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Configuring Multi-Value Groups

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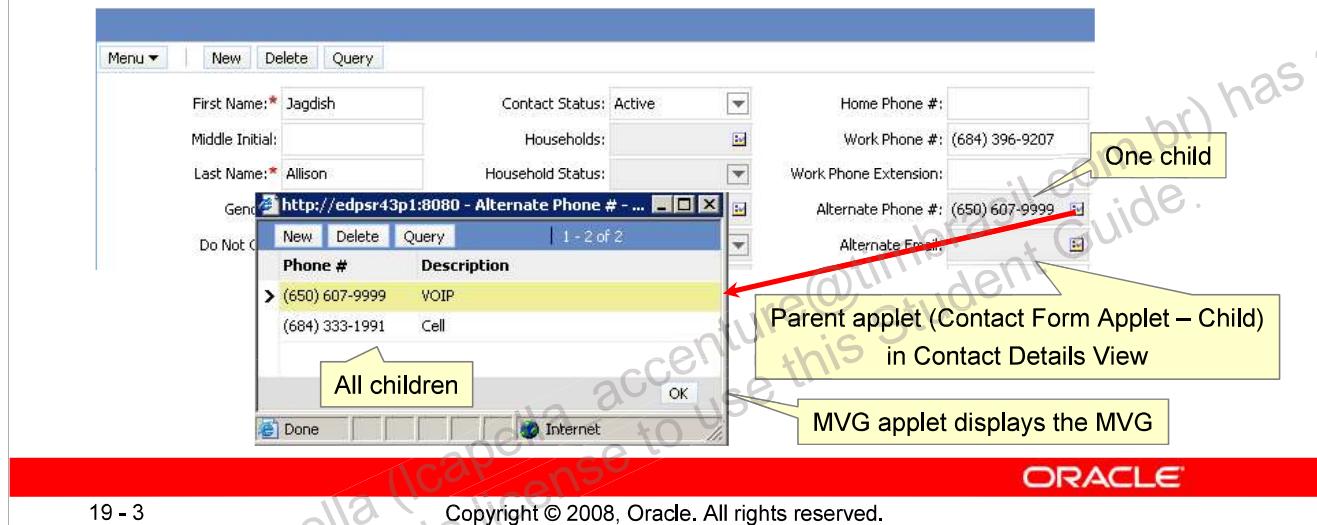
Objectives

After completing this lesson you should be able to:

- Add multi value fields (MVF) to a business component
- Display the child data in a multi-value group (MVG) applet
- Create a primary for a multi-value group

Multi-Value Group (MVG)

- Is a set of detail records associated with a parent record
 - The parent applet displays only one of the detail records
 - An applet opens on demand to display all detail (child) records
 - User clicks the multi select button to display the MVG



Multi-Value Group (MVG)

Reference: “Configuring Multivalue Group and Association Applets” in *Configuring Siebel Business Applications*

Shuttle Applet

- The MVG for a M:M child business component is displayed in a shuttle applet
 - Displays available as well as assigned child records
 - Appears only in high interactivity mode

The screenshot shows a Siebel application interface with a 'Shuttle applet' used for managing account team members. The shuttle applet has two panes: 'Available' (left) and 'Selected' (right). A red box highlights the 'Selected' pane, which contains five records:

| Primary | Last Name | First Name | Title |
|---------|---------------|------------|-----------------------|
| | Morris | Colby | Alliance Manager |
| | Marlow | Robin | Partner Sales Manager |
| ✓ | Morris | Colby | Alliance Manager |
| | Baxter | Charles | Relationship Manager |
| | Administrator | Siebel | Sys Admin |

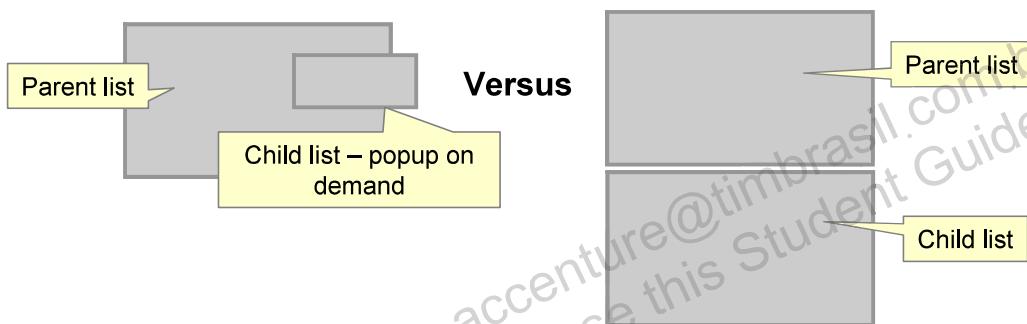
Below the shuttle applet, a message says 'Can add or remove records'. To the left of the shuttle, a box labeled 'All available but unassigned candidates' points to the 'Available' pane, which lists several user records. A red box highlights the 'Add >' button between the panes. A yellow box labeled 'One child' is positioned above the shuttle applet. A yellow box labeled 'Account Team MVG' is positioned to the right of the shuttle applet. A watermark 'Leonardo Cappella (capella@users.timsil.com) has a non transferable license to use this material' is diagonally across the page.

Shuttle Applet

A M:M MVG is displayed using a regular MVG applet for application running in SI mode.

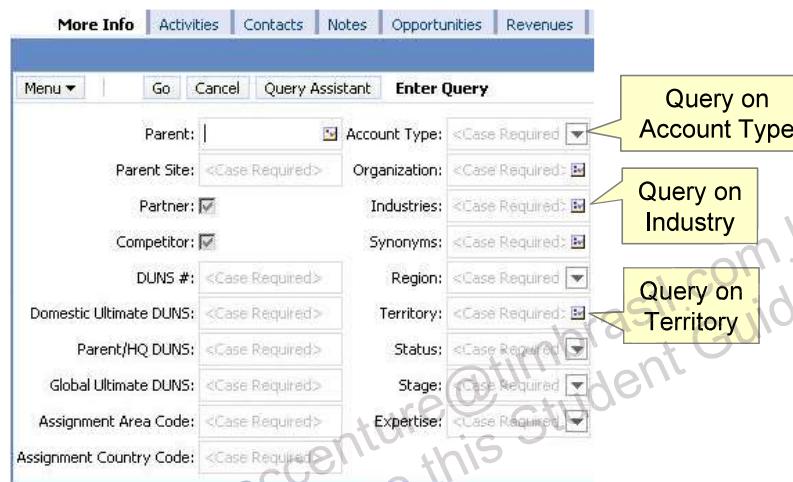
Multi-Value Group Display

- Is an alternative to a detail view for managing parent and related child records
 - Makes effective use of space
 - Does not require dedicated space in a view
 - Allows for multiple sets of detail records to be available from a single view



MVG Advantages

- Allows for creating queries that include values for fields in both parent and child records



MVG Concepts

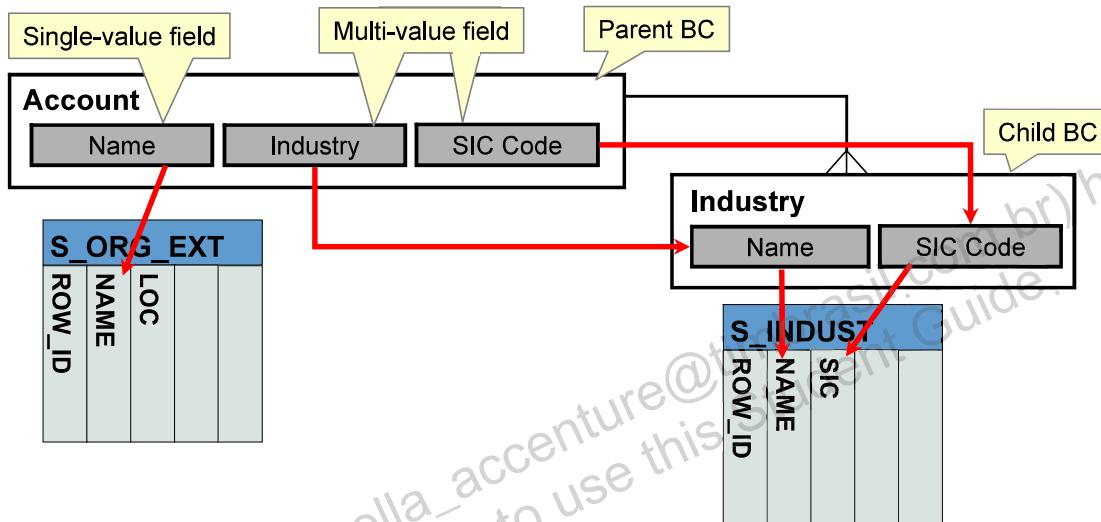
- Multi value field (MVF)
- Multi value link (MVL)
- Mapping MVFs to fields in a child business component
- MVG applet
- Association applet
- Primaries for performance

More 

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Multi Value Field (MVF)

- Is a field in a parent business component that references a field in the child business component
 - Does not directly reference a column in a table



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Multi Value Field (MVF)

Each multi value field stores its data in a column and table in the Siebel database. However the column and table used are associated with the child business component and not the business component with the multi value field.

Multi Value Link

- Is a child object definition of business component that specifies how to retrieve the records for a multi value field
- References a link object definition that specifies how the parent and child business components are related

The screenshot shows the Siebel Tools interface with two main windows. The top window is titled 'Multivalue Link List' and displays a table of 'Business Components'. A row for 'Account' is selected, showing the table name as 'S_PARTY'. The bottom window is titled 'Link List' and displays a table of 'Links'. A row for 'Account/Industry' is selected, showing the 'Parent Business Component' as 'Account' and the 'Child Business Component' as 'Industry'. A red arrow points from the 'Account/Industry' entry in the 'Link List' table to the corresponding row in the 'Multivalue Link List' table. Both windows have a sidebar labeled 'Object Explorer' with various object types listed, including 'Multi Value Link' which is highlighted with a red box. The bottom right corner of the interface features the 'ORACLE' logo.

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Multi Value Link

Reference: "Configuring Links" in *Configuring Siebel Business Applications*

Multi Value Fields and Multi Value Links

- A multi value field maps to a single value field in a child business component using a multi value link

The screenshot shows two windows from the Siebel 8.1.x Tools interface:

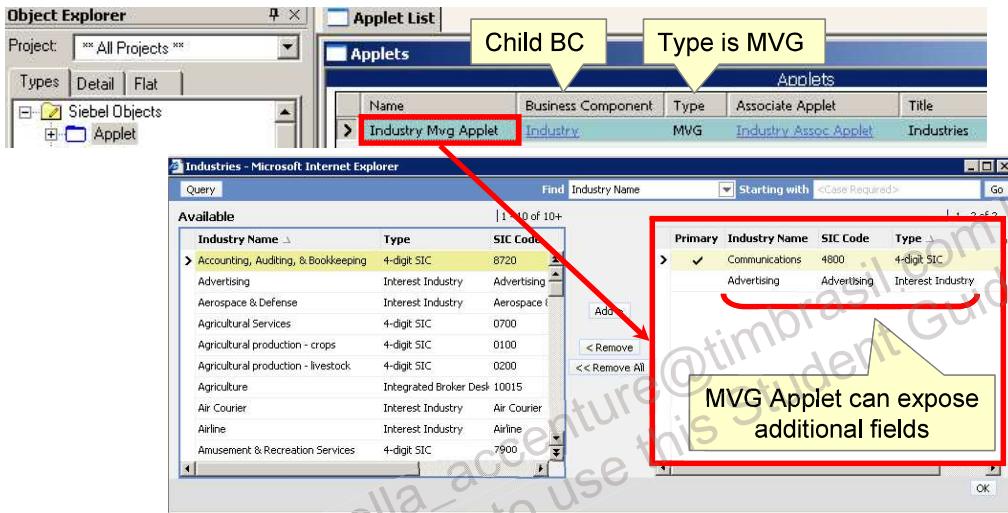
- Object Explorer**: Shows a tree view of project components. A red box highlights the "Multi Value Field" node under the "Join" category.
- Multivalue Field List**: A table titled "Business Components" with one row for "Account". Below it is a table titled "Multivalue Fields" with rows for "Industry" (linked to "Name" in the parent), "Industry Id" (linked to "Id"), "Industry Integration Id" (linked to "Industry Integration Id"), and "SIC Code" (linked to "SIC Code"). A red box highlights the "Industry" entry in the "Multivalue Link" column. A yellow box labeled "Name of field in parent" points to "Industry". Another yellow box labeled "Name of field in child" points to "Name". A red arrow points from the highlighted "Industry" entry in the Multivalue Fields table to the "Industry" entry in the Multivalue Link table.
- Object Explorer**: Shows a tree view of project components. A red box highlights the "MultiValue Link" node under the "Join" category.
- Multivalue Link List**: A table titled "Business Components" with one row for "Account". Below it is a table titled "Multivalue Links" with rows for "Industry" (linked to "Account/Industry" in the destination link). A red box highlights the "Industry" entry in the "Destination Link" column. A yellow box labeled "Destination Link" points to "Account/Industry".

At the bottom of the interface, there is a red banner with the text "Leonardo Cappella (capella) has a non-transferable license to venture.com.br's Study Guide." and the ORACLE logo.

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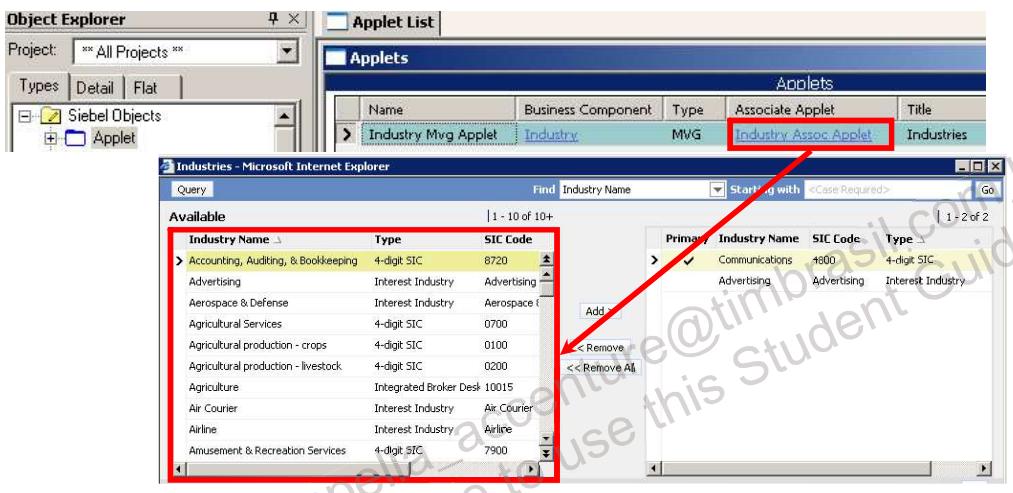
Multi-Value Group Applet

- Is a list applet that displays all child records
 - Floats above the parent list or form applet
 - Is based on the child business component



Association Applet

- Is required for MVGs with a M:M relationship
 - Allow available child records to be added to a parent record
- Is used in high interactivity mode to specify the "Available" list applet that appears in a shuttle applet



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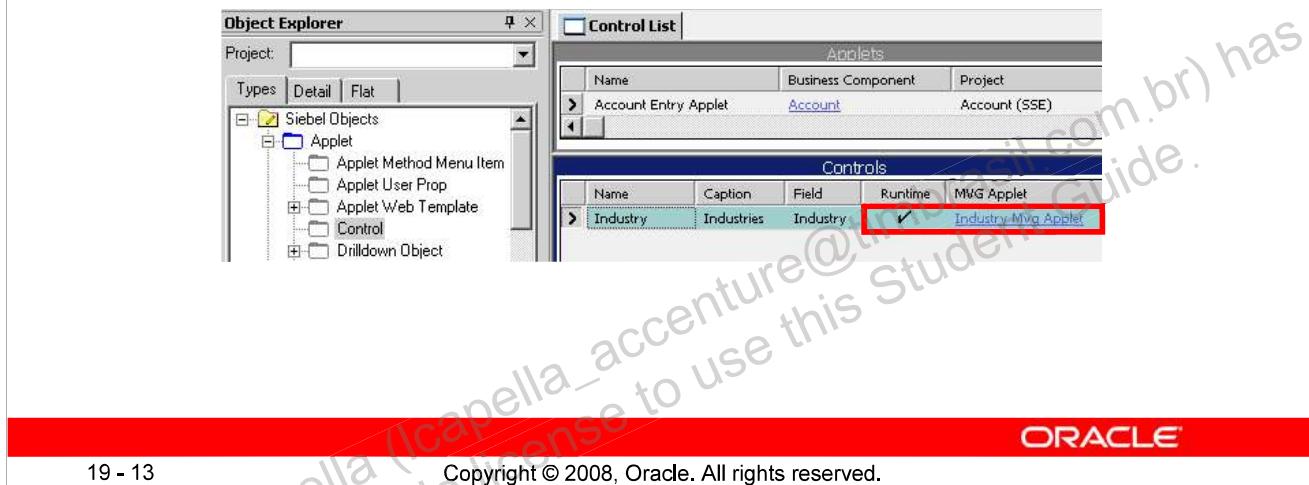
Association Applet

The Siebel application uses object definitions for both the MVG Applet and the Association applet to build the shuttle applet at run time. The shuttle applet appears only in high interactivity mode. If the application is using standard interactivity, then separate MVG and association applets are displayed to the user.

Consult the Configuring Siebel Applications guide in Bookshelf for more details on which controls from each applet are used in the shuttle applet.

Invoking the MVG Applet

- Specify the MVG Applet property
 - Identifies the MVG applet to display the child data
- Set Runtime in the parent applet to TRUE to enable the MVG applet



Primaries

- A primary allows fast retrieval of a designated child record for display in the parent applet
 - The designated child record is referred to as the primary

The screenshot shows a Siebel application interface. At the top, there is a header bar with the title "Account Information". Below this, there are several input fields: "Account Name" (Zephyr Partners), "Site" (New York), "Public" (checkbox), "Parent" (dropdown menu), "Industries" (dropdown menu set to "Communications"), "Founded" (text field), "Partners" (list box), and "Key Competitors" (list box). A red arrow points from the "Industries" dropdown to a list of industries below it. The list has columns: Primary, Industry Name, SIC Code, and Type. One row is highlighted in yellow and has a checkmark in the Primary column, indicating it is the primary industry. The data in the list is:

| Primary | Industry Name | SIC Code | Type |
|---------|----------------|-------------|-------------------|
| ✓ | Communications | 4800 | 4-digit SIC |
| | Advertising | Advertising | Interest Industry |

At the bottom of the interface, there is a red footer bar with the Oracle logo. On the left side of the footer, it says "19 - 14". In the center, it says "Copyright © 2008, Oracle. All rights reserved." On the right side, it says "ORACLE".

Primaries and Performance

- Primaries improve performance by eliminating the need to query each child BC separately
 - For example: without a primary a form applet with 5 MVGs would require six queries
 - One query to populate parent single-value fields
 - Five additional queries (one per MVG) to populate the MVGs
 - Using primaries, a form applet with 5 MVGs requires a single query to populate the single-value fields and MVGs

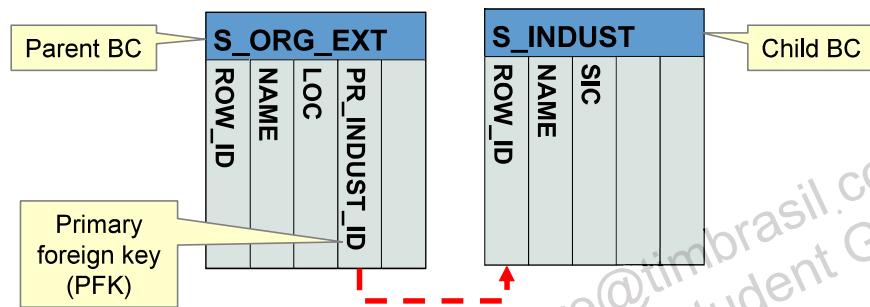
Primaries and Performance

- Three MVGs without primaries on a list applet displaying 10 parent records would require 31 queries to populate
 - One query to populate parent fields in the list applet
 - 30 queries (three per parent record) to populate the MVGs
- Using primaries, one query will populate all the fields on the list applet

| Account Name | Address Line 1 | City | State | Account Team | Industries |
|---------------------------|-----------------------------|--------------|-------|--------------|------------------------------------|
| Akamai Technologies, Inc. | 118 Turnpike Rd | Southborough | MA | CCHENG | computer related services |
| Andrews Manufacturing | 5807 Lampos Verde | | | | automobiles & other motor vehicles |
| British American Tobacco | Alsterufer 4 | | | | tobacco & tobacco products |
| Cap Gemini Ernst & Young | 2727 Paces Ferry Rd SE Bldg | Atlanta | GA | CCHENG | services |
| Caterpillar | 1550 N Milwaukee Ave | Chicago | IL | CCHENG | engine electrical equipment |
| Chase Manhattan Bank | 95 Wall St Lbby 3rd | New York | NY | CCHENG | bank holding companies |

Primary Foreign Key

- Is a foreign key field in the parent business component that references the child's primary key
 - Child data is retrieved using a join to the child table



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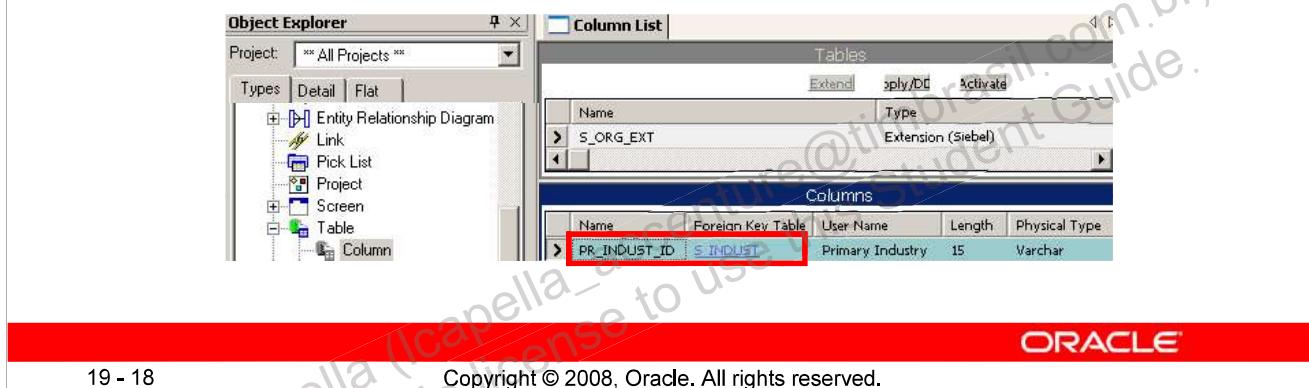
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Primary Foreign Key

Reference: “Configuring Tables and Columns” in *Configuring Siebel Business Applications*

Finding the Primary Foreign Key

- The Siebel Data Model includes primary foreign keys for many relationships
 - Begin with PR_
- To find a primary foreign key
 - Select the main table for the parent BC
 - Search for a column whose Foreign Key Table property is the main table for child BC



Enabling a Primary for a MVG

- Expose the primary field column in the parent BC
- Set the Primary Id Field and Use Primary Join properties in the MVL

Object Explorer

Project: ** All Projects **

Types Detail Flat

- BusComp View Mode
- Business Component Us
- Field
- Join
- Multi Value Field
- Multi Value Link
- Single Value Field

Single Value Field List

Business Components

| Name | Table | Search Specification |
|---------|---------|-------------------------|
| Account | S_PARTY | ([Internal Org Flag] <> |

Single Value Fields

| Name | Join | Column |
|---------------------|-----------|--------------|
| Primary Industry Id | S_ORG_EXT | PR_INDUST_ID |

Properties

Multi Value Link [Industry]

| Auto Primary | Default |
|--------------------------------|---------------------|
| Check No Match | FALSE |
| Comments | |
| Destination Business Component | Industry |
| Destination Link | Account/Industry |
| Inactive | FALSE |
| Module | |
| Name | Industry |
| No Associate | FALSE |
| No Copy | FALSE |
| No Delete | FALSE |
| No Insert | TRUE |
| No Update | FALSE |
| Parent Name | Account |
| Popup Update Only | FALSE |
| Primary Id Field | Primary Industry Id |
| Source Field | |
| Type Field | |
| Type Value | |
| Use Primary Join | TRUE |

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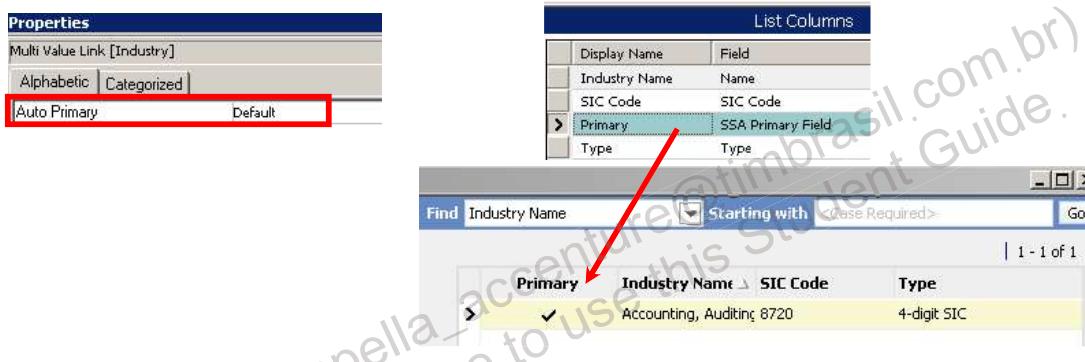
The Auto Primary Property

- Determines how a primary is assigned if not directly assigned by a user
 - Default (the first child record retrieved becomes the primary)
 - Selected (the highlighted record becomes the primary)
 - None (the user must specify the primary)

| Properties | |
|--------------------------------|---------------------|
| Multi Value Link [Industry] | |
| | |
| Auto Primary | Default |
| Check No Match | FALSE |
| Comments | |
| Destination Business Component | Industry |
| Destination Link | Account/Industry |
| Inactive | FALSE |
| Module | |
| Name | Industry |
| No Associate | FALSE |
| No Copy | FALSE |
| No Delete | FALSE |
| No Insert | TRUE |
| No Update | FALSE |
| Parent Name | Account |
| Popup Update Only | FALSE |
| Primary Id Field | Primary Industry Id |
| Source Field | |
| Type Field | |
| Type Value | |
| Use Primary Join | TRUE |

Setting the Primary Record

- The primary child record is usually set during initial data loads using Enterprise Integration Manager
 - If not, set the Auto Primary property in the MVL to Default
- Add the SSA Primary Field to the MVG applet to expose a special field to permit the user to see and change the primary child record



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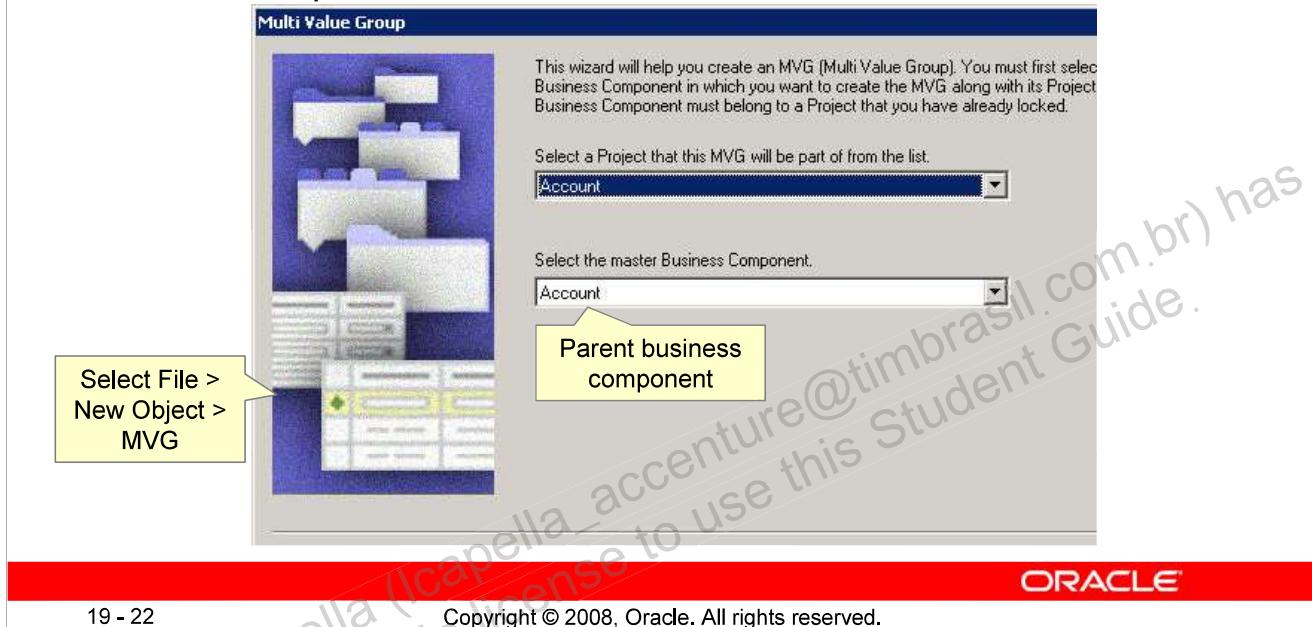
Setting the Primary Record

The SSA Primary field is not a field in the business component; rather, it is a special name that is recognized by the Siebel execution engine and results in the display of a check mark next to the primary child record.

When the user explicitly selects a primary, the primary foreign key field is updated.

Creating a Multi-Value Group

- Use the MVG wizard to create a new MVG
 - First verify that a link between the parent and child business components exists



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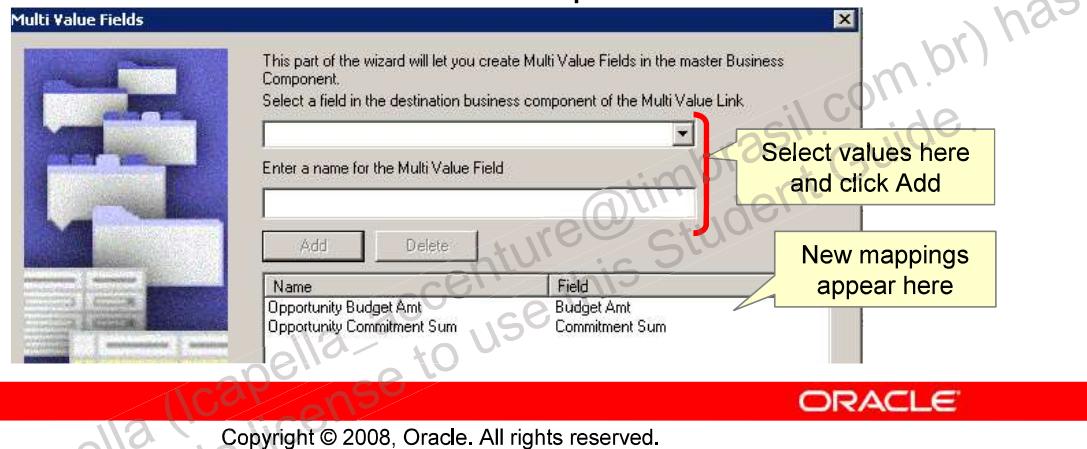
Creating a Multi-Value Group

The following example is shown in the next several slides:

You wish to create a Account Opportunity MVG.

MVG Wizard Inputs

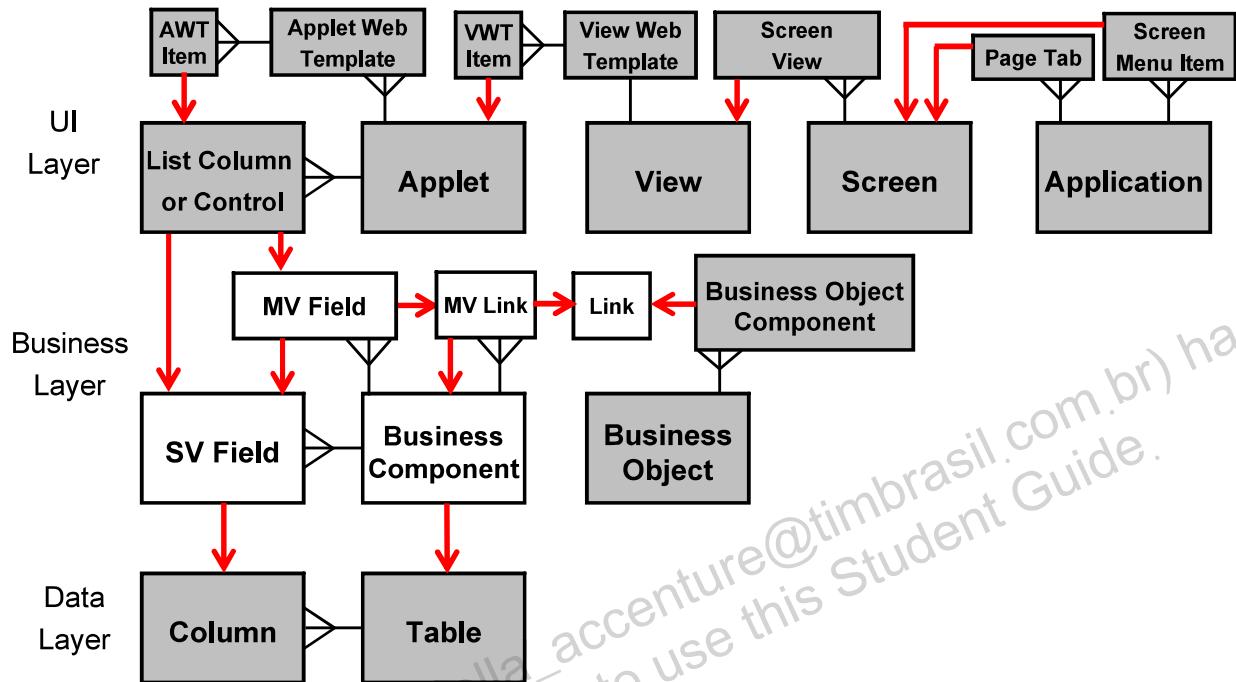
- Project to contain the new applet
- The master (parent) and detail (child) business components
- The link the MVF is based on
- The primary key field
- Fields from the child business component



MVG Wizard

- Creates the following:
 - Multi value link
 - Multi value fields
- Does not set Runtime or the MVG Applet properties for the control/list column
 - Must be set manually
- Invokes the MVG Applet wizard if no MVG applet exists suitable for the choice of parent and child business components

Summary of Object Types



Summary of Object Types

For the purposes of clarity, many references that are not directly involved in MVGs have been omitted from this diagram.

Lesson Highlights

- A multi-value group (MVG) is a set of detail (child) records associated with a parent record
- A primary is a designated child record that is displayed in the parent's applet
 - Improves performance for the display of applets with MVGs
 - Supported by a primary foreign key
- Objects needed to support a MVG are:
 - A multi value link
 - Multi value fields
 - A multi-value group applet
- Use the MVG wizard in Siebel Tools to create an MVG

Practice 19 Overview: Configuring Multi-Value Groups

This practice covers the following topics:

- Examining multi-value groups
- Configuring a multi-value group

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Configuring Access Control

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Objectives

After completing this lesson you will be able to:

- Configure views to control access to data based on
 - Person: who the user is
 - Position: which position is associated with the user
 - Organization: which organization the user is associated with
 - Access groups: which access groups the user belongs to
- Determine the visibility for picklists

Access Control: Review

- Is the set of mechanisms that control user access to data and application functionality
 - Application-level
 - Controls which screens are associated with an application
 - Defined by license keys
 - View-level
 - Controls which views within a screen are available to users
 - Defined by responsibilities
 - Record-level
 - Controls which records are available to employees within a view
 - Defined by record ownership, team membership, access groups, and the organizational structure
 - Used to generate the SQL to populate the applet on a business component

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Access Control: Review

Reference: “Configuring Access Control” in *Siebel Security Guide*

Business Components and Record-Level Access Control

- Many business components (BC) have been configured with single or multi value fields that store:
 - User Id
 - Position
 - Organization
- These business component records can be subject to record-level access control

Account Administration Details

| | | |
|---|---|--------------------------------------|
| Account Type: * Hospital | Status: Active | Territories: Corporate Banking |
| Account Class: * Customer | Region: | Lock Assignment: |
| Partner: <input type="checkbox"/> | Language Code: | Assignment Area Code: |
| Competitor: <input type="checkbox"/> | Disable Cleansing: <input type="checkbox"/> | Assignment Country Code: |
| Good Standing: <input type="checkbox"/> | Synonyms: | Inventory Location: |
| Fraud Level: | Expertise: | Account Team: VSILVER |
| | | Organization: Millennium Institution |

Details for the Parker Hospital account

Accounts are configured for multiple positions and organizations

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Visibility Views

- Views can be configured to display records subject to record-level access control restrictions
 - Are based on the user's identity, position, or organization
 - Permit additional access for
 - Managers
 - Executives
 - Administrators

The screenshot shows the Siebel Accounts List interface. At the top, there are navigation links: Home, Accounts, Contacts, Opportunities, and Sales Orders. Below these are links for Accounts Home, Accounts List, Charts, Global Accounts Hierarchy List, and Global Accounts API. A dropdown menu titled 'My Accounts' is open, showing options: My Accounts, All Accounts, My Team's Accounts, and All Accounts Across Organizations. The main area displays a table with columns 'Site' and 'Parent'. One row is highlighted in yellow, showing 'San Francisco' in the Site column and 'Premier Healthcare System' in the Parent column. The table also includes rows for 'NJ' and 'Abbot Designs'. At the bottom of the interface, there is a red footer bar with the ORACLE logo and copyright information: 'Copyright © 2008, Oracle. All rights reserved.'

View Modes

- Refers to the type of visibility view
- Common view modes include:

| Views | Description |
|----------------------------------|--|
| My View | Displays records directly assigned to you based on user ID or active position |
| My Personal View | Only displays records you directly own |
| My Team's View (Manager's View) | Allows managers to see records assigned to their direct and indirect reports that are the primary owner based on reporting structure |
| All View | Displays all records associated with the user's organization |
| All Across My Organizations View | Displays records that are assigned to the user's organization and its child organizations |
| All Across Organizations View | Displays all records in the enterprise with a valid organization |

Configuring Visibility Views

- A set of visibility views almost always have the same set of applets
- View mode for a visibility view is configured by:
 - Setting the Visibility Applet property
 - Identifies an applet in the view and therefore the business component
 - Is typically set to the:
 - Top list applet in a list view
 - Master form applet in a detail view
 - Setting the Visibility Applet Type
 - Determines the access control mechanism to use when retrieving records

BusComp View Mode Definition

- Is a child object definition of business component that specifies how to select records for the business component for a specific access control mechanism
 - Identifies an attribute of the user
 - Corresponds to the view mode
 - Identifies the field in the BC that contains the user's attribute
 - Is used to generate the SQL

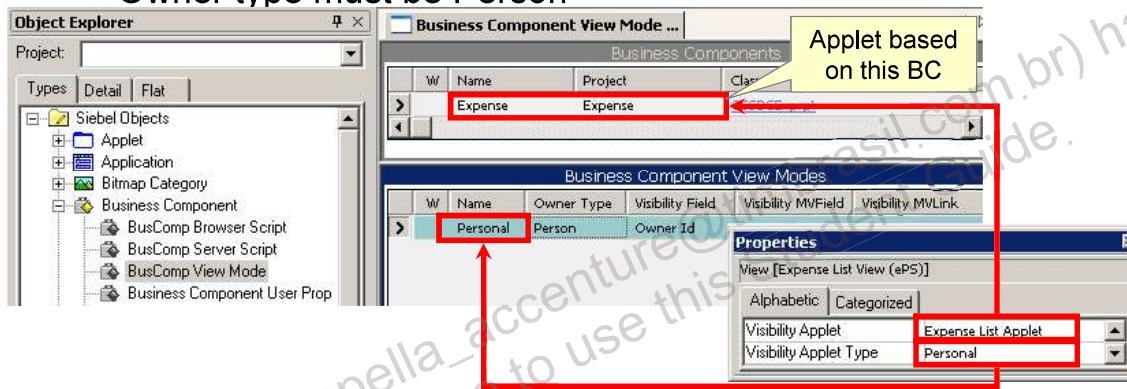
The screenshot shows the Siebel Object Explorer on the left and the Business Component View Mode dialog box on the right. In the Object Explorer, under Siebel Objects > Business Component, 'BusComp View Mode' is selected. In the Business Component View Mode dialog, the 'Business Components' tab shows a Contact record with the class CSSBCCContact575. The 'Business Component View Modes' tab displays three rows of data, with the second row ('Personal') having its 'Visibility Field' and 'Visibility MVField' columns highlighted with red boxes. The data is as follows:

| W | Name | Owner Type | Visibility Field | Visibility MVField |
|---|--------------|--------------|------------------|--------------------|
| > | Organization | Organization | Owned By Id | Organization |
| > | Personal | Person | Sales Rep | Sales Rep |
| > | Sales Rep | Position | | Position |

Below the dialog is a red banner with the ORACLE logo. At the bottom of the slide, there is a watermark: 'Leonardo Cappella (capella_academy.com.br) has a non-transferable license to use this content'.

Personal View

- Displays all records for which the user is the owner
- Is configured by
 - Setting the Visibility Applet property to identify an applet
 - Setting the Visibility Applet Type property to Personal
- Looks for a BusComp View Mode with name Personal
 - Owner type must be Person



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Personal View

In the example shown on the slide, the BusComp View Mode specifies that only records for which the user's Id matches the value in the business component field specified in the Visibility Field property (in the above case the Owner Id field) are retrieved and displayed in the this view. This specification is used to generate the SQL WHERE clause at run time.

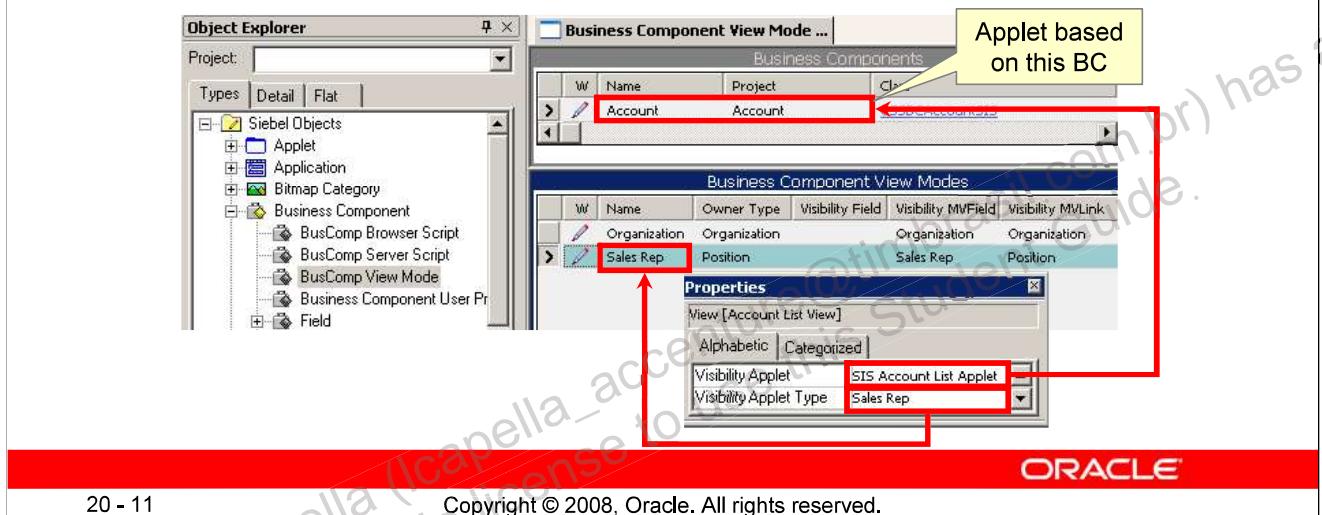
My View

- Displays all records for which user's Id or position is assigned to the record
- Is configured by:
 - Setting the Visibility Applet property to identify an applet in the view
 - Setting the Visibility Applet Type property to Sales Rep
 - Defaults to this value if none set



Retrieving My View Records

- Visibility Applet determines the business component
- Visibility Applet Type determines the access mechanism used to restrict records
 - Looks for a BusComp View Mode with name Sales Rep

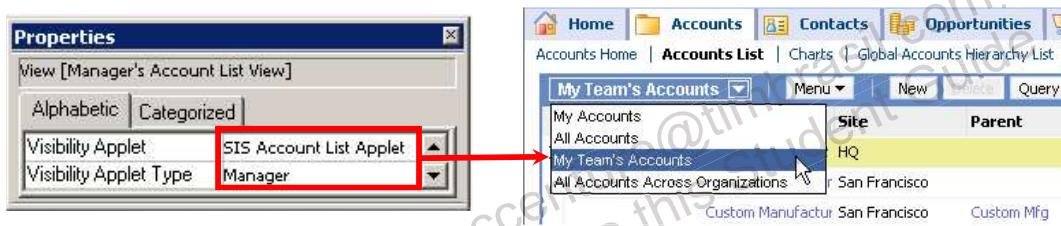


Retrieving My View Records

In the example of account shown on the slide, the Sales Rep BusComp View Mode specifies that only records for which the user's position appears in the Sales Rep multi value field are retrieved and displayed in the My View.

My Team's (Manager) View

- Displays all records
 - For which direct and indirect reports are the primary or owner
 - For which the user is the primary or owner
- Is configured by
 - Setting the Visibility Applet property to identify an applet
 - Setting the Visibility Applet Type property to Manager

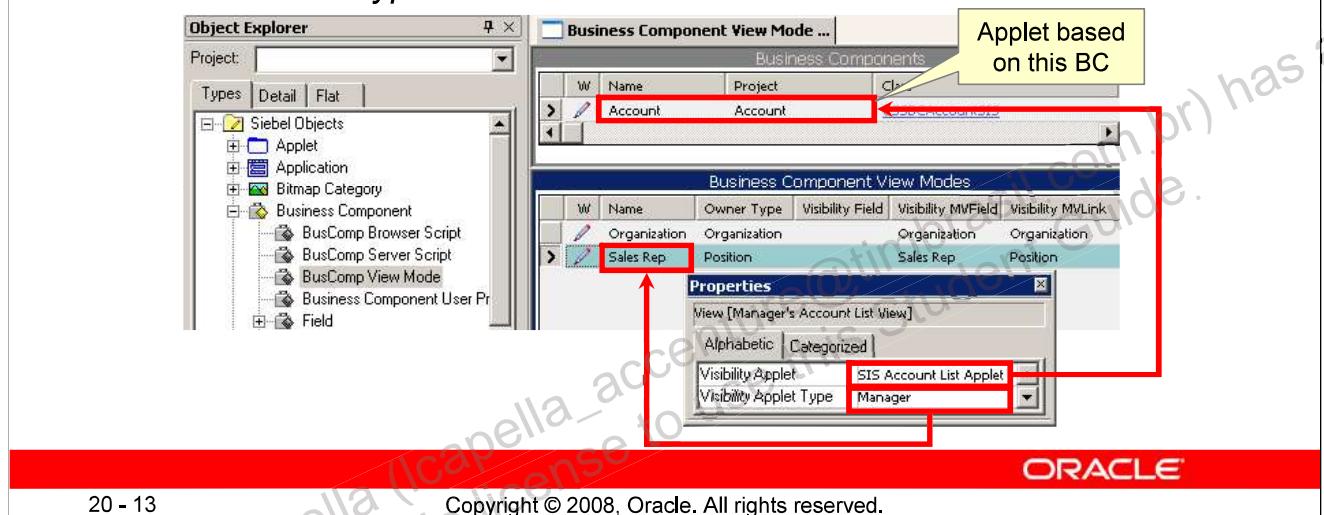


My Team's (Manager) View

By default a manager view displays only records for which direct and indirect reports are designated as primaries. A business component can be configured to return records for all direct and indirect reports, rather than just the primaries. This is performed by setting the Manager List Mode business component user property to Team. You will learn about business component user properties in a subsequent lesson.

Retrieving My Team's Records

- Visibility Applet determines the business component
- Visibility Applet Type determines the access mechanism used to restrict records
 - Looks for a BusComp View Mode with name Sales Rep
 - Owner type must be Position or Person



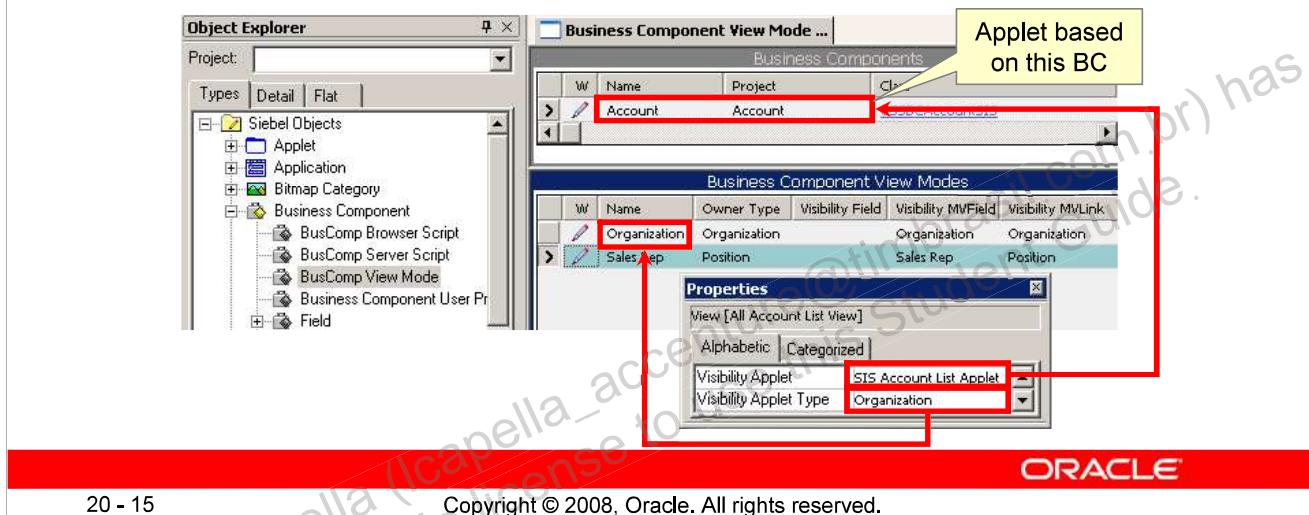
All View

- Displays all records (that have a primary organization set) within a single organization
 - Any sort specification in the business component is ignored for performance reasons
- Is configured by
 - Setting the Visibility Applet property to identify an applet
 - Setting the Visibility Applet Type property to Organization



Retrieving Records for an All View

- Visibility Applet determines the business component
- Visibility Applet Type determines the access mechanism used to restrict records
 - Looks for a BusComp View Mode with name Organization



Across All Organizations View

- Displays all records (that have a primary organization set) across all organizations
 - Does not use a BusComp View Mode definition
- Is configured by
 - Setting the Visibility Applet property to identify an applet
 - Setting the Visibility Applet Type property to All



Across All Organizations View

A primary must be set for records to be displayed in All or All Across Organizations views. Records that have not been assigned are not visible in these views. They are visible in Admin Mode views (to be discussed shortly).

Administration View

- Displays all the records in the database ignoring any visibility consideration
- Is configured by setting the Admin Mode Flag property in a View object definition

The screenshot shows the Siebel interface. On the left, a 'Properties' window for 'View [Account Administration View]' is open, showing the 'Admin Mode Flag' property set to TRUE, which is highlighted with a red box. The main window shows the 'Accounts Administration' screen with a list of accounts. The account data is as follows:

| New | Name | Site | Parent | Main Phone # | Status | Account Type | Account Team |
|-----|--------------------|------|--------------|----------------|--------|---------------|--------------|
| | Joe Connor | | Lyrd Systems | (212) 555-5678 | Active | Agency | JRUBIN |
| | Altman Capital-One | | | | Active | | SADMIN |
| | Pastoral Homes | | | | Active | Hospital Unit | SADMIN |
| | Global Barbeque Su | | | (415) 602-3021 | Active | Chain Food | PHAYS |
| | Edventure Holdings | | | (917) 658-6502 | Active | Customer | RYOUNG |

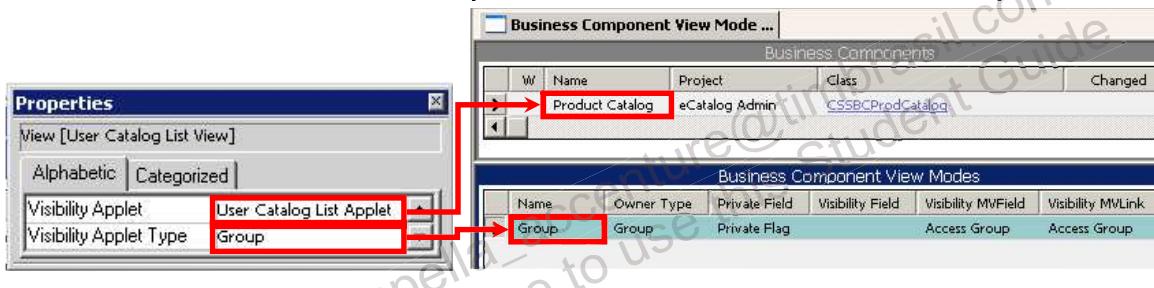
At the bottom, a red bar contains the text 'ORACLE' and 'Copyright © 2008, Oracle. All rights reserved.'

Administration View

Setting the Admin Mode Flag to TRUE also overrides the editing properties of the underlying business component displayed in the view.

Group View

- Displays categories of master data records that are associated with access groups to which the user belongs
 - Membership in an access group occurs through a position, organization, user list, and so forth
- Is configured by:
 - Setting the Visibility Applet property to identify an applet
 - Setting the Visibility Applet Type property to Group
- Looks for a BusComp View Mode with name Group



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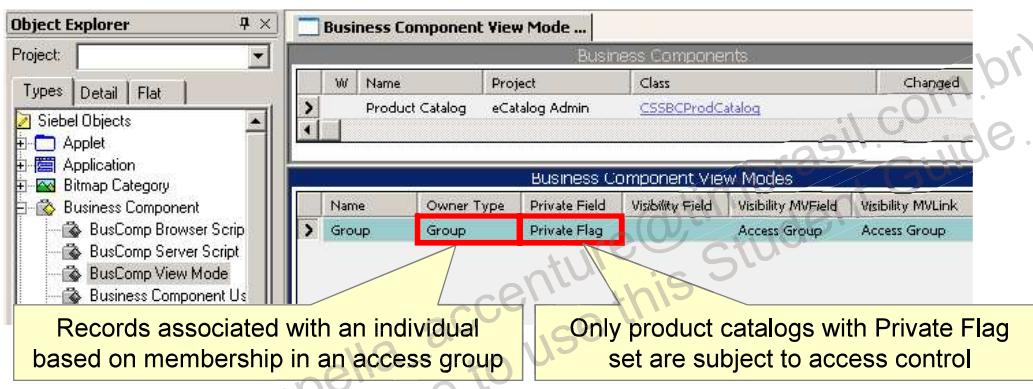
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Group View

The User Catalog List Applet is the applet displayed in the User Catalog List View used to display catalogs such as the InfoCenter.

Private Flag

- Identifies (optionally) a field in the business component
- Is used to determine if a given record is subject to visibility restrictions
 - When a private field is specified, and the value of that field in a record is empty, then that record is always visible
 - Is most commonly used with access group owner type



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Private Flag

A catalog can be created as either public or private. A public catalog (and any of its public categories) can be accessed by all users. A catalog (or category) that has been flagged as private can be accessed only by a user who has membership in an access group assigned to the catalog or category.

View Web Template Item Applet Visibility

- Applet visibility can be set for an applet in a view Web template item
 - Determines visibility of data displayed in that applet
 - Is typically used in a view (such as a home page view) that has no view visibility set

The screenshot shows two Siebel application windows. The top window is titled 'View List' and displays a table with columns: W, Name, Business Object, Visibility Applet, and Visibility Applet Type. A row for 'Home Page View (WCC)' is selected, and its details are shown in the 'Business Object' field: 'WebCallCenter Home'. A red box highlights this row. A yellow callout bubble points to it with the text 'View with no visibility restrictions'. An arrow points from the 'Visibility Applet' column of the 'View List' table to the 'View Web Template Item List' window below. The bottom window is titled 'View Web Template Item List' and shows a table with columns: W, Name, Changed, Web Template, and Upgrade Behavior. A single row is visible: 'Base'. Below this is another table titled 'View Web Template Items' with columns: W, Name, Applet Mode, and Applet Visibility Type. It lists several applets, all of which have 'Personal' visibility type. A red box highlights the 'Applet Visibility Type' column for these applets. A yellow callout bubble points to it with the text 'Applets with individual visibility restrictions'. The Oracle logo is at the bottom right of the interface.

| W | Name | Business Object | Visibility Applet | Visibility Applet Type |
|---|----------------------|--------------------|-------------------|------------------------|
| > | Home Page View (WCC) | WebCallCenter Home | | |

| W | Name | Changed | Web Template | Upgrade Behavior |
|---|------|------------|--------------|------------------|
| > | Base | View 66 33 | Admin | |

| W | Name | Applet Mode | Applet Visibility Type |
|---|--|-------------|------------------------|
| > | Account List Applet (WCC Home) | Base | Personal |
| | Activity List Applet (WCC Home) | Base | Personal |
| | Sales Message Alert List Applet Tiny | Base | Personal |
| | Salutation Applet (WCC Home) | Base | Personal |
| | Service Request List Applet (WCC Home) | Base | Personal |

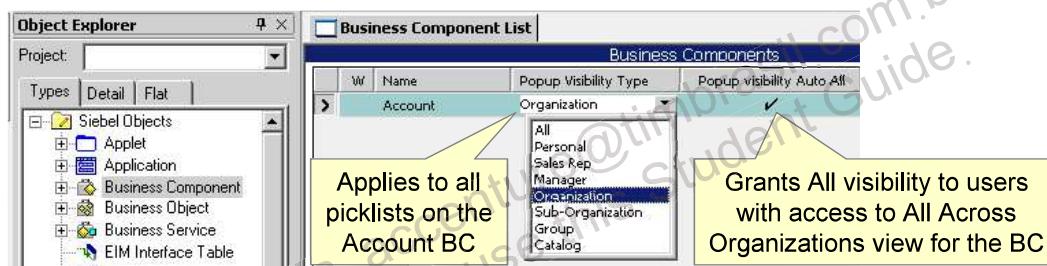
Visibility For Picklists

- For business components with access control restrictions, users typically see more records in picklists than they do in the My Views
 - For example: assigning an account to a new opportunity

The screenshot shows two Siebel application windows side-by-side. On the left is the 'Accounts List' window, which displays a table of accounts with columns for 'Name' and 'Site'. One row, 'Aikon AG', is highlighted in yellow. A callout box labeled 'Accounts to which user is assigned' points to this highlighted row. On the right is the 'Opportunities List' window, which displays a table with columns for 'Opportunity Name', 'Account', and 'Revenue'. One row, 'Laser P...', has its 'Account' field highlighted in yellow and is also highlighted in the main list. A red arrow points from this highlighted row to a callout box labeled 'User can select from more accounts when picking an account'. Both windows have standard Siebel navigation bars at the top.

Picklist Visibility

- Visibility of business component records in a picklist:
 - Is determined by the Popup Visibility Type property
 - Applies to all users
 - Can be overridden for users with access to Across All Organization views by setting the Popup visibility Auto All property to TRUE
 - Allows these users to see all records regardless of popup visibility type



Visibility for an Individual Picklist

- Visibility for an individual picklist can be modified by setting the Visibility Type property for the picklist

The screenshot displays three windows from the Siebel 8.1.x Tools interface:

- Object Explorer**: Shows a tree view of project objects including Pick List, Project, Screen, Table, and Task.
- Picklist List**: A grid view of picklists. One row is selected for "SIS HH PickList Contact - CE" under the "Contact" business component, with the "Visibility Type" set to "Sales Rep". A yellow callout box points to this cell with the text "Overrides for this picklist default value set on BC".
- Business Component List**: A grid view of business components. The "Contact" component has its "Popup Visibility Type" set to "Organization". A yellow callout box points to this cell with the text "default value for BC".

A red arrow points from the "Sales Rep" cell in the Picklist List to the "Organization" cell in the Business Component List, indicating that the picklist's visibility type overrides the business component's default value.

Lesson Highlights

- Many business components are configured to have users, positions, and organizations assigned
- Views can be configured to display records associated with the user's Id, position, or organizations
 - Is configured by setting the Visibility Applet and Visibility Applet Type for the view
 - References a BusComp view mode for an underlying business component in the view
- A BusComp view mode specifies how to retrieve the desired records and is used to generate the SQL
- Picklist visibility is determined by the Popup Visibility Type property of a business component
 - Can be overridden for individual picklists

Practice 20 Overview: Configuring Access Control

This practice covers the following topics:

- Configuring view modes
- Examining the visibility of picklists

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Configuring User Properties

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Objectives

After completing this lesson you will be able to:

- Describe the purpose and benefits of user properties
- Add a user property to an applet to control UI behavior
- Add a user property to a business component to implement business logic

User Properties

- Are child object definitions added to several UI and business layer object definitions
 - Configure specialized behavior beyond what is configured in the parent object definition's properties
 - Are stored in the repository and are compiled into the repository file
 - Are passed to the C++ code that implements the class
 - Values can be edited or created to modify the existing behavior
- Provide an alternative to custom scripting
 - Easier to configure
 - Perform better

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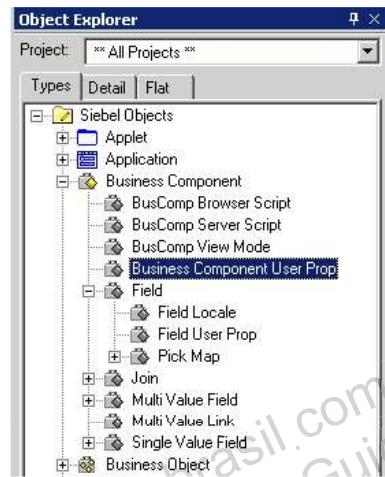
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User Properties

Reference: “Configuring Business Components” in *Configuring Siebel Business Applications*

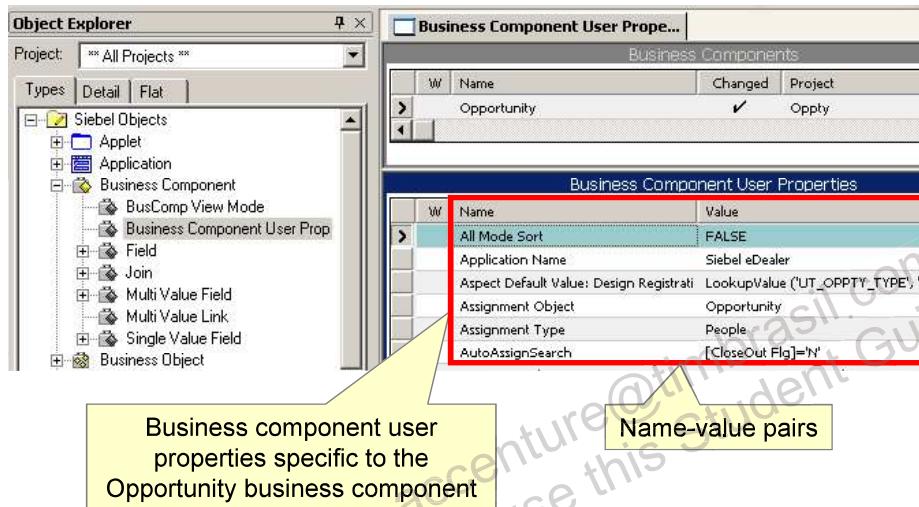
Object Definitions with User Properties

- Several object definitions include child user properties
 - Applet
 - Application
 - Business Component
 - Control
 - Field
 - List Column
 - View



User Properties

- User properties consist of name-value pairs passed to the underlying C++ code



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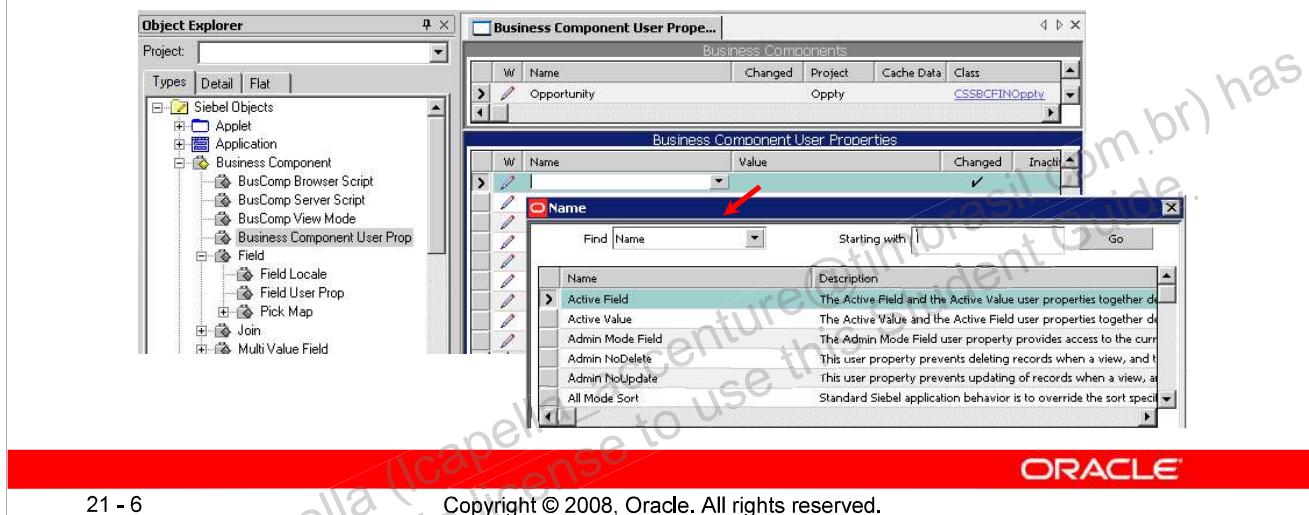
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User Properties

The picklist displays most of the common user properties for the object type. However, it does not necessarily show every possible user property.

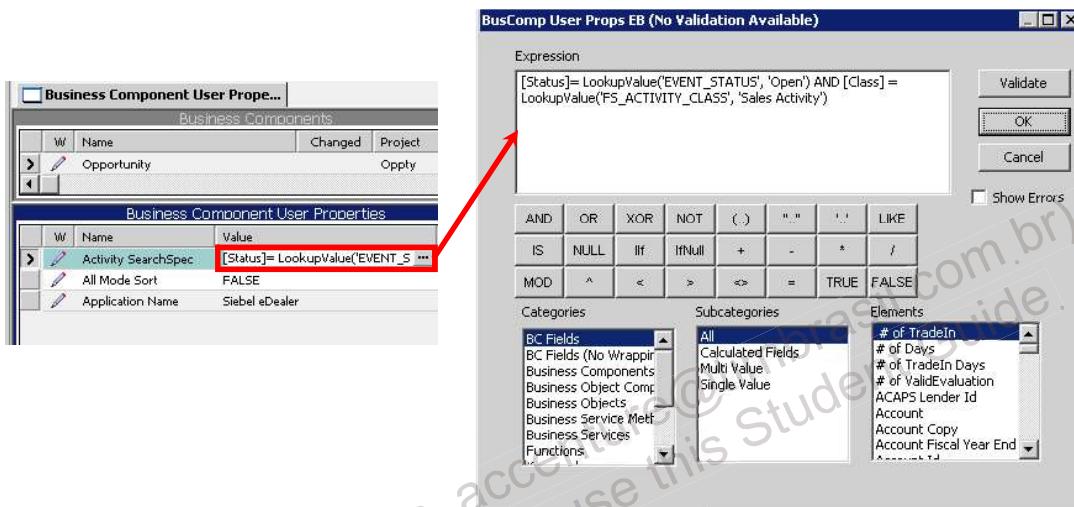
Editing User Properties

- Modify the existing user property or create a new one
 - Do not modify the name property for existing user properties
 - Use the picklist to select the name when creating a new user property



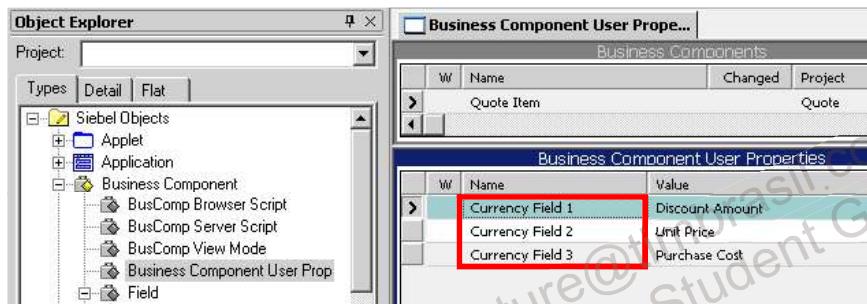
Expression Editor

- The value property can be a simple or complex expression
 - Use the expression builder to assist in creating complex expressions



Multiple Instances of a User Property

- Multiple instances can be defined for several user properties
 - Append the name property with consecutive integers starting at 1
 - Gaps in numbering are permitted



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Multiple Instances of a User Property

This user property allows you to specify the name of a field that holds currency data.

Examples of Applet User Properties

- Some applet user properties of interest include:
 - DefaultFocus_New
 - NoDataHide

User properties supported for customer use are documented in the Siebel Developer's Reference in the Siebel Bookshelf. Not all user properties are intended for customer use

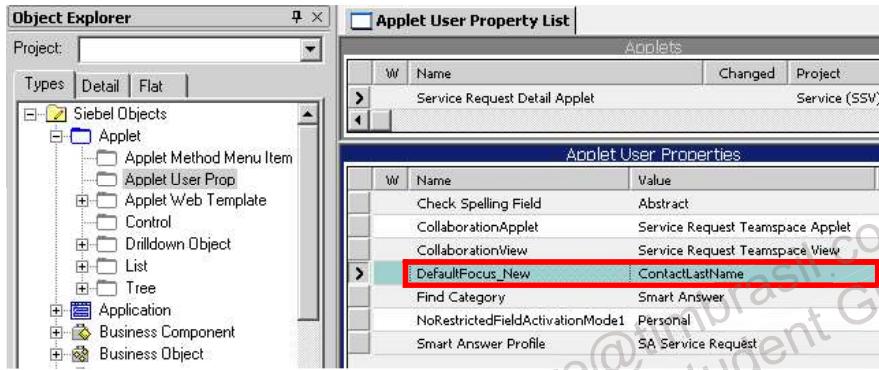


Examples of Applet User Properties

Reference: “Configuring Applets” in *Configuring Siebel Business Applications*

DefaultFocus_New

- Specifies the control in an applet that receives focus when the applet is invoked in New mode



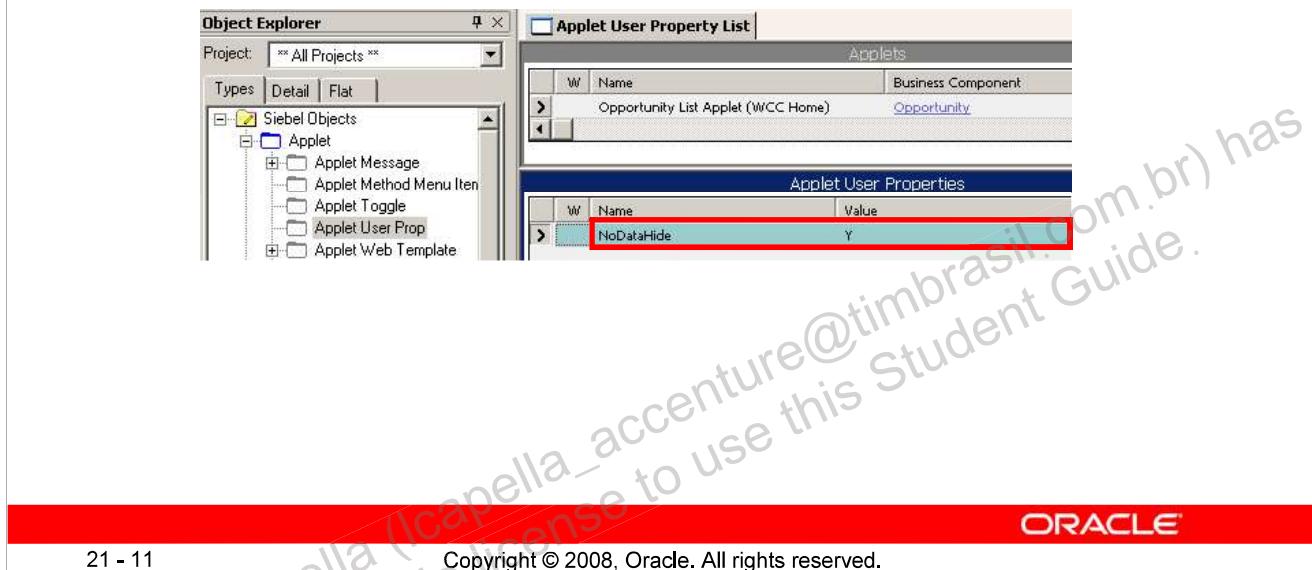
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NoDataHide

- Specifies whether the applet should be hidden if there are no records
 - Defaults to No



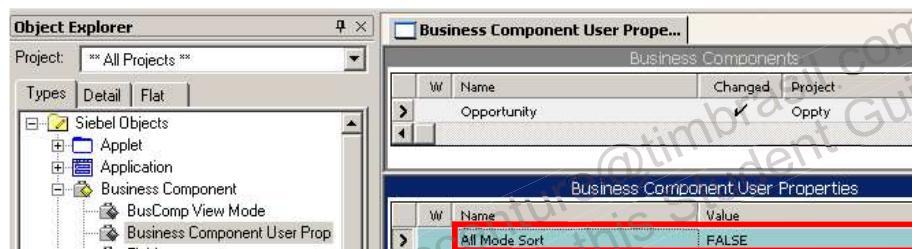
Examples of Business Component User Properties

- Some business component user properties of interest include:
 - All Mode Sort
 - BC Read Only Field
 - On Field Update Set
 - Parent Read Only Field
 - Field Read Only Field
 - Disable Automatic Trailing Wildcard Field List



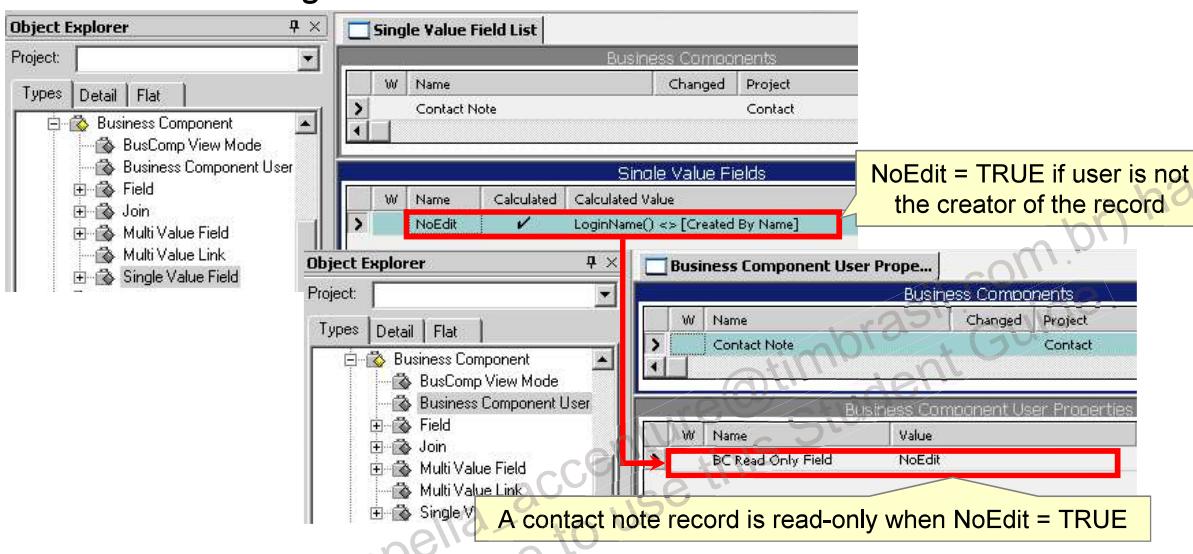
All Mode Sort

- Specifies how to sort records in views other than My and Personal views
 - Default behavior is to override any business component sort specification and to sort using the standard user key U1 index
- Is often set to FALSE to eliminate any sorting
 - Improves performance for large sets of records



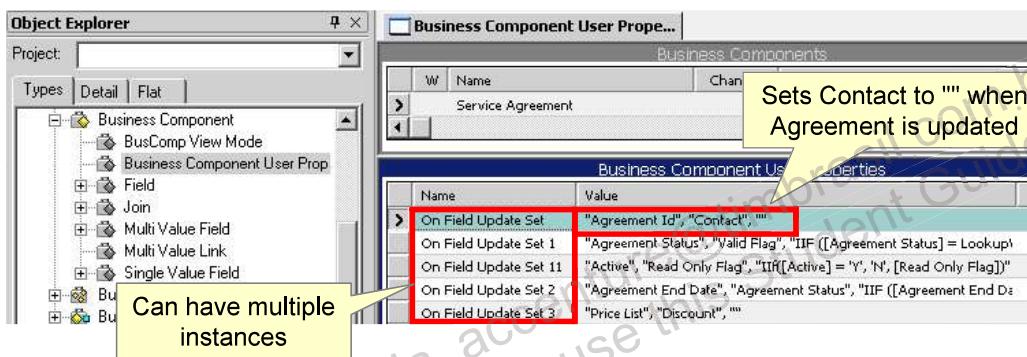
BC Read Only Field

- Specifies a field in the business component that makes a record read-only when the value of the field = TRUE
 - The designated field is often a calculated field



On Field Update Set

- Updates a single value field when another field is updated
 - Value property consists of:
 - The field to check
 - The field to update
 - A value or expression to set (defaults to the value in the checked field)



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On Field Update Set

The value property may also include an optional fourth parameter which serves as a condition. If the Condition parameter is defined, then the "field to update" is updated only if the condition evaluates to TRUE.

Parent Read Only Field

- Specifies a field in a parent business component that makes the child record read-only when the value of the parent field = TRUE (or Y)
 - Value property consists of:
 - Name of parent business component
 - Field name



Parent Read Only Field

When using the Parent Read Only Field user property, the referenced field in the parent business component must have its Link Specification property set to TRUE. Otherwise, the dynamic read-only functionality does not work.

Field Read Only Field

- Set a field in a business component to be read only based on the value in another field
 - Value property specifies the name of the field to check

The screenshot shows the Siebel Object Explorer interface. On the left, the Object Explorer tree is visible with nodes like Project, Types (selected), Detail, Flat, Business Component, Field, Join, Multi Value Field, Multi Value Link, Single Value Field, Business Object, Business Service, Command, EIM Interface Table, and Entity Relationship Diagram. In the center, a window titled "Business Component User Prop..." displays a list of business components under "Business Components". A single row for "Contact" is selected, with the class "CSSBCCContactSIS" shown. Below this, the "Business Component User Properties" table is displayed, listing various fields and their values. A yellow callout box points to the first few rows of the table, which are highlighted with a red border. The callout box contains the text: "These fields are read-only when Protect Internal Employee Flag is TRUE".

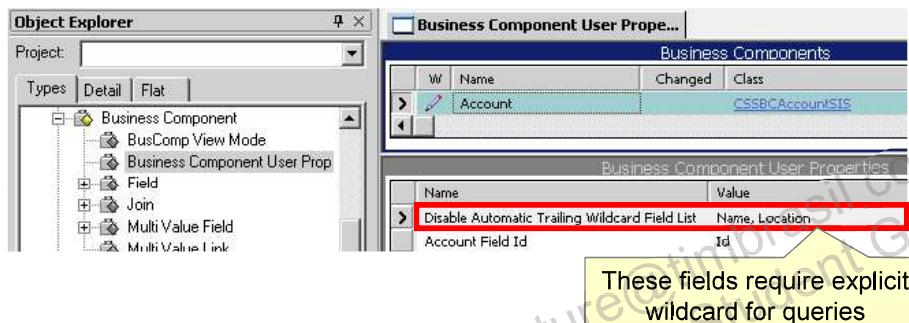
| Name | Value |
|---|--------------------------------|
| Field Read Only Field: Alias | Protect Internal Employee Flag |
| Field Read Only Field: Birth Date | Protect Internal Employee Flag |
| Field Read Only Field: Cellular Phone # | Protect Internal Employee Flag |
| Field Read Only Field: Email Address | Protect Internal Employee Flag |
| Field Read Only Field: Employee Number | Protect Internal Employee Flag |
| Field Read Only Field: Fax Phone # | Protect Internal Employee Flag |
| Field Read Only Field: First Name | Protect Internal Employee Flag |
| Field Read Only Field: Home Phone # | Protect Internal Employee Flag |

These fields are read-only
when Protect Internal
Employee Flag is TRUE

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Disable Automatic Trailing Wildcard Field List

- Disables automatic trailing wildcard for a set of fields in a business component
 - Value property specifies the list of fields to disable



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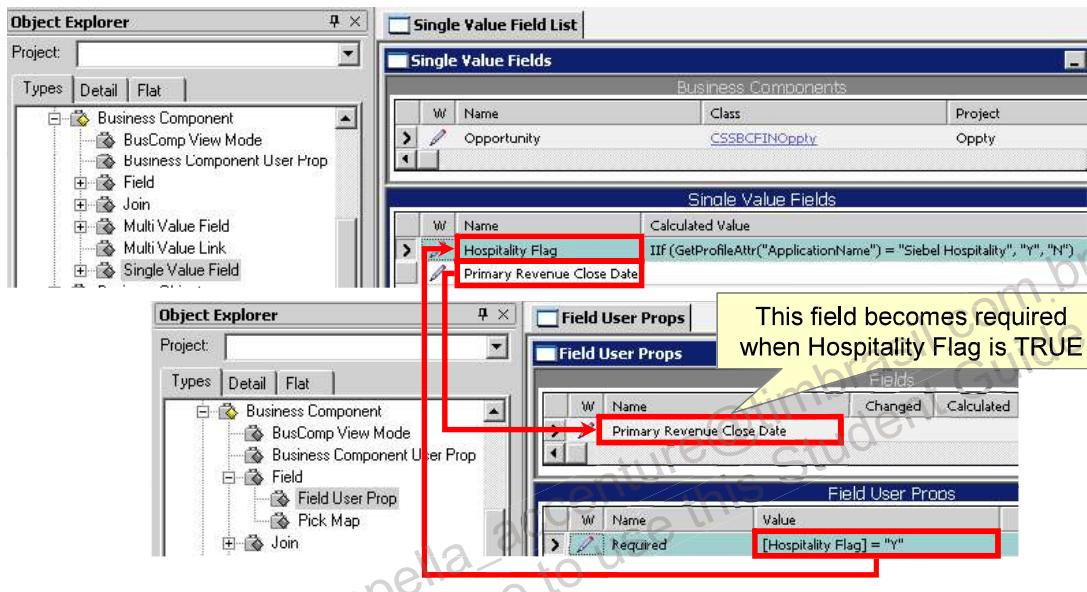
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Disable Automatic Trailing Wildcard Field List

Disabling trailing wildcards can be beneficial for performance, but requires additional training for users.

Required (Field User Property)

- Specifies that a field is required under certain conditions
 - Value property specifies the conditions



Lesson Highlights

- User properties are object definitions added as children of several UI and business layer object definitions
 - Configure specialized behavior beyond what is configured in the parent object definition's properties
 - Consist of name value pairs passed to the underlying code
- A picklist for the name property and expression builder are provided to assist in editing user properties
- Several business component user properties can be used to implement a variety of data-driven editing such as making a record read only based on the value of a field

Practice 21 Overview: Configuring User Properties

This practice covers the following topics:

- Configuring user properties

22

Siebel Workflow

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Objectives

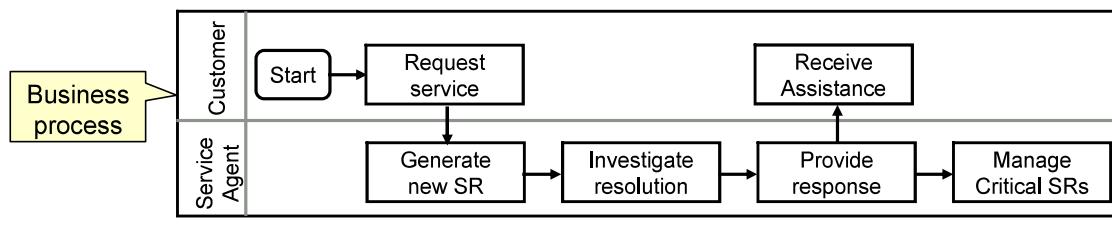
After completing this lesson, you should be able to:

- Describe the different steps of a workflow process
- Describe the behavior of workflow processes
- Examine existing workflow processes
- Contrast methods used to invoke workflow processes



Automating Business Processes in Siebel Applications

- A business process is a series of activities executed to achieve a business objective
- Siebel applications support automating some steps in a company's business processes
 - Can automate one or multiple steps in a business process
- Automation can result in:
 - Consistency in execution
 - Better performance
 - Enforcement of best practices



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Automating Business Processes in Siebel Applications

Reference

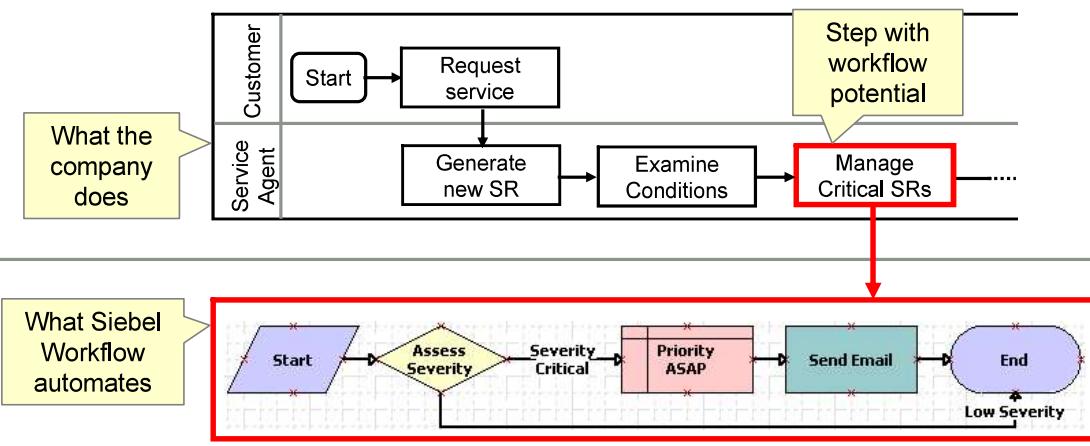
Bookshelf's *Siebel Business Process Framework: Workflow Guide*

Diagram

The diagram shows an example business process, which specifies how a service request is handled.

Automating Business Processes with Siebel Workflow

- Siebel Workflow is a general purpose facility for automating steps in a business process
- Workflow is a graphic "language" for executing business process steps



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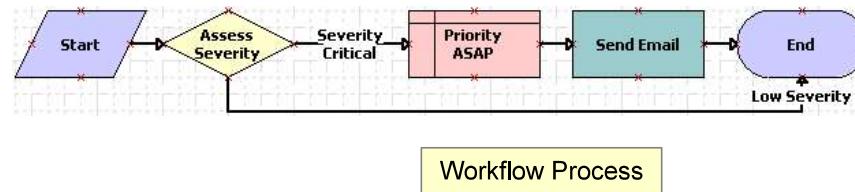
Automating Business Processes with Siebel Workflow

Diagram

The diagram depicts how Siebel Workflow can be used to automate one or more steps in a company's business process. The top half shows the business process for handling Service Requests (SRs), while the bottom half shows a workflow process for automating the Manage Critical SRs step in the business process.

Siebel Workflow Process

- Is an ordered set of steps executed in response to a defined set of conditions
- Is used to automate parts of a business process in a Siebel application
- Can be used as a solution to a business requirement
 - Example Requirement:
 - If an open SR's Severity is critical for two hours, update the SR's priority to ASAP, and notify the service manager via email
 - Workflow Implementation:



Workflow Process

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Workflow Designer

- Workflow processes are created Siebel Tools' Workflow Designer
 - Contains workspace and property windows, and a palette

The screenshot illustrates the Siebel Tools' Workflow Designer environment. It features several windows:

- Object Explorer:** Shows a tree view of Siebel Objects including Applet, Application, Business Component, Business Object, and Workflow Process.
- Properties Window:** Displays the properties of a selected step, specifically "WF Step [Priority ASAP]".
- Palettes Window:** Shows a palette of workflow steps: Start, Business Service, Decision Point, Sub Process, Siebel Operation, Task, User Interact, Wall, Stop, End, Connector, and Error Exception.
- Workflow Process - ABC Workflow- 0:** The main workspace where a workflow process is being designed. The process starts with a "Start" node, followed by a decision diamond labeled "Assess Severity". From the "Assess Severity" diamond, two paths emerge: one for "Severity Critical" leading to a "Priority ASAP" node, and another for "Low Severity" leading to an "End" node. A "Send Email" node is also present in the process flow.

Annotations provide additional context:

- A red arrow points from the "Workflow Processes" list to the "ABC Workflow" entry, with the text "Right-click to open Workflow Designer".
- A yellow callout box labeled "Workspace for designing Workflows" points to the main design area.
- A yellow callout box labeled "Properties of selected step" points to the Properties window.
- A yellow callout box labeled "Palette of workflow steps" points to the Palettes window.

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Workflow Designer

Diagram

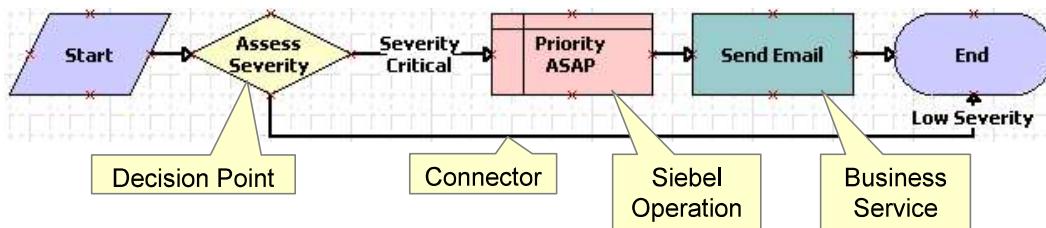
The screenshot shows Siebel Tools' Workflow Designer. To view a workflow in the Workflow Designer:

- Select Workflow Process in the OE
- Query for the workflow process in the list editor
- Right-click the workflow definition and select Edit Workflow Process.

The Workflow Designer includes a palette of workflow steps and connectors and a design pane, where steps can be dragged and dropped. The Properties window can be used to configure the steps.

Basic Workflow Process Steps

- Every workflow process must have Start and End steps
 - Start provides an entry point into the workflow
 - End specifies when a process is finished
- A Decision Point step provides branching capability
- A connector links steps and can contain branching logic
- A Siebel Operation step inserts, updates, or queries BC records
- A Business Service step runs a small program



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Basic Workflow Process Steps

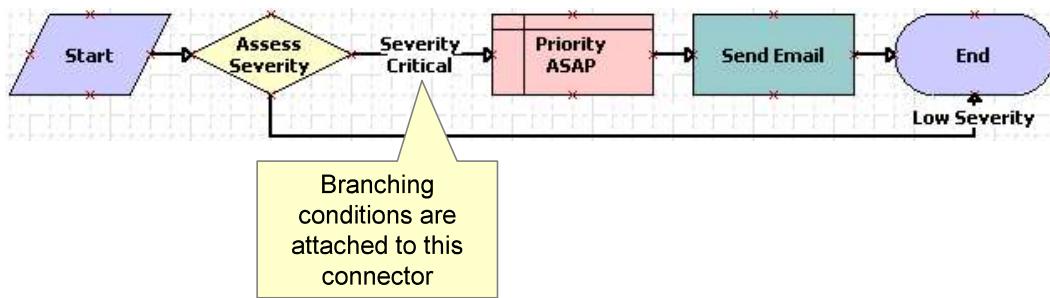
Diagram

The diagram shows a workflow process as it appears in the Workflow Designer. The workflow has several basic workflow step types, each with its own color and shape:

- Start and End: all workflows have these steps
- Decision Point: used to branch
- Connector: link steps and can have branching conditions
- Siebel Operation: inserts, updates, or queries records
- Business Service: executes a program.

Branching

- Is specified on one or more Connectors
 - Can be specified on a connector following any step that can have multiple branches
 - Start Step, Decision Step, User Interact Step
 - Example: Follow this branch if the Severity field = 1-Critical in the BC called Service Request



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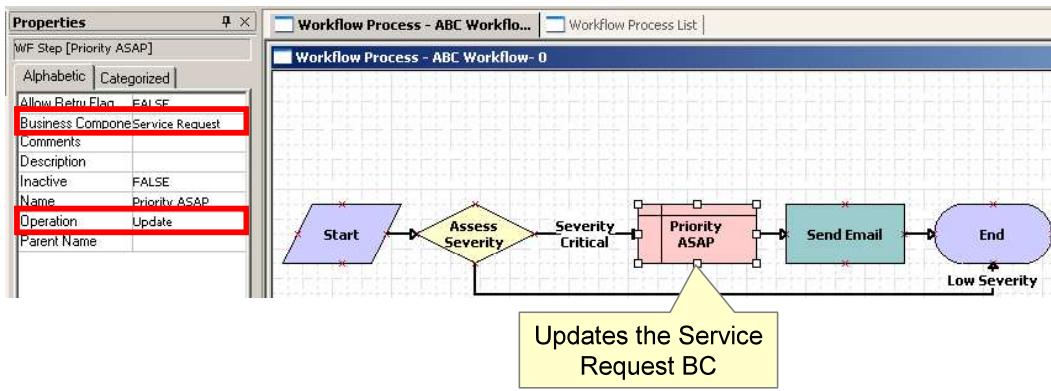
Branching

Diagram

This diagram shows the workflow seen in earlier slides and highlights the connector labeled Severity Critical. Branching conditions are attached to connectors immediately following a Decision Point step.

Siebel Operation Step

- Performs operations on a business component:
 - Insert, Update, Delete, Query
 - Example: Update the SR's Priority to ASAP



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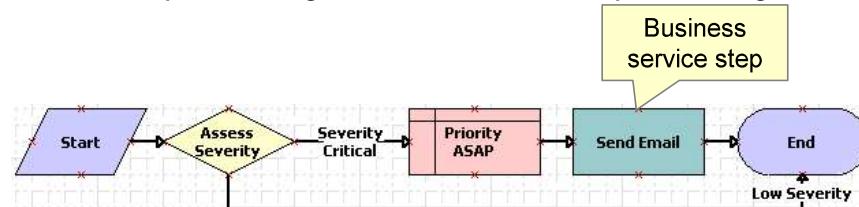
Siebel Operation Step

Diagram

The screenshot shows the same workflow seen earlier in the Workflow Designer. The Siebel Operation step labeled Priority ASAP is selected, and its properties appear in the Properties window to the left of the Design pane. Two properties are highlighted: Business Component = Service Request and Operation = Update.

Siebel Business Service Step

- Runs a Siebel-supplied or custom business service
 - A business service is a small program that can be reused
 - Consists of a set of “methods” that specify the action to take
 - The method invoked is based on the step’s Business Service Method property
 - Enables business logic to be executed repeatedly in multiple contexts, for example:
 - Send a notification email to the service agent who owns this SR
 - Some other examples include calculating shipping costs and taxes, performing a credit check, and performing email services



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Siebel Business Service Step

Diagram

The screenshot shows the same workflow seen earlier in the Workflow Designer. The Business Service step labeled Send Email is identified.

Additional Workflow Steps

- Siebel workflows may contain additional types of steps
 - A Sub Process invokes another workflow process
 - Can nest workflow processes
 - A User Interact step navigates to a view and waits for user activity
 - A Wait step pauses the workflow for a specified period of time before proceeding
 - A Task step invokes a Siebel task (Task UI)
 - Error Handling
 - A Stop step halts the workflow process instance if a predefined exception occurs
 - An Error Exception connector handles system and user-defined errors

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Additional Workflow Steps

User Interact Steps

User Interact steps are unnecessary in many workflows: instead, Task steps can be used to guide user navigation. Siebel Task UI is covered in a subsequent lesson.

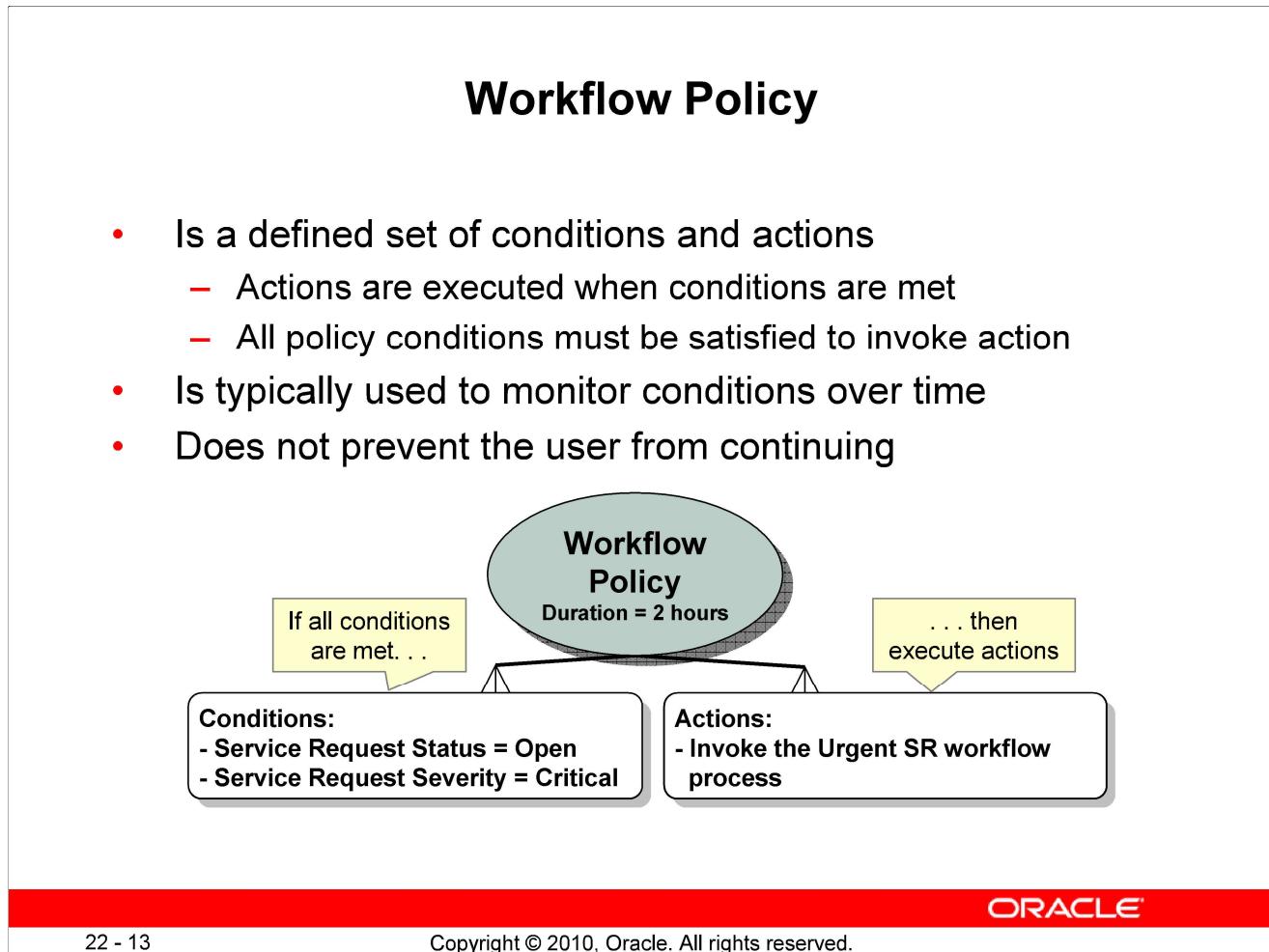
Invoking a Workflow Process

A workflow process can be invoked by:

- Workflow policies
- Run-time events
- Custom controls



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Workflow Policy

Monitoring Conditions Over Time

Workflow in Siebel applications monitors conditions over time by periodically "waking up" and checking to see what read/write activity has occurred in certain parts of the database. Depending on how frequently a workflow checks this read/write activity, there could be a delay before the workflow actually runs. This frequency can be adjusted by the administrator.

Diagram

The diagram shows the relationships between workflow policies, conditions, and actions. A workflow policy has one or more actions and one or more conditions. If all the conditions for a workflow policy are met, then all of the policy's actions are executed. The example shows a workflow policy with duration (period) = two hours. Its conditions are:

- Service Request Status = Open
- Service Request Severity = Critical

Its action is: invoke the Urgent SR workflow process.

Run-Time Events

- Are a mechanism that allows customer-configured processing to be triggered by user activity
- Consist of:
 - A specification of some user activity such as:
 - Record being updated
 - Navigating to or from an applet
 - The resultant processing:
 - Execution of a workflow process
 - Calls to one or more business services
 - Known as an action set
- Example: when a Service Request is saved, execute a workflow to handle high priority Service Requests



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Run-Time Events

Run-time events were introduced as part of Siebel Personalization and are described in Bookshelf's *Siebel Personalization Administration Guide*, "Tracking Run-Time Events".

Custom Controls

- User explicitly clicks a custom button or menu item to invoke the workflow
- Example Requirement
 - Add a button to the SR form so the user can click to notify of a change to Critical status

6-7358601

Custom control invokes a workflow

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Custom Controls

Diagram

The screenshot shows an applet with a custom control: a button labeled "Send Critical Notification". A workflow process will be executed when the button is clicked.

Workflow Scenarios

- Can be addressed by one of the three invocation methods:
 - Workflow Policy
 - Send out welcome letters at the end of the day to all new accounts that were created that day
 - Send an email alert to the manager when SR Status = Critical for more than one hour
 - Run-time Events
 - Send out a welcome email immediately when a new account is created
 - Send an immediate email alert to the manager when SR Status is set to Critical
 - Custom Control
 - Click Send Info (a new button) on the Account screen to send account summary to the team lead

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Specification of Workflow Processes

- Should include:
 - Description of workflow functionality, conditional logic, and branching
 - An indication as to how the workflow should be invoked
- Example:

| Business Requirement | Detailed Solution Description |
|---|---|
| If an open SR's Severity is critical for two hours, update the SR's priority and notify the service agent | Monitor the Severity field. When an open SR's Severity field = 1-Critical for a period of two or more hours, invoke a workflow process that first changes the Priority field to 1-ASAP, and then sends an email notification to the SR's owner. |

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Specification of Workflow Processes

Table

This table shows a business requirement and a detailed solution:

- Requirement: If an open SR's Severity is critical for two hours, update the SR's Priority and notify the service agent
 - Solution: Monitor the Severity field. When an open SR's Severity field = 1-Critical for a period of two or more hours, invoke a workflow process that first changes the Priority field to 1-ASAP, and then sends an email notification to the SR's owner.

General Questions for Analysis

- Business Process redesign projects often have improvement goals:
 - Timeliness, completeness, accuracy, consistency, compliance, customer satisfaction, and so forth
- Which business process steps could be automated to meet these goals?
 - Are the steps cross-functional?
 - Does the step require a standardized procedure that should be performed the same way each time?
 - If so, would it better to use navigation features such as Task UI, hyperlinks, and drilldowns to guide user tasks?
- What conditions must be met within the workflow process?

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Typical Requirements and Their Questions for Analysis

- Alert the customer service manager when a service issue has not been responded to after 24 hours
 - Does this requirement apply to all types of service requests?
 - How should the customer service manager be notified (by email? paging? inbox item?)
- Flag opportunities greater than \$50K that have not been closed
 - How long should the opportunity exist as not closed before it is flagged?
 - What happens when the opportunity is flagged?
 - How is action taken?
 - What action is taken?
 - Should any users be notified?

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Lesson Highlights

- Siebel Workflow provides a way to automate business process activities
- A workflow process is an ordered set of steps executed in response to a defined set of conditions
- Workflows can be invoked with workflow policies, run-time events, or custom controls
- Business solutions that involve workflow should include:
 - A prototype process design
 - Descriptions for the steps, including conditional and branching logic
 - A description of how workflow is to be invoked

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Practice 22 Overview: Exploring Workflow Processes

This practice covers the following topics:

- Gather information needed in a workflow specification
- Execute and explore a prototype workflow process
- Verify that a workflow meets specifications





Invocación de Workflow Processes

- Un Workflow Process es un objeto que representa una versión ejecutable de un proceso de negocio de la Compañía
- Se configura como un diagrama de flujo a partir de Steps, Conectores y Puntos de Decisión
- Los Steps pueden invocar a otros WorkflowProcesses, Business Service, Tasks u operaciones sobre los Business Components del contexto en el que se ejecuta
- Poseen su propio editor dentro de Tools, que garantiza un desarrollo rápido, uniforme y con menor probabilidad de error que otras herramientas, como el Scripting
- Permiten un rápido despliegue de nueva funcionalidad sin necesidad de compilación (salvo que invoque a objetos que sí la necesiten)
- Existe una gran cantidad de WFs predefinidos. Muchos para uso interno de la Aplicación y otros que pueden ser reutilizados en la satisfacción de nuevos requerimientos
- Se pueden desarrollar nuevos Workflows
- Admiten versionamiento
- Para su invocación es importante conocer su Estado, Activación y Propiedades de entrada y Salida



Invocación de Workflow Processes – Propiedades significativas

Nombre único dentro del Repositorio

Solo se podrán invocar aquellos WFs que hayan pasado por Estado = **Completed**, deployados en la Aplicación

| Workflow Processes | | | | | | | | |
|--------------------|--|-------------|---------------|---------|-------|--------------------------------|---------|--|
| Auto Persist | Process Name | Status | Workflow Mode | Changed | Group | Project | Version | |
| NO | NS Interfaces Invocacion Reimpresion de Polizas WF | In Progress | Service Flow | ✓ | | NS Interfaces Customer Service | 0 | |

Considera el contexto desde el que se ejecutará el WF al momento de poblar los parámetros de entrada como el Object Id

Es un parámetro opcional porque se puede “resolver el contexto” desde adentro del mismo WF

| Business Object | Description | Error Process Name | State Management Type | Comments |
|-----------------|----------------|--------------------|-----------------------|-------------------------------------|
| Service Request | Desarrollo v00 | | Stateful | GCerruti - F1 - 20/07/2012: WFP que |



Invocación de Workflow Processes – Activación y Versionamiento

Paso 1: Pasa el registro a Estado = **Completed** y lo **despliega** en la Aplicación

Paso 2: Pasa el registro a Estado = **Completed**

Paso 3: Crea una **nueva versión** editable del WF, en Estado = **In Progress**

Paso 4: Inactiva la versión del WF, pasando a Estado = **Not In Use**

Los WFs **no se compilan** en el SRF, se **Activan** desde la Aplicación

Los WFs no se exportan/importan por SIF, sino por **XML**. Para eso cuentan con sus propias opciones en su menú contextual

- Import Workflow Process
- Export Workflow Process

Pasar un WF a Estado = **Not In Use** no afecta a que el WF esté Activo u Obsoleto desde la Aplicación

Comando para acceder al editor del diagrama del WF

Workflow Processes

| Auto Persist | Process Name | Status | Workflow Mode | Changed | Group |
|--------------|--|-------------|---------------|---------|-------|
| NO | NS Interfaces Invocacion Reimpresion de Polizas WF | In Progress | Service Flow | ✓ | |

```

graph LR
    Start([Start]) --> Invocar[Invoker Interfaz Reimpresion Poliza]
    Invocar --> Crear[Crear Actividad Resultado de Interfaz]
    Crear --> Decision{Actividad OK?}
    Decision -- N --> Stop0([Stop 0])
    Decision -- S --> Subproceso[Subproceso Notificacion]
    Subproceso --> End([End])
  
```



Invocación de Workflow Processes - Properties

WF Process Props

| Name | Display Name | In/Out | Changed | Business Object | Business Component | Virtual Field | Default String | Default Date |
|----------------------------|--------------|--------|---------|-----------------|--------------------|---------------|-------------------|--------------|
| NroPatente | | In | ✓ | Service Request | | | | |
| Error Code | | In/Out | ✓ | Service Request | | | | |
| Error Message | | In/Out | ✓ | Service Request | | | | |
| Object Id | | In/Out | ✓ | Service Request | | | | |
| Process Instance Id | | In/Out | ✓ | Service Request | | | | |
| Siebel Operation Object Id | | In/Out | ✓ | Service Request | | | | |
| cErrorCodInterfaz | | None | ✓ | Service Request | | | | |
| cErrorMessageInterfaz | | None | ✓ | Service Request | | | Ejecución Exitosa | |
| SiebelMessage | | None | ✓ | Service Request | | | | |
| Nro Solicitud Core | | Out | ✓ | Service Request | | | | |

Todo WF se crea con un conjunto de Properties de sistema:

Error Code/Error Message: Ante una excepción se completan con el código Siebel del Error y una stack de las acciones que lo desencadenaron

Object Id: Para WFs con BO definido, representa el *Row Id* del registro del BC principal, que establecerá el contexto para todas las Siebel Operations del flujo

Process Instance Id: Identificador de la instancia en ejecución del WF

Siebel Operation Object Id: *Row Id* del registro que se consultó/creó/actualizó en la última Siebel Operation del avance de la ejecución del flujo del WF en tiempo de ejecución

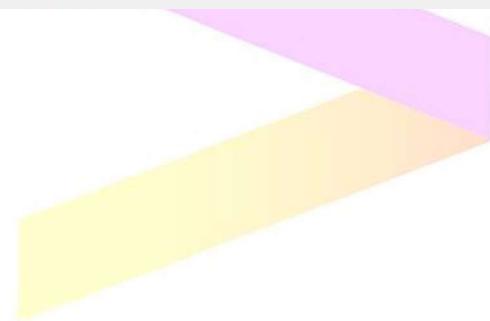


Invocación de Workflow Processes - Properties

Tipo de dato

Valores por Default
según el tipo de
dato de la Property

| Name | Data Type | Default Number | Integration Object | Correlator Flag | Inactive | Access Mode | Comments |
|----------------------------|--------------------|----------------|--------------------|-----------------|----------|-------------|----------|
| NroPatente | String | | | | | RW | |
| Error Code | String | | | | | RW | |
| Error Message | String | | | | | RW | |
| Object Id | String | | | | | RW | |
| Process Instance Id | String | | | | | RW | |
| Siebel Operation Object Id | String | | | | | RW | |
| cErrorCodInterfaz | Number | 0 | | | | RW | |
| cErrorMessageInterfaz | String | | | | | RW | |
| SiebelMessage | Integration Object | | CUT Account | | | RW | |
| Nro Solicitud Core | String | | | | | RW | |





Invocación de Workflow Processes – Activación en la Aplicación

Workflow Policies | Workflow Policy Actions | Workflow Policy Explorer | Workflow Policy Groups | Workflow Policy Log | **Workflow Deployment** | Workflow Processes | Workflow Instance Admin | Workflow Instance Monitor | Task Deploym

Repository Workflow Processes | Menu ▾ | Query | **Activate** | 1 - 10 of 77+ |

| Name | Business Object | Status | Group | Version | Mode |
|--|---------------------|-----------|------------------|---------|------------------|
| > ABO Bulk Request -Validate Process | ABO Bulk Request | Completed | ABO Bulk Request | 0 | 7.0 Flow |
| ABO Bulk Request - Add Sub-Process Workflow | ABO Bulk Request | Completed | ABO Bulk Request | 0 | Service Flow |
| ABO Bulk Request - All Exclusive Process Action Sub-Process Workflow | ABO Bulk Request | Completed | | 0 | Service Flow |
| ABO Bulk Request - Cancel Process Workflow | ABO Bulk Request | Completed | ABO Bulk Request | 0 | 7.0 Flow |
| ABO Bulk Request - Clear Exception Process Workflow | ABO Bulk Request | Completed | ABO Bulk Request | 0 | Service Flow |
| ABO Bulk Request - Clear Exception Sub-Process Workflow | ABO Bulk Request | Completed | ABO Bulk Request | 0 | Service Flow |
| ABO Bulk Request - Delete Sub-Process Workflow | ABO Bulk Request | Completed | ABO Bulk Request | 0 | Service Flow |
| ABO Bulk Request - Edit Order Line Item | Order Entry (Sales) | Completed | ABO Bulk Request | 0 | Interactive Flow |
| ABO Bulk Request - Inclusive Process Action Sub-Process Workflow | ABO Bulk Request | Completed | | 0 | Service Flow |
| ABO Bulk Request - Modify Sub-Process Workflow | ABO Bulk Request | Completed | ABO Bulk Request | 0 | Service Flow |

Child Items | **Active Workflow Processes**

Menu ▾ | Query | 1 - 10 of 10+ |

| Name | Version | Repository Version | Business Object | Group | Deployment Status | Activation Date/ | Expiration Date/ | Replication | Monitoring Level | Ar |
|--|---------|--------------------|---------------------|-------|-------------------|------------------|------------------|-------------|------------------|----|
| ABO Bulk Request -Validate Process | 1 | 0 | ABO Bulk Request | | Active | | | None | 0 - None | |
| > ABO Bulk Request -Validate Process | 0 | 0 | ABO Bulk Request | | Outdated | | | None | 0 - None | |
| ABO Bulk Request - Add Sub-Process Workflow | 0 | 0 | ABO Bulk Request | | Active | | | None | 0 - None | |
| ABO Bulk Request - All Exclusive Process Action Sub-Process Workflow | 0 | 0 | | | | | | None | 0 - None | |
| ABO Bulk Request - Cancel Process Workflow | 0 | 0 | ABO Bulk Request | | | | | None | 0 - None | |
| ABO Bulk Request - Clear Exception Process Workflow | 0 | 0 | ABO Bulk Request | | Active | | | None | 0 - None | |
| ABO Bulk Request - Clear Exception Sub-Process Workflow | 0 | 0 | ABO Bulk Request | | Active | | | None | 0 - None | |
| ABO Bulk Request - Delete Sub-Process Workflow | 0 | 0 | ABO Bulk Request | | Active | | | None | 0 - None | |
| ABO Bulk Request - Edit Order Line Item | 0 | 0 | Order Entry (Sales) | | Active | | | None | 0 - None | |
| ABO Bulk Request - Inclusive Process Action Sub-Process Workflow | 0 | 0 | ABO Bulk Request | | Active | | | None | 0 - None | |

No se recomienda borrar las versiones obsoletas (**Outdated**) porque podría ocasionar inconsistencias en procesos que la estén utilizando (especialmente para WFs persistentes)

Al activar un WF (con el botón resaltado en el Applet superior) se genera una nueva versión de WF activo en la Aplicación

La entrada en vigencia de la nueva versión dependerá de la configuración de la Aplicación. Existen parámetros que definen cada cuanto tiempo se chequearán versiones nuevas



Invocación de Workflow Processes – Ejemplo de invocación

La invocación se realiza a través de:

- BS Workflow Process Manager
- BS Workflow Process Batch Manager
- Step Subprocess dentro de un WF

Action Sets

| Name | Action Type | Sequence | Active | Start Date | End Date | Description |
|-------------|-------------|----------|--------|------------|----------|-------------|
| PSP Refresh | BusService | 1 | ✓ | | | |

More Info

| | | | |
|---------------------------|--------------------|--|---|
| Name: * PSP Refresh | Profile Attribute: | Business Service Name: Workflow Process Manager | Workflow Process Manager |
| Sequence: * 1 | Set Operator: | Business Service Method: RunProcess | RunProcess |
| Active: * ✓ | Value: | Business Service Context: "ProcessName", "PSP Re | "ProcessName", "PSP Refresh Cache On Cache Key - Discount Matrix" |
| Start Date: | Set Minimum: | Method Argument: | |
| End Date: | Set Maximum: | | |
| Action Type: * BusService | | | |
| Description: | | | |
| Conditional Expression: | | | |

Workflow Diagram

```

graph LR
    Start([Start]) --> GoDECISION{Go.DECISION}
    GoDECISION -- "Ignore Fetch Cache Key" --> End([End])
    GoDECISION -- "Fetch Cache Key" --> GetCacheKey[Get Cache Key From Adjustment Group]
    GetCacheKey --> RefreshAG[Refresh Adjustment Group On Cache Key]
    RefreshAG --> ConvertCacheKey[Convert Cache Refresh Key]
    ConvertCacheKey --> RefreshTB[Refresh Training-Based Adjustment...]
    RefreshTB --> RefreshEB[Refresh Entitlement-Based Adjustment...]
    RefreshEB --> RefreshPBA[Refresh Product-Based Adjustment...]
    RefreshPBA --> End
    
```



Runtime Events (RTE)

- Consisten en la configuración de un conjunto de acciones que se dispararán ante la ocurrencia de un determinado Evento de interés sobre un objeto activo:
 - Applet
 - Business Component
 - Aplicación
- No requieren compilación, pero sí una correcta administración
- Representan una alternativa a otras opciones de configuración más invasivas, como el Scripting
- Los tipos de objetos y eventos disponibles son similares a los disponibles desde Scripting





Runtime Events (RTE)

Alias del Evento

Evento de interés sobre el objeto elegido. Varía para cada tipo de objeto

Se disparará el evento, pero solo se ejecutarán las acciones si se cumple la condición definida

Se consideran los valores **activos** en el contexto de ejecución

| Name | Sequence | Object Type | Object Name | Event | Subevent | Conditional Expression | Action Set Name |
|------------------------------|----------|-------------|---|-----------------|-------------|------------------------|---|
| Solution - Write | 1 | BusComp | Solution Admin | WriteRecord | | | Update Index |
| Solution - PreDelete | 2 | BusComp | Solution Admin | PreDeleteRecord | | | Update Index |
| LogViewInfo - NavLogger | 0 | Application | | ViewActivated | | | LogViewInfo |
| Profile changed by user | 1 | Applet | User Profile Form Applet (eApps) | InvokeMethod | WriteRecord | | Profile Attributes Changed by user |
| Energy Profile changed by u: | 1 | Applet | NE Energy Profile Form Applet (eApps) | InvokeMethod | WriteRecord | | Profile Attributes Changed by user |
| EBPP Sign Up | 1 | Applet | DEMO Com Invoice Profile Form Applet (e | InvokeMethod | WriteRecord | | DEMO EBPP Sign Up |
| eSales Clear Cart | 3 | BusComp | Quote | InvokeMethod | ClearCart | | Clear Products from ProductsOnQuote |
| Quote - Item Removed (Shopi | 2 | BusComp | Quote Item | PreDeleteRecord | | | Drop Product from ProductsOnQuote |
| Quote - Item Added (Shopp | 1 | BusComp | Quote Item | WriteRecord | | | Append Product to ProductsOnQuote |
| NS Service Request - WriteR | -1 | BusComp | Service Request | WriteRecordNew | | | NS Interfaces Invocación Reimpresión de Polizas WF Action Set |

Orden de ejecución de RTEs para un mismo Evento de un mismo objeto.
El valor -1 indica que el registro está **inactivo**

Objeto particular para el Object Type elegido

Para algunos eventos se debe especificar un Subevento

Tipo de Objeto sobre el que “monitorean” eventos

- Applet
- BusComp
- Application

Conjunto de acciones que se ejecutarán cuando se dispare el evento

Ver *Siebel Personalization Administration Guide, version 8.2* (PersAdm.pdf, pág 35 para obtener el detalle de los eventos a configurar)



Runtime Events (RTE) - Alias

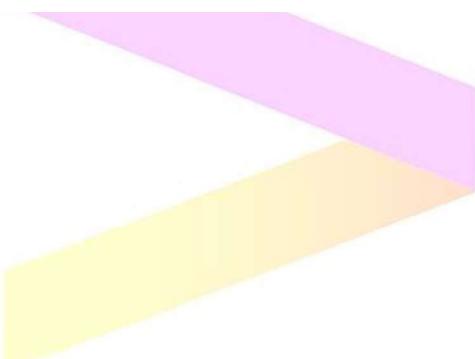
| Event Aliases | | | | |
|--|-------------|--------------------------|-----------------|----------|
| Name | Object Type | Object Name | Event | Subevent |
| > Service Request - New | BusComp | Service Request | NewRecord | |
| Service Request - Write | BusComp | Service Request | WriteRecord | |
| Service Request - PreDelete | BusComp | Service Request | PreDeleteRecord | |
| Service Request Attachment - New | BusComp | Service Request Attachme | NewRecord | |
| Service Request Attachment - Write | BusComp | Service Request Attachme | WriteRecord | |
| Service Request Attachment - PreDelete | BusComp | Service Request Attachme | PreDeleteRecord | |
| Contact - New | BusComp | Contact | NewRecord | |
| Contact - Write | BusComp | Contact | WriteRecord | |
| Contact - PreDelete | BusComp | Contact | PreDeleteRecord | |
| Account - PreDelete | BusComp | Account | PreDeleteRecord | |

Alias para una combinación de:

- Object Type
- Object Name
- Event
- Subevent

Representa un Template para la creación de Eventos comunes

Se recomienda usarlo, más que como un template, como un agrupador de RTEs que pueda usarse para identificar a todos los registros relacionados a una misma funcionalidad.
Puede ser útil para diagnóstico de defectos o migración





Runtime Events (RTE) – Action Set

Action Sets

| Name | Start Date | End Date | Active | Enable Export | Description |
|---|------------|----------|--------|---------------|--|
| NS Interfaces Invocacion Reimpresion de Polizas WF Action Set | | | ✓ | ✓ | GCERRUTTI - F1 - Invocación de WF de Reimpresión de Póliza |

Action Set Details

| Name | Action Type | Sequence | Active | Start Date | End Date | Description |
|---------------|-------------|----------|--------|------------|----------|-------------|
| Invocacion WF | BusService | 1 | | | | |

Conjunto ordenado de acciones

More Info

| | | |
|---------------------------|---------------------------------|--|
| Name: * Invocacion WF | Profile Attribute: | Business Service Name: Workflow Process Manager |
| Sequence: * 1 | Set Operator: | Business Service Method: RunProcess |
| Active: * | Value: | Business Service Context: "ProcessName", "NS Int |
| Start Date: | Set Minimum: | Method Name: |
| End Date: | Set Maximum: | Method Argument: |
| Action Type: * BusService | Invocación de método del Objeto | |
| Description: | | |
| Conditional Expression: | | |

Un espacio es requerido después de cada "," para la correcta interpretación de los parámetros. El no respetarlos puede hacer que no se ejecute la acción

Detalle de cada acción

Invocación de BS

Se pueden invocar WFs mediante el BS "Workflow Process Manager"

Condiciones de ejecución de la tarea

Operaciones con Profile Attributes

Los BS customizados **no admiten parámetros**. Deben setearse Profiles Attributes y consultarlos desde el código



Runtimes Events (RTE) – Ejemplo de Configuración

1 Event Aliases

| Name | Object Type | Object Name | Event | Subevent | Conditional Expression | Action Set Name |
|---------------------|-------------|-------------|------------|----------|------------------------|-------------------------------------|
| NS Prueba RTE Alias | BusComp | Action | CopyRecord | | | NS Prueba Runtime Events Action Set |

2 Action Sets

| Name | Action Type | Sequence | Active | Enable Export | Description |
|-------------------------------------|---------------|----------|--------|---------------|-------------|
| NS Prueba Runtime Events Action Set | Attribute Set | 1 | ✓ | ✓ | |

3 Events

| Name | Sequence | Object Type | Object Name | Event | Subevent | Conditional Expression | Action Set Name |
|---------------------|----------|-------------|-------------|------------|----------|------------------------|-------------------------------------|
| NS Prueba RTE Alias | 1 | BusComp | Action | CopyRecord | | | NS Prueba Runtime Events Action Set |

4 Reload Runtime Events

Activar el RTE desde su menú contextual



Runtim Events (RTE) – Ejemplo de funcionamiento

Ante la ocurrencia del evento configurado sobre el objeto configurado se ejecuta la acción del set asociado al RTE, en este caso, la invocación de un Business Service que despliega un mensaje por pantalla



Runtimes Events (RTE) - Migración

Events | Menu ▾ | New Delete Query

| Name | Object Name | Event | Subevent | Conditional Expression | Action Set Name |
|----------------------------------|-----------------------------|-------------------|----------|------------------------|-------------------------------------|
| Undo Record [Ctrl+U] | Siebel eTraining | WebSessionStart | | | eSales Web Session Start Action Set |
| Delete Record [Ctrl+D] | Siebel Marketing Enterprise | WebSessionStart | | | eSales Web Session Start Action Set |
| New Record [Ctrl+N] | Siebel Universal Agent | WebSessionStart | | | eSales Web Session Start Action Set |
| Copy Record [Ctrl+B] | Siebel Universal Agent | ViewActivated | | | Comm.Notify View Change Action |
| Save Record [Ctrl+S] | Siebel eTraining | WebLogin | | | eTraining WebLogin Action Set |
| New Query [Alt+Q] | Siebel eEvents Management | WebLogin | | | eTraining WebLogin Action Set |
| Run Query [Alt+ENTER] | | ApplicationUnload | | | Comm. Web Session Close Action |
| Refine Query [Alt+R] | ERM Group News Item | SetFieldValue | Status | | Workflow_0-6BOSG |
| About Record [Ctrl+Alt+K] | Siebel Partner Manager | WebSessionStart | | | eSales Web Session Start Action Set |
| Record Count [Ctrl+Shift+3] | Literature List Applet (e | | | | |
| Create Bookmark... | | | | | |
| Print Preview... | | | | | |
| Print... | | | | | |
| Columns Displayed [Ctrl+Shift+J] | | | | | |
| Advanced Sort [Ctrl+Shift+O] | | | | | |
| Import... | | | | | |
| Export... | | | | | |
| Apply List | | | | | |
| Save List | | | | | |
| XML Export... | | | | | |
| XML Import... | | | | | |
| Reload Runtime Events | | | | | |

Renueva la caché para que tomen efecto los cambios

Se debe ejecutar después de una importación y crear un RTE desde 0

Las acciones **no se sincronizan** cuando se migran entre ambientes. Conviene inactivar más que borrar

Exporta toda la personalización:

- Reglas de Personalización
- Runtime Events

```

</BusComp>
- <BusComp Name="Personalization Event">
  pendingOn BusComp="Personalization Action Set" Field="Action Set Id" />
  pendingOn BusComp="Personalization Event Def" Field="Event Def Id" />
  <Field Name="Action Set Id" DataType="id" />
  <Field Name="Condition Expression" DataType="text" />
  <Field Name="Event" DataType="text" />
  <Field Name="Event Def Id" DataType="id" />
  <Field Name="Object Name" DataType="text" />
  <Field Name="Object Type" DataType="text" />
  <Field Name="Sequence" DataType="integer" />
  <Field Name="Sub-Event" DataType="text" />
  - <Row Id="04-E8T51" Created="31/12/1979 04:00:00 p.m.">
    Updated="31/12/1979 04:00:00 p.m."
    <Value Field="Action Set Id">04-E8T50</Value>
    <Value Field="Event">InvokeMethod</Value>
    <Value Field="Object Name">Select Credit Card Applet (eSales)</Value>
    <Value Field="Object Type">Applet</Value>
    <Value Field="Sequence">-1</Value>
    <Value Field="Sub-Event">NamedMethodSelect</Value>
  </Row>
  - <Row Id="04-E8T5A" Created="31/12/1979 04:00:00 p.m.">
    Updated="31/12/1979 04:00:00 p.m."
    <Value Field="Action Set Id">04-E8T59</Value>
  </Row>

```



Ejercicio

- Realizar el ejercicio “5- Workflow y Business Services” del documento “Ejercicios - Otros Objetos”

