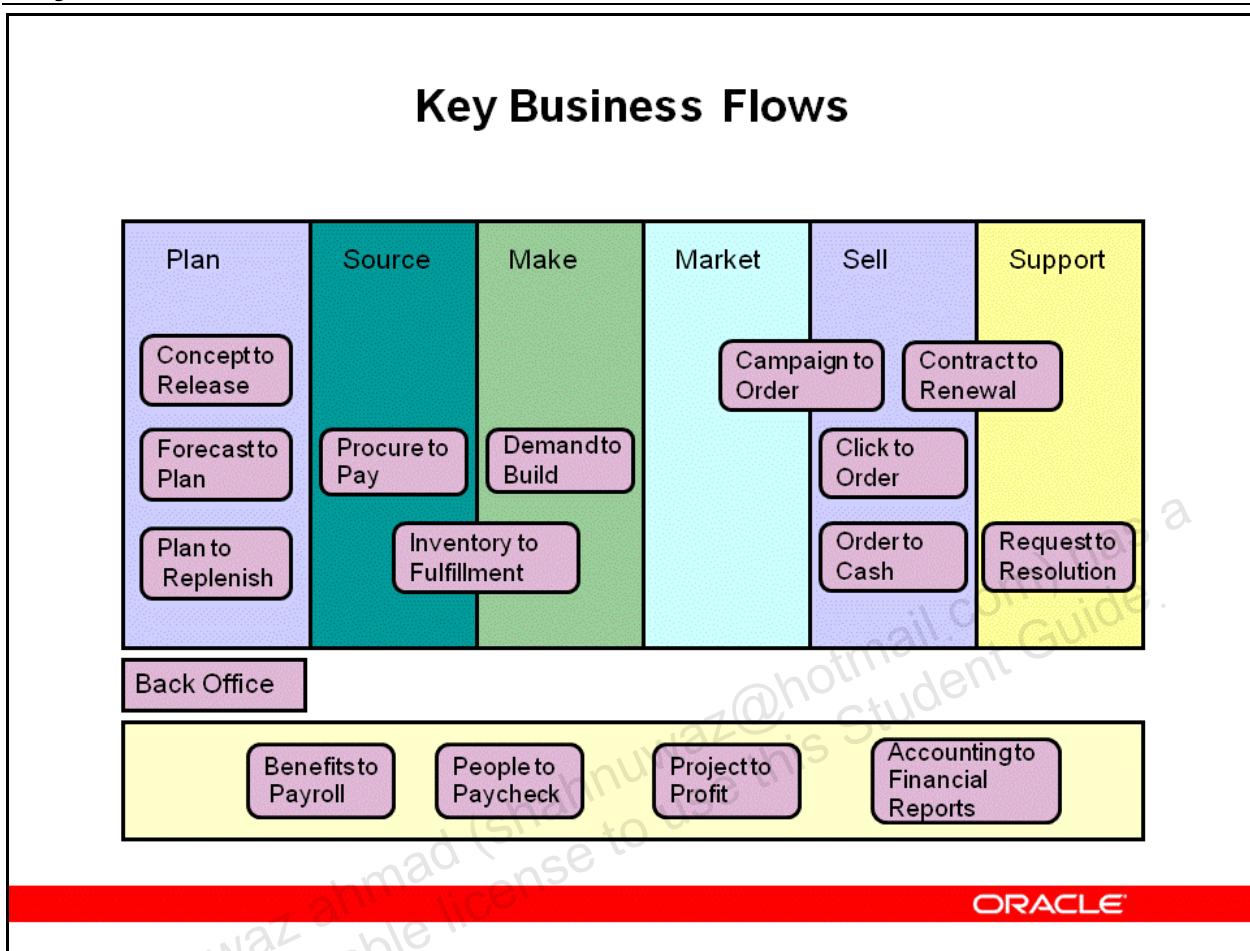
Organizations

Owner: Human Resources

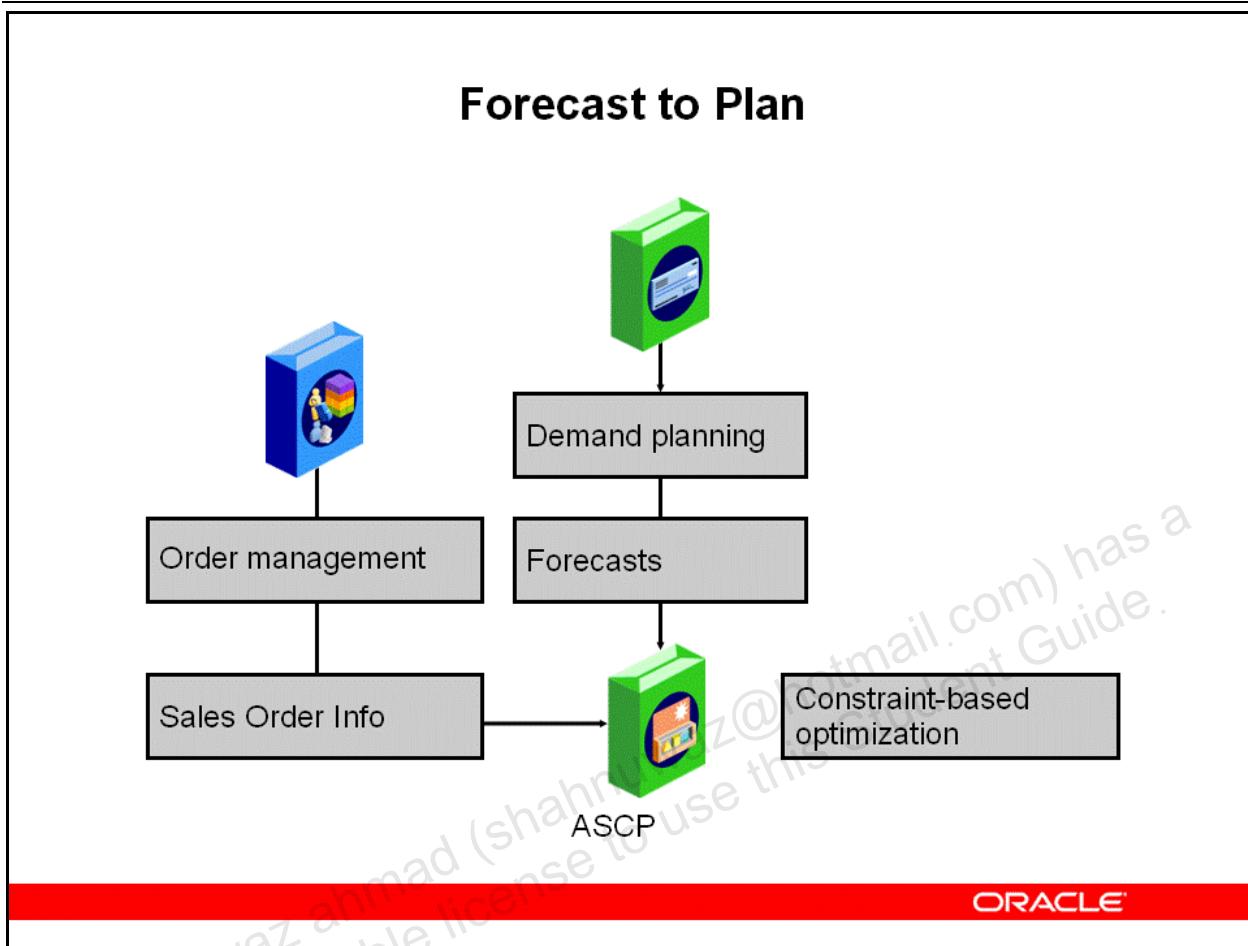
An organization may be a physical site or it can represent a collection of sites sharing certain characteristics. These characteristics are used to define business structures within the Oracle E-Business environment. Examples of organizations include, but are not restricted to:

- **Legal entity:** The business units where fiscal or tax reports are prepared
- **Operating Unit:** The level at which Enterprise Resource Planning (ERP) transaction data is secured
- **Inventory organization:** A business unit such as a plant, warehouse, division, and so on
- **Expenditure/event organization:** The unit that allows you to own events, incur expenditures, and hold budgets for projects

Key Business Flows



Forecast to Plan



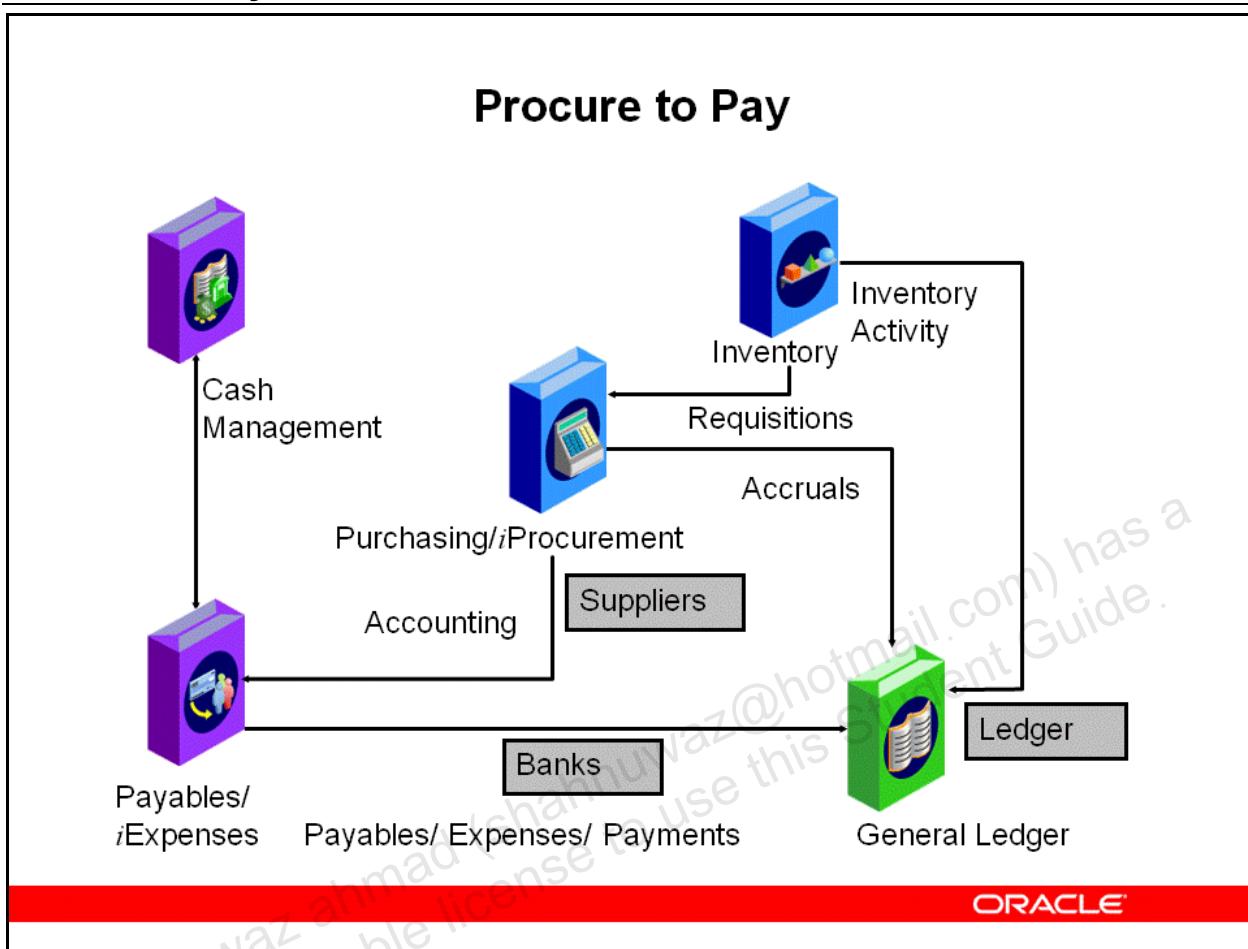
Forecast to Plan

This business flow outlines how a company uses sales order history to produce a forecast, design a production, manufacturing, or distribution plan from that forecast, and how to analyze, revise, and simulate changes to that plan.

The flow involves the following:

- **Demand Planning:** Create consolidated forecasts based on marketing, sales, and manufacturing.
- **Order Management:** Provide sales order information.
- **Advanced Supply Chain Planning (ASCP):** Create constraint-based plans or optimized plans.

Procure to Pay



Procure to Pay

This business flow outlines how a company creates purchase orders for procurement of goods or services, and then processes associated invoices for payment, transfers to General Ledger, and reconciliations with bank statements.

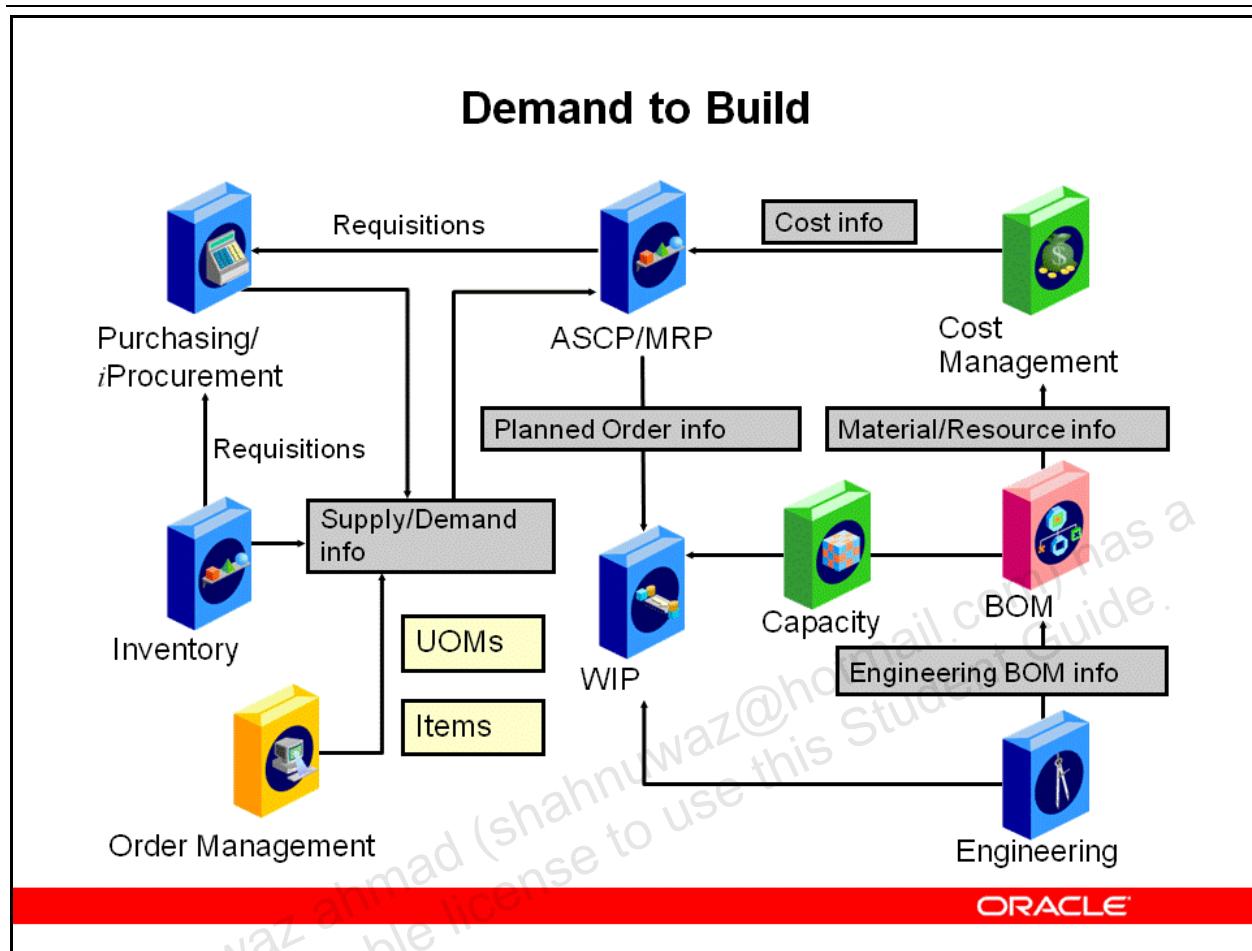
This flow involves the following:

- **General Ledger:** General Ledger receives accounting information from many Oracle applications. After the accounting information is imported, journals can be posted and account balances can be updated.
- **Cash Management:** It reconciles cash payments, adjustments, and corrections to cash payments.
- **Payables/iExpenses:** Supplier invoices are entered into Payables, and if appropriate, matched to purchase orders in Purchasing. During the matching process, the invoice distribution is copied from the purchase order (in the case of an expense) or the appropriate liability account (in the case of an inventory item). Payables, expenses, and payments are interfaced to General Ledger. Invoices for asset purchases can be interfaced to Assets.
- **Purchasing/iProcurement:** Purchasing captures accounting information about requisitions and purchase orders. Purchase orders are sent to suppliers who respond by delivering goods or services and sending invoices that are processed in Payables. During

the accounting period, accruals for goods set to accrue a liability on receipt are sent to General Ledger. Any suppliers set up in Purchasing are shared with Payables and vice versa.

- **Inventory:** Oracle Purchasing, as well as other Oracle applications, use items defined in Oracle Inventory. If the item is designated as a planned item, demand can be generated in the form of requisitions and sent to Purchasing, where purchase orders or blanket releases can be created to replenish inventory levels.

Demand to Build



Demand to Build

This business flow outlines how a company analyzes or anticipates demand, and translates that demand into a production plan.

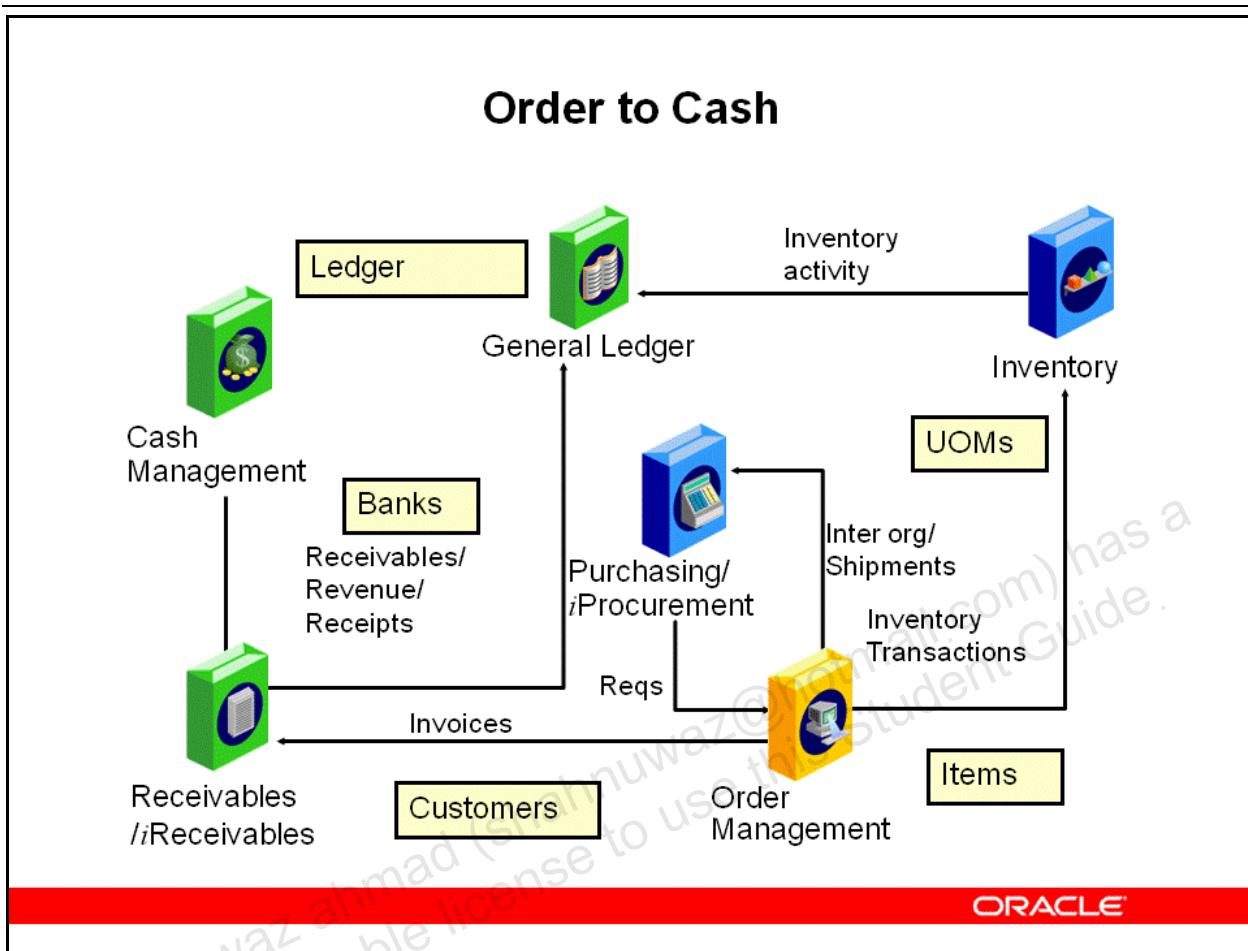
This flow involves the following:

- **Advanced Supply Chain Planning (ASCP)/Material Requirements Planning (MRP):** Creates constraint-based or optimized plans and requisitions (purchase or internal) to replenish Inventory
- **Cost Management:** Supplies cost information for optimized planning
- **Oracle Work in Progress (WIP):** Uses discrete, project, repetitive, assemble-to-order, work-order-less, or a combination of manufacturing methods. Inquiries and reports provide a complete picture of transactions, materials, resources, costs, and job and schedule progress.
- **Capacity:** Calculates your capacity load ratio by resource or production line, thereby ensuring that you have sufficient capacity to meet your production requirements
- **Bills of Material (BOM):** Stores lists of items associated with a parent item and information about how each item is related to its parent
- **Purchasing/iProcurement:** Requisitions are received from Inventory and ASCP/MRP. Procures goods and services, and records periodic and perpetual accruals

- **Inventory:** Sets up inventory/expense items and records inventory activity such as receipts of inventory, returns, and corrections
- **Order Management:** Demand is based on sales orders.

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Order to Cash



Order to Cash

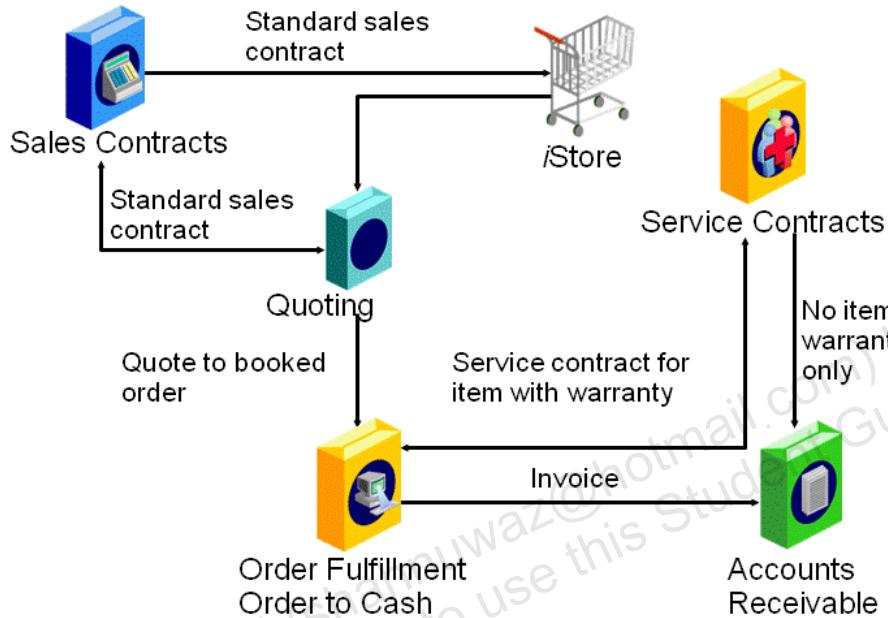
This business flow encompasses activities starting from order entry, checking/booking of the items in the inventory, shipping of goods, raising invoices, reconciling bank statements, and transferring accounting entries to General Ledger.

This flow involves the following:

- **General Ledger**: Imports journals relating to inventory transactions, receivables invoices, adjustments, credits, and receipts
- **Receivables/iReceivables**: Creates invoices and book receivables for shipped goods, services, and so on; corrects invoices, manages collections, and records/generates payments from customer
- **Purchasing/iProcurement**: Generates requisitions/drop shipments
- **Inventory**: Provides items or inventory relief
- **Order Management**: Enters orders, ship goods, and provides services
- **Cash Management**: Reconciles customer payments and miscellaneous transactions with bank statements

Contract to Renewal

Contract to Renewal



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Contract to Renewal

This business flow encompasses activities such as managing and renewing contracts (both manually and automatically), and authoring new service contracts for prospective or existing customers. However, the business flow in the slide does not reflect the complete back-end integration with many of the shared entities. The modules displayed in the slides depict more of the front-end functionality.

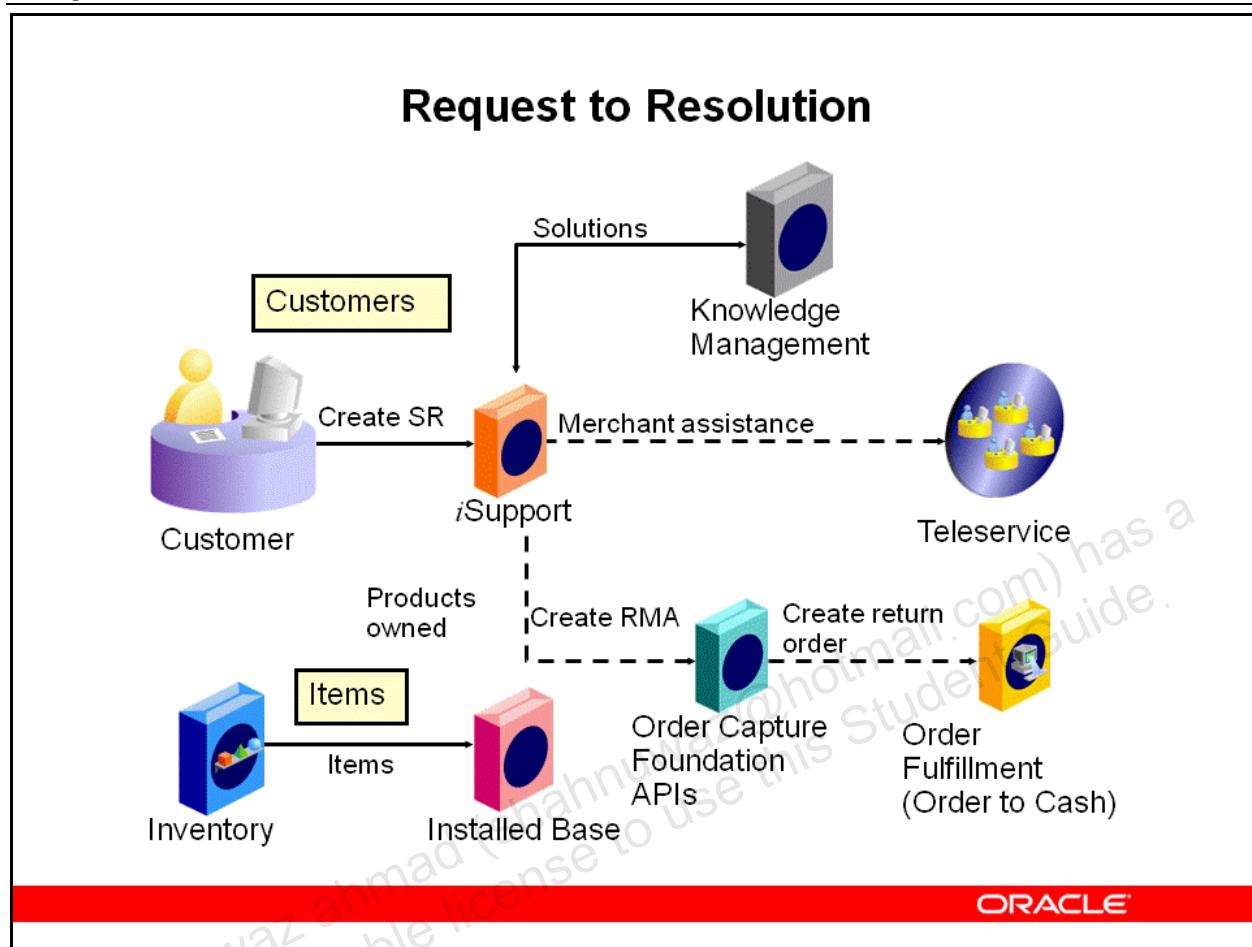
This flow involves the following:

- **iStore:** An order placed in iStore can have a sales contract created for it. During checkout, the customer has the option to accept or negotiate the terms of the sales contract.
- **Quoting:** From Quoting, a sales representative can create a quote for a customer and then create a sales contract from the quote for further negotiation.
- **Sales Contracts:** Sales contracts are created in the Sales Contracts module.
- **Quoting:** From Quoting, the quote is sent to the Order to Cash flow for booking and fulfillment. If the item purchased has a warranty attached, or an extended warranty is purchased, a service contract will be created when it is instantiated in the customer's installation base.

- **Service Contracts:** If the item the customer wants a warranty for was not purchased from the deploying merchant, a warranty or service contract can be purchased and billed through Service Contracts.
- **Accounts Receivable:** Accounts Receivable invoices for the item, item with extended warranty, or only the service contract.

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Request to Resolution



Request to Resolution

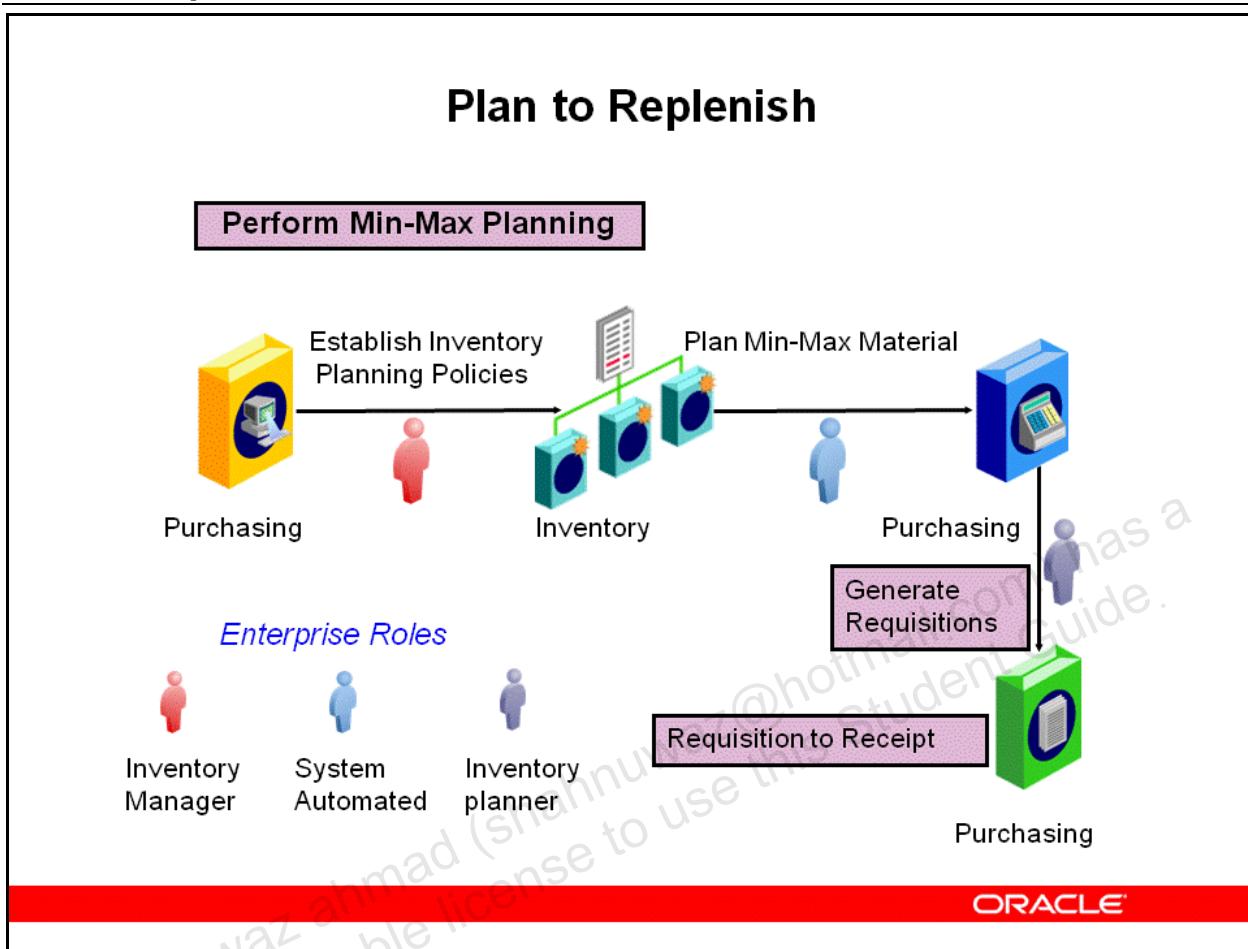
The Request to Resolution business procedure enables a customer or customer service representative to create a service request, search for a solution from Knowledge Management, resolve, and close that service request. This business flow enables companies to manage the service request life cycle including service request escalation and charges for the service provided. However, the business flow in the slide does not reflect the complete back-end integration with many of the shared entities. The modules displayed in the slide depict more of the front-end functionality. The dotted lines (-----) in the slide show some of the additional options to resolve a service request.

- **Customer:** A customer has purchased a product from a merchant who has implemented iSupport. The customer logs in to iSupport.
- **iSupport:** When logged into iSupport, the customer can view and update the installed base.
- **Installed Base:** The products owned by the customer account. This can be done automatically or manually.
- **Inventory:** Only products in Inventory can be added automatically or manually.
- **Knowledge Management:** Search for solutions by using Knowledge Management. If you cannot find a solution, you can submit a service request.

- **Teleservice:** It is the merchant facing application used by the merchant's support personnel.
- **Order Capture Foundation APIs:** From *iSupport* or Teleservice, a customer can also create a return material authorization (RMA). When an RMA is created, it is submitted to the Order Fulfillment cycle.
- **Order to Cash:** Order Fulfillment can also refer to the Order to Cash flow. When it is in the Order to Cash flow, the order is credited with line types for a return.

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Plan to Replenish



Plan to Replenish

Purchasing, Inventory: Perform Min-Max Planning

Establish Inventory Planning Policies

- Defines the policy for the management's guidelines for planning the purchase or assembly of material outside the ASP plan—for example, safety stock levels and order quantities by item
- Determines item Min-Max level

Plan Min-Max Material

- Plans for the replenishment of Inventory using Min-Max

Requisition to Receipt

- Performs direct transactions such as requisitions, raise and issue purchase orders and receipts by using Purchasing, or raise receipts using Inventory

Purchasing: Generate Requisitions

- Performs requisition import and creates requisitions
- This concurrent program can be scheduled to run automatically.

Quiz

Quiz

Oracle Inventory owns Units of Measure.

- a. True
- b. False

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Answer: a

Quiz Specifications: This statement is true. Units of Measure is the way that you quantify items.

Quiz

Quiz

Which module owns Internal Banks?

- a. Cash Management
- b. General Ledger
- c. Payables
- d. Receivable

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Answer: a

Quiz

Quiz

In the “Order to Cash” business cycle, details of shipping goods and providing related services are entered in:

- a. Purchasing
- b. Receivables
- c. Order Management
- d. Inventory

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Answer: c

Quiz

Quiz

Three products are involved in the “Forecast to Plan” business flow.

- a. True
- b. False

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Answer: a

Quiz Specifications: This statement is true. Demand Planning, Order Management, and Advanced Supply Chain Planning (ASCP) are the three products that are involved in the “Forecast to Plan” business flow.

Summary

Summary

In this lesson, you should have learned about:

- The shared entities within R12.x E-Business Suite
- The key integration points and business flows between products in R12.x E-Business Suite

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Fundamentals of Multi-Org

Chapter 7

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Fundamentals of Multi-Org

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Fundamentals of Multi-Org

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Objectives

Objectives

After completing this lesson, you should be able to do the following:

- Define Multiple Organization (Multi-Org)
- Discuss the types of organizations supported in the Multi-Org model
- Explain the entities of Multi-Org
- Explain how Multi-Org secures data
- Identify key implementation considerations
- Define Multi-Org Access Control (MOAC)
- Explain Multi-Org preferences
- Explain Enhanced Multiple-Organization Reporting

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What Is Multi-Org?

What Is Multi-Org?

- A server-side (applications and database) enhancement that enables single installation of Oracle Applications
- Keeps transaction data and some setup data separate and secure by different lines of business

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What Is Multi-Org?

Multi-Org is a server-side (applications and database) enhancement that enables multiple business units in an enterprise to use a single installation of Oracle Applications products while keeping transaction data separate and secure. The Multi-Org enhancement uses native database views to build a security layer on top of a single installation of Oracle Applications. In Oracle Applications R12.x, the following products support Multi-Org capabilities:

- Cash Management
- Order Management, Shipping Execution, and Release Management
- Payables
- Property Manager
- Projects
- Purchasing
- Receivables
- Incentive Compensation
- Sales and Marketing
- Service

Basic Business Needs

Basic Business Needs

The Multi-Org enhancement provides features that enable you to:

- Support multiple business units even if they use different ledgers
- Secure access to data on a single instance by line of business
- Define different organizational models
- Sell and ship from different legal entities
- Procure and receive from different legal entities
- Produce reports across entities or within a single entity

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Basic Business Needs

The Multi-Org enhancement to Oracle Applications provides features necessary to satisfy the following basic business needs. You should be able to:

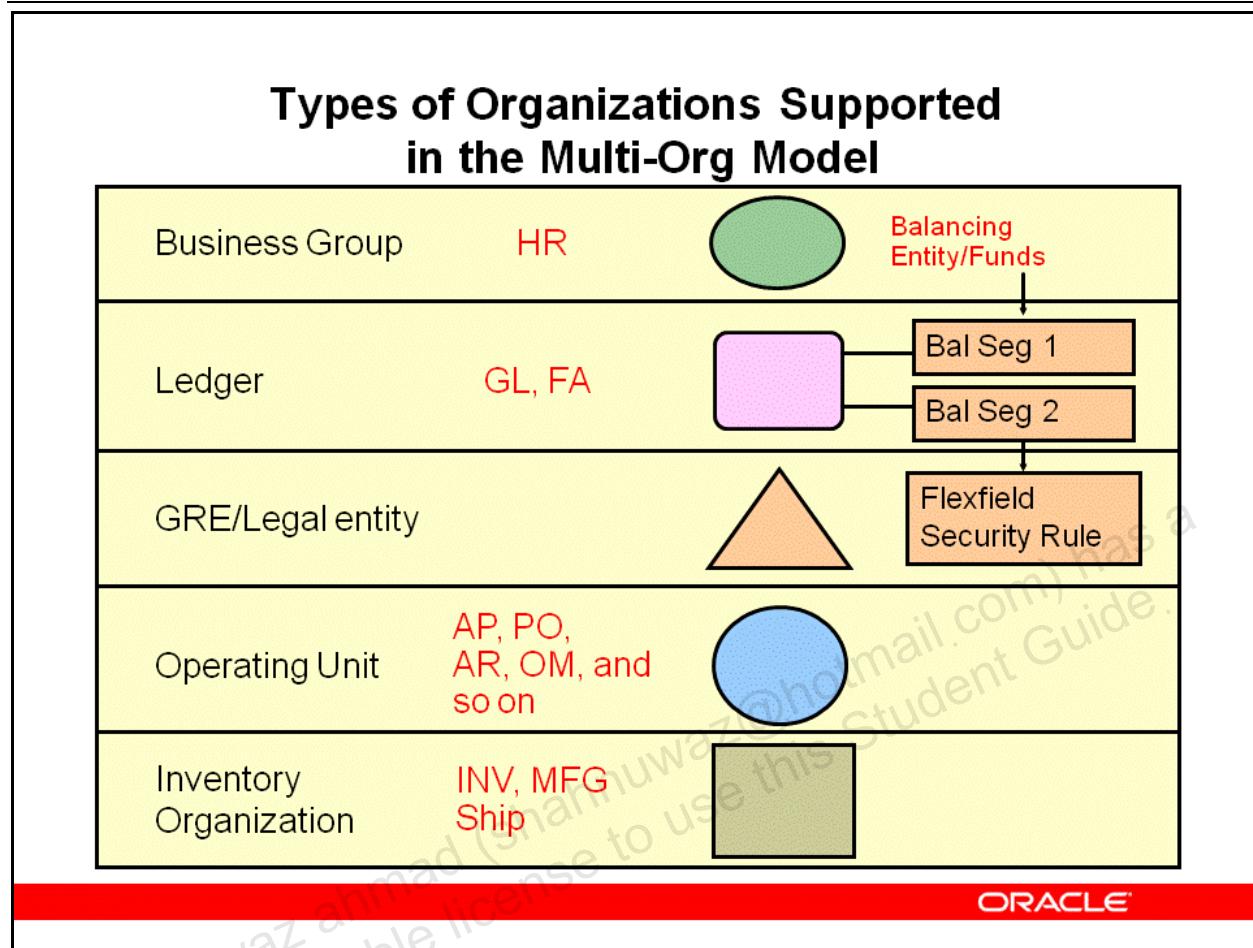
- Use a single installation of any Oracle Applications product to support any number of business units, even if those business units use different ledgers
- Support any number of business units within a single installation of Oracle Applications
- Secure access to data whereby user access is limited to information relevant to the user's organization
- Procure products from an operating unit that uses one ledger, but receive them in another operating unit using a different ledger
- Sell products from an operating unit using one ledger, but ship them from another operating unit using a different ledger, automatically recording the appropriate intercompany sales by posting intercompany accounts payable and accounts receivable invoices
- Report at any level of the organization structure

Organization Types Supported in the Multi-Org Model

Organization Types Supported in the Multi-Org Model

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Types of Organizations Supported in the Multi-Org Model



Types of Organizations Supported in the Multi-Org Model

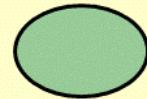
The Multi-Org model provides a hierarchy that dictates how transactions flow through different business units and how those business units interact. You define the organizations and the relationships between them. In the graphic in the slide, note the different shapes used for each organization type. The shapes are helpful when you draw multiple organization diagrams.

Business Group

Business Group

Business Group

HR



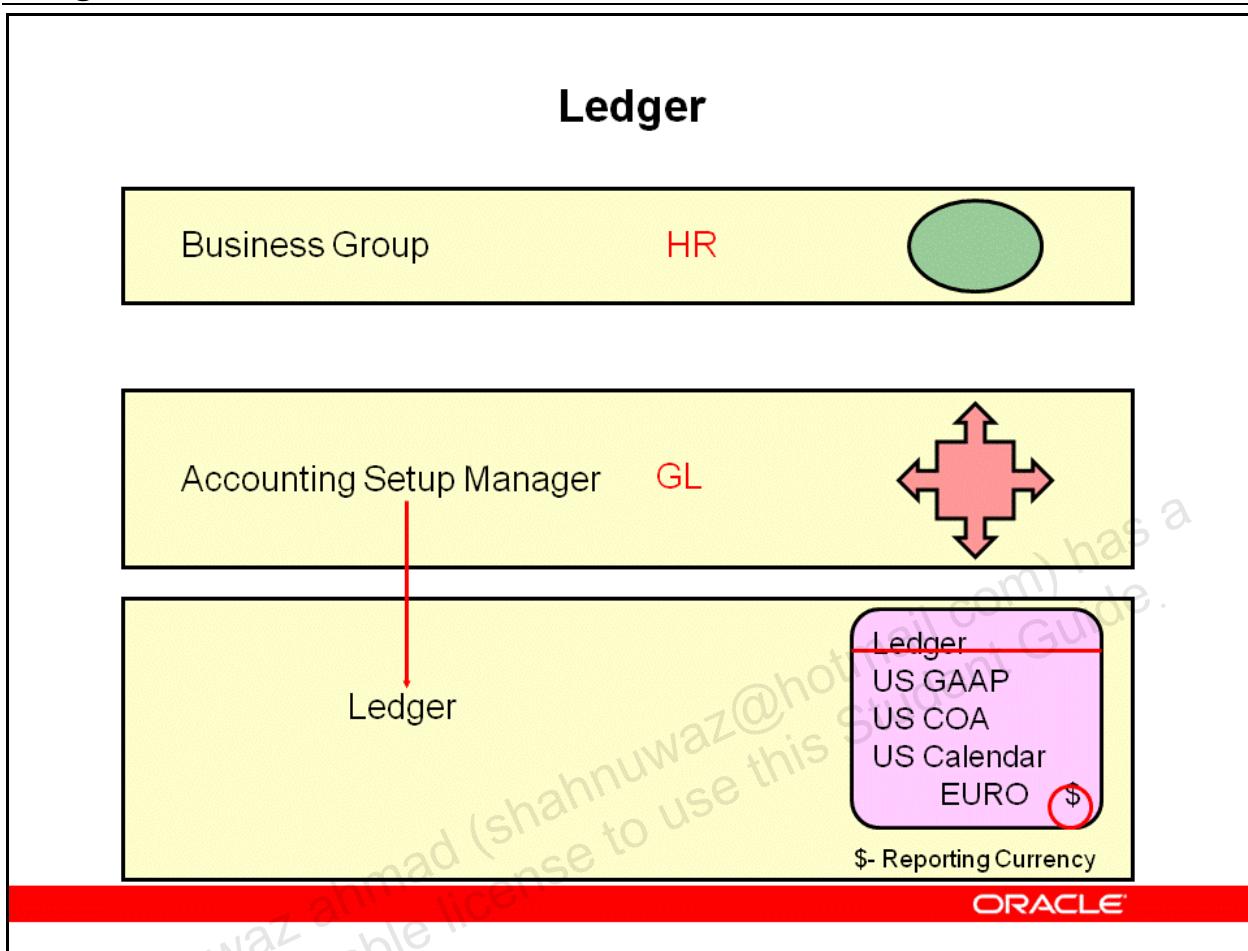
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Business Group

The Business Group partitions Human Resources information and the Purchasing Approval Hierarchy. A Business Group can be set up to model a consolidated enterprise, a major division, or an operating company—without any accounting impact. Multiple Legal Entities can relate to a single Business Group.

You must have at least one Business Group. For a new installation, Oracle Applications provides a default business group, Setup Business Group. You can define additional business groups as required for your enterprise.

Ledger



Ledger

A Ledger is a financial reporting entity, which implements the four “C”s and is a single repository of financial truth.

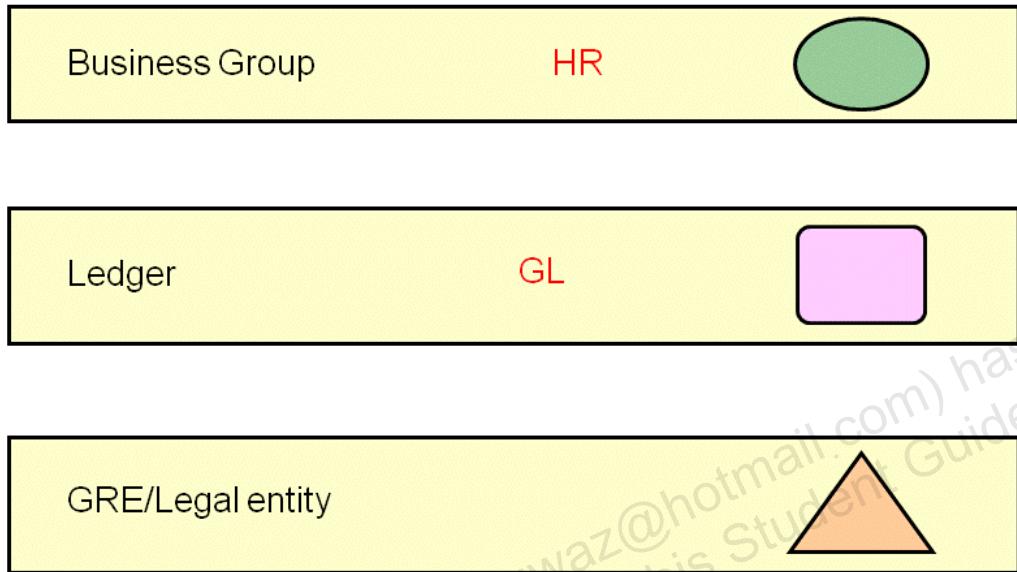
- Chart of Accounts (COA: Accounting Flexfield Structure)
- Functional Currency
- Financial Accounting Calendar
- Accounting Conventions

Here is an example of a Ledger implementing four “C”s: The balance on creditors (COA) is 4.2 million euros (Currency) on March 31, 2007 (Calendar), according to IAS/IFRS definition (Accounting Convention).

The Ledger concept is similar in a Multi-Org environment. General Ledger secures transaction information (journal entries, balances) by Ledger. When you use General Ledger, you select a responsibility that specifies a particular Ledger with information relevant to only that Ledger.

Legal Entity

Legal Entity



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Legal Entity

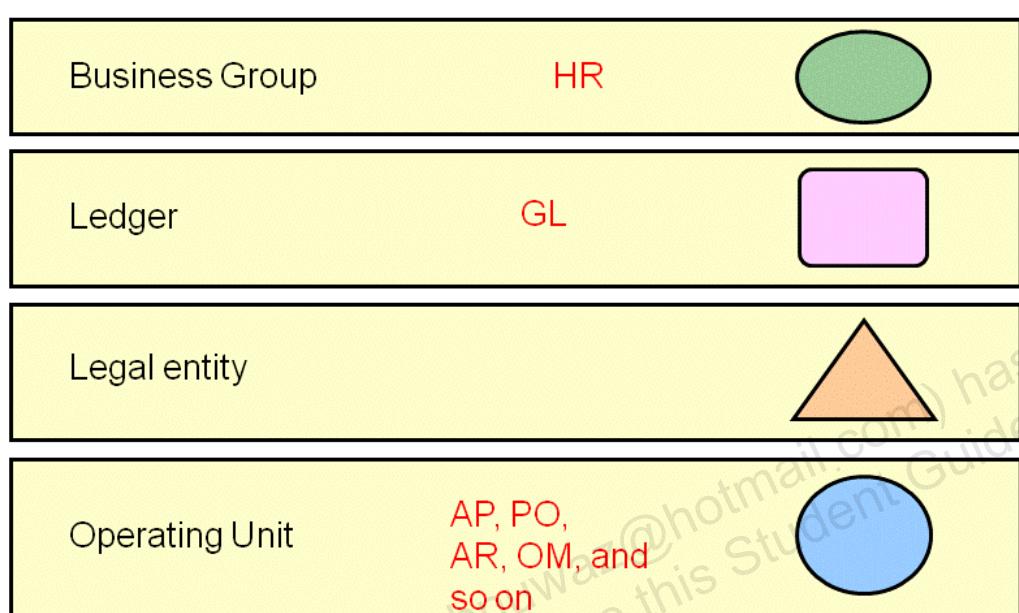
A Legal entity represents a legal company for which you prepare fiscal or tax reports. You assign tax identifiers and other Legal entity information to these types of organizations. A Legal entity is identified through the registration with Legal Authority.

Types of Legal Entities

GRE/Legal entity: Use this classification to represent the following organizations.

- **Ultimate Legal entity:** Represents the enterprise and typically the highest (global) level of a business organization.
- **Legal entity:** Represents the designated legal employer, recognized by the legal authorities in a country as a separate employer. In an organization hierarchy, a Legal entity may report to an operating company or to the ultimate Legal entity.
- **Consolidated Legal entity:** Acts on behalf of multiple operating companies, which are either not legally registered or simply on the behalf of the enterprise in a country.

Operating Unit



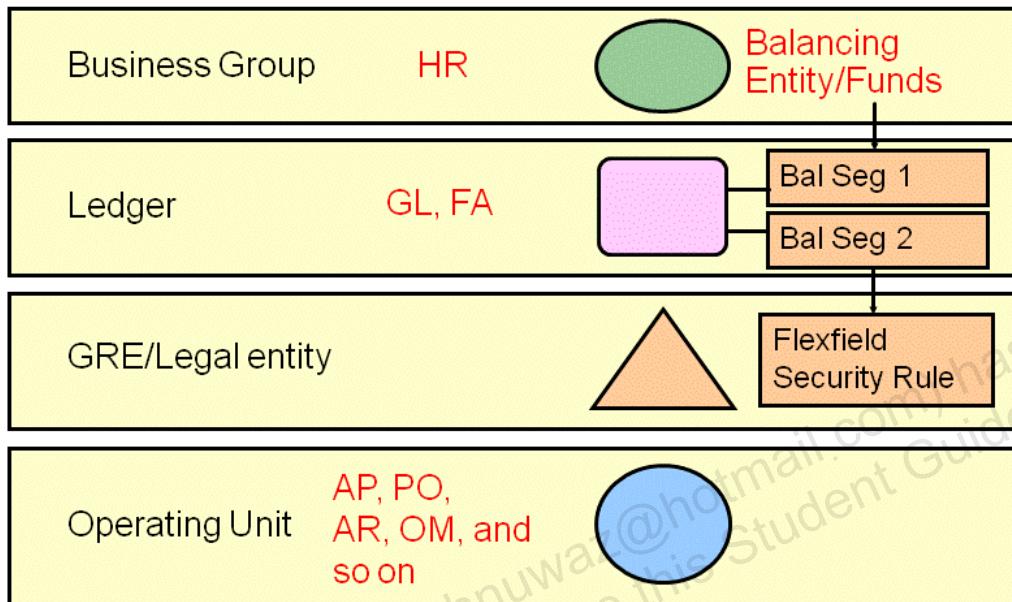
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Operating Unit

An organization qualified as an operating unit can be used to model an autonomous business unit in an organization that has a business need to secure transaction data, set up and seed data. An operating unit can be set up to support different business policies and workflow processes. Generally, an operating unit can be a major division or separate company within the enterprise. Each user sees the information associated with the operating units to which they have access. An operating unit is linked to a Responsibility by using the MO: Operating Unit profile option.

Balancing Entity

Balancing Entity



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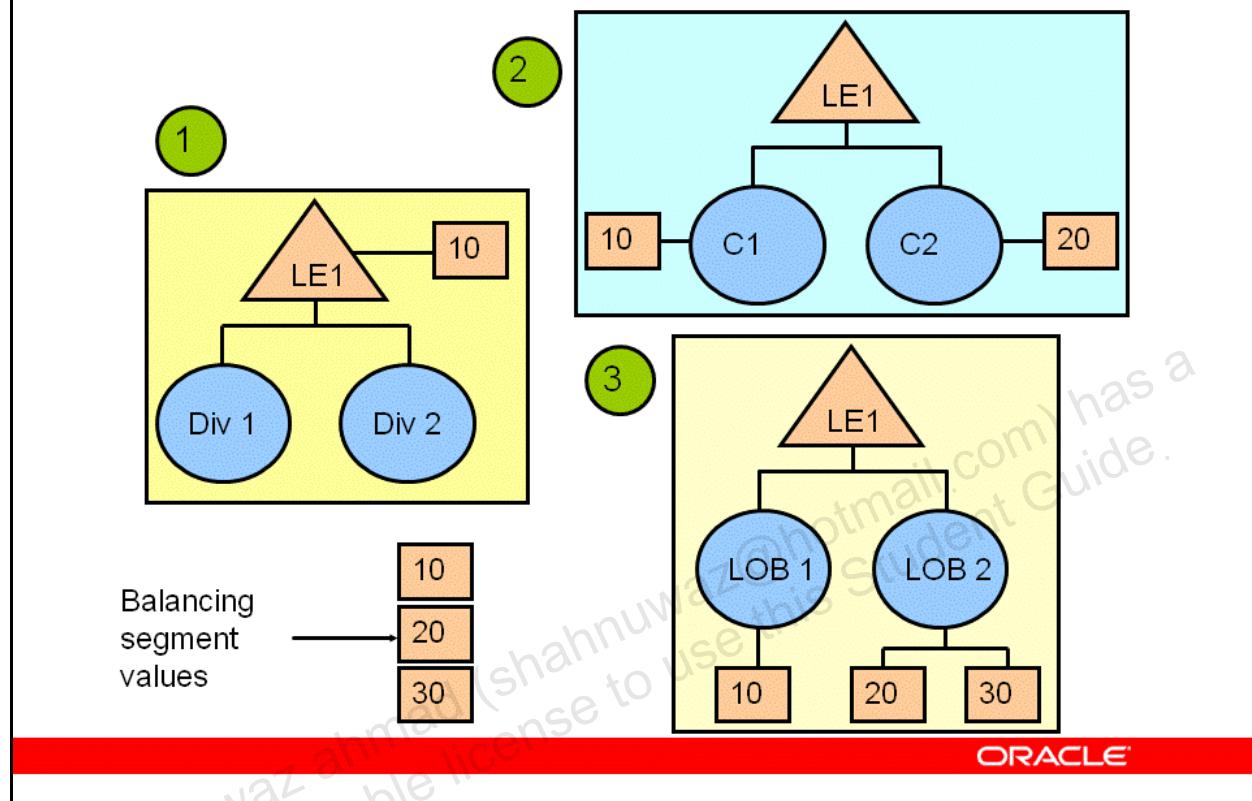
Balancing Entity

This is an entity for which you prepare a balance sheet, represented as a balancing segment value in the Accounting Flexfield structure. There can be multiple balancing entities within the same operating unit structure and each of these must balance within itself. All required intercompany entries will be automatically created within the Ledger to ensure that companies are never out of balance. For example, a balancing segment can be a company or a division.

It is important to keep in mind that a Government Reporting Entity (GRE) or Legal entity may consist of one or more than one balancing segments. For example, you may have multiple companies defined in your chart of accounts that roll up to a single Legal entity for reporting purposes. Alternatively, each company you define in your chart of accounts may have multiple divisions for which you produce balance sheets. In that case, each company in the chart of accounts will most likely be set up as a Legal entity and each division will most likely be set up as an operating unit. Oracle does not automatically secure balancing segment values within your chart of accounts with specific legal entities or operating units. You can create security rules to do this. For example, you may want the Payables team to only be able to enter invoices for a specific division associated with a particular operating unit. If security rules are not defined, they will be able to access all divisions regardless of the operating unit associated with their responsibility. The solution is to create a security rule that allows access to only the divisions that roll up into their operating unit.

Balancing Entity: Examples

Balancing Entity: Examples



Balancing Entity: Examples

While a balancing segment most often is associated with a single operating unit, it is not always the case. For each of the three examples, assume there is one General Ledger, the balancing segment value is the company segment, and there are three companies defined (10, 20, and 30). Also, keep in mind that operating units are associated with responsibilities. That is, each responsibility is associated with one operating unit.

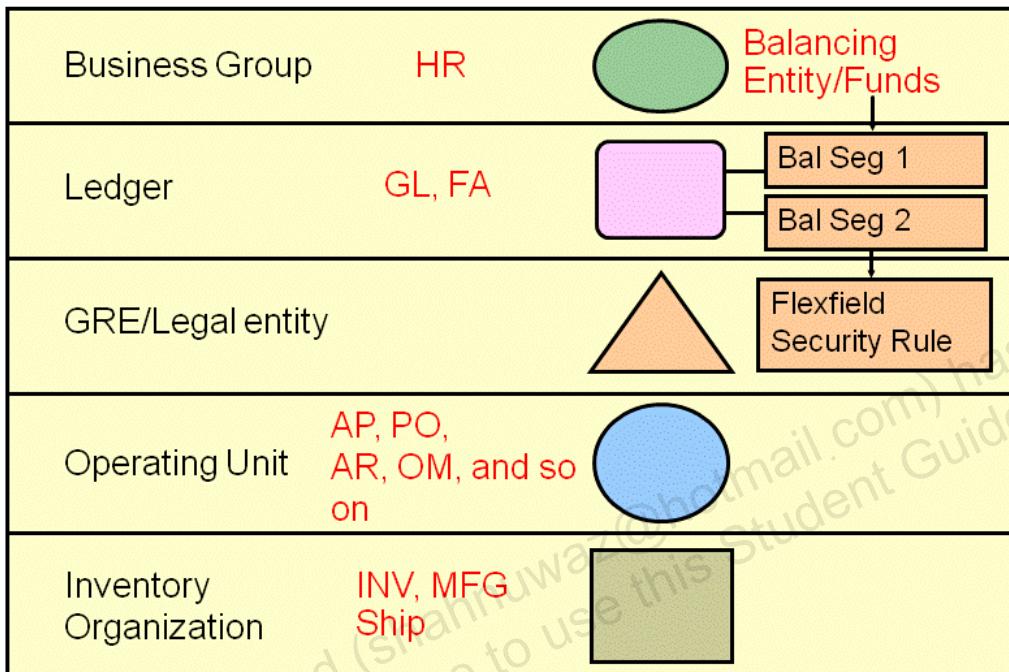
Example 1: Company is a Legal entity. Balancing segment value (company 10) is a Legal entity in and of itself. Two divisions have been defined as operating units and roll up to it. A flexfield security rule that allows access to company 10 has been created and associated with the responsibility that points to the Div1 and Div2 operating units. When users log in with either responsibility, they will only be able to enter transactions associated with company 10 (and not 20 and 30).

Example 2: Company is an operating unit. Balancing segments 10 and 20 are operating units in and of themselves. Both roll up to the same Legal entity. Two different security rules will be defined. All responsibilities associated with the C1 operating unit will have a security rule that allows them to enter transactions associated with company 10. All responsibilities associated with the C2 operating unit will have a different security rule that allows them to enter transactions associated with company 20.

Example 3: Company is part of a line of business. Balancing segment 10 is associated with one line of business and balancing segments 20 and 30 are associated with a separate line of business. As in the earlier examples, security rules will be created to allow appropriate access to data.

Inventory Organization

Inventory Organization



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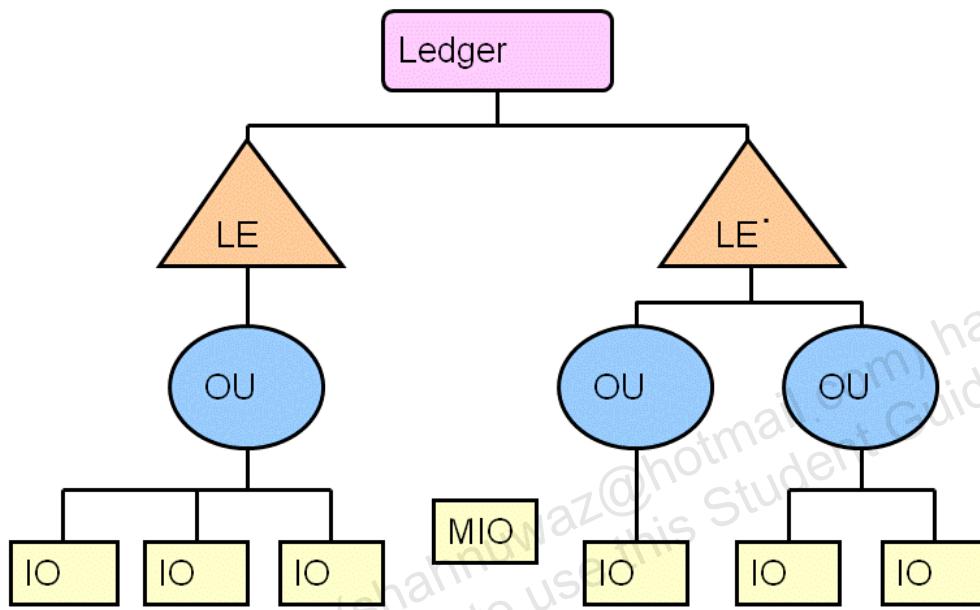
Inventory Organization

An inventory organization represents an organization for which you track inventory transactions and balances. Examples include manufacturing plants, warehouses, distribution centers, and sales offices. The following products and functions secure information by inventory organization: Inventory, Bills of Material, Engineering, Work in Process, Master Scheduling/MRP, Capacity, and Purchasing/Receiving functions. To run any of these products or functions, you must select an organization classified as an inventory organization.

With the Multi-Org enhancement, multiple Ledgers can use the same “global” item master organization because the item master organization is used for item definition and not item accounting information. All accounting related attributes in the Item Master are controlled at the item or organization level.

Sample Organization Structure

Sample Organization Structure



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Sample Organization Structure

With Oracle Applications accounting, distribution, and materials management functions, you define the relationships between inventory organizations, operating units, legal entities, and Ledger to create a multilevel company structure.

Legal Entities (LE) Post to a Ledger

Each organization classified as a Legal entity must specify a Ledger to post accounting transactions. A Legal entity can point to only one Ledger.

Operating Units (OU) Are Part of a Legal Entity

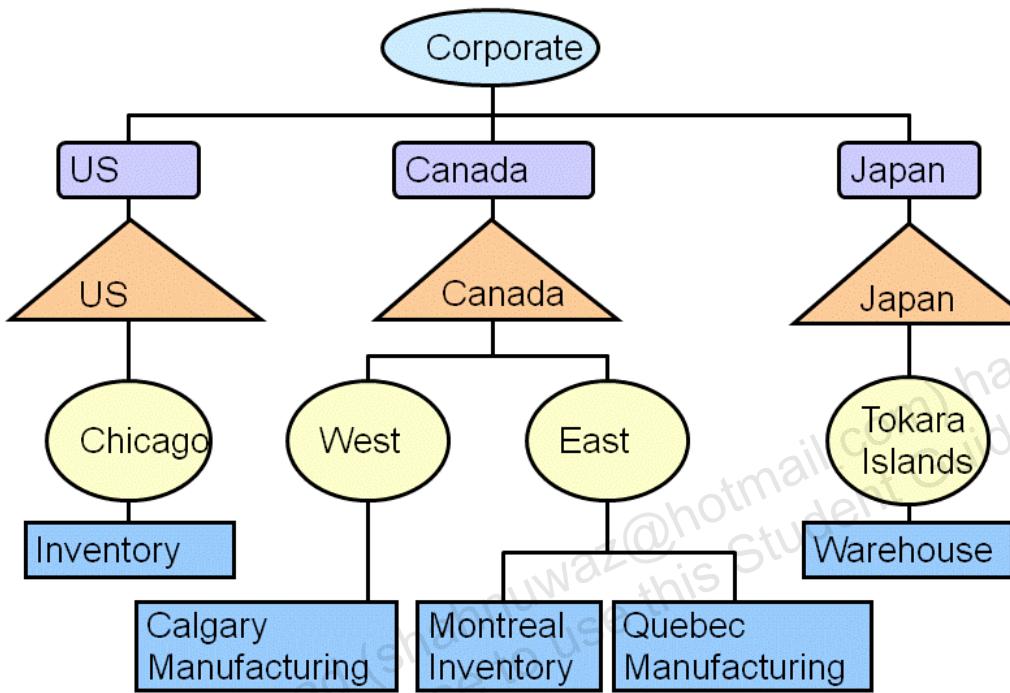
Each organization that you classify as an operating unit must reference a Legal entity. An operating unit can point to only one Legal entity.

Inventory Organizations (IO) Are Part of an Operating Unit

Each organization classified as an Inventory Organization must reference an operating unit. An Inventory Organization points to only one operating unit, but through standard functionality can be referenced by any operating unit having the same Ledger as the attached operating unit. Items are defined in the master inventory organization (master parts list) and added to the appropriate child inventory organizations. Any inventory transactions are secured by the Inventory Organization.

Define the Organization Structure

Define the Organization Structure



Define the Organization Structure

Plan and define the entities in your organization structure.

A successful implementation of Multiple Organization Support in Oracle Applications primarily depends on correctly defining your organization structure in the hierarchy used by Oracle Applications. A careful analysis and design of a company's organization structure is critical for future success. The following points describe how the Multi-Org model relates organizations:

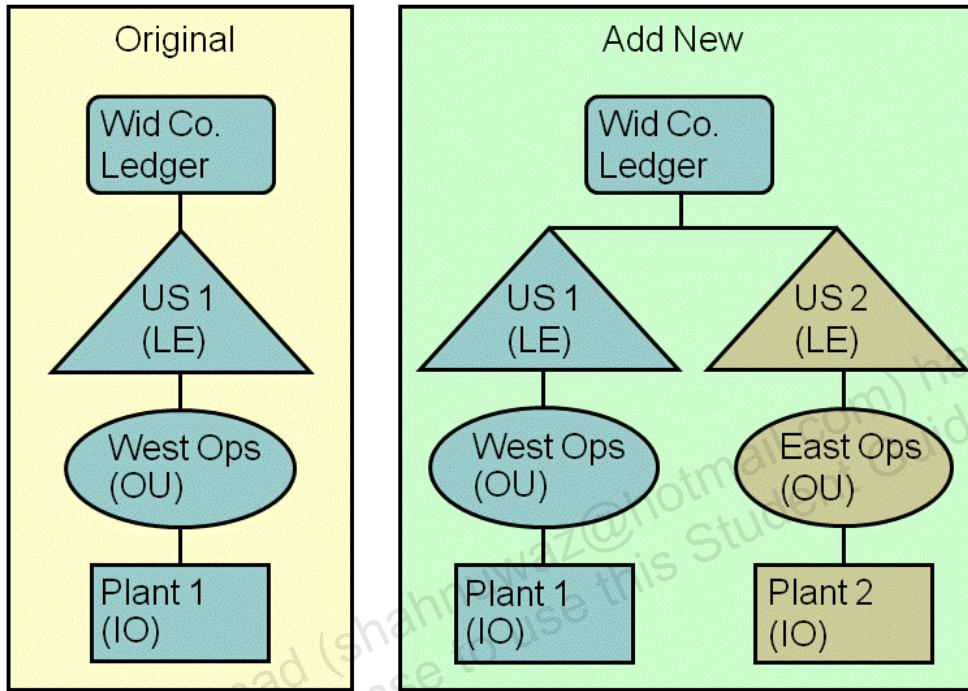
- A Business Group is the highest level of the structure and does not have an accounting impact. The Business Group determines which employees will be available to ledgers and operating units related to that Business Group.
- A Ledger is the highest level that impacts accounting.
- A Ledger is associated with a single Business Group. Multiple Ledgers may be associated with a single Business Group.
- Each Ledger may have a different chart of accounts structure, calendar, or functional currency.
- Each GRE/Legal entity is associated with a single Ledger, multiple Legal Entities may be associated with a single Ledger.

- Each Operating Unit is associated with a single GRE/Legal entity, multiple operating units may be associated with a single Legal entity.
- An Inventory Organization may be associated with any operating unit within the same Ledger.

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Adding to the Organization Structure

Adding to the Organization Structure



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Adding to the Organization Structure

The Multi-Org enhancement allows you to add organizations at any time. Enterprises with substantial acquisition and divestiture activities, as well as businesses prone to reorganizations, are able to define new business units and disable old business units as required.

One approach for organizations that restructure frequently is to define new business organizations as required, while leaving the old organizations untouched. With this approach, it is easy to keep day-to-day business transactions recorded.

To add additional operating units, perform the following:

- Create the operating unit.
- Run the Replicate Seed Data concurrent request.
- Create new responsibilities as necessary and set the MO: Operating Unit profile option.

How Multi-Org Secures Data

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How Multi-Org Secures Data

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Security Model

Security Model

The responsibility is key to multi-org security and reporting. It determines:

- Operating unit
- Reporting ability



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Security Model

As shown in the slide, users have responsibilities linked to operating units via a profile option.

Data Security by Application

Data Security by Application

Application	Partitioned By
GL	Ledger
FA	Asset Book
HR	Business Group
OM, AR, AP, PO, CE, PA, AS, SC, ASO, ASN, AST	Operating Unit
INV, MFG	Inventory Organization

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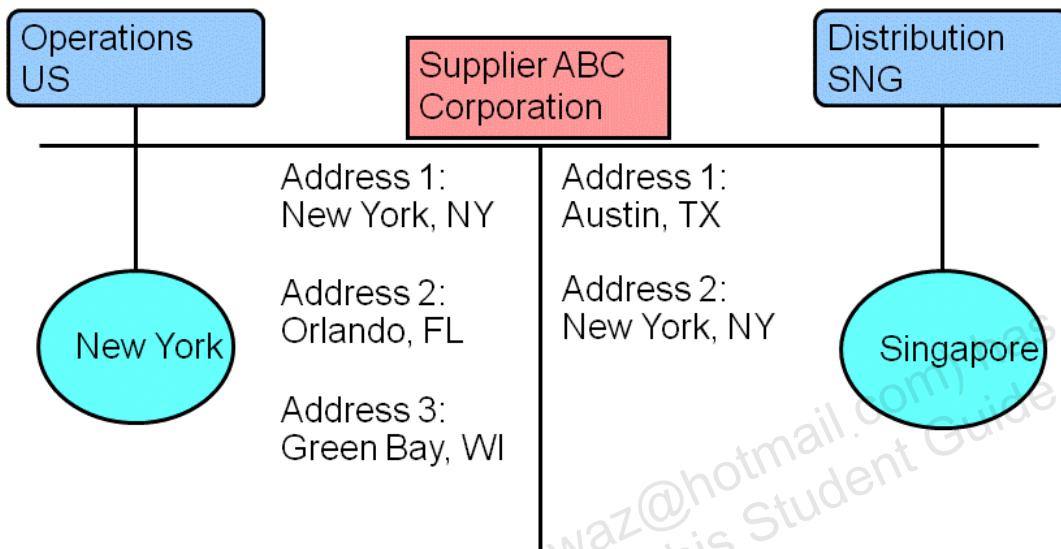
Data Security by Application

Data is partitioned (secured) in Oracle Applications in many different ways:

- General Ledger and Fixed Assets are partitioned by GL Ledger. In addition, hierarchies of asset books may also be set up within assets that can effectively secure assets by asset book.
- Human Resources is partitioned by Business Group.
- Order Management, Accounts Receivable, Accounts Payable, Purchasing, Cash Management, Projects, Service, Incentive Compensation, Sales and Marketing are partitioned by operating unit.
- Manufacturing applications are partitioned by Inventory Organization.

Global Registries

Global Registries



Note the separation of supplier sites by OU.

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Global Registries

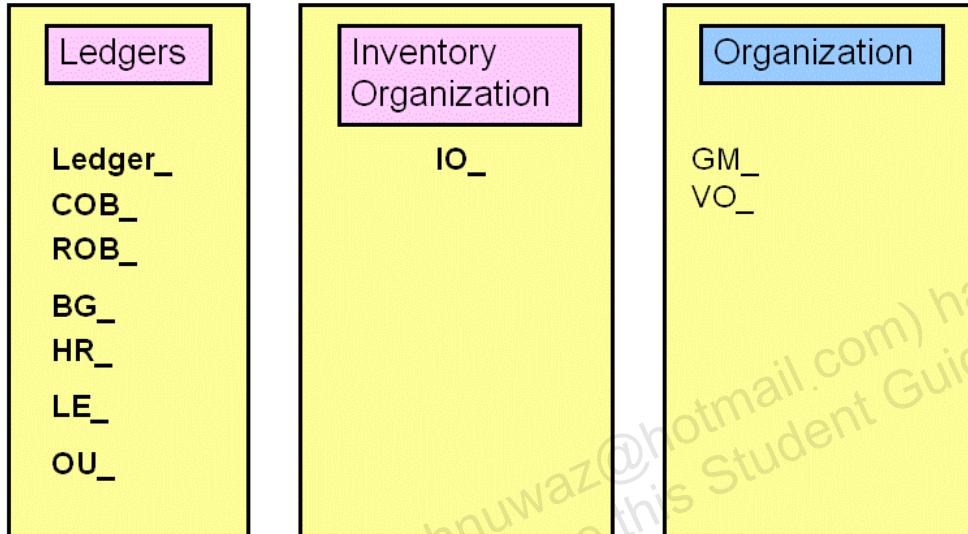
For the global registries of both customers and suppliers, header-level information is stored in an unpartitioned table for all the entities within an instance. This allows for custom reports to consolidate information at either the Ledger or GRE/Legal entity levels.

Taxpayer ID, Federal and State reportable options are still at the customer or supplier level. In the above example, the supplier, ABC Corporation, is shared across the two operating units. Each operating unit has its own groupings of address information. If two operating units share the same address for a supplier, they must currently enter the information separately.

Refer to the practice - *Understanding How Multi-Org Secures Application Data (Required)*.

Organization Naming Considerations

Organization Naming Considerations



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Organization Naming Considerations

Multi-Org naming conventions should be used to identify the Oracle organizations classification (for example, Ledger, Operating Unit, Inventory Organization) and its unique characteristics such as country or currency, location name, and usage.

The following are general guidelines for creating organization names:

Ledgers, where:

- **Ledger_**: An operational book that obtains journal entries directly from a subledger system (for example, accounts payable, inventory)
- **COB_**: A consolidation Ledger
- **ROB_**: A reporting Ledger when using the Multiple Reporting Currencies (MRC) feature
- **BG_**: A Business Group
- **HR_**: A Human Resources Organization
- **LE_**: A GRE/Legal entity
- **OU_**: An Operating Unit

Inventory Organizations, where:

- **IO_**: An Inventory Organization intended to be a subledger in Oracle Applications or a planning entity. This organization will contain either inventory transactions or Master Demand Schedule entries, or both.
- **GM_**: The Global Item Master. If more than one Item Master is used (which is not advised), follow with a currency designation (for example, USD).
- **VO_**: An Inventory Organization used only for validation purposes (for example, for maintaining value-added tax rates by item) and is not an Inventory subledger. It will never contain inventory transactions.
- **PO_**: Used for planning purposes only with no transactions. For example, a Distribution Requirement Planning (DRP) schedule, with planning processes, and related setups for particular product lines crossing many plants and distribution centers, can be established and controlled from this Organization.

Country Codes, Locations, Business Names, Functions and (corporate) Proper Names are used in the Organization naming conventions to distinguish the actual site location and country ownership. For example:

- **Country Codes**: Are abbreviations used to identify the Organization's country of registration and residence. They usually have three characters followed by a sequentially numbered digit for the country. For example: USA1, USA2
- **Locations**: Are the City and State or Province address of the Organization. They are delineated by an “_” between the City and State and sometimes abbreviated to fit into the 30-character suggested Name length, for example, DALLAS_TX.
- **Example**: Ledger_USA1_ABC; OU_USA1_MILWAUKEE_ABCCORP

Define Multi-Org Access Control (MOAC)

Define Multi-Org Access Control (MOAC)

User access to multiple operating units is called Multi-Org Access Control. The primary topics of discussion for MOAC are:

- Features that support various functionalities
- Benefits
- Setup and process
- Dependencies and interactions

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Define Multi-Org Access Control (MOAC)

User access to multiple operating units is called Multi-Org Access Control (MOAC). Multi-Org Access Control allows companies that operate shared service centers or those that have centralized their accounting and administration functions to process business transactions more efficiently. For example, you operate in multiple countries and your headquarters provides some or all accounting services to the other subsidiaries. You may not have implemented a formal shared service center, but you can still reap the benefits from Multi-Org Access Control. MOAC allows companies to gain processing efficiencies because users can more easily access, process, and report on data across multiple operating units from a single responsibility without compromising data security or system performance.

Features of MOAC

Features of MOAC

- Access one or more operating units using single responsibility.
- Enhanced reporting capability using:
 - Reporting-level parameter
 - Reporting context

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Features of MOAC

MOAC is basically the ability to access multiple operating units from a single application responsibility. Multi-Org preferences allow the user to control and limit the number of operating units they have access to based on their work environment. Cross-organization reporting has been enhanced to be more in-line with MOAC. Users can run reports enabled for cross-organization reporting, via their security profile, to summarize data for all operating units rolling up to a specific GRE/legal entity or ledger.

Access One or More Operating Units Using Single Responsibility

You can assign operating units to a security profile and then assign the security profile to responsibilities or users. If multiple operating units are assigned to the security profile, a user can access data for multiple operating units from a single responsibility.

Enhanced Reporting Capability Using:

- **Reporting-level parameter:** Allows users to choose the level at which they want to report the valid options, which are ledger, GRE/legal entity, and operating unit. If the user selects ledger as the reporting level, the report displays data for the operating units assigned to the ledger accessible by the user. If the user chooses operating unit, selectable operating units depend on the operating units assigned to the MO: Operating Unit or the MO: Security Profile profile option. If the MO: Security Profile profile option is set, the MO: Operating Unit profile option is ignored.

- **Reporting context:** Allows users to select an entity within the selected reporting level. Valid options are ledger names, or operating unit names, depending on the reporting-level value.

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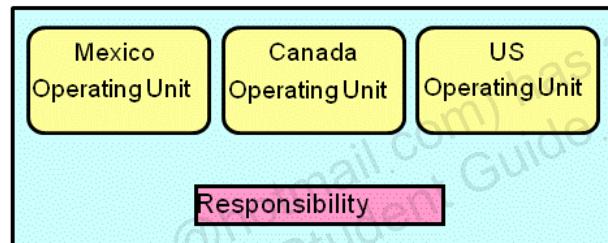
Benefits of MOAC

Benefits of MOAC

Using MOAC, a user can perform tasks for multiple operating units (OU) without changing their responsibilities.

Tasks users can perform using MOAC in multiple OUs:

- Enter Payables Invoices.
- View Consolidated Requisitions.
- Perform Collections.
- Process Receiving and Drop Shipments.
- Perform Customer Data Management.
- Perform Accounting Setup.



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Benefits of MOAC

In Oracle Applications 11*i*, if you had three operating units in the shared services center you were managing, such as a Mexico Operating Unit, a Canada Operating Unit, and a United States Operating Unit, you needed to define three different responsibilities. If a user processes Payables Invoices across all three operating units, he/she would have three separate responsibilities, one for each operating unit. In order to process invoices for the various operating units, your user would have to switch responsibilities any time he/she wished to process an invoice for another operating unit, thus decreasing their efficiency.

From Oracle Applications Release 12 onwards, you can create a security profile and assign multiple operating units to the profile. In the example mentioned here, assign all the three operating units to a security profile and associate the security profile to a responsibility using the MO: Security Profile option. For example, you can assign the security profile to the USA Payables responsibility to allow that responsibility to process invoices across all the three operating units.

Processing Payables Invoices is just one example. With MOAC, you can efficiently perform other processes, such as processing receivables invoices, viewing Consolidated Requisitions, performing Collections using Advanced Collections, and processing Receiving and Drop Shipments.

A single application responsibility can now access multiple operating units. Companies that have implemented a Shared Services operating model can:

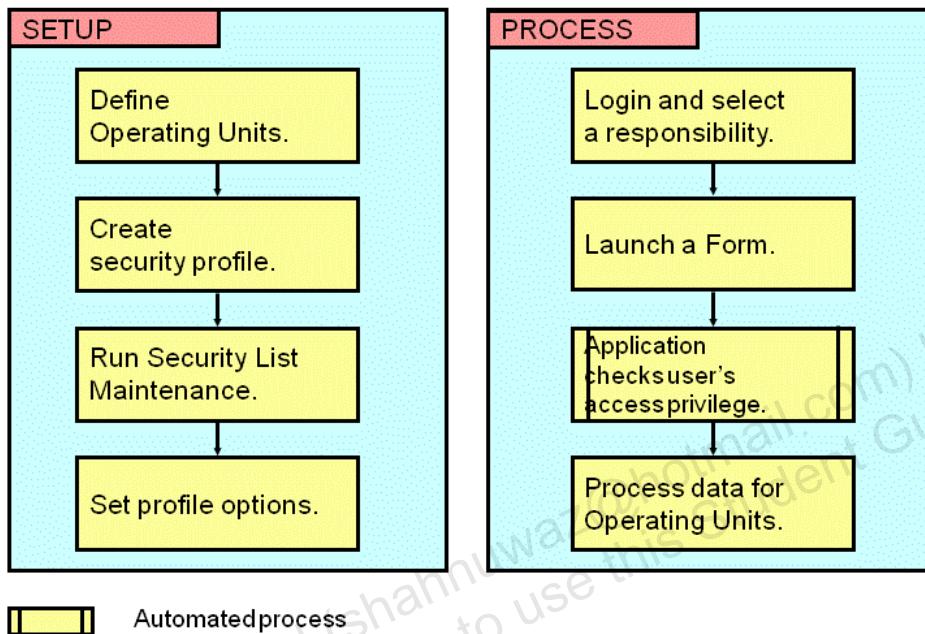
- Increase operational efficiency and effectiveness
- Process data across multiple OUs from a single responsibility
- Process transactions more efficiently for companies that have centralized business functions or operate Shared Service Centers
- Obtain better information for decision making
- Obtain a global consolidated view of information
- View information, such as supplier sites and customer sites across multiple OUs
- Reduce costs
- Speed up data entry
- Reduce setup and maintenance of many responsibilities

In Oracle Applications11*i*, an operating unit is associated with a responsibility, therefore when a user had to enter and/or process data for multiple operating units, he/she had to switch responsibilities to access the appropriate operating unit. For example, if you had a centralized payment processing center where a single user processed payment for multiple operating units, he/she would have to switch responsibilities every time he/she wanted to process payments for a different operating unit.

Now in Oracle Applications Release 12 onwards, MOAC enables companies that have implemented a Shared Services operating model to efficiently process business transactions by allowing users to access, process, and report on data for an unlimited number of operating units within a single applications responsibility. This increases the productivity of Shared Service Centers, as users no longer have to switch application responsibilities when processing transactions for multiple operating units. Data security and access privileges are still maintained using security profiles, which now support multiple operating units.

MOAC: Setup and Process

MOAC: Setup and Process



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Multi-Org Access Control: Setup and Process

From Release 12 onwards, you define your security profile in HR using the Security profile form or the Global Security profile form and assign all operating units needed for a responsibility's access. Then, run the Run Security List Maintenance concurrent request from HR, which will make the security profile available for assignment to a responsibility via the MO: Security Profile profile option.

In terms of processing, things operate basically the same way as in 11i. Each product team has implemented MOAC to best suit their business process flows. For example, in AP, there's a new operating unit field on their Invoice Workbench. The OU list of values will read from the Security Profile assigned to the responsibility to determine which OUs should be displayed in the LOV. In general, when a user logs in to a responsibility and opens an application, the application will determine which operating units can be accessed and used for processing. The user can then view or process transactions for multiple operating units.

Refer to the Guided Demonstration - *Multi-Org Access Control (MOAC) Setup, Defining Security Profile, Running System List Maintenance (Optional)*.

Refer to the Practice - *Covering Tasks for Multiple Operating Units Without Changing Responsibilities (Optional)*.

Accounting Setup Manager (ASM)

The screenshot shows the Oracle Accounting Setup Manager interface. A red box highlights the 'Legal Entities' tab under 'Accounting Setups'. A yellow box labeled 'Define Legal Entities Dashboard.' points to the 'Legal Entities' section. Another yellow box labeled 'Assign/view Legal Entities.' points to the 'Primary Ledger: Vision Operations (USA)' section. A red box highlights the 'Vision Operations (USA)' row in the ledger setup table. A yellow box labeled 'Define Ledger.' points to this row. A red box highlights the 'Operating Units' row in the ledger setup table. A yellow box labeled 'Define OU.' points to this row. The bottom right corner features the Oracle logo.

Accounting Setup Manager (ASM): Centralized Setup

You create a Ledger using the Accounting Setup Manager in General Ledger. You define all other types of organizations using the Organizations window.

Define Legal Entities

This allows you to define Legal Entities and associate country-specific rules.

Assign/View Legal Entities

This allows you to assign Legal Entities defined in other applications such as HRMS, Inventory, Purchasing.

Define Ledger: Associate Four Cs

This allows you to define multiple Ledgers for accounting rules for E-Business Suite (EBS) applications such as Accounts Payables (AP), Accounts Receivables (AR), include currencies such as US dollar, pound sterling, Canadian dollar, and associate country-specific rules for USA, UK, Canada, and so on.

Define Operating Unit [(OU)]

This allows you to define or assign any number of operating units for a specific GRE/Legal entity.

MOAC Setup: Create an Operating Unit

MOAC Setup: Create an Operating Unit

The screenshot shows the Oracle Accounting Setup Manager interface. In the top navigation bar, 'Legal Entities' is selected. Below it, the path 'Accounting Setups > Accounting Options: Vision Operations (USA) > Operating Units: Vision Operations (USA)' is visible. A search bar at the top left contains 'Vision%' and a 'Next 5' button. The main area displays a table of operating units with columns: Operating Unit Name, Operating Unit Short Code, Business Group, and Default Legal Context. The table shows three rows: 'Vision Leasing' (Short Code: VISION), 'Vision Corporation' (Short Code: VISION), and 'Vision Construction' (Short Code: VISION). Buttons for 'Add Operating Unit' and 'Open Organization Form' are present. At the bottom, there are 'Open Organization Form' and 'Return to Accounting Options' buttons.

Financials Accounting
Setup Manager

(Or)

HRMS Organization
Form

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MOAC Setup: Create an Operating Unit

Navigation

- Responsibility: General Ledger, Vision Operations (USA)
(N) Setup > Financials > Accounting Setup Manager
- Responsibility: Human Resources , Vision Enterprises
(N) Work Structures > Organization > Description

You can define your operating units in two places. You can continue to define them in the Oracle HRMS Organization Form or in Account Setup Manager in General Ledger. The Accounting Setup Manager streamlines the setup and implementation of Oracle Financial Applications by centralizing the setup and maintenance of common financial components, such as legal entities, operating units, and ledgers. So, here when you create an accounting setup, assign a Legal entity, and create the ledgers that will perform the accounting for that Legal entity, you can also define and assign the relevant operating units. Instead of attaching an OU to a LE, you assign it to a default legal context. If operating units are assigned to a Ledger, they will be associated to a primary ledger in an accounting setup. You will be able to view all operating units assigned to an upgraded primary ledger using Accounting Setup Manager.

Dependencies and Interactions of MOAC

Dependencies and Interactions of MOAC

- Oracle HRMS:
 - Define operating units.
 - Set up Multi-Org Security Profiles.
- Accounting Setup Manager:
 - Define operating units.
 - View all operating units assigned to the primary ledger.
- Oracle E-Business Suite products that use Operating Units:
 - Process data across multiple operating units using MOAC.

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Dependencies and Interactions of MOAC

As already mentioned, operating units can be defined using either the HRMS organization form or the Accounting Setup Manager.

Dependencies and Interactions of MOAC

Dependencies and Interactions of MOAC

Product name	Leveraging Multi-Org Access Control feature
Payables	Reduce processing time with the ability to enter invoices for multiple operating units without switching responsibilities. Reduce processing cost with the ability to pay invoices for multiple operating units in a single pay run.
Receivables	Provide global information for decision making purposes with new cross-organization reports.
Purchasing	Provide the ability to negotiate discounts armed with consolidated requisition demands.
Collections	Is a global collections agency with consolidated view of customer accounts and collection tasks for multiple operating units
Accounting Setup Manager	Create ledgers and operating units through the Accounting Setup Manager.

Dependencies and Interactions of MOAC (continued)

Following are a few examples of how products leverage MOAC:

- In Payables, you can enter invoices for different operating units from their Invoice Workbench. There is a operating unit field, which is the first field to be specified when you enter an invoice. It does not imply that you can enter an invoice with invoice lines that cross operating units. An invoice is still applicable for one operating unit, but you can select different operating units without having to change responsibilities.
- In Receivables, there are some cross-organization reports. So when you run a report, it will run the report for all the operating units you have access to, based on your security profile.
- In Purchasing, you will be able to view consolidated requisition demands that cross operating units.
- In Collections, you can manage customers and accounts across OUs.
- Accounting Setup Manager provides the ability to define operating units, assign them to a primary ledger, as well as create the GRE/Legal entities and operating units at the same time.

Multi-Org Preferences: Description

Multi-Org Preferences: Description

User Level Preferences:

- Specify User Level Preferences.
- Identify a subset of operating units to access.
- Set default Operating Unit specific to that user.

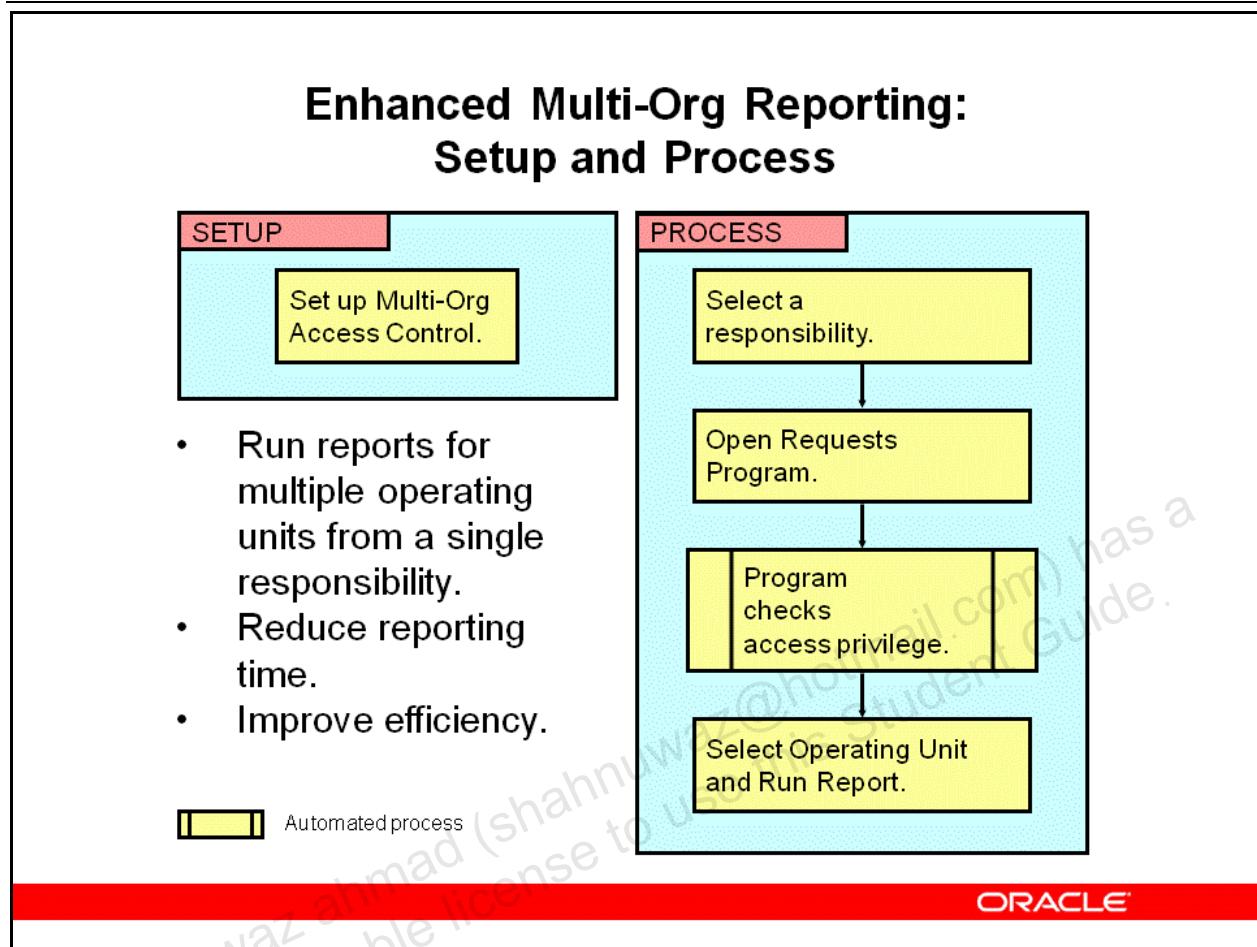
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Multi-Org Preferences: Description

Multi-Org preferences allow the user to control the list of operating units the user accesses. HR may create a security profile that has 10 operating units assigned and the system administrator assigns the profile to a user or responsibility. But, if a user only works with five of them on a daily basis and does not want the workspace cluttered with extraneous operating units, the user can set up Multi-Org preferences to restrict the list of OUs. Because the user has complete control over this, he/she can change it at anytime.

In addition, the user can specify a default operating unit, which sets the User-level value for the Default Operating Unit profile option.

Enhanced Multi-Org Reporting: Setup and Process



Enhanced Multi-Org Reporting

Enhanced Multi-Org reporting is not the same as cross-organization reports that allow you to run a report at the ledger level to obtain results for all operating units assigned to that ledger or obtain results for all the operating units for a GRE/Legal entity.

Multi-Org Reporting allows you to select any operating unit you have access to when submitting a report. So it is in line with MOAC. All this allows you to report on data for multiple operating units from a single application responsibility.

Setup and Process

When you set up MOAC and run a report, you will be able to run it for any operating unit you have access to.

Quiz

Quiz

Users can change the responsibility to access different operating units by using MOAC.

- a. True
- b. False

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Answer: b

Quiz Specifications: This statement is False. Users can access any number of operating units using MOAC, provided that all operating units are associated with the Global Security Profile.

Quiz

Quiz

An inventory organization represents an organization, for which you track inventory transactions and balances, and manufacture or distribute products.

- a. True
- b. False

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Answer: a

Quiz Specifications: This statement is True. An inventory organization represents an organization, for which you track inventory transactions and balances, and manufacture or distribute products. Examples include manufacturing plants, warehouses, distribution centers, and sales offices.

Quiz

Quiz

Multi-Org is a server-side (applications and database) enhancement that enables single installation of Oracle Applications.

- a. True
- b. False

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Answer: a

Quiz Specifications: This statement is True. The Multi-Org enhancement uses native database views to build a security layer on top of a single installation of Oracle Applications. Multi-Org is a server-side enhancement that enables multiple business units in an enterprise to use a single installation of Oracle Applications products while keeping transaction data separate and secure.

Quiz

Quiz

Which of the following profile options links an Operating Unit to a Responsibility?

- a. MO: Operating Unit
- b. MO: Security Profile
- c. MO: Set Client_Info for Debugging
- d. MO: Default Operating Unit

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Answer: a

Summary

Summary

In this lesson, you should have learned how to:

- Define Multi-Org
- Explain the Multi-Org entities
- Explain how data is secured
- Identify key implementation considerations
- Define Multi-Org Access Control
- Explain Multi-Org preferences
- Explain Enhanced Multiple-Organization Reporting

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Fundamentals of Workflow and Alerts

Chapter 8

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Fundamentals of Workflow and Alerts

8

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Objectives

Objectives

After completing this lesson, you should be able to do the following:

- Discuss Workflow concepts
- Describe the benefits of Workflow
- Discuss the Business Events concepts
- Discuss Oracle Workflow Home pages and Worklist Web pages
- Monitor Workflow Web pages
- Respond to Workflow notifications
- Monitor a Workflow process
- Describe alerts

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Workflow Processes

Workflow Processes

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Enabling E-Business

Enabling E-Business

Streamlined business processes play a critical role in the transformation to e-business. Workflow delivers a complete business process definition, automation, and integration solution.



Workflow: The wiring for e-business

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Enabling E-Business

Oracle Workflow delivers a complete workflow management system that supports integration for business processes. Its technology enables modeling, automation, and continuous improvement of business processes, and routing information of any type according to user-defined business rules.

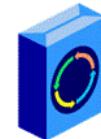
E-business is accelerating the demand for integration of applications within the enterprise, as well as integration of a company's systems with trading partners, and business-to-business exchanges. Oracle Workflow automates and streamlines business processes both within and beyond your enterprise. It supports workflow in traditional applications as well as workflow in e-business integration. Oracle Workflow is unique in providing a workflow solution for internal processes. It also coordinates business processes between applications.

Workflow Activities: Examples

Workflow Activities: Examples

A workflow is a set of business rules that can:

- Create accounting based on your requirements
- Route business documents internally for approval
- Initiate an outbound message (queue an approved purchase order for transmission to a supplier)
- Be started as a result of an inbound message (for example, an inbound Payables Invoice)
- Generate and send notifications that can be viewed from your personal home page or the Notifications Window
- Generate and send email to an email client (respond directly to notifications without accessing Oracle Applications)



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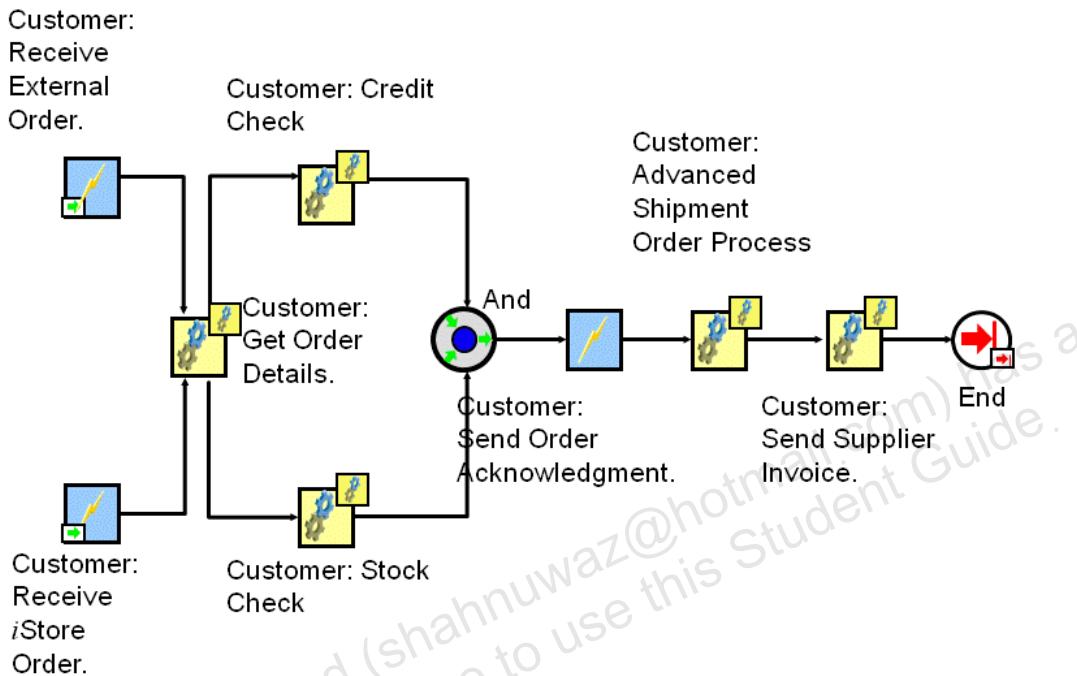
Workflow Activities: Examples

Workflow is a tool that helps automate your business processes and the human-worker processes that generate information. Workflow can help streamline business processes by making them more efficient.

Each workflow is a series of activities performed either automatically or by an end user. Each activity is a PL/SQL function that is executed by the Workflow Engine in the form of a notification to a human user to perform some work, a business event, or a subprocess in itself. Notification activities deliver messages to users via email or a Notification Web page, accessible through a Web browser.

Workflow Processes

Workflow Processes



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Workflow Processes

A workflow process definition must be saved to the same database as the Workflow Engine. A process definition is composed of activities and the transitions between them.

- A completed application transaction or event can initiate a workflow process by raising an event or by calling a series of Workflow Engine APIs.
- The Workflow Engine locates the “Start” activity in the process definition.
- The Workflow Engine drives through the process, performing all automated steps such as function activities and Raise and Send event activities, until an asynchronous activity such as a notification requiring a Response, Receive event activity, or blocking activity occurs.
- The Workflow Engine calls the Notification System to deliver a notification message to an appropriate role. When the person associated with the role completes the notification response, the Workflow Engine continues to drive through the remaining activities in the process.
- If a blocking activity is encountered, the Workflow Engine waits for an external program to complete and call the appropriate Workflow Engine API before proceeding to the next activity.

- If a Receive event activity is encountered, the Workflow Engine waits to receive the event from the Business Event System before proceeding to the next activity.
- The process completes when the Workflow Engine encounters an End activity.

Example

Order Processing: The example in the slide shows a sample workflow process that includes business events.

Oracle Workflow Availability

Oracle Workflow Availability

Oracle Workflow is available embedded in Oracle E-Business Suite.

- Self-service applications
- Professional applications



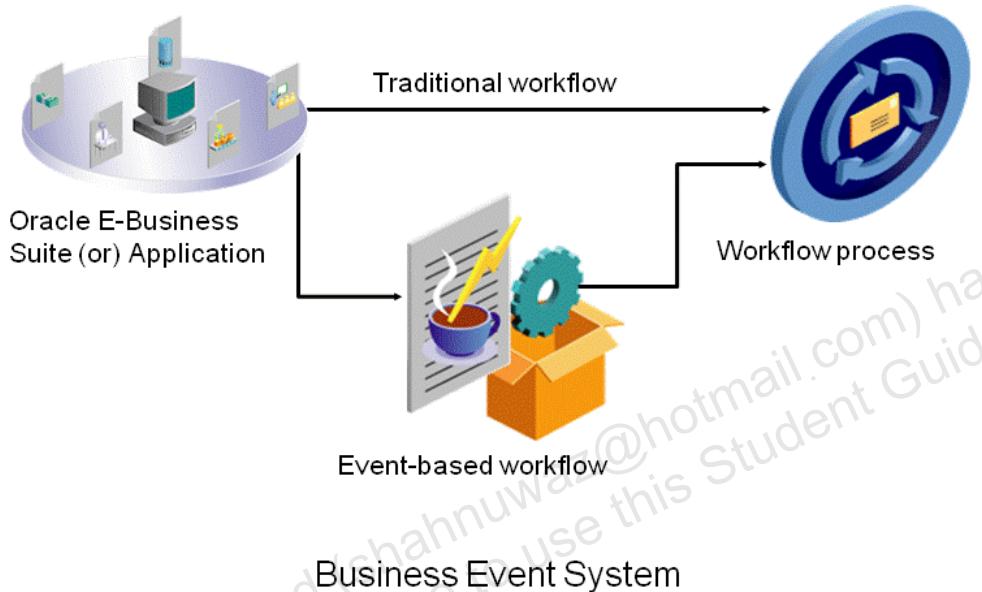
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Oracle Workflow Availability

Oracle Workflow is available embedded in Oracle E-Business Suite to enforce a common set of business rules. In Oracle E-Business Suite, Oracle Workflow is incorporated in applications, including Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), and Human Resources Management Systems (HRMS). Oracle Workflow is leveraged by both professional applications, which are typically Forms based applications for power users, and self-service applications, which are typically HTML based applications for more casual users.

Traditional Workflow Versus Event-Based Workflow

Traditional Workflow Versus Event-Based Workflow



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Traditional Workflow Versus Event-Based Workflow

Traditional Workflow

- Traditional applications-based workflow processes are launched from a business application through APIs that are hard-coded within the application. These processes model the business rules in the individual, local application, and comprise activities executed by the Workflow Engine only in that application's system. For example, the modeling of an approval hierarchy is a common use of Workflow in this scenario.

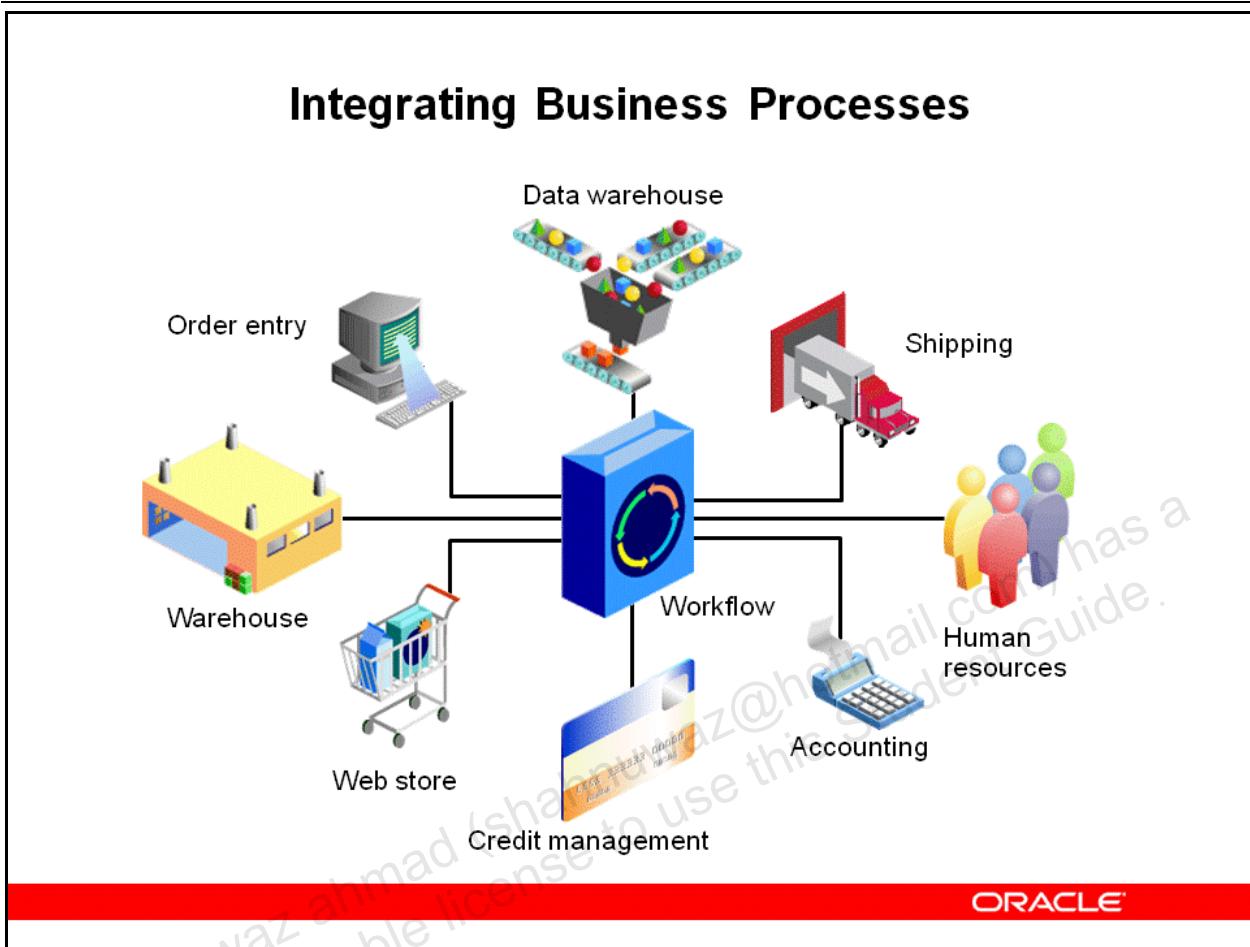
Event-Based Workflow

- With the Business Event System, Workflow supports both traditional applications-based workflows and event-based integration workflows.
- For e-business, there is a need to integrate with external systems, such as sending a document to a business-to-business exchange, or other systems external to the local application. Workflow supports e-business integration workflows by allowing business analysts and developers to model business processes spanning different systems using a graphical drag-and-drop designer—Workflow Builder—and run those processes using the Workflow Engine and the Business Event System. This support allows Workflow customers to handle business objects in comprehensive e-business integration flows, with minimal intrusion into the core application.

The Business Event System and the Workflow Engine can function independent of each other. However, you can achieve the most powerful and flexible processing by using the Business Event System and the Workflow Engine together to execute cross-system processes for e-business integration.

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Integrating Business Processes



Benefits of Workflow

Benefits of Workflow

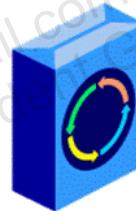
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Workflow-Driven Business Processes

Workflow-Driven Business Processes

Workflow allows you to focus on managing the business process, not individual transactions.

- Define and implement your business policies.
- Streamline the entire process.
- Route information.
- Capture exceptions and take action.
- Build continuous improvements directly into the process definition.
- Adapt your processes as your business changes.



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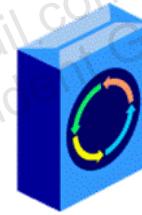
Workflow-Driven Business Processes

Streamlined business processes play a critical role in the transformation to e-business. Oracle Workflow delivers a complete workflow management system that supports integration for business processes. Its technology enables modeling, automation, and continuous improvement of business processes, and routing information of any type according to user-defined business rules.

Workflow-Driven Business Processes

Workflow-Driven Business Processes

- Workflow automates and streamlines business processes contained within and between enterprises.
- For example, you can use workflow processes to:
 - Add personalized trading partner rules
 - Validate self-service transactions
 - Approve standard business documents
 - Step through daily transaction flows
 - Integrate with trading partner systems



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Oracle Workflow Home Pages

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Oracle Workflow Home Pages

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Oracle Workflow Home Pages

Oracle Workflow Home Pages

Oracle Workflow embedded in Oracle E-Business Suite:

- Administrator Home page
- Self-service Home page



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Oracle Workflow Home Pages

Oracle Workflow embedded in Oracle E-Business Suite:

- **Administrator Home page:** Lists your five highest priority notifications as well as the five most recent error workflows that were started within the past week. It also provides tabs to Developer Studio, Event Manager (Business Events), administrator Status Monitor, and Advanced Worklist.
- **Self-service Home page:** Lists your five highest priority notifications as well as the five most recent workflows that you own that were started in the past two weeks. It also provides tabs to Advanced Worklist and self-service Status Monitor.

Worklist Web Pages

Worklist Web Pages

The Worklist Web pages:

- Provide a list of open notifications for a particular user
- Allow the user to view notification details, including:
 - Messages formatted in extended HTML message formats
 - Links to URLs or Oracle E-Business Suite forms that allow users to research and make decisions through online inquiry
- Allow the user to respond to notifications that require a response



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Worklist Web Pages

The Oracle Workflow version embedded in Oracle E-Business Suite includes three different versions of the Worklist in the Oracle Applications Framework user interface format:

- **Worklist:** Shows basic notification information
- **Advanced Worklist:** Provides additional information as well as additional options for displaying and administering notifications
- **Personal Worklist:** Provides additional search and filtering options for displaying notifications

To view the notifications on the Worklist Web pages, you must have Oracle HTTP Server installed as the Web server for Oracle Workflow, and a Web browser supporting Frames and JavaScript.

Email Notifications

Email Notifications

- The Notification System interfaces with the notification mailer program to send email notifications.
- Users can reply to email notifications by using their email client.
- A notification mailer can send an individual email for each notification, or a summary email listing all the outstanding notifications for a user.



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Notification Worklist

Notification Worklist

From the Notification Worklist, you can:

- View all the open notifications
- View all the FYI notifications (no response required)
- View all the To Do notifications (require a response)
- View all the notifications
- Reassign the notifications

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Notification Worklist

The Notification Worklist provides a list of open notifications for a user. You can also configure the Notification Mailer to send you an email summarizing the outstanding notifications. From the Worklist, a user can view the notifications as well as respond to those that require a response.

Self-Service Web Page Format

The Workflow Web pages are in the format of self-service Web applications. Currently, the Notifications Worklist and the Notification Rules Web pages are available in this format for the Workflow version embedded in Oracle E-Business Suite (EBS).

Worklist: Bulk Notification Response and Bulk Notification Close

In 12.1, the Bulk Notification Response and Bulk Notification Close feature enables mass response to Oracle Workflow notifications. Oracle Workflow now lets users respond to multiple notifications of the same type at once using a Respond button on the Worklist and Notification Search pages. Oracle Workflow also lets users close multiple FYI notifications at once using a Close button on the Worklist and Notification Search pages. These features enhance user productivity by letting users handle similar notifications in bulk, rather than having to navigate to the Notification Details page for each notification individually.

Workflow Monitor Web Pages

Workflow Monitor Web Pages

The Workflow Monitor Web pages:

- Allow you to search for a workflow process instance
- Display status information for the process instance:
 - Graphical depiction of the process status in a diagram
 - Detailed information about individual activities and about the process as a whole
- Allow users to view their own workflows
- Allow administrators to view all workflows, perform control operations, and handle errors



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Workflow Monitor Web Pages

User Interface

The Oracle Workflow Web pages are in the Oracle Applications Framework user interface format. Workflow includes the administrator and self-service versions of the Status Monitor.

The Oracle Workflow Web pages require Oracle HTTP Server to be installed on a server machine. Oracle HTTP Server is included with Oracle Application Server. See *Oracle Applications Installation Guide: Using Rapid Install*.

To view Workflow Web pages, users need a Web browser application supported for Oracle Applications. See *Recommended Browsers for Oracle E-Business Suite Release 12, My Oracle Support Knowledge Document 389422.1*.

Refer to the guided demonstration - *Using the Workflow Monitor (Required)*.

Refer to the practice *Viewing Approval Process Using Workflow Monitor (Required)*.

Business Event System

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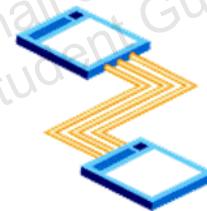
Business Event System

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System Integration with Workflow

System Integration with Workflow

- E-business accelerates the demand for system integration.
- Communication is required between systems both within and beyond the enterprise.
- Workflow supports e-business integration workflows through the Business Event System.
- Business event-based workflows allow modeling of cross-system processes, enabling business process-based integration.



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Subscription-Based Processing

Subscription-Based Processing

In the Workflow Business Event System:

- Business events in applications trigger event subscriptions in Workflow
- Subscriptions can launch workflow processes or perform other processing
- Multiple subscriptions can be defined to perform different processing for the same event
- Subscriptions can be enabled, modified, or disabled as necessary



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Subscription-Based Processing

Business Event System provides increased flexibility through subscription-based processing: You raise a business event from an application, but specify the processing to perform a subscription in Workflow for the same event. For example, you can launch a workflow process when an event is raised by associating the workflow process in the subscription for the event. You can also define multiple subscriptions to the same event to perform additional processing for different purposes.

An event subscription is a registration indicating that an event is significant to a system. An event subscription also specifies that the processing should happen when the triggering event occurs. You can define your event subscriptions in Event Manager. When you install Workflow, several default subscriptions to predefined Workflow events are automatically created. You can update, enable, or disable these subscriptions to perform event processing.

Whenever an event is raised locally or received from an external source, the Event Manager searches for and executes any active subscriptions by the local system to that event or to the Any event. If no active subscriptions exist for the event that occurred (apart from subscriptions to the Any event), Workflow executes any active subscriptions to the Unexpected event.

Workflow provides default error handling for subscription processing through a predefined Error subscription to the Unexpected event and the Default Event Error process in the System: Error item type. You can also define custom error handling for your events.

Business Event System: Example

Business Event System: Example

Business Event	PO Approval
Subscription	Extract PO



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Business Event System: Example

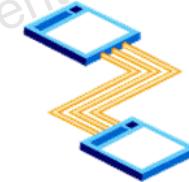
The Business Event System consists of the Event Manager, which allows you to register subscriptions to events significant to your systems. When a local event occurs (PO Approval), the subscribing code is executed in the same transaction as the code that raised the event (Extract PO), unless the subscription is deferred. When you define a subscription for a business event, you define the resulting action to be taken when the event is raised. Subscription processing can include executing custom code on the event information, sending event information to a workflow process, and sending event information to other queues or systems.

Supported System Integration Types

Supported System Integration Types

The Business Event System supports integration in which applications are loosely coupled through asynchronous messaging.

- Point-to-point system integration: Hardwired communication between specified systems
- Messaging hub system integration: Intersystem communication routed through a central hub for more complex integration scenarios
- Distributed applications messaging: Master/copy replication of data for distributed applications



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Supported System Integration Types

The types of system integration supported by Workflow are message based. By supporting communication of messages between systems, Workflow allows you to define processing across different systems encompassing both your enterprise and your business partners. The power of this cross-system processing, together with the flexibility provided by the subscription-based processing, enables you to use Workflow for e-business integration.

Overview of Alerts

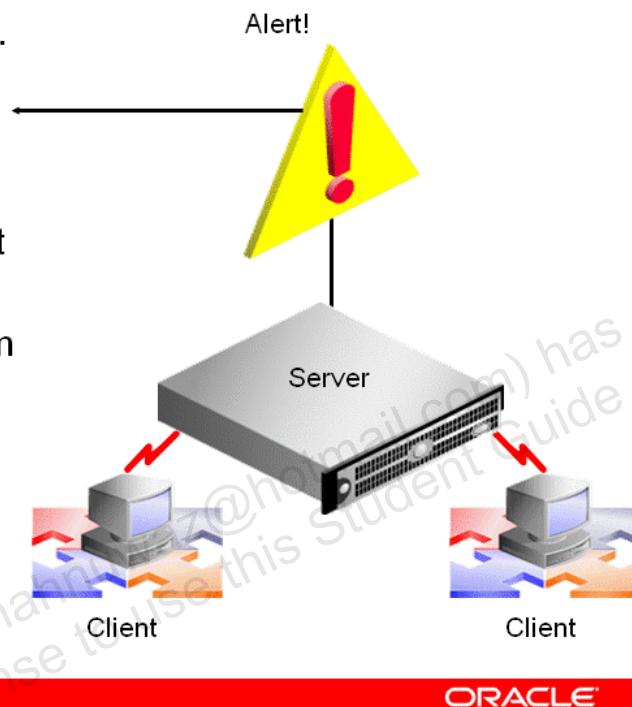
Overview of Alerts

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Alert Process Overview

Alert Process Overview

- Send email message.
- Submit concurrent program request.
- Run SQL script.
- Run a SQL script that starts a workflow.
- Run operating system script.



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Alert Process Overview

How do you find out about important or unusual activity in your database? How do you stay informed of regular, yet critical database events without sorting through lengthy reports?

Alerts monitor your database information and notify you when the condition that you have specified is found. Oracle Alert leverages the Workflow Notification Mailer to send alert email messages and process responses.

You can define Alerts in any Oracle application or custom Oracle application. Some applications (Purchasing, for example) supply Alerts that can simply be activated and used.

You can define one of two types of alerts: event and periodic

- **Event alert:** Notifies you of activity in your database as soon as it occurs
- **Periodic alert:** Checks the database for information according to a schedule that you define

Event Alerts: Examples

Event Alerts: Examples

Event alerts start when a record is inserted or updated.

Examples of event alerts that could be created include:

- New Code Combination: Notify GL Manager as soon as a new account combination has been created.
- Shipment Confirmation: Notify a user as soon as a shipment has been processed.
- Supplier Hold: Notify Purchasing Manager as soon as a supplier has been placed on hold.
- Database monitoring: Inform the DBA as soon as database tables need more space and automatically allocate space.

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Event Alerts: Examples

By creating event alerts, you can have an immediate view of the activity in your database, thereby keeping up with important or unusual events as they happen.

When you create an event alert, you specify the following:

- A database event that you want to monitor—which is an insert or update to a specific database table
- A SQL SELECT statement that retrieves specific database information as a result of the database event
- Actions that you want Alert to perform as a result of the database event

Periodic Alerts: Examples

Periodic Alerts: Examples

- Personnel: Show all employees terminated in the last six months (monthly).
- Payroll: Show current balance and vacation reported by month (monthly).
- Purchasing: Detect creation or edit of Vendor with nonstandard payment terms (weekly).
- Purchasing: Show all blanket agreements that will expire (daily).

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Periodic Alerts: Examples

By creating periodic alerts, you can have current measurements of staff and organization performance, so that you can focus on potential trouble spots. You can automate routine transactions.

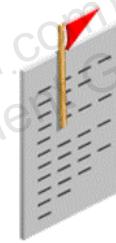
When you create a periodic alert, you specify the following:

- A SQL SELECT statement that retrieves specific database information
- The frequency with which you want the periodic alert to run the SQL statement
- Actions that you want Alert to perform when it runs the SQL statement

What Is an Exception?

What Is an Exception?

- An exception is a specified condition found during an alert check.
- For example, an alert checking for users who did not change their passwords within the designated time finds five users that meet the criteria. Each user found is an exception.



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Action Types

Action Types

An action occurs after a monitored database event occurs or a periodic check of the database has been performed. Alert can perform the following actions:

- Send an email message.
- Submit a concurrent program request.
- Run a SQL statement script.
- Run an operating system script.

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Action Types

- Messages:

- Simple Mail Transfer Protocol (SMTP) for outbound messages
- Internet Message Access Protocol (IMAP) for inbound messages

- Concurrent program request: Supply arguments.

- SQL statement script

Note: The only tables that you can write to directly are the custom application tables and the open interface tables.

- Operating system script

Action Levels

Action Levels

- **Detail:** Perform the action for each occurrence of the condition.
- **Summary:** Perform the action for a group of occurrences of the condition.
- **No Exception:** Perform the action when nothing in the database meets the search criteria.



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Action Levels

Inform the Account Manager of invoices on hold:

- **Detail Action:** Send a separate email message for each invoice that meets the search criteria of invoices on hold.
- **Summary Action:** Send a single email message listing all the invoices that meet the search criteria, or send one summary for each vendor.
- **No Exception Action:** Send an email message stating that nothing in the database is on hold.

Refer to the guided demonstration - *Activating an Event Alert (Optional)*.

Refer to the practice - *Creating and Testing a Periodic Alert (Optional)*.

Differences Between Alert and Workflow

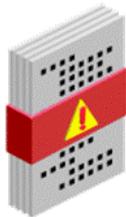
Differences Between Alert and Workflow

Alerts:

- Run on insert, update
- Limited conditional logic
- Limited predefined frequencies

Workflow:

- Run on potentially any action, concurrent request
- Any conditional logic
- Almost any frequency



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Differences Between Alert and Workflow

A major difference between Alert and Workflow is the ability to handle conditional processing. For example, assume that a workflow is defined in the system to detect a condition and requires a response from a user. Further, assume that the workflow was created such that if a response is not recorded during a specific period of time, a notification must be sent to the user's manager.

This type of logic is easy to incorporate into a Workflow. However, the same type of processing would be difficult to accomplish using Alert.

Quiz

Quiz

Workflow with the Business Event System can act as a system integration–messaging hub that relays business event messages among systems.

- a. True
- b. False

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Answer: a

Quiz Specifications: This statement is True. Workflow with the Business Event System can act as a system integration–messaging hub that relays business event messages among systems.

Quiz

Quiz

The workflow engine is a set of tables and PL/SQL stored procedures that manage the execution of a workflow process and tracks work in process.

- a. True
- b. False

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Answer: a

Quiz Specifications: This statement is True. The workflow engine is a set of tables and PL/SQL stored procedures that manage the execution of a workflow process and tracks work in process. It maintains the state information of a workflow item and generates a complete history for the item.

Quiz

Quiz

An alert can run an operating system script.

- a. True
- b. False

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Answer: a

Quiz Specifications: This statement is True. An alert can run an operating system script. Additionally, an alert can also run a SQL statement script, send an email, and submit a concurrent program request.

Quiz

Quiz

A specified condition found during an alert check is called:

- a. Notification
- b. Exception
- c. Error
- d. Message

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Answer: b

Summary

Summary

In this lesson, you should have learned how to:

- Recognize the benefits of Workflow
- Describe a Workflow process
- Identify the Business event process
- Describe Oracle Workflow Home pages and Worklist Web pages
- Monitor Workflow Web pages
- Respond to Workflow notifications
- Monitor a Workflow process
- Describe Alerts

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Oracle Business Intelligence Applications: Overview

Chapter 9

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Oracle Business Intelligence Applications: Overview

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Objectives

Objectives

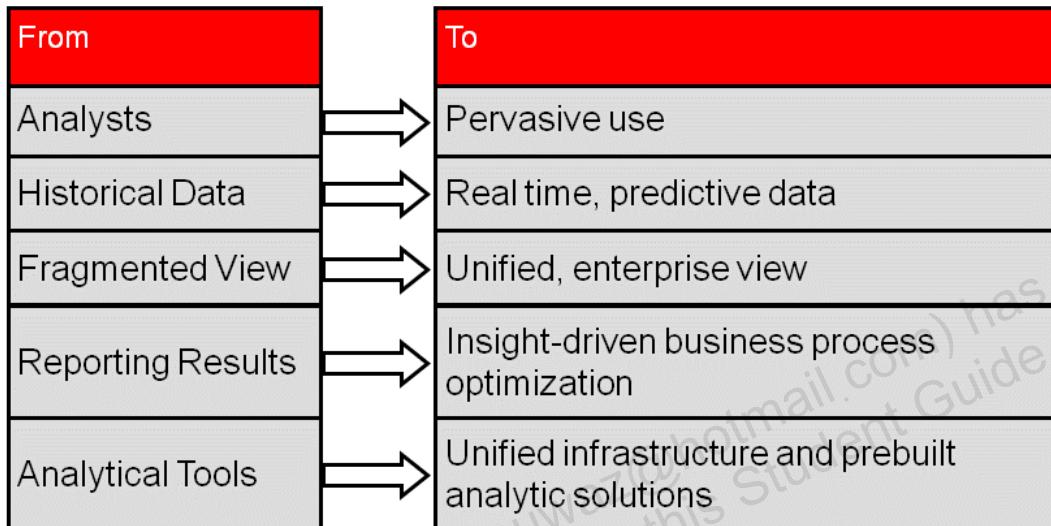
After completing this lesson, you should be able to:

- Describe Oracle Business Intelligence (Oracle BI) Applications
- Explain the key components of Oracle BI Applications
- Describe the integration of Oracle BI Applications with transactional applications

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The Evolving Role of Business Intelligence

The Evolving Role of Business Intelligence



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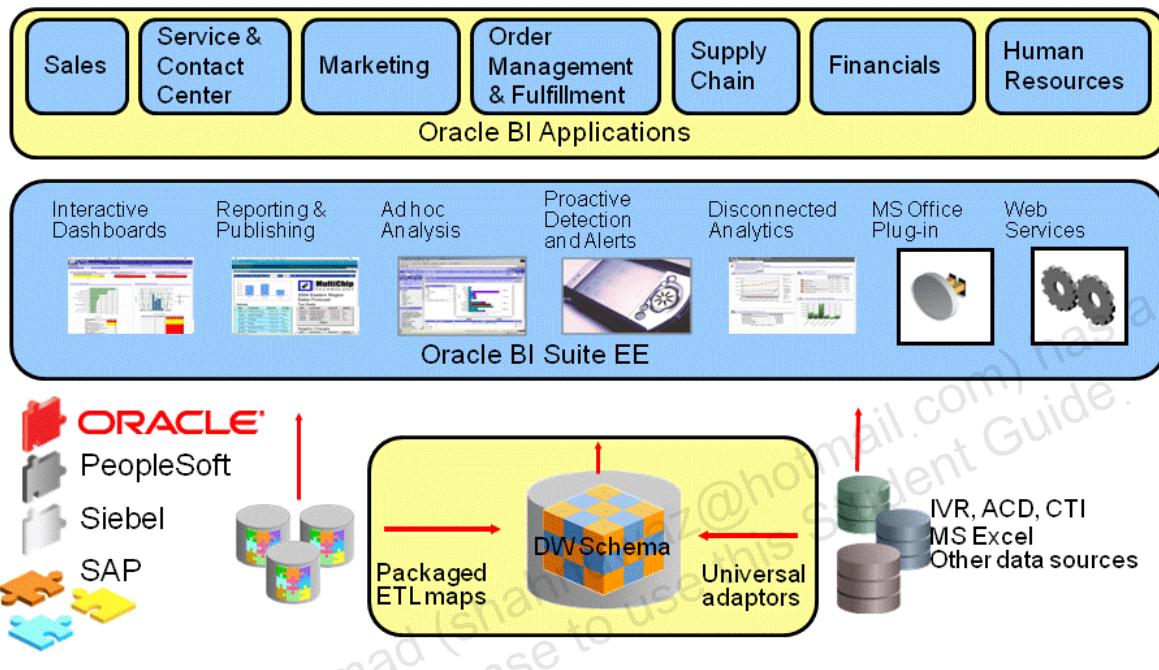
The Evolving Role of Business Intelligence

The role of business intelligence in an enterprise is undergoing a change:

- Usage is moving from a few analysts to pervasive use across many organizational functions. This is supported by the use of prebuilt applications that support multiple roles.
- Data storage is moving from purely historical information to up-to-the-minute analysis, and even predictive data that allows analysis into the future.
- Organizations want to bring together formerly fragmented silos of information, often stored in transactional systems, into a unified enterprise view of their organization.
- There is a trend toward using prebuilt BI Applications that offers packaged value instead of building individual reports on an as-needed basis using Analytics tools.

Oracle BI Applications: Overview

Oracle BI Applications: Overview



Oracle BI Applications: Overview

Oracle BI Applications is a complete, prebuilt Business Intelligence solution that both delivers intuitive, role-based intelligence for everyone in an organization, from frontline employees to senior management, and enables better decisions, actions, and business processes.

Oracle BI Applications is a complete, end-to-end BI environment that includes the Oracle BI EE platform and the prepackaged analytic applications.

The platform includes a server and end-user tools such as dashboards, query and analysis, enterprise reporting, and disconnected access to data, all supported by a unified, model-centric server architecture.

On top of this platform, Oracle BI Applications consumes transactional operational data sources via packaged extract, transform, and load (ETL) mappings, and metadata, which load a data warehouse for analysis. Analyzing the data warehouse, Oracle BI Applications delivers role-based analysis via prebuilt reports, dashboards, alerts, briefing books, and other channels provided by the platform.

Oracle BI Applications: Multisource Analytics

Oracle BI Applications: Multisource Analytics																
Sales	Service & Contact Center	Marketing	Order Management & Fulfillment		Supply Chain	Financials		Human Resources								
Pipeline Analysis	Churn Propensity	Campaign Scorecard	Order Linearity		Supplier Performance	A/R & A/P Analysis		Employee Productivity								
Triangulated Forecasting	Customer Satisfaction	Response Rates	Orders vs. Available Inventory		Spend Analysis	GL/Balance Sheet Analysis		Compensation Analysis								
Sales Team Effectiveness	Resolution Rates	Product Propensity	Cycle Time Analysis		Procurement Cycle Times	Customer & Product Profitability		HR Compliance Reporting								
Up-sell/Cross-sell	Service Rep Effectiveness	Loyalty and Attrition	Backlog Analysis		Inventory Availability	P&L Analysis		Workforce Profile								
Cycle Time Analysis	Service Cost Analysis	Market Basket Analysis	Fulfillment Status		Employee Expenses	Expense Management		Turnover Trends								
Lead Conversion	Service Trends	Campaign ROI	Customer Receivables		BOM Analysis	Cash Flow Analysis		Return on Human Capital								
Prebuilt adaptors: PeopleSoft Siebel SAP Other Operational & Analytic Sources																
Oracle BI Suite Enterprise Edition																

Financial Analytics

Financial Analytics

Provides the ability to improve financial performance with complete, up-to-the-minute information on expenses and revenue contributions:

- Assess cash management.
- Monitor operational effectiveness of the payables department to ensure the lowest transaction costs.
- Monitor DSOs and cash cycles to manage working capital.
- Manage financial performance across locations, customers, products, and territories.
- Identify the most profitable customers, products, and channels.
- Understand profitability drivers across regions, divisions, and profit centers.

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Financial Analytics

Understand and manage the key drivers of shareholder value and profitability. Oracle Financial Analytics helps frontline managers improve financial performance with complete, up-to-the-minute information on their department's expenses and revenue contributions. Hundreds of key performance indicators and more than 200 reports enable financial managers to improve cash flow, lower costs, and increase profitability while maintaining more accurate, timely, and transparent financial reporting that help ensure Sarbanes-Oxley compliance.

Oracle Financial Analytics provides the following benefits:

- **Payables:** Assess cash management and monitor operational effectiveness of the payables department to ensure the lowest transaction costs.
- **Receivables:** Monitor DSOs and cash cycles to manage working capital, manage collections, and control receivables risk.
- **General Ledger:** Manage financial performance across locations, customers, products, and territories, and receive real-time alerts on events that may impact the financial condition.
- **Profitability:** Identify most profitable customers, products, and channels, and understand profitability drivers across regions, divisions, and profit centers.

Procurement and Spend Analytics

Procurement and Spend Analytics

Provides the ability to optimize supply-side performance by integrating data from across the enterprise value chain:

- Gain detailed visibility into direct and indirect spending.
- Identify opportunities to consolidate spending and reduce costs.
- Monitor price, delivery, and product quality to determine best- and worst-performing suppliers.

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Procurement and Spend Analytics

Oracle Procurement and Spend Analytics provides the ability to optimize supply-side performance by integrating data from across the enterprise value chain and enables executives, managers, and frontline employees to make more informed decisions. Oracle Procurement and Spend Analytics increases visibility into the complete procure-to-pay process, including comprehensive spend-and-procurement analysis, supplier performance analysis, and supplier payables analysis. Through complete end-to-end insight into the factors that impact company performance, you can significantly reduce costs, enhance profitability, increase customer satisfaction, and gain competitive advantage.

Supply Chain and Order Management Analytics

Provides insight into order and inventory data so that you can make better decisions in each stage of the order life cycle:

- Improve revenue recognition with faster order to booking conversion and fewer bottlenecks in the order-to-cash cycle.
- Improve inventory management for those products that consistently fall into backlog due to a lack of appropriate stock levels.
- Gain visibility into inventory activities to minimize unnecessary expenditures and optimize inventory to conserve working capital.

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Supply Chain and Order Management Analytics

Oracle Supply Chain and Order Management Analytics delivers deep customer insight into order and inventory data so that you can make better decisions in each stage of the order life cycle. Oracle Supply Chain and Order Management Analytics enables you to assess inventory levels, determine likely product fulfillment needs before the order has been booked, quickly identify potential order backlog issues, and stay on top of critical accounts receivable (A/R) and days sales outstanding (DSO) issues. By leveraging actionable and fact-based insights, you can transform your current Supply Chain and Order Management processes to improve financial performance and customer satisfaction.

Sales Analytics

Sales Analytics

Improves the effectiveness of a sales organization:

- Analyze pipeline opportunities to determine actions required to meet sales targets.
- Determine which products and customer segments generate the most revenue.
- Understand which competitors are faced most often and how to win against them.
- Identify up-sell and cross-sell opportunities within existing accounts.

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Sales Analytics

Oracle Sales Analytics provides hundreds of key performance indicators and more than 130 prebuilt reports in five customizable dashboards. These analytics solutions dramatically improve the effectiveness of a sales organization by providing real-time, actionable insight into every sales opportunity at the point of customer contact. With more accurate sales forecasts and enhanced identification of potential problems and opportunities, Oracle Sales Analytics helps close business faster and increase overall sales revenue. Sales Analytics analyzes pipeline opportunities and forecasts to determine the actions required to meet sales targets. The application determines which products and customer segments generate the most revenue and how to effectively cross-sell and up-sell to them. It also evaluates which competitors are faced most often and how to win against them.

Human Resource Analytics

Human Resource Analytics

Provides the ability to improve overall workforce performance and managerial effectiveness:

- Understand how compensation impacts performance.
- Align incentive compensation with objectives and company goals.
- Assess HR performance against recruitment and retention goals.
- Understand drivers of employee turnover.
- Reduce time and cost of compliance reporting.

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Human Resource Analytics

Oracle Human Resources Analytics helps organizations improve overall workforce performance and managerial effectiveness while reducing costs. With numerous key performance indicators, more than 85 reports, and four dashboards, Oracle Human Resources Analytics provides human resources (HR) professionals and frontline managers with the tools to gain up-to-the-minute insight into productivity levels across an organization. The resulting benefits help reduce workforce costs, increase employee productivity, effectively manage employee compensation, improve retention, and reduce voluntary turnover.

Oracle Human Resources Analytics provides the following benefits:

- **Compensation:** Understand how compensation impacts performance, ensure compensation is equitable and consistent across roles, and align incentive compensation with objectives and company goals.
- **HR Performance:** Assess HR performance against recruitment and retention goals, monitor and improve employee productivity, and assess compensation competitiveness to attract top talent.
- **Retention:** Understand drivers of employee turnover, proactively identify top performers who are likely to be recruited by competitors, and reduce recruiting and involuntary termination costs.

- **Workforce Profile and Compliance:** Reduce time and cost of compliance reporting, increase employee satisfaction and retention, and manage overall profile and background of workforce.

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Service Analytics

Service Analytics

Provides a comprehensive customer service solution:

- Monitor, analyze, and manage the service center based on key performance metrics.
- Track the performance of customer-service representatives.
- Provide customer-service representatives a more complete view of a customer's account.

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Service Analytics

Oracle Service Analytics provides a comprehensive customer-service solution, with hundreds of key performance indicators and more than 102 reports delivered in eight interactive dashboards. This consolidated view of customer service effectiveness leads to improved service levels while lowering service costs, and increased customer satisfaction that translates into higher revenue per customer.

Oracle Service Analytics provides the following benefits:

- **Service Effectiveness:** Monitor, analyze, and manage the service center based on key performance metrics such as service request aging and average resolution time, increasing customer satisfaction and reducing costs.
- **Employee Effectiveness:** Understand the performance of customer-service representatives to enable improvements in employee productivity, effectiveness, training programs, and retention.
- **Customer Insight:** Provide customer-service representatives a more complete view of a customer's account, potential value, and propensity to buy more products, enabling faster resolution of issues and increased cross-selling rates.

Contact Center Telephony Analytics

Contact Center Telephony Analytics

Provides the ability to analyze all the aspects of contact center performance:

- Optimize performance across multiple service channels to maximize service effectiveness.
- Optimize staffing levels for anticipated call volumes and service request types.
- Gain insight into how training, tenure, and rewards impact agent performance.
- Track and measure initial incident-to-issue resolution rates.
- Maximize cross-sell and up-sell rates.

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Contact Center Telephony Analytics

Oracle Contact Center Telephony Analytics provides organizations with powerful insight that enables them to analyze all the aspects of contact center performance. Contact Center Telephony Analytics provides more than 72 reports in five interactive dashboards with hundreds of best-practice metrics, alerts, and key performance indicators (KPIs), enabling companies to take targeted action to improve employee productivity, reduce costs, and increase customer satisfaction.

Oracle Contact Center Telephony Analytics provides the following benefits:

- **Customer Service:** Optimize performance across multiple service channels to achieve greater process efficiency and maximize service effectiveness and customer satisfaction.
- **Agent Performance:** Increase service effectiveness while minimizing costs, optimize staffing levels for anticipated call volumes and service request types, and gain insight into how training, tenure, and rewards impact agent performance.
- **Service and Delivery Cost:** Track and measure initial incident-to-issue resolution rates, measure service costs by customer, channel, and product type to reduce overall service costs, and maximize customer satisfaction.
- **Contact Center Sales:** Increase revenue per agent, maximize cross-sell and up-sell rates, and maximize revenue performance across customer, product, service, and regions.

Marketing Analytics

Marketing Analytics

Provides a complete, up-to-the-minute picture of customer preferences, buying behavior, and profitability:

- Achieve better campaign response rates.
- Profile customers for more effective event-based promotion.
- Allocate resources more effectively by identifying what drives campaign results.
- Track and measure campaign effectiveness in real time.
- Compare individual campaign results to target metrics.
- Gain better insight into segmentation characteristics.

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Marketing Analytics

Oracle Marketing Analytics provides the ability to obtain maximum results from marketing investments by providing the entire marketing team with a complete, up-to-the-minute picture of customer preferences, buying behavior, and profitability. Oracle Marketing Analytics helps you to develop closer, more valuable customer and prospect relationships, and improve marketing effectiveness.

Oracle Marketing Analytics provides the following benefits:

- **Marketing Planning:** Achieve better campaign response rates, profile customers for more effective event-based promotion, and allocate resources more effectively by identifying what drives campaign results.
- **Campaign Performance:** Track and measure campaign effectiveness in real time, understand factors that drive campaign results and lead conversion rates, and compare individual campaign results to target metrics.
- **Customer Insight:** Understand product affinity for targeted promotions, profile customers' buying behavior for more effective promotions, and gain better insight into segmentation characteristics.

Oracle BI Applications Components

Oracle BI Applications Components

Oracle BI Applications includes four key components:

- Prebuilt data warehouse with conforming dimensions
- Prebuilt ETL to extract data from Oracle and non-Oracle sources
- Premapped metadata embedding best practices for metrics and KPIs
- Best practice library of dashboards and reports

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Oracle BI Applications Components

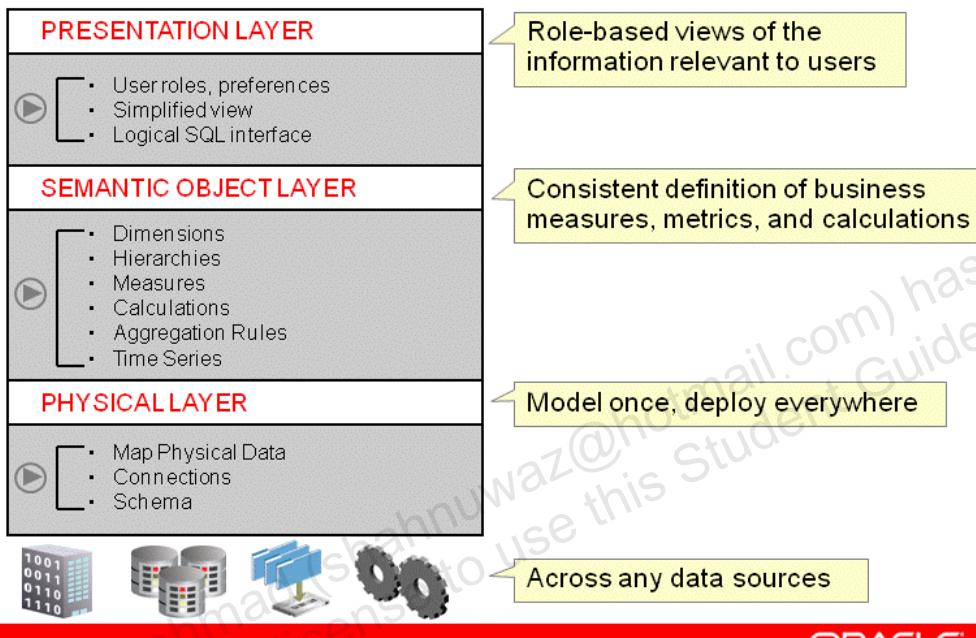
Oracle BI Applications includes the same four key components:

- A prebuilt data warehouse data model that is optimized for the various supported databases. This data model incorporates the best practices that have been used in BI, decision support, and data warehousing. For example, there are more than 15 star schemas designed for analysis and reporting on Financial Analytics.
- Prebuilt ETL logic that extracts and transforms data using a source-specific understanding of the supported transactional system before loading it into the data warehouse data model. The prebuilt ETL extracts data from over 3,000 operational tables and loads it into the data warehouse, sourced from SAP, Peoplesoft, Siebel, Oracle E-Business Suite, and other sources.
- Premapped metadata, which connects the physical data sources, provides logical models defining all the key performance indicators (KPI) and metrics, and finally defines the presentation of data in a role-based way to the users of the system. For example, there are different prebuilt presentations for roles such as Finance Managers, Procurement Managers, Call Center Agents, Sales Representatives, and so on.
- A library of metrics, reports, and alerts that are embedded in Interactive Dashboards and presented to users on the basis of individual roles, such as CFO, Finance Controller, Financial Analyst, AR/AP Managers, and Executives

Common Enterprise Information Model

Common Enterprise Information Model

Unified metadata model provides consistent information across the enterprise:



Common Enterprise Information Model

Oracle BI Applications is built on the Oracle Business Intelligence Foundation. At the heart of the Oracle Business Intelligence Foundation is a key technology differentiator for Oracle—the Common Enterprise Information Model. This is a unified metadata model, which is accessed by all the end-user tools, so that every end user and every department across the enterprise has the same consistent view of information, customized to their role. As a result, organizations no longer need to maintain multiple metadata environments for different types of users. Oracle provides the ability to “model once, deploy everywhere.”

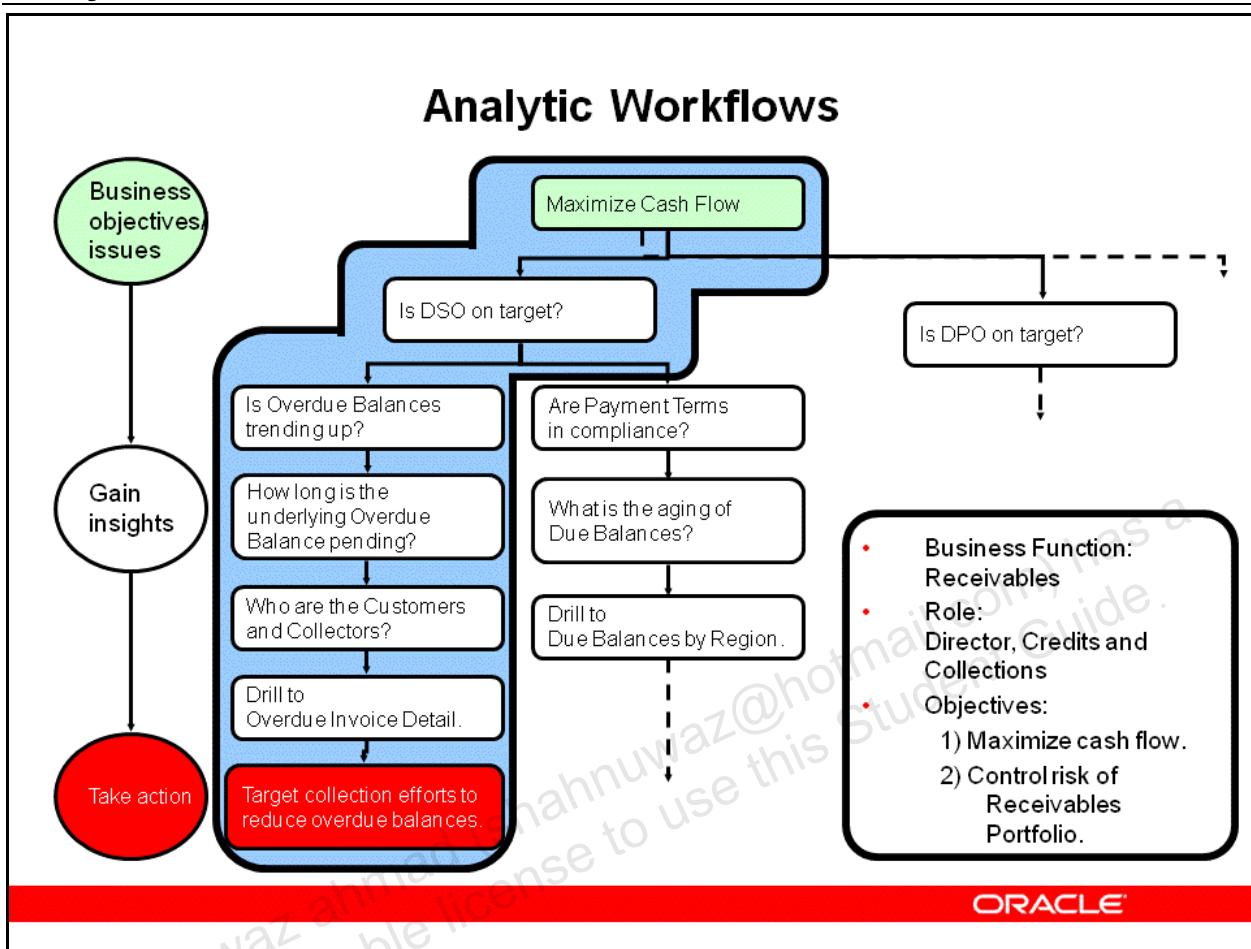
The metadata model consists of three tiers:

- The physical layer enables you to import the table structures of your existing data sources.
- The semantic layer enables you to create a simplified representation of multiple data sources, creating a logical model of your business in ways your managers think about it—dimensions, hierarchies, and metrics.
- The presentation layer further simplifies this model making the data appear to end users as a single data source with a single table structure of dimensions, measures, and derived measures.

This Common Enterprise Information Model enables you to define key metrics and calculations in one place, assuring that everyone has a consistent view of information (customized to their role) and assuring alignment across departments.

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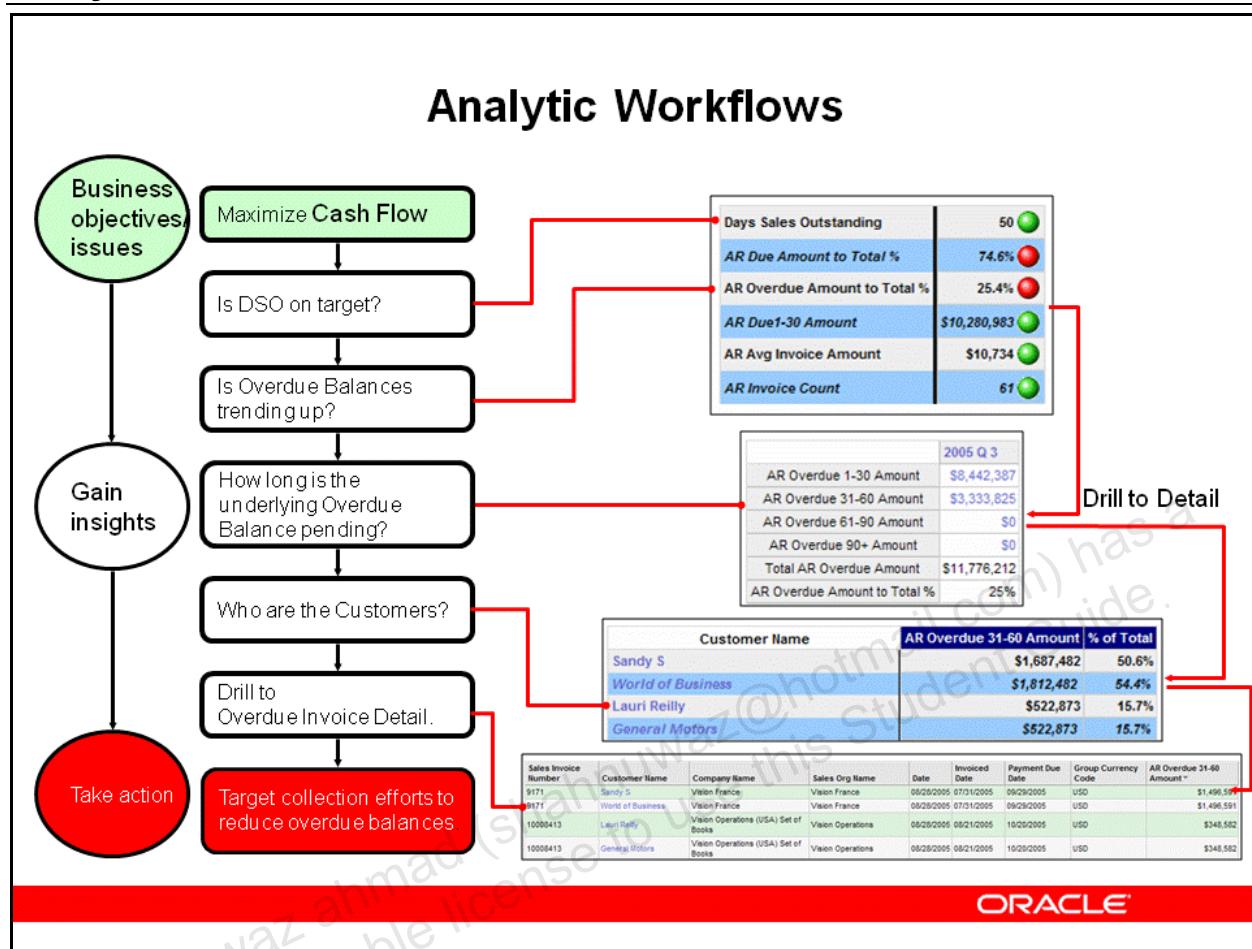
Analytic Workflows



Analytic Workflows

Analytic workflows are built around standard paths of discovery for business issues. In this example, a Director of Credits and Collections in the Receivables function of Finance and Accounting is monitoring the “Maximize Cash Flow” objective. This objective is composed of several key questions and KPIs around Days Sales Outstanding (DSO), Days Payable Outstanding (DPO), and others. Each one of these subsequently leads to more questions about the core components of the KPI—for example, DSO being on target requires overdue balances to be on target, customers to be paying in line with their terms, and so on. These workflows are supported in Oracle BI Applications as standard exploration paths.

Analytic Workflows

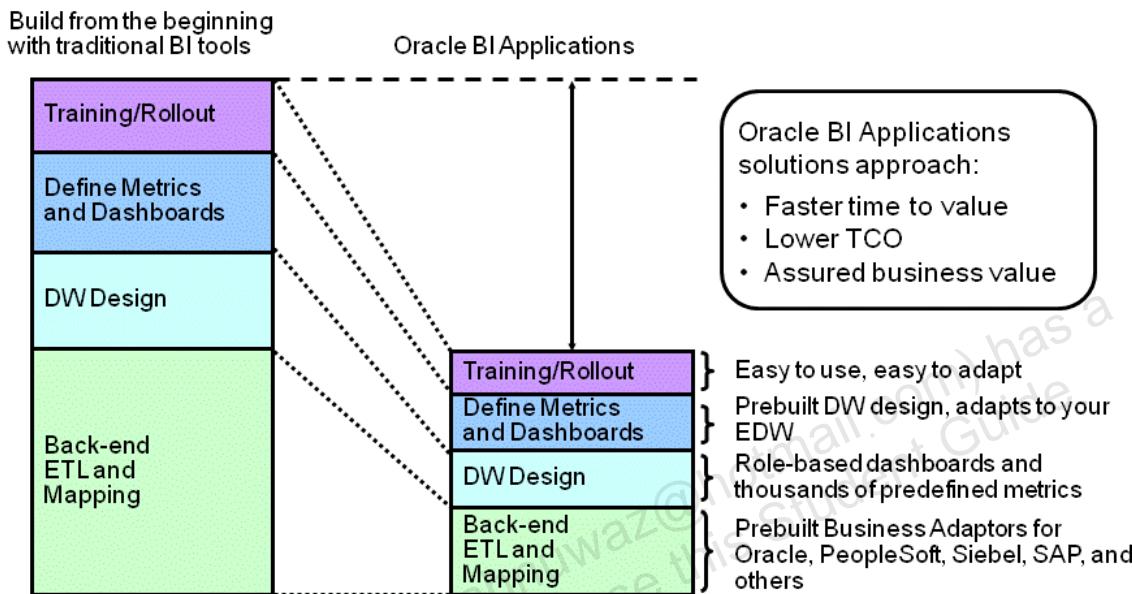


Analytic Workflows (continued)

Continuing with the example from the previous slide, following one branch of the “Maximize Cash Flow” analytic workflow, each part of the flow is supported by prebuilt reports and navigation that allow users to easily drill down to further levels of detail as required. Because the application and the supporting data warehouse model, and ETL are built to capture information at the transaction-line level, users can easily drill down from the summary information to the most atomic level of information. Ultimately this allows the user to not only monitor progress on an objective, but also to easily navigate to the right information, so that in the end any required corrective action can be proactively taken. Notice, for example, that in the “Take Action” area of the workflow, the user is drilling down from the BI Application’s transactional invoice level report back to the originating transactional application to take action in the operational system.

Speeds Time to Value and Lowers TCO

Speeds Time to Value and Lowers TCO



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Speeds Time to Value and Lowers TCO

Compared with a traditional business intelligence deployment, which entails using ETL and BI platforms to build, load, and report on a custom data warehouse schema, Oracle BI Applications can provide a significant benefit in the value and total cost of ownership (TCO). The prebuilt nature of the applications, including the data warehouse data model and ETL, BI metadata, and reports and dashboards, allows significant savings in deployment time, creating business value in the significantly reduced timeframes. Built-in best practices, KPIs, metrics, and workflows reduce time, ensure successful business analysis, and reduce TCO.

Application Integration: Security

Application Integration: Security

Shared security with Oracle EBS

- **EBS Security Integration:**
 - FND_User security
 - Shared responsibilities between Oracle EBS and Oracle BI Applications
 - Oracle Single Sign-On (SSO)
- **Hot-Pluggable Security:**
 - Prebuilt security roles in BI Applications
 - Users/roles synchronized with selected security environment

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Application Integration: Security

A shared security model between Oracle BI Applications and Oracle transactional applications supports SSO and enables a consistent view of the users and their hierarchies, and the roles within the organization. Oracle BI Applications is compatible with and shares user responsibilities with EBS security.

Application Integration: Action Links

Application Integration: Action Links

- Seamless navigation from analytical information to transactional detail while maintaining context
- Works with Oracle EBS, Siebel CRM, and PeopleSoft

The diagram illustrates the concept of action links. On the left, a screenshot of a BI report titled "Top 10 Orders" is shown. This report lists sales orders with columns for Sales Order Number, EBS Action Link, Customer Name, Source Order Status Description, and Total Ordered Amount. An arrow labeled "Action links" points from the BI report to the right, where a screenshot of the Oracle EBS Sales Order 100173 page is displayed. This page shows detailed transactional information for the selected order, including General details like Customer Name and Order Date, and Lines details like Item Description and Quantity.

Sales Order Number	EBS Action Link	Customer Name	Source Order Status Description	Total Ordered Amount
100173		Computer Service and Rentals	Closed	\$739,418
100174		Business World	Closed	\$738,893
120043		Imaging Innovations, Inc.	Closed	\$74,063
200133		Imaging Innovations, Inc.	Closed	\$59,548
120018		Hilman and Associates	Closed	\$54,149
100037		Imaging Innovations, Inc.	Closed	\$54,100
120040		Imaging Innovations, Inc.	Closed	\$50,578

Application Integration: Action Links

Action links allow navigation from Oracle BI Application reports back to Oracle EBS. Action links can move into the EBS screens in the context of the record shown in the report. This can be accomplished by:

- Installing the appropriate EBS patch for SSO integration with Oracle BI EE
- Retrieving the URL for the EBS page that you want to drill down to
- Creating an action link with this URL to navigate to the Oracle Application page

It is important to note that the lowest grain of records possible is loaded into the Oracle BI Applications from EBS—for example, general ledger and inventory transactions, order and invoice lines, human resources employees, and events. Because of this, it is easy for users to drill from the high-level, summary BI information that is created from these details down to successively more detailed information until they reach the most granular levels possible. Here, users may want to make changes to some of the transactional records related to this detailed information. Action links make it easy to navigate from the detailed records in BI to records in the transactional system while maintaining context.

Guided Navigation

Guided Navigation

Guided navigation:

- Enables users to quickly navigate a standard path of analytical discovery specific to their function and role

In addition to looking at the Inventory Snapshot by Plant that details information on a Quantity basis, it is very important to also understand the dollar value of these quantities. In order to obtain this information please click on the link below.

[Top 10 Inventory Valuation Report By Plant or Product Type](#)

Conditional navigation:

- Appears only when conditions are met and alerts users to potential out-of-the-ordinary conditions that require attention

 Recognized Revenue is trailing Order Revenue by a significant amount. Check your revenue page to investigate this issue.
[Revenue](#)

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Guided Navigation

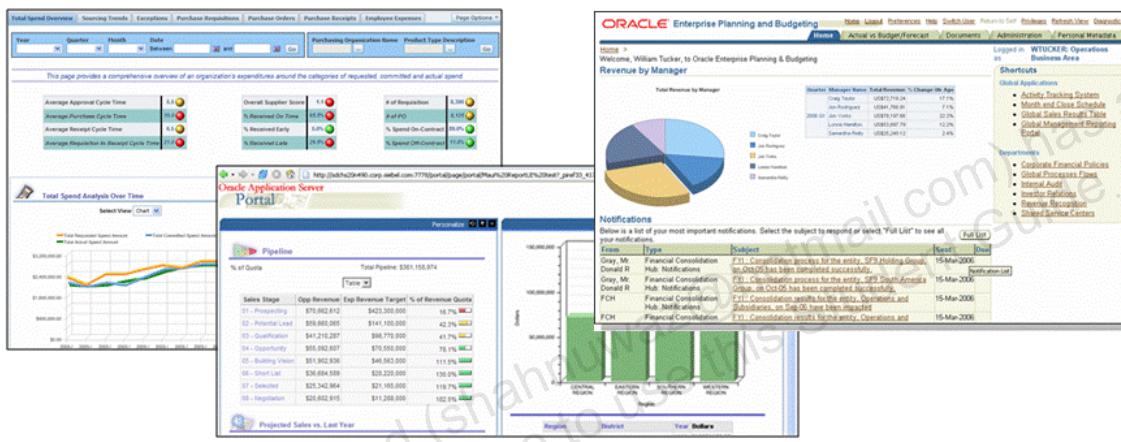
Guided navigation and alerts drive the business user to greater insight and action. As a result, users are guided to make informed and effective decisions that enhance the performance of the entire organization. Guided navigation links enable users to quickly navigate a standard path of analytical discovery specific to their function and role. This enhances usability and lowers the learning curve for new users.

It is also possible to set up conditional navigation links, which appear only when certain conditions are met, alert users to potential out-of-the-ordinary conditions that require attention, and guide users to the next logical step of analytical discovery.

Deployment Options

Deployment Options

- Stand-alone dashboards
- Portal integration
- Embedded directly in Oracle EBS



Deployment Options

BI content can be published in line with other standard content in a number of contexts. Besides the traditional stand-alone dashboards shown through the client, Oracle BI Applications can be embedded into any JSR 168 standards-based portals such as Oracle Portal. Reports can also be embedded directly in the Oracle Application pages.

Quiz

Quiz

Identify the correct description of the prebuilt extract, transform, and load (ETL) mappings used in Oracle BI Applications.

- a. ETL mappings are customized to manage consumption of all operational application data.
- b. ETL mappings are provided as a template and require customization.
- c. ETL mappings are prebuilt and consume information from multiple transactional sources to deliver broad business insight into these applications.
- d. ETL mappings are role based.

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Answer: c

Quiz

Quiz

There are four key components in Oracle BI Applications: data warehouse data model, prebuilt ETL logic, premapped BI EE metadata, and a library of metrics, reports, and alerts.

- a. True
- b. False

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Answer: a

Quiz

Quiz

Identify the correct statement about action links.

- a. Action links allow you to drill from an analytical report directly to the transactional detail.
- b. Action links provide alerts to situations based on key performance indicators.
- c. Action links are provided only for Oracle EBS applications.
- d. Action links allow you to drill down to the transactional grain in the data warehouse data.

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Answer: a

Quiz

Quiz

Financial Analytics includes the following: General Ledger and Profitability Analytics, Payables Analytics, and Receivables Analytics.

- a. True
- b. False

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Answer: a

Summary

Summary

In this lesson, you should have learned how to:

- Describe Oracle Business Intelligence (Oracle BI) Applications
- Explain the key components of Oracle BI Applications
- Describe Oracle BI Applications integration with transactional applications

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Additional Business Flows

Chapter 10

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Additional Business Flows

Additional Business Flows

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Campaign to Order



Campaign to Order

This business flow outlines how a company initiates, runs, and tracks a market campaign to attract and secure more orders. The business flow in the slide does not reflect the complete back-end integration with many of the shared entities, but depicts more of the front-end functionality.

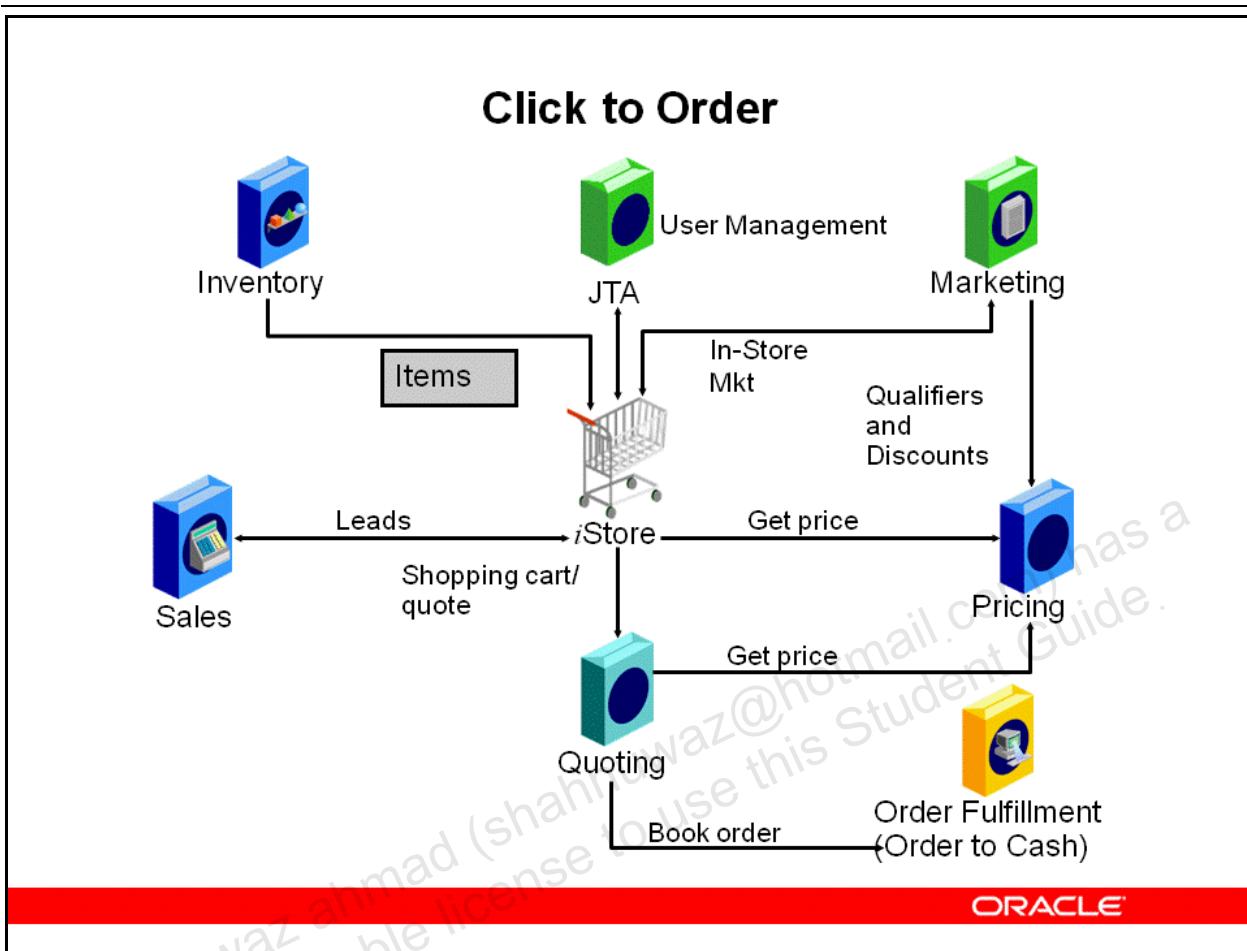
This flow involves the following products:

- **Discoverer:** Market segments of your customer base are created by using Discoverer. From the market segment, a target segment is created (for example, Market Segment = All Repeat Customers, Target Segment = Males over the age of 35).
- **Marketing:** A Marketing campaign is created in Marketing, which targets a particular audience. Campaigns are executed using many different channels (for example, Web, email, sales calls, and so on).
- **Scripting:** A script to help the sales agent through a particular offer is created and made available to all inbound agents. This script can be launched from the Sales application.
- **Audience:** The audience receives email, phone calls, reads an advertisement, and so on.
- **Advanced Inbound:** In this scenario, a call is placed to a 1-800 number, directed to the inbound call center, and then routed to an appropriate sales agent.

- **Sales:** The sales agent launches a script containing details of the offer about which the customer is inquiring.
- **Order to Cash Flow:** The sales agent creates a quote and the quote is passed to Order Management or to the Order to Cash business flow.

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Click to Order



Click to Order

This business flow relates to a company specifying its online sales setup. This flow encompasses activities starting from customer registration, setting up of product catalogs, setting up of targeted storefronts, and finally capturing of the order. However, the business flow in the slide does not reflect the complete back-end integration with many of the shared entities. The modules displayed in the slide depict more of the front-end functionality.

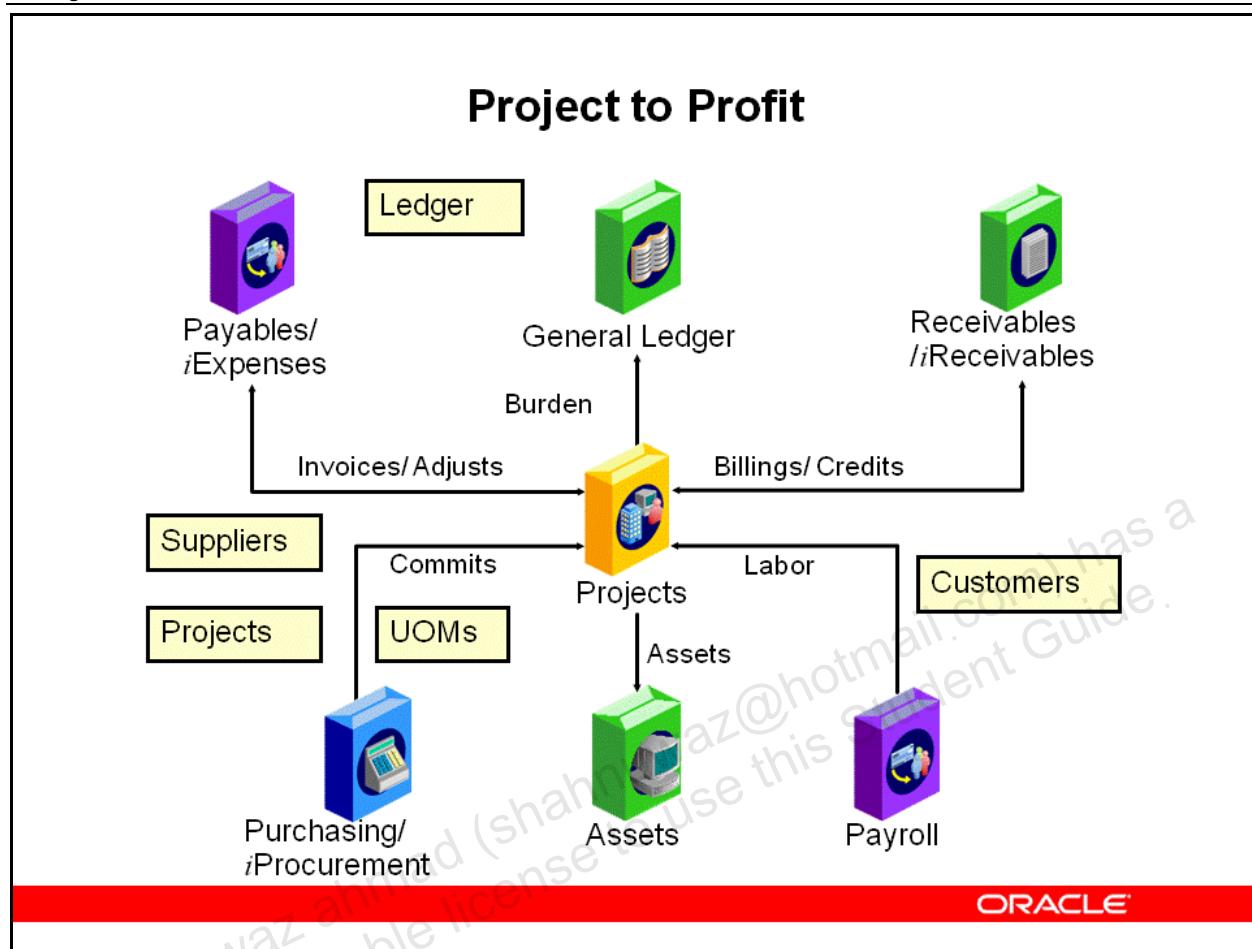
This flow involves the following products:

- **iStore:** iStore is the focal point of Click to Order. It enables a company to do business on the Web by using business-to-consumer (B2C) and/or business-to-business (B2B) models.
- **Java Transaction API (JTA):** JTA provides the user management functionality to the store to enable creation of users and their management.
- **Inventory:** Product or services sold in the store are items in Inventory.
- **Marketing:** The eMerchandizing module of Marketing can be used to advertise and make product recommendations within the store. Also, campaigns involving a discount are created in Marketing, those discounts are created in Pricing.
- **Sales:** Saved shopping carts that have been used for a predetermined amount of time are made available to Sales as leads.

- **Pricing:** *i*Store can call the pricing engine to determine the price of an item and check whether modifiers exist that can be applied to the price. Quoting can also call Pricing to determine the price.
- **Quoting:** A saved shopping cart is actually a quote in Quoting.
- **Order to Cash:** *i*Store communicates via the Order Capture Foundation APIs to Order Management (Order Fulfillment). The follow-on flow would be the Order to Cash flow.

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Project to Profit



Project to Profit

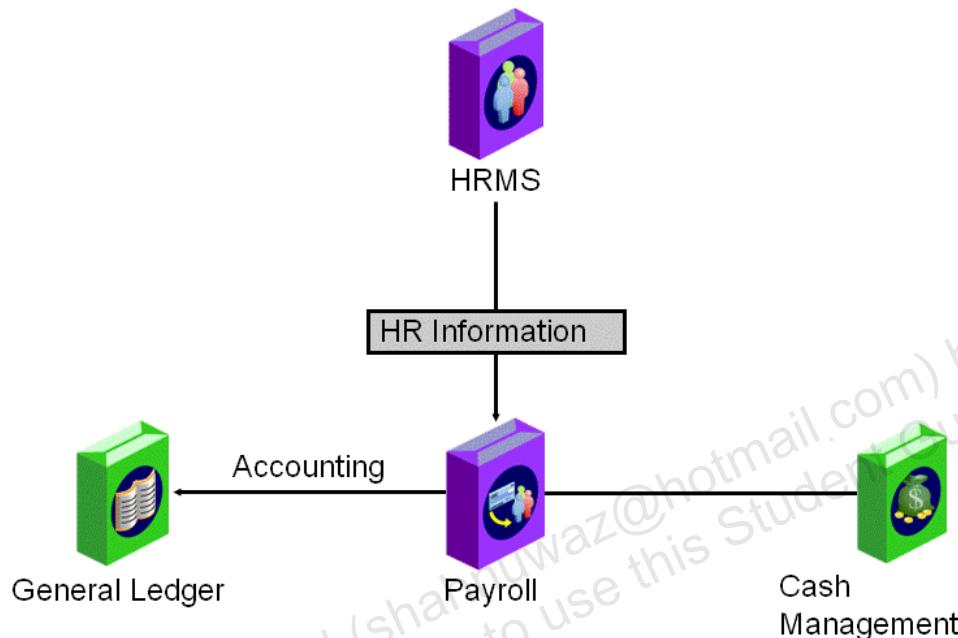
The Project to Profit business flow encompasses activities from project initiation, planning, scheduling, and scoping. It also covers managing of resources, and defines work breakdown structure, and collection of expenses.

This flow involves the following products:

- **General Ledger**: Receives journals
- **Payables/iExpenses**: Records project-related invoices
- **Receivables/iReceivables**: Records progress billings
- **Purchasing/iProcurement**: Records committed costs
- **Assets**: Capitalizes assets
- **Payroll**: Records project-related labor
- **Projects**: Defines and tracks projects along with resources

People to Paycheck

People to Paycheck



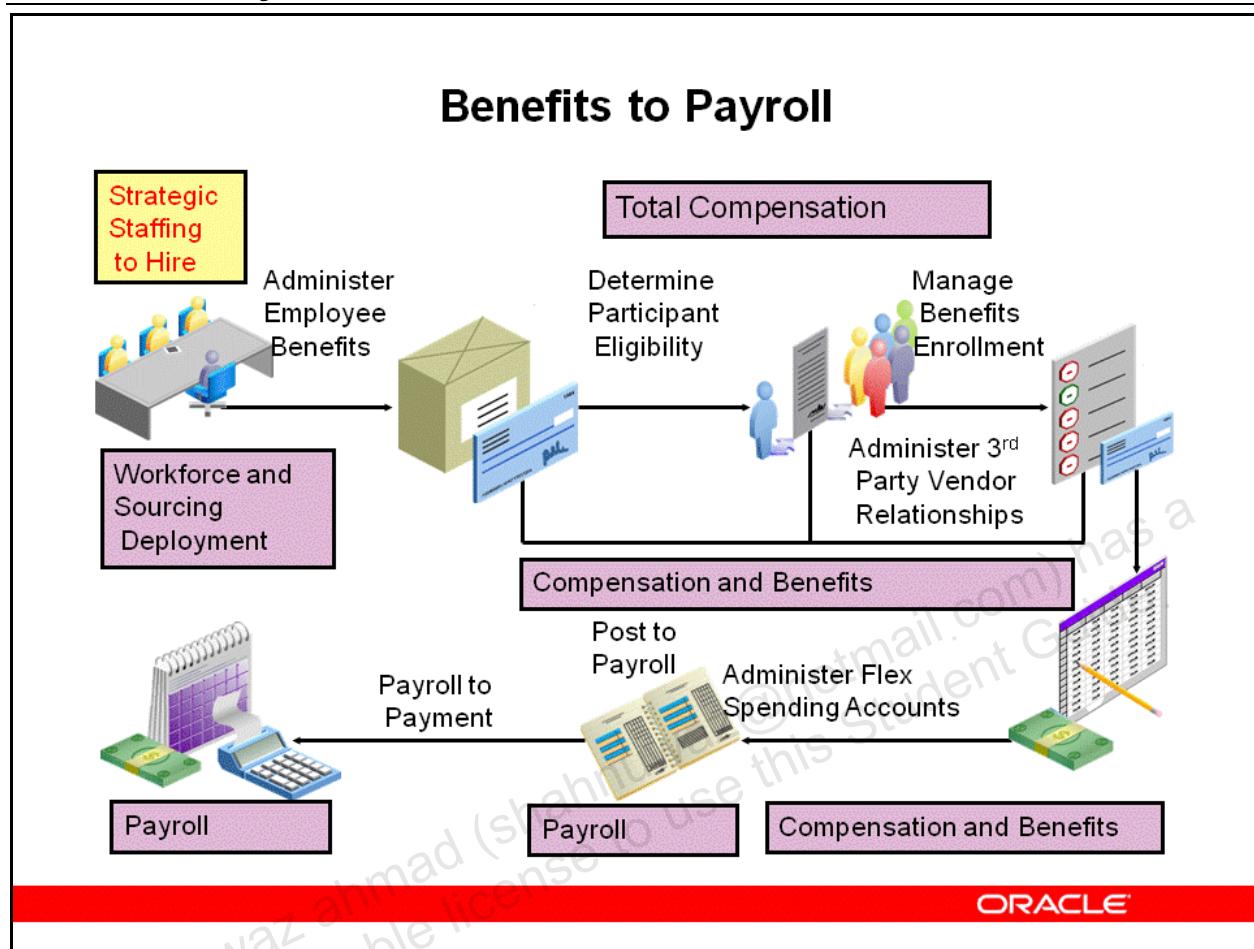
People to Paycheck

This business process encompasses activities related to calculation and generation of payroll payments to employees. This flow enables users to set up necessary payroll elements and methods for particular employees, perform payroll processing (standard, periodic, supplementary, and one-offs for a single employee), pay employees by check or direct deposit, request various related reports, and perform costing and transfer of completed payroll data to General Ledger.

This flow involves the following products:

- **HRMS:** Manages HR-related activities
- **Payroll:** Manages payroll
- **Cash Management:** Reconciles payroll
- **General Ledger:** Records labor expense

Benefits to Payroll



Benefits to Payroll

Administer Employee Benefits

- Employees receive benefits information to evaluate benefit plan offerings for annual open enrollment.
- Employees review their current benefits before making new annual elections.

Determine Participant Eligibility

- Benefit eligibility modeling is performed to evaluate various benefit choices and costs to employee based on eligibility.

Manage Benefits Enrollment

- Manage benefits for new enrollments and open enrollment.

Administer Third-Party Vendor Relationships

- Extract new and changed employee benefit enrollment information for submission to the Benefit Providers.

Administer Flex Spending Accounts (US Only)

- FSA accounts are maintained for employee health care and dependent care reimbursement requests.

Post to Payroll

- Processed enrollments and benefit payments have been posted to the payroll for processing in the designated pay run.

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