

Siebel 8.0 Essentials

Volume I • Student Guide

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Siebel 8.0 Essentials

Module i: Siebel 8.0 Essentials Training

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Module Agenda

- This module provides an introduction to the:
 - ▶ Instructor and class participants
 - ▶ Training site information
 - ▶ Course:
 - Audience
 - Prerequisites
 - Goal
 - Objectives
 - Methodology
 - Materials
 - Agenda



Instructor and Class Participants

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- Who are you?
 - ▶ Name
 - ▶ Company
 - ▶ Role
- What is your prior experience?
 - ▶ Siebel Applications
 - ▶ Relational database
- How do you expect to benefit from this course?



Training Site Information

- Bathrooms



- Telephones



- Fire Exits



- Class duration and breaks



- Meals and refreshments



- Questions?



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Course Audience

- This course is designed for implementation teams
 - ▶ Application developers
 - ▶ System architects and configurators
 - ▶ Database administrators
 - ▶ Systems administrators

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Course Prerequisites

- Basic Windows or NT navigation and file-management skills
- Understanding of basic relational database concepts
- Familiarity with application development
- Familiarity with Web-based and client/server applications



Course Goal

- To enable participants to identify and perform tasks required for an initial Siebel 8 Application deployment

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Course Objectives

- Navigate the Siebel application user interface
- Secure access to Siebel applications and data
- Define your company structure
- Describe the Siebel application architecture
- Describe the steps required to install Siebel application software to set up your enterprise
- Configure a Siebel application
- Automate business rules in your Siebel application
- Populate and migrate data into the Siebel database
- Migrate data between environments



Course Methodology

- Subject matter is delivered via:
 - ▶ Lecture and slide presentations
 - ▶ Software demonstrations
 - ▶ Class discussions
 - ▶ Hands-on labs

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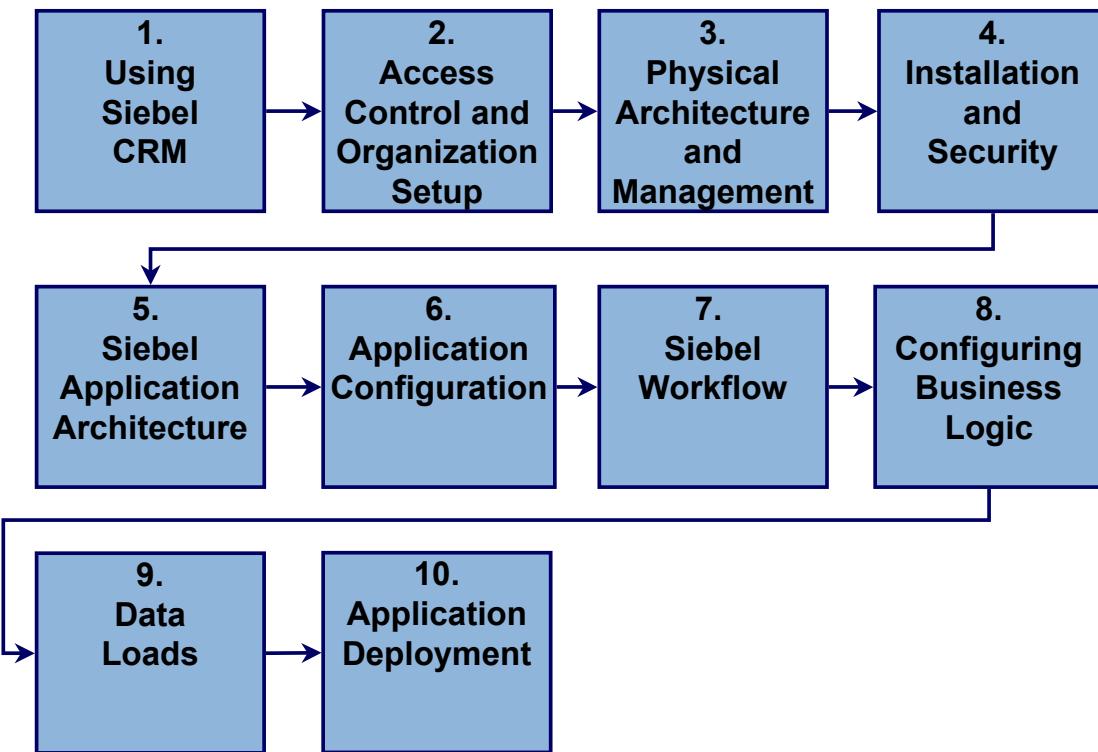


Course Materials

- Student Guide
 - ▶ All slides presented during lecture
 - ▶ Notes that point to Siebel Bookshelf references
- Lab Guide
 - ▶ Hands-on lab exercises and solutions

Overview of Course Flow

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Course Agenda

- Using Siebel CRM
 - ▶ 1: Introducing Siebel Applications
 - ▶ 2: Using the Siebel Web Client
 - ▶ 3: Working with Siebel Data
- Access Control and Organization Setup
 - ▶ 4: Responsibilities and Views
 - ▶ 5: Users, Positions, and Organizations
 - ▶ 6: Controlling Access to Customer Data
 - ▶ 7: Catalogs and Master Data
- Physical Architecture and Management
 - ▶ 8: The Siebel Web Architecture
 - ▶ 9: Server Components and Parameters
 - ▶ 10: Server Management
 - ▶ 11: Siebel Client Types

Course Agenda Continued

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- Installation and Security
 - ▶ 12: Securing Access to the Application
 - ▶ 13: Installing Siebel Applications
- Siebel Application Architecture
 - ▶ 14: Siebel Application Architecture
 - ▶ 15: Using Siebel Tools to Examine Object Definitions
 - ▶ 16: The Siebel Data Model
 - ▶ 17: Siebel Business Components
 - ▶ 18: Siebel Party Business Components
 - ▶ 19: Siebel Business Objects
 - ▶ 20: Configuration Strategy
 - ▶ 21: The Configuration Process



Course Agenda Continued

- Application Configuration
 - ▶ 22: Managing Object Definitions
 - ▶ 23: Editing and Compiling Object Definitions
 - ▶ 24: UI Layer Configuration: Web Templates
 - ▶ 25: UI Layer Configuration: Applets
 - ▶ 26: UI Layer Configuration: Applications, Screens, and Views
 - ▶ 27: UI Layer Configuration: Drilldowns
 - ▶ 28: Business Layer Configuration: Joins
 - ▶ 29: Business Layer Configuration: Existing Business Components and Fields
 - ▶ 30: Business Layer Configuration: New Business Components and Fields
 - ▶ 31: Business Layer Configuration: Picklists
 - ▶ 32: Configuring Multi-Value Groups
 - ▶ 33: Data Layer Configuration

Course Agenda Continued

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- Siebel Workflow
 - ▶ 34: Siebel Business Services
 - ▶ 35: Building Siebel Workflow Processes
 - ▶ 36: Testing and Deploying Workflow Processes
 - ▶ 37: Executing Workflow Processes
 - ▶ 38: Using Workflow Policies
- Configuring Business Logic
 - ▶ 39: Siebel Task UI
 - ▶ 40: Task UI: Creating a Task
 - ▶ 41: Transient Business Components and Branching
 - ▶ 42: Siebel Business Rules
 - ▶ 43: Creating Business Rules
 - ▶ 44: Introducing Siebel Assignment Manager
 - ▶ 45: Creating Assignment Rules
 - ▶ 46: Tailoring Assignment Manager Behavior



Course Agenda Continued

- Configuring Business Logic (Continued)
 - ▶ 47: Invoking Siebel Assignment Manager
 - ▶ 48: State Models
- Data Loads
 - ▶ 49: Introducing Enterprise Integration Manager
 - ▶ 50: Creating Data Maps
 - ▶ 51: Running Enterprise Integration Manager
- Application Deployment
 - ▶ 52: Introducing Application Deployment Manager
 - ▶ 53: Deploying Application Customizations



Summary

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- This module provides an introduction to the:
 - ▶ Instructor and class participants
 - ▶ Training site information
 - ▶ Course:
 - Audience
 - Prerequisites
 - Goal
 - Objectives
 - Methodology
 - Materials
 - Agenda



Siebel 8.0 Essentials

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Module 1: Introducing Siebel Applications

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Module Objectives

- After completing this module you should be able to:
 - ▶ Describe Siebel Customer Relationship Management (CRM) applications and how they are classified
 - ▶ Identify the common business entities found in Siebel CRM applications
- Why you need to know:
 - ▶ You need to be familiar with Siebel applications to understand the context of this course



Siebel Customer Relationship Management (CRM)

- Enables you to manage interactions with customers, partners, and employees
 - ▶ Typically deployed as a single application with broad functionality
 - ▶ Supports multiple communication channels
 - Web and email
 - Call center
 - Field service
- Uses a single database to:
 - ▶ Allow all users access to the same set of data
 - Example: The correct customer order status is seen by all relevant users
 - ▶ Ensure changes to data are made once and only once
 - Example: An address needs to be updated in only one place
- Is a packaged application with built-in best practices

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Siebel Bookshelf

Comprehensive documentation on Siebel applications is available in Siebel Bookshelf, which is available in book form and online on the Siebel support Web site. Access to the online version requires a SupportWeb login. References in this course material refer to Siebel Bookshelf titles.



Siebel CRM Applications

- Are available tailored for:
 - ▶ Different types of customer, partner, or employee interactions and channels (horizontal applications)
 - ▶ Different industries (industry applications)
- Examples:
 - ▶ Horizontal applications
 - Siebel Sales
 - Siebel Call Center
 - Siebel Partner Portal
 - Siebel Remote
 - ▶ Industry applications
 - Siebel Finance
 - Siebel Consumer Goods

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References

Siebel Bookshelf includes titles on horizontal applications, such as Siebel Field Service Guide, as well as titles for industry applications, such as Siebel Finance Guide.



Types of Siebel Enterprise Applications

- Employee applications
 - ▶ Are used by internal employees
 - ▶ Examples include:
 - Siebel Call Center
 - Siebel Sales
- Customer and partner applications
 - ▶ Are used by customers and partners
 - ▶ Examples include:
 - Siebel eSales
 - Siebel Partner Portal

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Employee Application: Siebel Sales

- Siebel Sales may be used by a company's sales representatives and managers to manage accounts, sales opportunities, and contacts

The screenshot shows the Siebel Sales Opportunities screen. At the top, there is a menu bar with File, Edit, View, Navigate, Query, Tools, and Help. Below the menu is a toolbar with various icons. A yellow callout box points to the 'Opportunities' button in the toolbar, which is highlighted with a red border. The main area is titled 'Siebel Sales Opportunities screen'. It displays a contact list with columns for Last Name, First Name, Mr./Ms., Work Phone #, Job Title, Email, Account, Site, and Role. The first contact listed is Agostini, Rakesh, Mr., with phone number (847) 555-4628, job title Sr. Business Consult, email Rakesh_Agostini@m, account Erickson Retirement, site Atlanta, GA, and role Approver. Other contacts listed include Conway, Brad; Dannemann, Atul; and Doeden, Mike.

Last Name	First Name	Mr./Ms.	Work Phone #	Job Title	Email	Account	Site	Role
Agostini	Rakesh	Mr.	(847) 555-4628	Sr. Business Consult	Rakesh_Agostini@m	Erickson Retirement	Atlanta, GA	Approver
Conway	Brad	Mr.	(707) 678-9023	Practice Manager	bconway@deloitte.c	Erickson Retirement	Atlanta, GA	
Dannemann	Atul		(312) 555-7894	Database Analyst	Atul_Dannemann@c	Erickson Retirement	Atlanta, GA	Evaluator
Doeden	Mike		(408) 555-7829	Manager Sales Adm	Mike_Doeden@lsil.c	Erickson Retirement	Atlanta, GA	Evaluator

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Employee Application: Siebel Call Center

- Siebel Call Center may be used by a company's telesales and service representatives

The screenshot shows the Siebel Call Center service screen. At the top, there is a menu bar with File, Edit, View, Navigate, Query, Tools, and Help. Below the menu is a toolbar with various icons. A yellow callout box points to the 'Service' button in the toolbar, which is highlighted with a red box. The main area displays a grid of 'My Service Requests' with columns for New, SR #, Status, Substatus, Summary, Account, Last Name, Owner, and Priority. One row in the grid is selected and highlighted in yellow. Below the grid, a specific service request (SR # 1-1826242) is shown in a detailed view. The detailed view includes fields for SR #, Work Phone #, Last Name, First Name, Account, Site, Summary, and Description.

New	SR #	Status	Substatus	Summary	Account	Last Name	Owner	Priority
>	1-1826242	Open	Resolved	How do I setup a networked printer on m	Marriott Internatior	Manning	CCHENG	2-High
	1-1856014	Open	Unassigned	Problem with resolution after self-installin	Marriott Internatior	Carlson	CCHENG	3-Mediu
*	1-1862924	Open	Resolved	Anti-virus software failing to update .DA	Marriott Internatior	Carlson	CCHENG	3-Mediu
	1-2170401	Open	Unassigned	Problem with upgrade of CPU	AEP Communicatio		CCHENG	3-Mediu
	1-2222321	Open	Unassigned	How do I install graphics card?	Marriott Internatior	Manning	CCHENG	3-Mediu
*	1-3598124	Open	Unassigned	Problem with my hard drive	Cymer Inc.	Ellis	CCHENG	2-High
	1-5071509	Open	Unassigned	Question on disk problem	Marriott Internatior	Manning	CCHENG	3-Mediu
	1-5071517	Open	Unassigned	Server Failure: PCS 500S needs replacer	Marriott Internatior	Carlson	CCHENG	3-Mediu
	1-5411401	Open	Unassigned	I need help..	3Com	Pennington	CCHENG	3-Mediu
	1-692304	Open	In Process	Customer has a problem with the HP Prinl	Marriott Internatior	Manning	CCHENG	2-High

1-1826242

SR #: 1-1826242 Work Phone #: (408) 477-2006
Last Name: Manning First Name: James
Account: Marriott Internation Site: HQ

Summary: How do I setup a networked printer on my PCS series computer?
Description: Please provide documentation for this process. Thanks.

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Customer Application: Siebel eSales

- May be used by customers to purchase products over the Web
- Includes an interactive product catalog, search and product comparison mechanisms, and online ordering capabilities

The screenshot shows the Siebel Customer Relationship Management interface. At the top, there's a navigation bar with links for Home, Catalog (which is highlighted with a red box), My Account, Help, Contact Us, About Us, and Log Out. Below the navigation bar, the main content area has tabs for Product catalog and Shopping cart. A search bar is located at the top right. The left sidebar includes sections for Browse (with links to Search With Characteristics and Browse Literature) and Links. The central area displays a "Recommended Items" section with three items listed:

- 11 Mbps Wireless LAN PC Card with XJACK® Antenna** (Tricor - 11 Mbps Wireless LAN PC Card with XJACK® Antenna)
- 24x/10x/24x CD-RW w/8x DVD Combo Drive** (CompMaster - 24x/10x/24x CD-RW w/8x DVD Combo Drive)
- 7200RPM 80GB Retail Kit** (Primex - 7200RPM 80GB Retail Kit)

To the right, there's a sidebar titled "Last Item Added:" with fields for Line Items and Total Price, and a "Need Advice?" section. At the bottom, there's a "Quick Add" form with fields for Item Name and Item Code, and a "Add Item" button. The footer contains copyright information and page numbers.

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Partner Application: Siebel Partner Portal

- May be used by a company's partners to communicate, collaborate, and conduct business with a Web-based interface

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Partner Portal opportunities screen

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Comparison of Siebel CRM Applications

- Siebel functionality is delivered as separate horizontal or vertical applications that:
 - ▶ Have the same user interface and navigation
 - ▶ Are based on the same underlying application architecture
 - ▶ Use the same underlying technologies for automation, integration, and so on
 - ▶ Share many of the same application screens
- Applications use the same executable, but use different configuration and input files
 - ▶ Configuration files are used to specify application parameters
 - ▶ Use Siebel Tools to generate input files that control behavior
- This course will teach you how to modify these files to meet the specific requirements of your business

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Siebel User Interface (UI) Modes

- The Siebel UI is rendered in one of two modes:

High Interactivity Mode

Standard Interactivity Mode

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High Interactivity Mode

- Is available for employee applications, supporting highly interactive users
- Uses additional code, such as Active X controls, to provide extra functionality
 - ▶ Drag-and-drop for setting column widths
 - ▶ Explorer-like hierarchy views
 - ▶ Menu bar and tool bars
 - ▶ Saving records by moving off the current line
- Requires Internet Explorer (check documentation for versions)

Standard Interactivity Mode

- Is available for customer and employee applications
- Designed to be less browser-dependent
 - ▶ Behaves like a typical HTML-based Web application
- Available on a wide variety of browsers (check documentation for supported browsers)

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Reference

System Requirements and Supported Platforms



Common Siebel Application Business Entities

- Siebel applications use common business entities
 - ▶ A business entity is something of business interest in the real world
- Siebel applications refer to these entities as business components
- Examples:
 - ▶ Accounts
 - ▶ Contacts
 - ▶ Opportunities
 - ▶ Service requests
 - ▶ Assets

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Common Siebel Business Components

Accounts

Contacts

Opportunities

Service Requests

Assets

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Accounts

- Are businesses external to your company
- Represent a current or potential client, a business partner, or a competitor
- Are associated with a team

The screenshot shows the Siebel Accounts List interface. At the top, there's a navigation bar with links for Home, Accounts (which is highlighted with a red box), Contacts, Households, Sales Orders, Service, and Assets. Below the navigation bar is a sub-navigation bar with links for Accounts Home and Accounts List. The main area is a table titled 'My Accounts' with columns for Account Name, Site, Main Phone #, Status, and URL. The table lists ten accounts, each with a small icon and a hyperlinked name. The first account, 'Akamai Technologies, Inc.', is selected, indicated by a yellow background.

Account Name	Site	Main Phone #	Status	URL
Akamai Technologies, Inc.	Cambridge, MA	(508) 460-8900	Gold	www.akamai.com
British American Tobacco	Hamburg, Germany	+490242117465	Silver	www.bat.com/
Cap Gemini Ernst & Young	Atlanta, GA	(404) 249-2000	Gold	www.bellsouth.com
Chase Manhattan Bank	Manhattan, Ny	(212) 622-0726	Platinum	www.chase.com
Country Companies Services Inc.	Bloomington, IL	(309) 821-3000	Platinum	www.countrylife.com
Danney K. Foundation	Pittsburgh, PA	(800) 578-9515	Gold	www.dkf.com
FleetBoston Financial	Framingham, MA	(617) 883-9300	Active	www.fleet.com
Harris Corporation	Florida (HQ)	(414) 239-5000	Active	www.harris.com
Holiday Inn	HQ-Corporate	(707) 234-5506	Active	www.holidayinn.com
IBM Corporation	Poughkeepsie, NY	(914) 433-9187	Platinum	www.ibm.com

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Contacts

- Are people with whom you do business
- Can be public or marked as personal
- Are associated with a team (public contacts) or a user (personal contacts)

The screenshot shows the Siebel Contacts application interface. At the top, there is a navigation bar with tabs: Home, Accounts, Contacts (which is highlighted with a red box), Households, Sales Orders, Service, Assets, and Service Orders. Below the navigation bar, there are two buttons: 'Contacts Home' and 'Contacts List'. The main area displays a table titled 'My Contacts' with columns: Last Name, First Name, Mr./Ms., Work Phone #, Job Title, and Email. The table contains 12 rows of contact information.

Last Name	First Name	Mr./Ms.	Work Phone #	Job Title	Email
Allen	Ross	Ms.	(312) 555-7448	Training Specialist	Ross_Allen@kemper.com
Allen	Ross	Mr.	(312) 555-7448		
Allen	Ross	Mr.	(312) 555-7448		
Brown	Joshua	Mr.	(818) 731-1237 x18	Student	josh@comappeal.com
Carlson	Mike	Mr.	(301) 380-5001	Director, IT Procurement	mcarlson@demohost.siebel.com
Carlson	Troy	Mr.	(301) 380-4532	Customer Service Administrator	tcarlson@marriott.com
Cutting	JoAnn	Ms.	(467) 995-6990	Lawyer	joann876@aol.com
Damone	Victor	Mr.	(408) 373-4332	IT Director	vic.damone@princesscruises.com
Fosters	Julie	Ms.	(415) 345-8832	Senior Director, Communications	jifosters@akamai.com
Gaddam	Mike	Ms.	(416) 555-2703	Associate Director, eBusiness Application	Mike_Gaddam@bell.ca

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Opportunities

- Are potential revenue-generating events
- Have the following characteristics:
 - ▶ A possible association with an account
 - ▶ A probability of completion
 - ▶ A close date
- Are associated with a team

Opportunity:

The screenshot shows the Siebel Opportunities List interface. At the top, there's a navigation bar with links for Home, Opportunities (which is highlighted with a red box), Accounts, Contacts, Calendar, and Quotes. Below the navigation bar, there are links for Opportunities Home, Opportunities List (which is selected), Charts, and Opportunity Explorer. The main area is titled "My Opportunities" and contains a table with the following data:

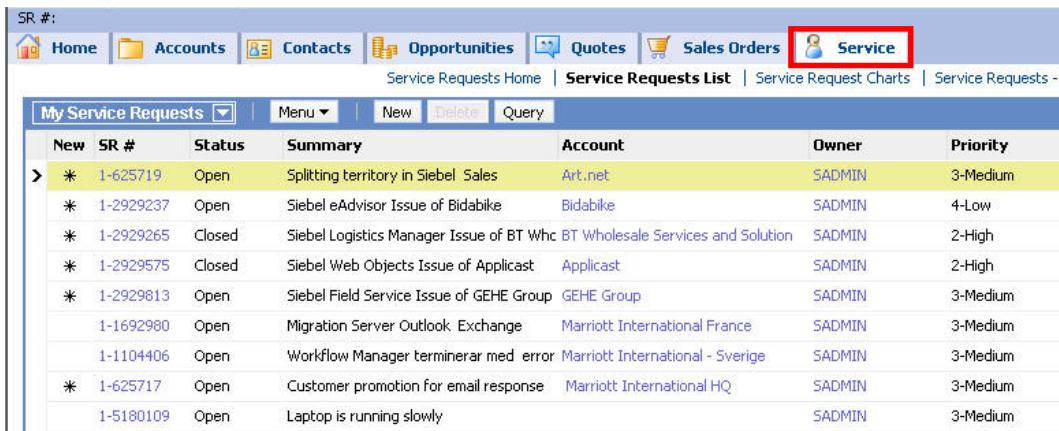
Opportunity Name	Account	Revenue	Committed	Team Space	Sales Stage
> Laptops for Kaboom		\$25,000.00			
350 V16 Monitor Units	Genesys Communic	\$340,000.00			02 - Qualification
Performance Servers	State of Florida	\$250,000.00			02 - Qualification
150 PCS Puma Laptop EB units	3Com	\$250,000.00			03 - Closing
Fast Ethernet NIC PCI 10/100 - 2500 unil	Marriott Internati	\$687,500.00	✓		04 - Opportunity
75x PCS Torro Server Pro FL, all options	PlusOne Financial	\$300,000.00	✓		03 - Qualification
500x PCS Chev Desktop Q Options	Altera	\$275,000.00	✓		03 - Qualification
40x ePharma Open	Assurances General	\$200,000.00	✓		04 - Opportunity
505x PCS Puma Laptop CC	CJ Tenney	\$1,500,000.00	✓		06 - Short List
PCS Puma Laptop PS Deployment - Erics	Erickson Retirement	\$220,000.00	✓		09 - Closed/Lost

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Service Requests

- Are requests from customers or prospects for information or assistance with your products or services
- Have the following characteristics:
 - ▶ A status
 - ▶ A severity level
 - ▶ A priority level
- Are associated with a single owner



The screenshot shows the Siebel Service Requests List interface. At the top, there's a navigation bar with tabs for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Service. The 'Service' tab is highlighted with a red box. Below the navigation bar, there are several links: Service Requests Home, Service Requests List (which is the current page), Service Request Charts, and Service Requests - I. The main area is a table titled 'My Service Requests'. The columns are: New, SR #, Status, Summary, Account, Owner, and Priority. The table contains ten rows of data, each representing a service request. The first row is highlighted with a yellow background.

New	SR #	Status	Summary	Account	Owner	Priority
>	*	Open	Splitting territory in Siebel Sales	Art.net	SADMIN	3-Medium
	*	Open	Siebel eAdvisor Issue of Bidabike	Bidabike	SADMIN	4-Low
	*	Closed	Siebel Logistics Manager Issue of BT Whc	BT Wholesale Services and Solution	SADMIN	2-High
	*	Closed	Siebel Web Objects Issue of Appicast	Appicast	SADMIN	2-High
	*	Open	Siebel Field Service Issue of GEHE Group	GEHE Group	SADMIN	3-Medium
	1-1692980	Open	Migration Server Outlook Exchange	Marriott International France	SADMIN	3-Medium
	1-1104406	Open	Workflow Manager terminerar med error	Marriott International - Sverige	SADMIN	3-Medium
	*	Open	Customer promotion for email response	Marriott International HQ	SADMIN	3-Medium
	1-5180109	Open	Laptop is running slowly		SADMIN	3-Medium

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Assets

- Are instances of purchased products
- Have the following characteristics:
 - ▶ An asset number
 - ▶ A product and part number
 - ▶ A status level

The screenshot shows a Siebel application interface titled "Asset". The top navigation bar includes links for Home, Sales Orders, Service, Assets (which is highlighted with a red box), Service Orders, Opportunities, and Quotas. Below the navigation is a toolbar with buttons for All Assets (selected), Menu, New, Delete, Query, and Transfer. The main area displays a table of asset records:

Asset #	Serial #	Product	Installed	Status	
> 1-1293300	1-1293300	PCS Telephony PBX2	12/22/1999 4:00:00 PM	Production	
1-1293400	1-1293400	PCS Chev Desktop ES	11/5/1999 4:00:00 PM		
1-1293401	1-1293401	Monitor - 20" LCD	12/5/1999 4:00:00 PM		
1-1295501	1-1295501	PCS Chev Desktop ES	6/5/2001 5:00:00 PM		
1-1295505	1-1295505	Monitor - 20" LCD	9/5/2001 5:00:00 PM		
1-1295521	1-1295521	Guide - PCS CC Laptop	8/13/2001 5:00:00 PM		
1-1295525	1-1295525	PCS Chev Desktop ES	8/9/2001 5:00:00 PM		
1-1295529	1-1295529	Monitor - 20" LCD	8/16/2001 5:00:00 PM		
1-1295533	1-1295533	Monitor - 20" LCD	8/16/2001 5:00:00 PM		
1-1295537	1-1295537	Guide - PCS CC Laptop	7/16/2001 5:00:00 PM		

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Module Highlights

- Siebel CRM applications allow you to manage all customer points of contact
- Types of Siebel CRM enterprise applications are:
 - ▶ Employee applications: Siebel Call Center, Siebel Sales, and so on
 - ▶ Customer applications: Siebel eSales, Siebel Partner Portal, and so on
- Common Siebel business components include:
 - ▶ Accounts
 - ▶ Contacts
 - ▶ Opportunities
 - ▶ Service requests
 - ▶ Assets



Siebel 8.0 Essentials

Module 2: Using the Siebel Web Client

2

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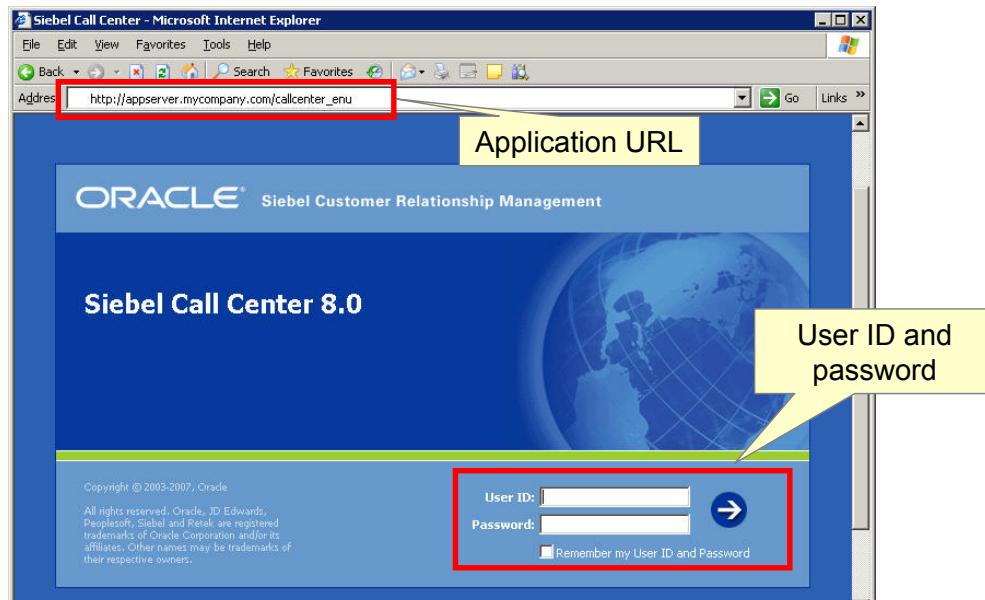
Module Objectives

- After completing this module you should be able to:
 - ▶ Start and log in to a Siebel application
 - ▶ Navigate screens and views in the application
 - ▶ Identify major user interface (UI) features in a Siebel CRM application
- Why you need to know:
 - ▶ Understanding the UI enables you to effectively use and configure Siebel applications



Logging In to a Siebel Application

- Start a Siebel application in a Web browser by entering the application's URL
- Log in using assigned user ID and password



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Reference

Siebel Fundamentals



Application URLs

- A Siebel application's URL is formed from :
 - ▶ Application's Web server name
 - ▶ Application name
 - ▶ Suffix identifying the application language
- Examples:
 - ▶ http://AppServer0.MyCompany.com/callcenter_enu

Web server name: Appserver0.MyCompany.com
Application name: callcenter (Siebel Call Center)
Language suffix: _enu (American English)

- ▶ http://public.MyCompany.com/esales_fra
- Web server name: public.MyCompany.com
Application name: esales (Siebel eSales)
Language suffix: _fra (French)

Application Home Page

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- Displayed after log-in to a Siebel application

The screenshot shows the Siebel Application Home Page. At the top, there's a navigation bar with links for File, Edit, View, Navigate, Query, Tools, and Help. Below the navigation bar is a toolbar with icons for Home, Accounts, Contacts, Households, Sales Orders, Service, Assets, and Service Orders. The main content area has a title 'My Homepage' and a welcome message 'Welcome Back Casey Cheng! Today is Monday, January 08, 2007.' A 'My Service Requests' list is displayed, showing several entries with columns for New, SR #, Summary, Account, and Priority. A yellow callout box points to the 'Home' icon in the toolbar with the text 'Personalized data provides direct links to common tasks'. On the right side, there's a 'My Calendar' section showing a daily agenda from 9:00 AM to 1:00 PM. A yellow callout box points to the 'Edit Layout' button in the top right corner of the calendar with the text 'Personalize home page by clicking Edit Layout'. The bottom of the page has a red footer bar with the text 'Copyright © 2007, Oracle. All rights reserved.' and '5 of 24'.

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Siebel Application User Interface

- Siebel applications consist of Web pages
- Each page displays Siebel data surrounded by tabs, toolbars and a top-level menu

The screenshot shows a Siebel application window with the following features highlighted:

- Application-level menu:** A yellow callout points to the top navigation bar (File, Edit, View, Navigate, Query, Tools, Help) which is labeled "Application-level menu helps navigation and manipulating data".
- Global toolbar:** A yellow callout points to the toolbar at the top of the main content area, labeled "Global toolbar provides quick access to common tasks".
- Tabs:** A yellow callout points to the "Contacts" tab in the navigation bar below the main content area, labeled "Tabs provide easy navigation to related data".

Below the main content area, there is a table listing contacts:

Mr./Ms.	First Name	Last Name	Middle Name	Job Title	Work Phone #	Mobile Phone #	Email	Status
Ms	Regina	Ash	G	President	(650) 555-0000		rash@dunandbra	
Mr.	Bill	Chang	J	Treasurer	(650) 555-0000		bchang@dunandbra	

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Help Menu: Online Help and Technical Support

- The application-level Help menu offers Online Help
 - ▶ Documents common end-user tasks
- Technical Support... in the Help menu identifies useful technical information
 - ▶ Includes current user ID and support contact information

The screenshot illustrates the integration of Oracle's Siebel Web Client with its own help system. On the left, a screenshot of the Siebel Web Client interface shows the 'Help' menu open. The 'Technical Support...' option is highlighted with a red box and has a red arrow pointing from it to a second screenshot on the right. The second screenshot is a 'Technical Support - Microsoft Internet Explorer' window. It displays various system and support information, with the 'User ID: SADMIN' field also highlighted with a red box.

Help

- Contents Ctrl+H
- Technical Support... Ctrl+Alt+J
- Suggestion Box
- About Record... Ctrl+Alt+K
- About View...
- About SRF...
- About Siebel...

Contents

Contents | Index

- Getting Started: Using Keyboard Shortcuts
- Accessing Screens and Views
- Understanding the User Interface
- Using the Home Page
- Setting User Preferences
- Finding Information

Technical Support - Microsoft Internet Explorer

System information

- Application Version: 8.0 [20405] ENU(*)
- Schema Version: 43.105.0.0
- User ID: **SADMIN**
- Connect String: Siebel_DSN
- Table Owner: dbo
- Repository File: C:\OUsea\siebsrv\objects\enu\siebel.srf
- File System: *FSM*

Support information

- Phone #: (xxx) xxx-xxxx
- Fax #: (xxx) xxx-xxxx
- URL: http://siebel.<OurCompany>.com
- Alt. 1: None
- Alt. 2: None

OK

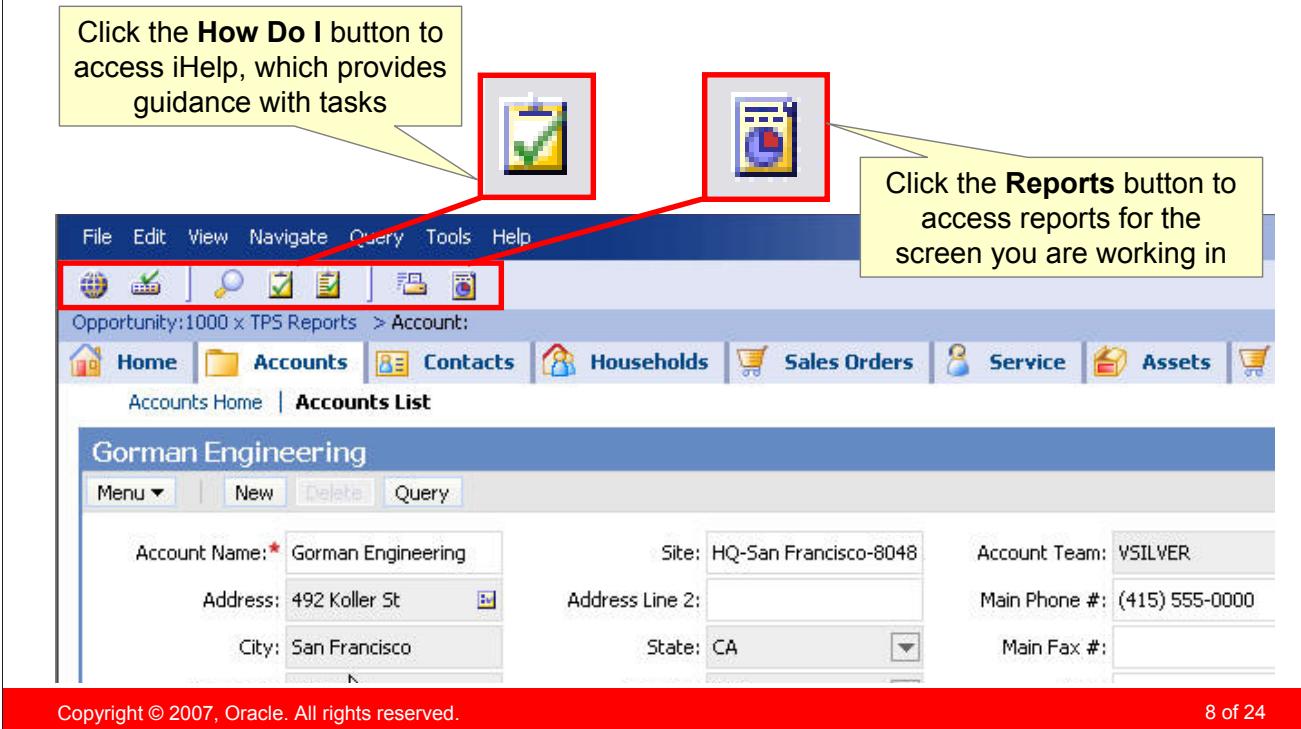
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Global Toolbar: iHelp and Reports

- Access context-sensitive tasks and reports associated with the current screen





Global Toolbar: Site Map

- Access a list of all application areas available to the user

Site Map button

The screenshot shows the Siebel Web Client interface. At the top is the Oracle logo. Below it is the Global Toolbar with various icons. The Site Map button (a globe icon) is highlighted with a red box and a yellow callout box pointing to it with the text "Site Map button". The main content area shows a list of application areas under the heading "Site Map lists application areas". A red box highlights the "Forecasts" item in this list. A yellow callout box points to the "Forecasts" item with the text "Drilling down on an area shows detailed navigation". To the right of the application area list is a table with columns: Forecast Series, Date, Status, Updated, Revenue, and Best Case. The "Forecasts" row from the list is selected and expanded, showing a detailed navigation menu with items like "Forecasts Analysis List", "Forecasts List", and "My Forecasts". The "My Forecasts" item is also highlighted with a red box.

Owner	Forecast Series	Date	Status	Updated	Revenue	Best Case
TSMYTHE	Quarterly Sales Forecast	5/30/2002 9:15:00	Active	5/30/2002 9:15:00	2,470,000.00	2,470,000.00
TSMYTHE	Quarterly Sales Forecast	5/30/2002 9:15:00	Active	5/30/2002 9:15:00	2,221,704.00	2,221,704.00
TSMYTHE	Quarterly Sales Forecast	5/30/2002 9:15:00	Active	5/30/2002 9:15:00	2,420,599.00	2,420,599.00
TSMYTHE	Quarterly Sales Forecast With Details	4/23/2002	Active	5/30/2002 9:15:00	2,396,393.00	2,396,393.00

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Screens

- Represent groups of related data for a functional business area, such as accounts, contacts, or opportunities

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Screen Tabs

The screen tabs that are visible are typically a subset of those available from the Site Map.



Screen Home Pages

- Some screens have home pages that provide quick access to common end-user tasks and data

Frequently Viewed Opportunities

- My Opportunities
- Forecasted Opportunities
- All Opportunities
- New Leads

Recent Records

- 1000 x TPS Reports

iHelp

- Assign Opportunity to Partner Company
- Convert Opportunity to Quote
- Create a New Opportunity
- Create a Sales Activity Plan

Add

Opportunity:*

Account:

Revenue:

Close Date:*

Contact:

Add & Go

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Navigating

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- Click the different UI elements to navigate to different data

The screenshot shows the Siebel Web Client interface with several UI elements highlighted:

- Screen tabs:** Located at the top of the browser window.
- Link bar:** A horizontal bar below the screen tabs containing links like More Info, Activities, Attachments, Contacts, Enterprise Selling Process, Notes, Opportunities, Revenues, Service Requests, Payment Profile, Orders, and Quotes.
- View tabs:** A horizontal bar above the data grid containing links like Add, New, Delete, and Query.
- Row indicator:** A vertical bar on the left side of the data grid indicating the current row being selected.
- Selected record:** A callout pointing to the selected record in the data grid, which is Mr. Todd James.

Data Grid Data:

Mr./Ms.	First Name	Last Name	Middle Name	Job Title	Work Phone #	Mobile Phone #	Email	Status
Ms.	Roberta	Baker		Director, Marketing	(650) 323-3231			
Mr.	Corey	Bell		CIO	(650) 323-3229			
Mr.	Clifford	Clottey		Project Manager	(650) 323-9000		cclottey@aceproper	
Mr.	Joe	Galan		CEO	(650) 323-3225		jgalan@aceproper	
> Mr.	Todd	James		VP, Sales	(408) 551-0100		tjames@aceproper	
	Sean	Spencer		Sales Manager	(650) 323-3227		sspencer@aceproper	
	Torre			Director, Sales	(650) 323-3228		jtorre@aceproper	
	Williams			VP, Marketing	(650) 323-3229		bwilliams@aceproper	

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Views

- A view consists of one or more applets displaying records

The screenshot shows the Siebel Web Client interface with the title 'Ace Properties'. At the top, there's a toolbar with various icons and a menu bar with 'File', 'Edit', 'View', etc. Below the menu is a navigation bar with links like 'Home', 'Accounts', 'Contacts', 'Opportunities', 'Quotes', 'Sales Orders', and 'Service'. On the right side of the header, it says 'Saved Queries: All Accounts' and has a 'View' button. The main content area is titled 'Ace Properties' and shows account details: Account Name: Ace Properties, Site: Headquarters, Account Team: CCHENG, Status: Active, Address: 100 El Sabino Road, City: Tucson, Zip Code: 85719, Main Phone #: (408) 905-3050, Main Fax #: (408) 905-3051, URL: www.aceproperties.com, and Territories: AZ, USA. Below this, there's a table of contacts:

First Name	Last Name	Middle Name	Job Title	Work Phone #	Mobile Phone #	Email	Status
Roberta	Baker		Director, Marketing	(650) 323-3231		rbaker@aceproperti	
Corey	Bell		CIO	(650) 323-3229		cbell@aceproperties	
Clifford	Clottey		Project Manager	(650) 323-9000		cclottey@aceproper	
Joe	Galan		CEO	(650) 323-3225		jgalan@aceproperti	
Todd	James		VP, Sales	(408) 551-0100		tjames@aceproperti	
			Sales Manager	(408) 551-0227			

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Drop-Down Menu Screen and View Navigation

- Access additional tabs and links using drop-down arrows
 - ▶ Available if needed for screen tabs, link bar, and view tabs

The screenshot shows the Siebel Web Client interface. At the top, there's a menu bar with File, Edit, View, Navigate, Query, Tools, and Help. Below the menu is a toolbar with various icons. The main title is 'Account:ASA Consultores > Account'. The navigation bar includes Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, Calendar, Forecasts, and a dropdown menu. The dropdown menu is open, showing 'Global Accounts Administration' and 'Portfolio Management Process'. The main content area is titled 'ASA Consultores' and displays account details for 'ASA Consultores'. Below this is a contact list table:

Mr./Ms.	First Name	Last Name	Middle Name	Job Title	Work Phone #	Mobile Phone #	Email
Mr.	Carlos	Pelaez	Alberto	Director de Servicio al Cl	+3491 555 3285		cpelaez@eurocable
Ms.	Mario	Pinzon	Fernando	Vicepresidente de Marke	+3491 555 4892		mpinzon@asa.com.

At the bottom of the screen, there's a red footer bar with the text 'Copyright © 2007, Oracle. All rights reserved.' and '14 of 24'.

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Hyperlinks

- Drill down on a hyperlink to see more information

The screenshot illustrates the use of hyperlinks in the Siebel Web Client. On the left, the 'Accounts List' view shows a list of accounts. An arrow points from the 'AMCO Communications' row to the right, where the 'AMCO Communications' account detail page is displayed. This detail page includes fields for Account Name, Site, Address, City, State, Zip Code, and Country, along with tabs for More Info, Activities, Attachments, Contacts, Enterprise Selling Process, and Notes. Below the list view, a callout box says 'Clicking account hyperlink...' and another says '...navigates you to the Account Detail - Contacts view'.

Account Name	Site
AMCO Communications	Chicago, IL
Acer America, Inc.	San Jose, Ca
Acer Sales	Clayton
Aegis	Warehouse
Air Fra	France

Mr/Ms	First Name	Last Name	Middle Name	Job Title
Mr.	Joshua	Brown	P.	Student
Mrs.	Cindy	Citrus	P	VP Manufacturing
Mr.	Cynthia	Farhi	O	Production Manager

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List Applets and Form Applets

- Views are made up of one or more applets
 - ▶ List applet displays records in rows
 - ▶ Form applet displays a single record in a two-dimensional layout

The screenshot shows the Siebel Web Client interface. At the top, there's a navigation bar with links like Home, Accounts, Contacts, Households, Sales Orders, Service, Assets, and Service Orders. Below the navigation bar is a toolbar with buttons for My Accounts, Menu, New, Delete, Query, Collaborate, and Create Team Space. The main area is divided into two sections: a List Applet and a Form Applet.

List Applet: This section shows a table of account records. The columns are Account Name, Site, Main Phone #, Status, URL, and DUNS #. One row for 'Tycion.com' is highlighted with a yellow background, indicating it is the selected record. A callout bubble labeled "List applet" points to this section.

Form Applet: This section shows a detailed view of the selected record, 'Tycion.com'. It includes fields for Account Name, Site, Account Team, Status, Address, Address Line 2, Main Phone #, Main Fax #, City, State, Account Type, and Territory. A callout bubble labeled "Form applet" points to this section.

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Navigating List Applets and Form Applets

- Use the Menu button or scroll bars and arrows

The screenshot illustrates several key components of the Siebel Web Client interface:

- Standard applet buttons:** A context menu is open over a list of accounts, showing options like "New Record" and "Delete Record".
- Right-click for context menu:** A mouse cursor is shown right-clicking on a list item, opening a context menu.
- Form applet navigation arrows:** Navigation arrows are visible at the bottom of a form panel.
- Applet-specific menu items:** A context menu is open over a specific account record, showing items like "New Order" and "New Quote".

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Freezing List Columns

- Freeze position in list columns
 - ▶ Freeze columns by double-clicking column headers within list applets
 - Enhances ability to work effectively with lists that contain many columns of data
 - ▶ Drag and drop columns in and out of the frozen area

Account Name	Main Phone #	Status	URL	DUNS #	Te...
Basin		Active			
Bayer	100	Inactive	www.bayer-ag.de	690593553	
Berkeley	00	Active			
Berkeley	80	Active			
Berkeley	45	Active			
Big Box Bikes		Active			
Black Diamond Unified School District	(925) 756-3000	Active	www.j...		
Black Diamond Unified School District	(925) 756-3000	Active	www.j...		
Bonanza	(415) 368-7700	Active			
Butler Informatics Consulting		Active			

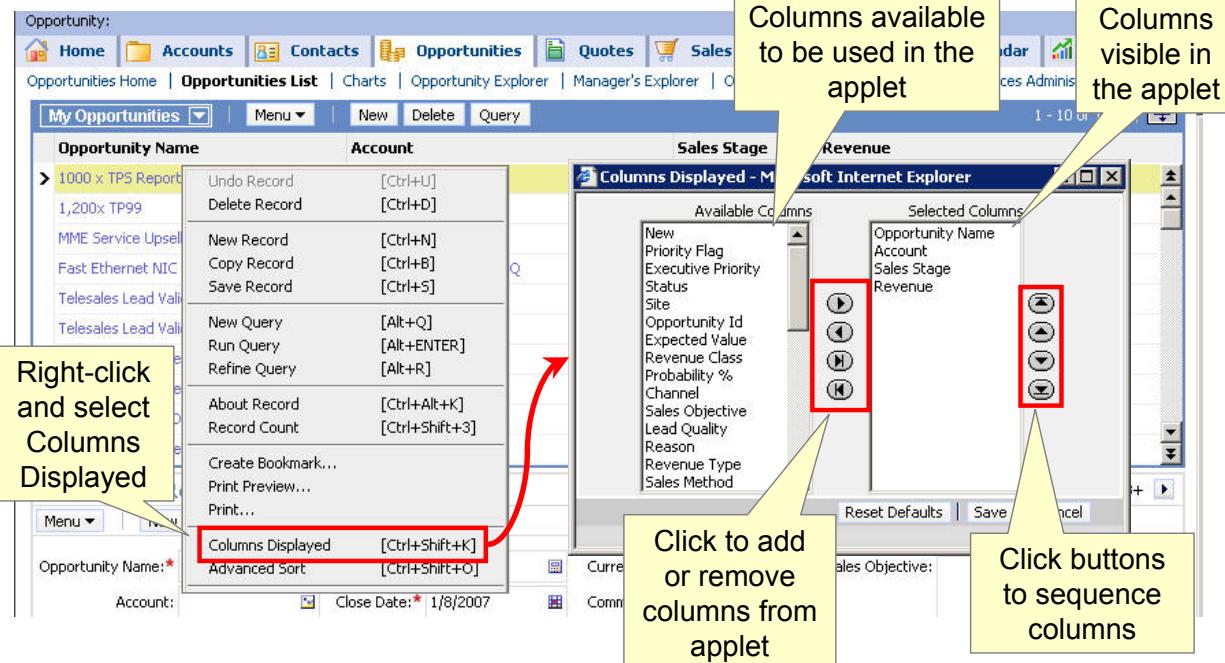
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Changing Columns Displayed

- Click the **Menu** button, or right-click and select **Columns Displayed**



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Displaying More Records

- Click the Show More button in the top-right corner of a list applet to toggle display of more records

Account:

Home Accounts Contacts Households Sales Orders Service Accounts Home | Accounts List

My Accounts Menu New Delete Query Collaborate Create Team Space 1 - 10 of 27+ 

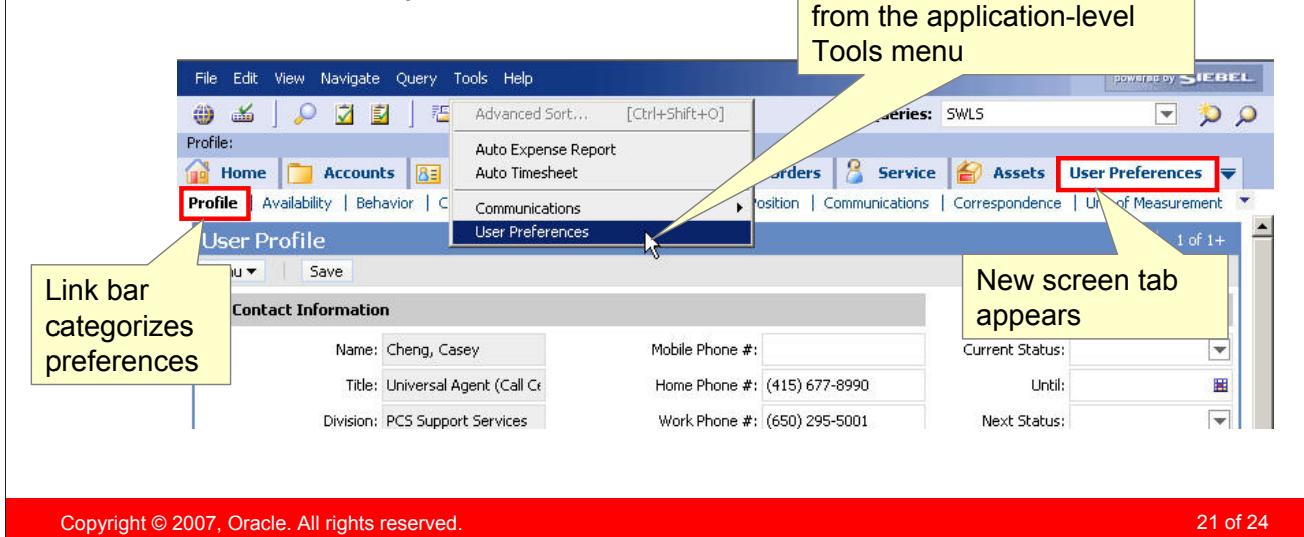
Account Name	Site	Main Phone #	Status	URL	DUNS #
Akamai Technologies, In	Cambridge, MA	(508) 460-8900	Gold	www.akamai.com	948175534
Andrews Manufacturing	Fresno	(649) 700-0000	Active	www.andrewsmanuf.cor	
British American Tobacco	Hamburg, Germany	+490242117465	Silver	www.bat.com/	315000554
Cap Gemini Ernst & Your	Atlanta, GA	(404) 249-2000	Gold	www.bellsouth.com	
Caterpillar	Chicago	(847) 555-1000	Active	www.cat.com	
Chase Manhattan Bank	Manhattan, Ny	(212) 622-0726	Platinum	www.chase.com	1530
Country Companies Serv	Bloomington, Il	(309) 821-3000	Platinum	www.countrylife.com	088502997
Cymer Inc.	San Francisco	(415) 278-9667	Active	www.cymer.com	
Danney K. Foundation	Pittsburgh, PA	(800) 578-9515	Gold	www.dkf.com	
FleetBoston Financial	Framingham, MA	(617) 883-9300	Active	www.fleet.com	122557143
Harris Corporation	Florida (HQ)	(414) 239-5000	Active	www.harris.com	
Holiday Inn	HQ-Corporate	(707) 234-5506	Active	www.holidayinn.com	
IBM Corporation	Poughkeepsie, NY	(914) 433-9187	Platinum	www.ibm.com	616769907
Informix Corporation	Menlo Park, CA	(650) 741-1500	Silver	www.informix.com	
Knoll Pharmaceutical Co	Edison, NJ	(973) 426-2600	Current Customer	www.knollph.com	150582492
LSI Logic Corporation	Milpitas, CA	(408) 433-8000	Active	www.lsilogic.com	012444253
Merck & Co Inc	Lansdale, PA	(610) 458-4900	Active	www.merck.com	112493155

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Setting User Preferences

- Allows users to set individual preferences for some application features
 - ▶ Set time zone preferences
 - ▶ Set a startup view
 - ▶ Change default spell check options
 - ▶ Customize aspects of the calendar





Module Highlights

- A Siebel application consists of Web pages that display data
- A screen is a grouping of views in a major application functional area
- A view consists of one or more applets as well as links and tabs used to navigate within the view
- A list applet displays multiple records in table form
- A form applet displays a single record



Lab

- In the lab you will:
 - ▶ Practice navigating in Siebel Call Center

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Siebel 8.0 Essentials

Module 3: Working With Siebel Data

3

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Module Objectives

- After completing this module you should be able to:
 - ▶ Create, modify, and delete records
 - ▶ Query for records in a Siebel CRM application
- Why you need to know:
 - ▶ Knowing these skills is important for understanding and configuring Siebel applications

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Working with Data in the Siebel User Interface (UI)

Creating Data

Modifying and Saving Data

Using Picklists and Multi-Value Groups

Sorting Data

Deleting Data

3

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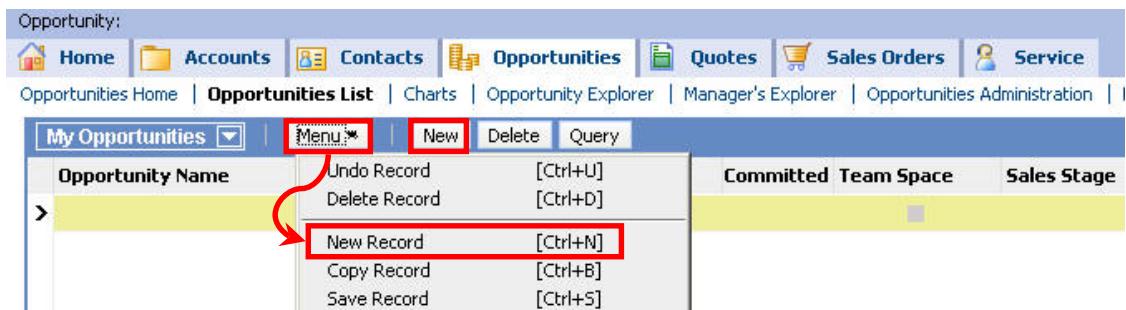
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Creating Data

- Select Menu > New Record or click the **New** button to create a new record



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Creating Data continued

- Enter data in list or form applet
- Some fields are required:
 - ▶ Marked with a red asterisk in a form applet
 - ▶ Default value may be provided automatically

The image shows a Siebel form applet for creating opportunities. The form has two columns of fields. The left column includes 'Opportunity Name:' with a red asterisk, 'Account:', 'Sales Team:' (set to 'SADMIN'), and 'Territories:'. The right column includes 'Revenue:' (\$0.00), 'Close Date:' (1/7/2007), 'Sales Stage:', 'Probability %:' (0%), 'Currency:' (USD), 'Committed:' (unchecked), 'Lead Quality:', and 'Organization:' (Default Organization). Two callout boxes highlight specific fields: one points to the 'Opportunity Name:' field with the text 'Required field indicated by red asterisk'; another points to the 'Revenue:' field with the text 'Required field populated with default value'.

Modifying and Saving Data

- Modify data
 - ▶ Select field in the list or form and change it
- Save data implicitly
 - ▶ Step off the record in a list or a form to commit it to the database
 - ▶ Available in High Interactivity interface
- Save data explicitly
 - ▶ Click **Menu** and select **Save Record**
 - ▶ Keyboard: CTRL+S



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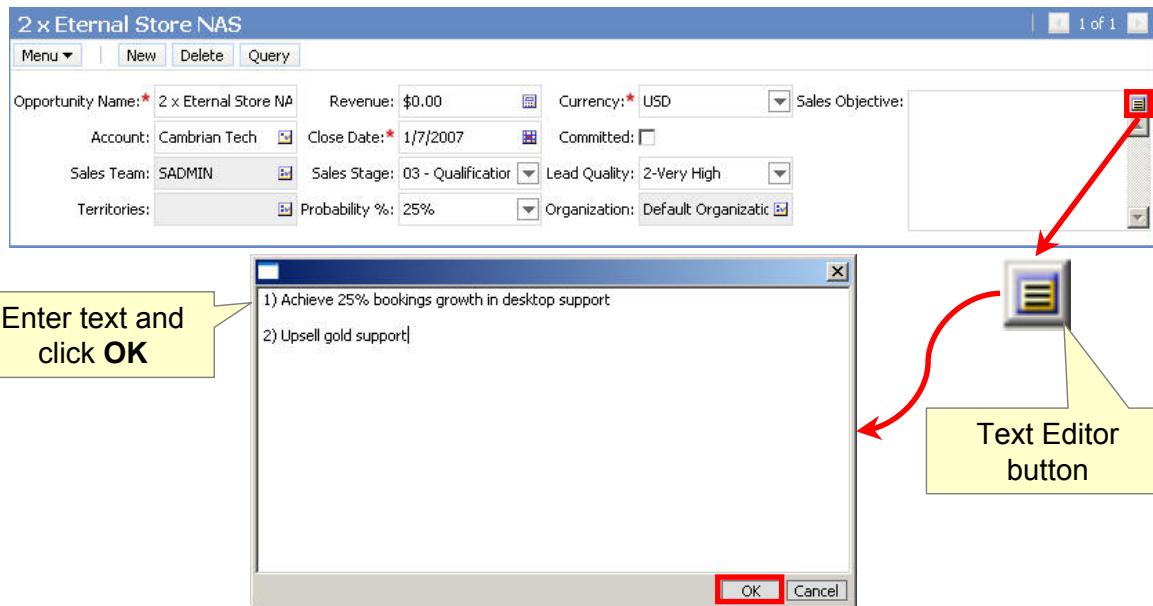
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Text Editor

- Is an editable text area used to create, edit, or view large amounts of text
- Is accessed by clicking the Text Editor button in the top-right corner of a text field



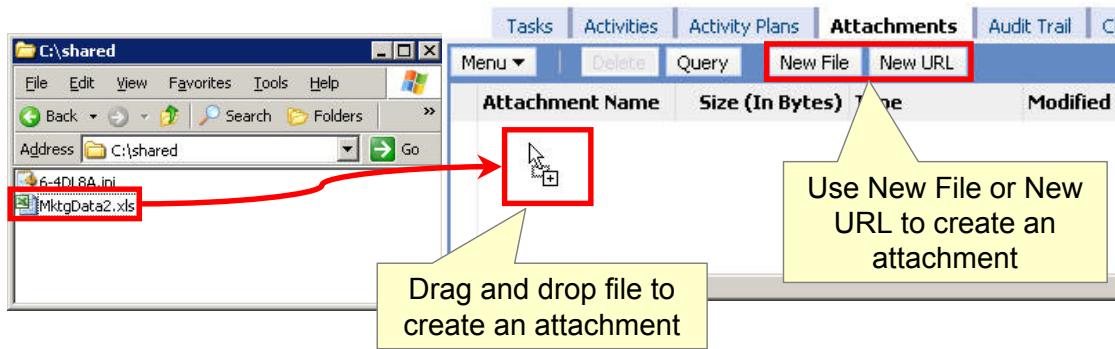
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Attachments

- Are files created in other applications that can be associated to records in Siebel applications
- Can be related to records wherever the Attachments view is available within a screen
 - ▶ Drag and drop a file into the Attachments list view, or
 - ▶ Use the New File or New URL button



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Using Picklists

- Picklists allow user to select a field value from a list
- Two types of picklist:
 - ▶ Static: User selects a value from a fixed drop-down list
 - ▶ Dynamic: User selects a value from list of changing values
 - Examples: Accounts, Opportunities, Contacts

Opportunity Name	Account	Sales Stage	Revenue
My New Opportunity	State of Florida	02 - Qualification	0.00
1,200x TP99	State of Florida	01 - Prospecting	0.00
1010x PCS Chev Desktop ES 1-1A6Z9	Bidabike	02 - Qualification	0.00

Opportunity Name	Account	Sales Stage
My New Opportunity		02 - Qualification

Pick Account - Microsoft Internet Explorer

Account	Site	Status
Big Box Bikes		Active
Banco Mediterraneo	Barcelona, España	Active
Berkeley Asset Management	Berkeley	Active

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Constrained vs. Unconstrained Picklists

A picklist may be constrained, only allowing users to enter values that appear in the drop-down list or pick applet, or unconstrained, where the user is free to add any value.

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Using Multi-Value Groups

- Multi-value groups (MVGs) assign one or more values to a field in a record
- Only the primary value will be displayed in a list or form

The screenshot illustrates the use of Multi-Value Groups (MVGs) in Siebel. At the top, a form shows fields for Account Team (SADMIN), Main Phone #, Main Fax #, and URL. A red box highlights the 'MVG Select button' (a small icon with a grid and a plus sign) next to the Account Team field. A yellow callout bubble points to it with the text 'Associate members to the account team'. A large red arrow points from this callout to a 'Team Members - Microsoft Internet Explorer' window below.

Team Members - Microsoft Internet Explorer

Available					Selected		
Last Name	First Name	User ID	Position	Division	Primary	Priority	User ID
Reed	Shawne	SREED	Active Systems Part		SREED		
Allen	Matt	MALLEN	Assistant, Marketing		GABBO		
Master	Daniel	DMASTER	Assistant, Office Ser		TAVES		
Abboline	Glen	GABBO	Associate Consultant				SADMIN
Aves	Terry	TAVES	Associate Marketing				
Douglas	Charles	CDOUGLASS	Asyrex Delegated A				

The 'Available' list shows several team members. The 'Selected' list shows three members: SREED (Primary), GABBO, and TAVES. A red box highlights the 'Add >' button between the two lists. A yellow callout bubble points to the 'SADMIN' entry in the 'Selected' list with the text 'Primary'.

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Sorting Data

- Click a column header to sort data in ascending or descending order

Click the column header for ascending (A – Z) or descending (Z – A) order

Account Name	Site	Main Phone #	Status
British American Tobacco (Sortable)	Hamburg, Germany	+490242117465	Silver
Cap Gemini Ernst & Young	Atlanta, GA	(404) 249-2000	Gold
Chase Manhattan Bank	Manhattan, Ny	(212) 622-0726	Platinum
Country Companies Services Inc	Bloomington, IL	(309) 821-3000	Platinum
Cymer Inc.	San Francisco	(415) 278-9667	Active
Danney K. Foundation	Pittsburgh, PA	(800) 578-9515	Gold
FleetBoston Financial	Framingham, MA	(617) 883-9300	Active
Harris Corporation	Florida (HQ)	(414) 239-5000	Active
Holiday Inn	HQ-Corporate	(707) 234-5506	Active
IBM Corporation	Poughkeepsie, NY	(914) 433-9187	Platinum

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Sorting Data Continued

- Select Menu > Advanced Sort to sort using values of up to three columns at once

The screenshot shows the Siebel Accounts List interface. On the left, there's a sidebar with account names like Akamai Technologies, Andrews Manufacturing, British American Tobacco, etc. The main area displays a grid of accounts with columns for Status, URL, and ID. A yellow callout box points to the grid with the text "Select sort columns and order". On the right, a "Sort Order - Microsoft Internet Explorer" dialog box is open, showing three levels of sorting: "Sort By" (Status), "Then By" (Region), and "Then By" (Account Name). The "Advanced Sort" menu option in the Siebel menu bar is also highlighted with a red box and arrow.

Status	URL	ID
Gold	www.akamai.com	9
Active	www.andrewsmanuf.co	
Silver	www.bat.com/	3
Gold	www.bellsouth.com	
Active	www.cat.com	
Platinum	www.chase.com	1!
Platinum		
Active		
Gold		
Active		

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Deleting Data

- Delete a record by:
 - ▶ Select Menu > Delete Record
 - ▶ Click Delete button
 - ▶ CTRL+D
- Some records may be read-only



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Querying for Data in the Siebel UI

Running and Executing a Query

Using the Query Assistant

Querying an MVG Field

Refining a Query

Saving a Query

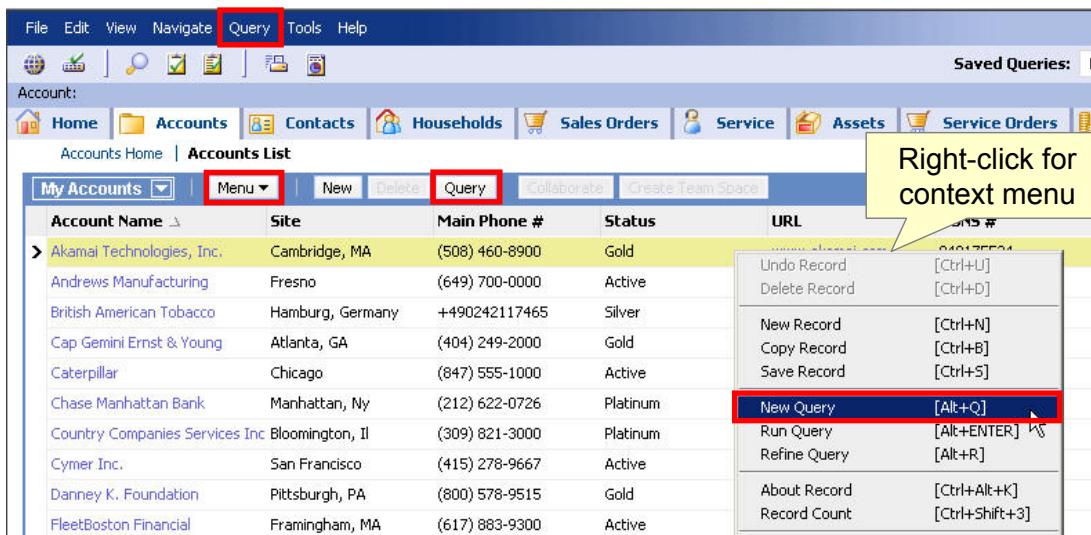
Executing Predefined and Saved Queries

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Running and Executing a Query

- Query for records inline within a form or list applet using one of the following methods:
 - ▶ Query button on an applet
 - ▶ Query from applet-level and application-level menus
 - ▶ Run Query item in context menu (accessed by right-click)



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Wildcards

- Wildcards can be used to search for matching characters
- * is a substitute for zero or more characters in a string query
 - ▶ * cannot be used in date or numeric fields
 - ▶ Examples:
 - Ma* matches “Madrid”, but not “San Mateo”
 - *Ma* matches “Madrid” and “San Mateo”
- ? Is a substitute for exactly one character in a string query
 - ▶ ? cannot be used in date or numeric fields
 - ▶ Examples:
 - st?r matches star and stir, but not stair
 - *st?r matches monster and rock star, but not tastier



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Default Query Behavior

Default behavior for queries in list and form applets is to insert a trailing *. Example: A query for “Ma”, without an asterisk, would match Madrid.

Query Operators

- Relational operators can be used on numeric or date fields
 - ▶ < (less than)
 - ▶ > (greater than)
 - ▶ = (equal to)
 - ▶ <= (less than or equal to)
 - ▶ >= (greater than or equal to)
- <> (not equal to) can be used on all fields
- Example:
 - ▶ Find dates on or after 1/1/2006
 - Date field in query is set to: >= 1/1/2006

Name	Quote #	Revision	Created	Account	Last Name
> <Case Required>	<Case Required>		=>1/1/2006	<Case Required>	<Case Required>

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Query Operators Continued

- OR allows match on any one of multiple values for a field
- AND allows match on all of multiple values for a field
- Other operators include
 - ▶ NOT
 - ▶ “ ”
 - ▶ IS NULL
 - ▶ IS NOT NULL
- Examples:
 - ▶ Find service requests with no description entered
 - Use IS NULL in Description field of service request
 - ▶ Find dates on or between 1/1/2006 and 1/7/2006
 - In date field of query: $>=1/1/2006$ AND $<=1/7/2006$

The screenshot shows a Siebel Query Assistant window. The title bar includes "All Quotes Across Organizations" and "Query Assistant". The main area displays a table with columns: Name, Quote #, Revision, Created, and Account. A filter row above the table specifies "Created >=1/1/2006 AND <=7/1/2006". The "Created" column header is highlighted with a red box.

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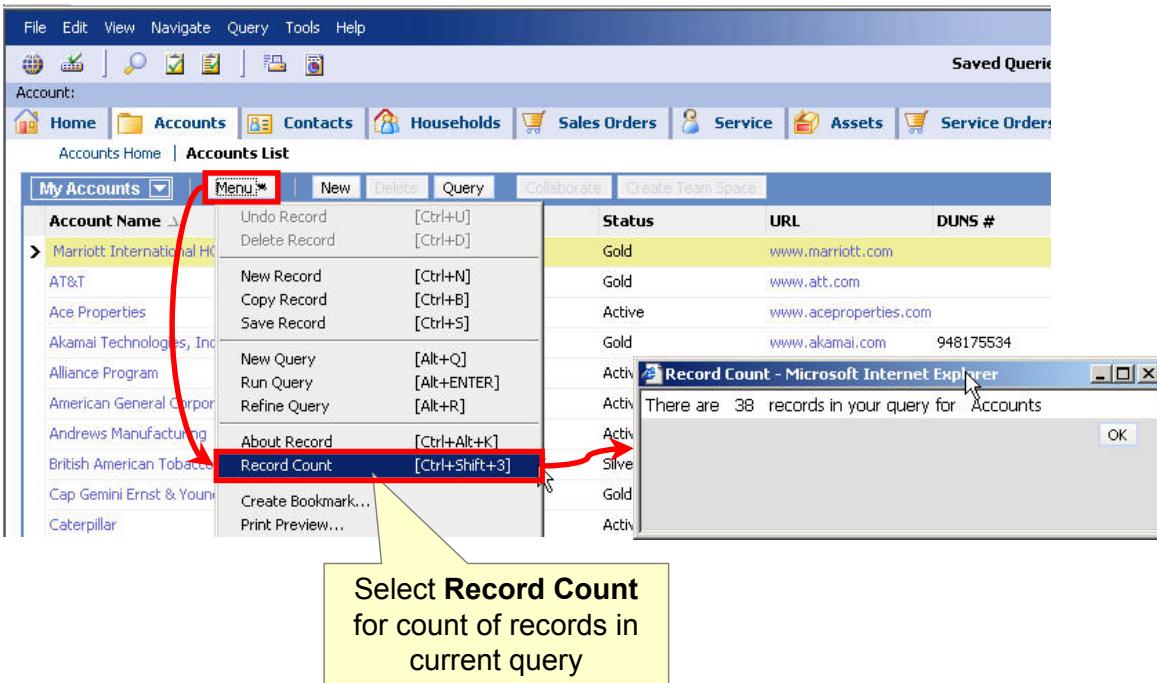
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Record Count

- Provides the total number of matching records in the query



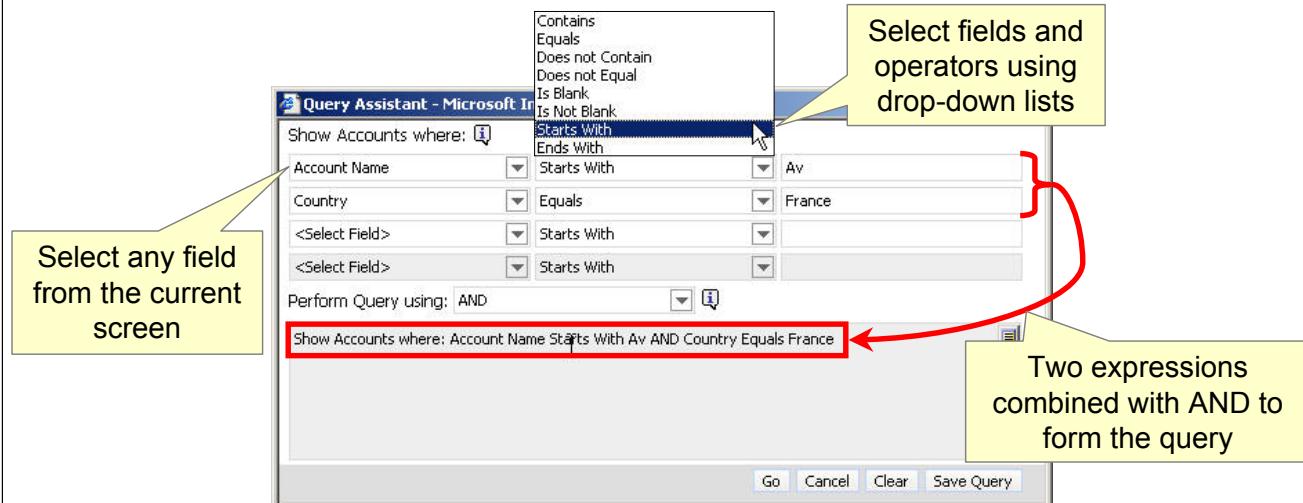
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Using the Query Assistant

- Provides a simplified way for users to execute queries from anywhere in a Siebel application
 - ▶ Guides users through creating a query
 - ▶ Users do not have to be familiar with query syntax or operators
- Click Query Assistant button after clicking Query in a form or list

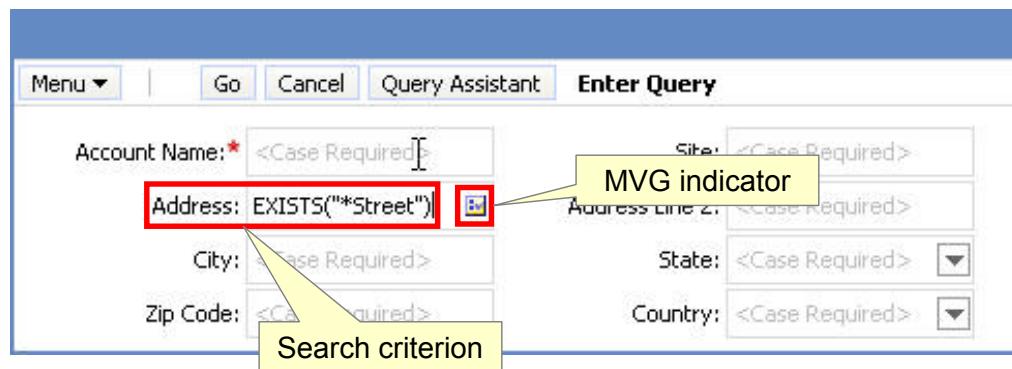


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Querying an MVG Field

- Use EXISTS() to search for matches in multi-value groups (MVGs)
 - ▶ Only way to query all child records in an MVG
 - ▶ Example: Searching for the string “*Street” in the address of an account
 - An account can have multiple addresses
 - Query matches all accounts with one or more addresses ending with the sub-string “Street”



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Queries Using Drop-Down Lists A related issue involves queries on a field whose values are populated using a drop-down list. Best practice is to enter the value to be queried using the drop-down list, rather than typing this value.

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Querying an MVG Field Continued

- Search results show records where at least one value in an MVG matches the search criteria
 - ▶ Example:
 - Search results include accounts with string “*Street” in at least one address

The screenshot shows three windows illustrating the querying of an MVG field:

- Accounts List View:** A grid of account records. The third record, "Ace Properties", is highlighted in yellow. A callout box states: "These accounts all have addresses that match the query".
- Ace Properties Record Detail:** Shows the account record for "Ace Properties" with address "100 El Sabino Road". A red box highlights the "Address" field.
- Account Addresses View:** A list of addresses. The first address, "100 El Sabino Road", is marked as primary. Red boxes highlight the "Street" fields in the other addresses: "Brattle Street", "NE 8th Street", and "North Firs Street".

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Refining a Query

- Use Refine Query to modify an existing query

1. Select Refine Query

2. Enter additional or modified criteria

3. Query results reflect original and modified criteria

Original criterion

Account Name	Site	Main Phone #	Status
G	Ch*	(800) 477-5148	Active

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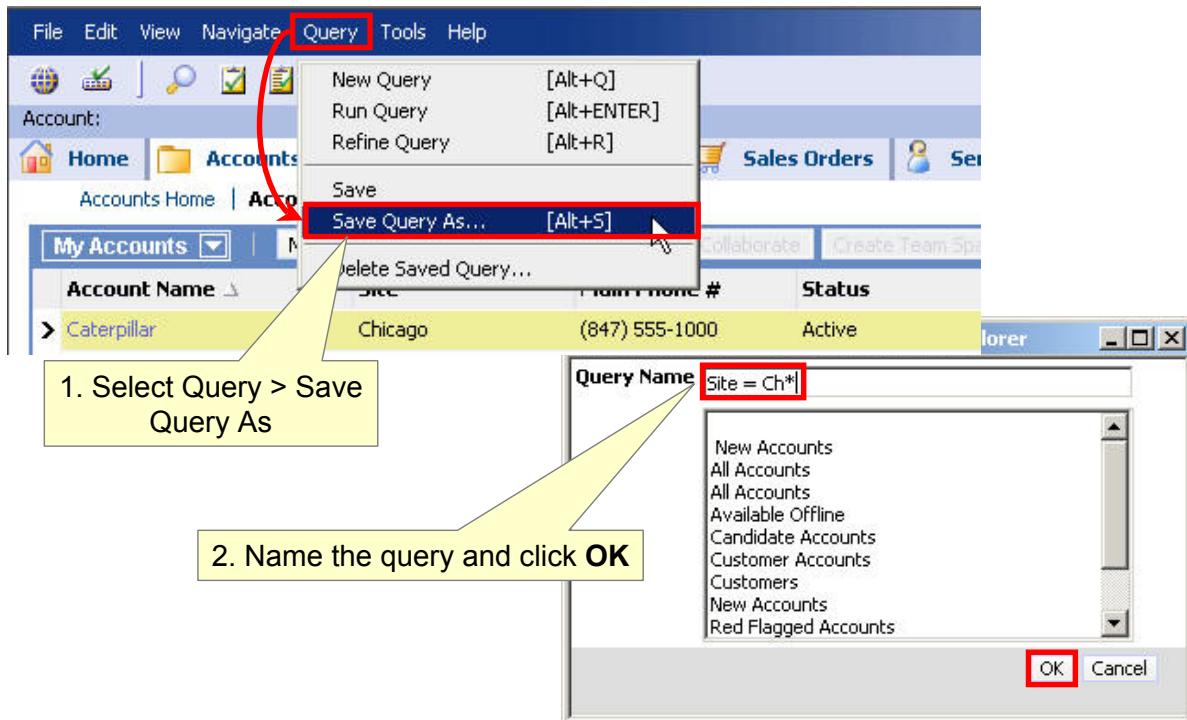
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Saving a Query

- Use the application-level Query menu to save a query



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Executing Predefined and Saved Queries

- Predefined queries are provided by an application administrator
 - ▶ Cannot be deleted by an end user
- Additional saved queries are created and saved by the user
- All saved and predefined queries appear in the Saved Queries drop-down list





Module Highlights

- Creating and editing data may involve using:
 - ▶ Required and optional fields
 - ▶ Drop-down lists
 - ▶ MVG fields
 - ▶ Attachments
- Siebel applications support complex queries on data with:
 - ▶ Wildcards
 - ▶ Logical and numerical operators
 - ▶ Support for searching multi-value group (MVG) fields
- The Query Assistant helps end users form complex queries
- Commonly-executed queries may be saved



Lab

- In the lab you will:
 - ▶ Create, modify, and delete records
 - ▶ Use basic querying skills



Siebel 8.0 Essentials

Module 4: Responsibilities and Views

4

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Module Objectives

After completing this module you should be able to:

- ▶ Describe the purpose of a responsibility
- ▶ Create a new responsibility
- ▶ Modify an existing responsibility

Why you need to know:

- ▶ Access to views within the application is controlled by responsibilities
- ▶ Understanding responsibilities is required to properly configure users within the application



Business Challenge

- Large-scale enterprise applications should not grant all users access to the entire application, for example:
 - ▶ Most users should not have access to system administration views
 - ▶ Most users should not have access to all data in the application, for example:
 - Employee salaries, sales contracts, and other sensitive data
 - Data not related to the employee's job function
- Application administrators require a mechanism to restrict access to views and data
 - ▶ Ideally, the restriction mechanisms should be independent of one another:
 - One mechanism to restrict access to views
 - A separate mechanism to restrict access to data



Business Solution: Access Control

- Siebel applications provide mechanisms known as Access Control to restrict views and data seen by users
 - ▶ Responsibilities control access to views
 - Subject of this module
 - ▶ Positions control access to data
 - Subject of subsequent module
 - ▶ These Access Control mechanisms are independent of one another

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Positions

Positions will be discussed in a subsequent module



Views and Job Functions

- Users should see only those views required to perform their job functions
 - ▶ Improves efficiency for the user
 - ▶ Improves business security by preventing unauthorized access to sensitive or administrative views

The System Administrator has many more administrative views than a Call Center Agent. Notice that even the set of screen tabs is different

System Administrator

File Edit View Navigate Query Tools Help

Queries: []

Home:

[Home](#) | [Accounts](#) | [Contacts](#) | [Opportunities](#)

Screens

Click a screen hyperlink to see all the views for the screen.

Accounts	Administration - User
Activities	Administration - Web
Administration - Alert	Browser
Administration - Analytics	Administration - Web
Administration - Application	Services
Administration - Assignment	Administration - iHelp
Administration - Audit Trail	Agreements
Administration - Briefings	Alerts

Call Center Agent

File Edit View Navigate Query Tools Help

Queries: []

Home:

[Home](#) | [Accounts](#) | [Contacts](#) | [Households](#)

Screens

Click a screen hyperlink to see all the views for the screen.

Accounts	Engineering
Activities	Entitlements
Administration - Application	Events
Administration - Briefings	Expense Reports
Administration - Data Quality	Finance
Administration - Data	Forecasts
Administration - Forecast	Fulfillment
Administration - Product	HelpDesk

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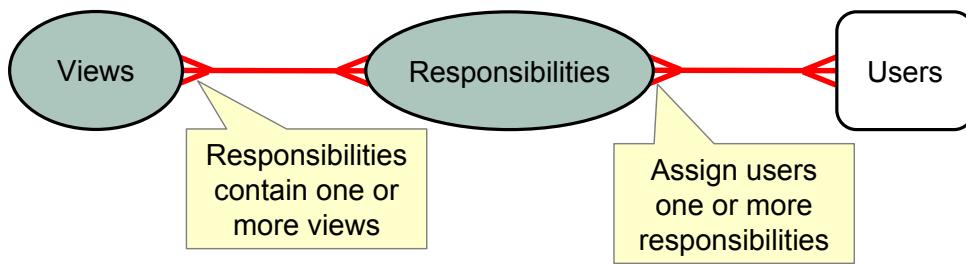
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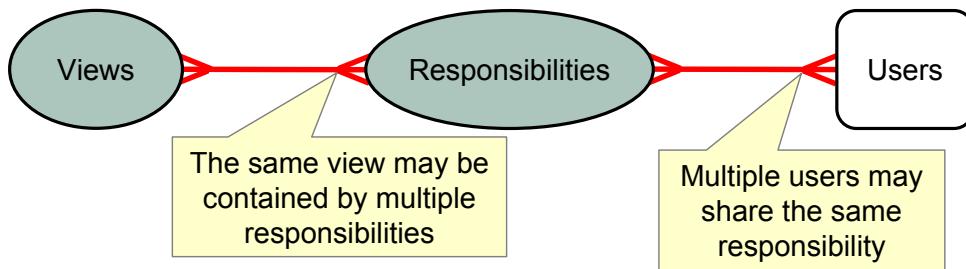
Responsibilities

- Are collections of views associated with a job function
 - ▶ All of the views necessary to perform that particular job function
- Are assigned to users according to their job functions
- Users may have more than one job function, hence may have more than one responsibility



Properties of Responsibilities

- A view may be contained in multiple responsibilities
 - ▶ For example, the Home Page View of an application should be included in every responsibility used to access that application
- Multiple users may share the same responsibility
 - ▶ For example, Call Center agents





Seed Responsibilities

- Are a set of responsibilities provided with the Siebel application
 - ▶ Automatically created during application installation
- Cannot be modified or deleted
- May be copied to create new, editable responsibilities

The screenshot shows the Siebel application's main menu bar with options like File, Edit, View, Navigate, Query, Tools, and Help. Below the menu is a toolbar with various icons. The main content area has a header 'Responsibility:' followed by a navigation bar with links to Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, and Administration - Application. Below this is a sub-navigation bar with links to Branch Locator, Contact Us, Alerts Online, License Keys, Predefined Queries, Reports Server Administrator Profile, Responsibilities, and Business Service Ac. The main table displays 'Responsibilities' with columns for Responsibility, Description, Organization, and Web Access. A callout box highlights the 'Analyst Routing Model' row, which is described as 'Analyst Routing Model' with 'Views for Anonymous Users' under 'Organization' and 'Default Organization' under 'Web Access'. Other rows listed include 'Anonymous User - SMC', 'Asset Management', 'Business Analyst', and 'CEO'.

Responsibility	Description	Organization	Web Access
Analyst Routing Model	Analyst Routing Model	Views for Anonymous Users	Default Organization
Anonymous User - SMC			Default Organization
Asset Management			Default Organization
Business Analyst			Default Organization
CEO			Default Organization



Creating New Responsibilities

- If the existing seed responsibilities are not sufficient for your business requirements, create new responsibilities as required
 - ▶ New responsibilities may be edited or deleted

File Edit View Navigate Query Tools Help

Responsibility:

Home Accounts Contacts Opportunities Quotes Sales Orders Service Administration - Application

Branch Locator | Contact Us | Alerts Online | License Keys | Predefined Queries | Reports Server Administrator Profile | Responsibilities | Business Service Ac

Responsibilities | Menu ▾ | New Delete Query Clear Cache

Responsibility	Description	Default Organization
ABC Developer	Responsibility for ABC Company Developers	
Analyst Routing Model	Analyst Routing Model	
Anonymous User - SMC	Access to Siebel Mobile Connector eService Views	
Asset Management	Asset Management	
Business Analyst	User of ePortal Base and all Analysis Options	
CEO	User of ePortal Base and Executive Analysis option	

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Assigning Responsibilities to Users

- Assign responsibilities to users according to their job role(s)
 - ▶ Users with multiple responsibilities see the union of the views
 - ▶ Users with no responsibilities see nothing
 - Critical to remember to assign responsibilities to partners and Web customers

Users | **Menu** | **New** | **Delete** | **Query**

Last Name	First Name	User ID	Responsibility
Cheng	Casey	CCHENG	7.5 Universal Agent

Click the Select button to bring up the Responsibilities list

Responsibilities - Microsoft Internet Explorer

Query Find Responsibility **Select**

Available		1 - 10 of 10+
Responsibility	Description	
7.5 Universal Agent	ALL USER RESPONSIBILITY	
ALL VIEW RESPONSIBILITY		
Additional Responsibility for GUESTCP		
Administrator		
Analyst Routing Model		
Anonymous User - SMC		

Add > < Remove << Remove All

Primary	Responsibility
	7.5 Universal Agent
	Universal Agent
	ERM User
	eMail Response Agent
	eBriefings User
	ISS Analytics Administrator
✓	Universal Agent (B2B+B2C)

CCHENG has many responsibilities, and is able to see all of the views in all of them

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Primary Responsibilities

- Assign each user a primary responsibility
 - ▶ Determines the initial tab layout when the user logs in
 - Administrator determines the initial layout
 - User can edit personal preferences to create a different layout

The screenshot shows the Siebel application interface. At the top, there's a navigation bar with 'Users' selected, followed by 'Menu', 'New', 'Delete', and 'Query' buttons. Below this is a table with columns: Last Name, First Name, User ID, and Responsibility. A single row is selected for 'Cheng' (Casey), showing 'CCHENG' as the User ID and '7.5 Universal Agent' as the Responsibility.

Below the table is a window titled 'Responsibilities - Microsoft Internet Explorer'. It has two main sections: 'Available' and 'Selected'. The 'Available' section lists various responsibilities like '7.5 Universal Agent', 'ALL USER RESPONSIBILITY', etc. The 'Selected' section lists responsibilities with columns for 'Primary' and 'Responsibility'. One entry, '7.5 Universal Agent', is highlighted in yellow and has a checkmark next to it. A tooltip is overlaid on the 'Available' list, stating: 'CCHENG's primary responsibility is Universal Agent (B2B+B2C), so she initially sees the tab layout for that responsibility'.

At the bottom of the application window, there's a red footer bar with the text 'Copyright © 2007, Oracle. All rights reserved.' and '11 of 22'.

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Creating a Responsibility

1. Copy or Create a Responsibility

2. Add or Remove Views

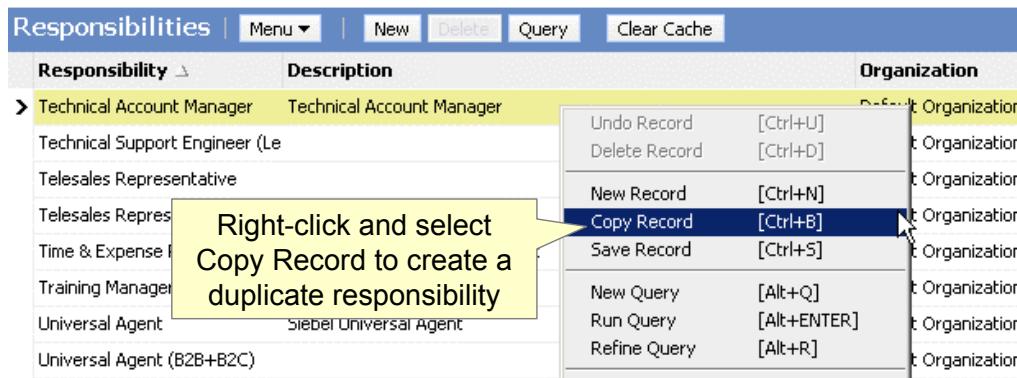
3. Test the Responsibility

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1. Copy or Create a Responsibility

- Navigate to the Administration – Application > Responsibilities view
- Copy an existing responsibility with a set of views similar to your requirements
- Alternatively, create a new responsibility to start without any views



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1. Copying or Creating Responsibilities

- Copying seed responsibilities:
 - ▶ Provides a “quick start” in creating responsibilities with large numbers of views
 - ▶ May provide far more views than your business logic requires
 - Seed responsibilities frequently contain hundreds of views
 - Inefficient for inexperienced users
 - May include inappropriate administrative views
- Creating new responsibilities:
 - ▶ Allows fine-tuning of application logic to exactly match business requirements
 - Users see only those views that your company has decided they require to perform their job functions
 - ▶ Requires determining exactly which views a user may require and adding those views to the responsibility

2. Add or Remove Views

- Add or remove views from the responsibility as necessary
- A pick applet provides querying functionality and improves efficiency when selecting views

The screenshot shows the Siebel application interface. At the top, there's a navigation bar with links like Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, and Administration - Application. Below the navigation bar, a toolbar has buttons for New, Delete, Query, and Clear Cache. The main area is titled 'Responsibilities' and shows a table with columns: Responsibility, Description, Organization, and Web Access. One row is selected, showing 'ABC Developer' and 'Default Organization'. Below this, another table is titled 'Views' with columns: View Name, Description, Local Access, Read Only View, Last Name, First Name, User ID, and Job Title. An 'Add' button is highlighted with a red box and a yellow callout bubble containing the text '1. Click Add to add views to a responsibility'. A red arrow points from this callout to the 'Add' button. In the foreground, a modal window titled 'Add Views' is open, showing a list of view names and descriptions. The first item in the list is 'Repository Workflow Process Definition Parent-Child View' with the description 'Repository Workflow Process Definition Parent-Child View'. A yellow callout bubble with the text '2. Pick applet supports querying for and adding multiple views at once' is positioned over the modal window.

View Name	Description
Repository Workflow Process Definition Parent-Child View	Repository Workflow Process Definition Parent-Child View
Repository Workflow Process Definition	A separate view for repository
Repository Workflow Object List View	Repository Workflow Object List View
Repository Workflow Component List View	Repository Workflow Component List View
Repository Workflow Component Column List View	Repository Workflow Component Column List View
Repository Workflow Column List View	Repository Workflow Column List View

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2. Read-Only Views

- After editing the set of views for the responsibility, mark views as read-only for that responsibility if desired
 - ▶ Allows different responsibilities to have different levels of access to the same view

The screenshot shows the Siebel application interface. At the top is a menu bar with File, Edit, View, Navigate, Query, Tools, and Help. Below the menu is a toolbar with various icons. The main header bar includes links for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, and Administration - Application. A sub-header bar shows Branch Locator, Contact Us, Alerts Online, License Keys, Predefined Queries, Reports Server Administrator Profile, Responsibilities, and Business Service Acc. The main content area has two tabs: 'Responsibilities' (selected) and 'Views'. The 'Responsibilities' tab displays a list of responsibilities with columns for Responsibility, Description, Organization, and Web Access. The 'Views' tab displays a list of views with columns for View Name, Description, Local Access, and Read Only View. A yellow callout box points to the 'Read Only View' column in the 'Views' table, containing the text: 'Mark views as Read Only Views to prevent editing'.

Responsibility	Description	Organization	Web Access
ABC Developer	Responsibility for ABC Company Developers	Default Organization	
Analyst Routing Model	Analyst Routing Model	Default Organization	

View Name	Description	Local Access	Read Only View
Repository Applet List View	Repository Applet Li	✓	
Repository Applet Method Menu Item List View	Repository Applet M	✓	
Repository Applet Script List View	Repository Applet Si	✓	
Repository Applet Toggle List View	Repository Applet Ti	✓	✓

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2. Clear the Cache

- Clear the responsibility cache to ensure that users will see their updated responsibilities the next time they log in

The screenshot shows the Siebel application interface. At the top, there is a toolbar with various icons and a menu bar with File, Edit, View, Navigate, Query, Tools, and Help. Below the toolbar, there is a navigation bar with links like Home, Accounts, Contacts, and Op. The main content area has two tabs: 'Responsibilities' and 'Views'. The 'Responsibilities' tab is currently selected. It displays a list of responsibilities with columns for Responsibility, Description, Organization, and Web Access. One row is highlighted in yellow, showing 'ABC Developer' with the description 'Responsibility for ABC Company Developers' and 'Default Organization' under both Organization and Web Access. A callout box with a yellow arrow points to the 'Clear Cache' button in the toolbar above the list. The 'Views' tab is also visible, showing a list of views with columns for View Name, Description, Local Access, and Read Only View. The 'Views' tab has its own toolbar with Add, Delete, and Query buttons. The bottom right corner of the main content area contains the text 'Administration - Application'. In the bottom left corner of the main content area, there is a red banner with the text 'Copyright © 2007, Oracle. All rights reserved.' and '17 of 22'.

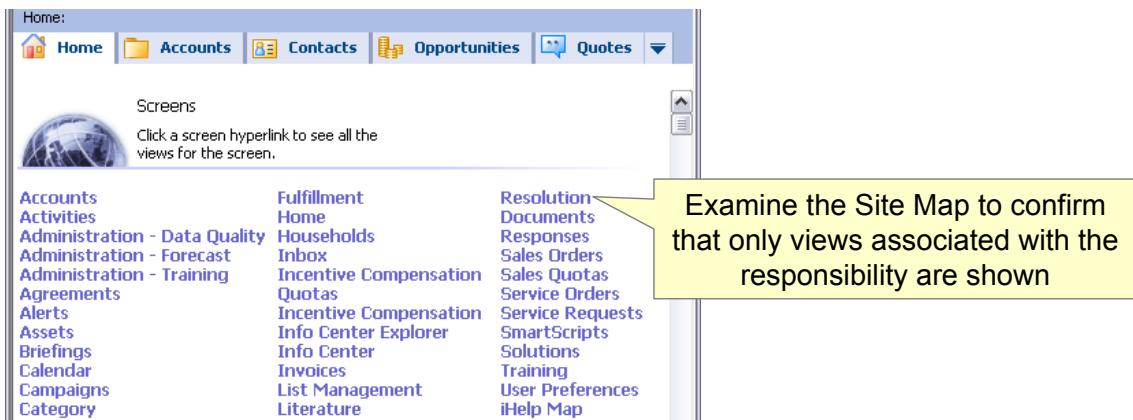
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3. Test the Responsibility

- Assign the responsibility to a sample user
 - ▶ Use the Administration – User > Users view
- Log in as that user and verify the available views from the Site Map
 - ▶ Users only see references to views that are contained in their responsibilities



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Additional Features

- Use responsibilities to restrict access to business services, business processes, and tasks
 - ▶ This prevents unauthorized users from invoking them

The screenshot shows the Siebel application interface. At the top, there is a navigation bar with links for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, Administration - Application, and various system links like Branch Locator, Contact Us, Alerts Online, License Keys, Predefined Queries, Reports Server Administrator Profile, Responsibilities, Business Service Access, etc. Below the navigation bar, the main content area has two tabs: 'Responsibilities' and 'Views'. The 'Responsibilities' tab is active, showing a list of responsibilities. One responsibility, 'ABC Developer', is selected and highlighted in yellow. The 'Description' column shows 'Default Organization'. Below the list are buttons for New, Delete, Query, Clear Cache, and Query Results, along with a status message '1 - 1 of 1'. The 'Views' tab is also visible. A red box highlights the 'Business Service' tab in the 'Views' header, which contains columns for View Name, Description, Local Access, Read Only View, Last Name, First Name, User ID, and Job Title. The 'Views' header includes buttons for Menu, Add, Delete, Query, and a status message 'No Records'. To the right of the 'Views' section, there is another 'Users' section with similar headers and buttons.

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Module Highlights

- Responsibilities are collections of views used to limit the views visible to a user
- Responsibilities have a M:M relationship with views and users
- Create responsibilities by copying and editing seed responsibilities or by creating new responsibilities
- Assign responsibilities to a user and clear the responsibility cache before testing a responsibility



Lab

- In the lab you will:
 - ▶ Explore seed responsibilities
 - ▶ Create and test a new responsibility

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Siebel 8.0 Essentials

Module 5: Users, Positions, and Organizations

5

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5

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Module Objectives

After completing this module you should be able to:

- ▶ Describe how data access is controlled by users, positions, and organizations
- ▶ Implement the company structure using divisions, organizations, positions, users, and employees

Why you need to know:

- ▶ Access to some data within the application is controlled by users, positions, and organizations
- ▶ Implementing your company's structure enables role- and organization-specific functionality in Siebel CRM



Business Challenge

- Large-scale enterprise applications should not grant all users access to all of the data within the application
 - ▶ For example, sales representatives should see their own sales quota attainment, but no one else's
 - ▶ On the other hand, sales managers should see all of their reports' quota attainments
- System administrators require a mechanism to restrict access to data within the application
 - ▶ This mechanism should be independent of the mechanism to restrict access to views



Business Solution: Access Control

- Siebel applications allow different users to see different data based on their user ID, position, or organization within the company
 - ▶ Data access control is independent of responsibilities and views
 - ▶ Example: Ted Arnold and Casey Cheng can access the same view based on their responsibilities, but see different data in the view

The image contains two separate screenshots of Siebel application interfaces, both titled "My Service Requests".
The top screenshot shows a list for "Casey Cheng" (CCHENG). It has three items:

- SR # 1-1323601: Environment: Production Special Consi Bell Canada CCHENG
- SR # 1-1826242: How do I setup a networked printer on m Marriott International CCHENG
- SR # 1-1856014: Problem with resolution after self-installatir Marriott International CCHENG

The bottom screenshot shows a list for "Ted Arnold" (TARNOLD). It has three items:

- SR # 1-10E-3B: Onsite PM service for Server. 3Com TARNOLD
- SR # 1-1404156: Using Siebel Call center with Genesys C Puma Sports, Inc. TARNOLD
- SR # 1-1404201: Dynamic Screen Pops not working on tr Hydro-Quebec TARNOLD

In both cases, the "Summary" column shows the ticket details, while the "Account" and "Owner" columns show the respective user names.

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Reference

Siebel Security Guide: Configuring Access Control



Users

- Are individuals who use the Siebel application
 - ▶ May be employees, customers, or partners
- Require unique user IDs
- Require at least one responsibility to see views in the application

Note that multiple users can have the same name as long as their user ID is different

Last Name	First Name	User ID	Responsibility
Cheng	Casey	ITA_CCHE	Call Center Manager
Cheng	Chris	KOR_CCHE	Consultant
Cheng	Chris	SVE_CCHE	Call Center Manager
Cheriyan	John	JCHERIYA	Sales Manager
Chi	Helen	HCHI	Reports User
Chin	Isaac	ICHIN	ERM User

108 - 117 of 126+ |

Users must have at least one responsibility or they will see no views

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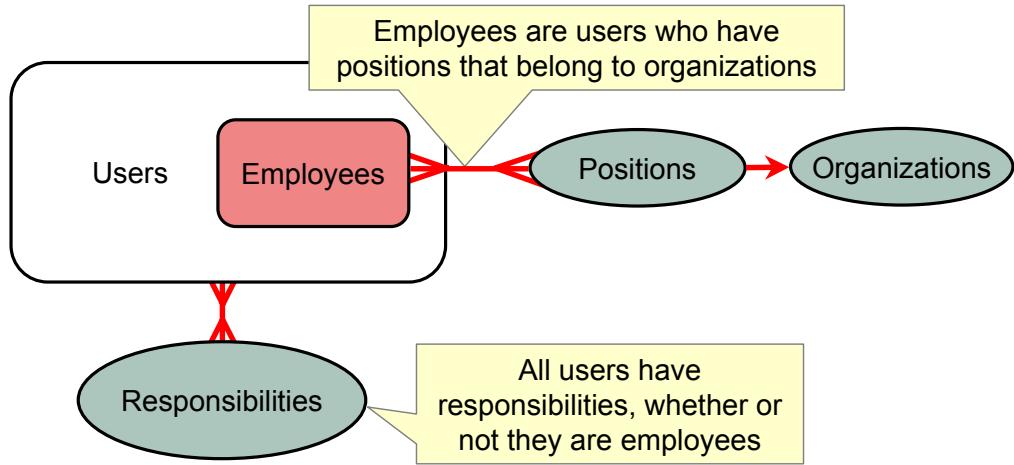
Reference

Developing and Deploying Siebel Business Applications: Required Application Administration Tasks

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Employees

- Are a special type of user representing employees of the company
 - ▶ Employees have one or more positions within the company
 - ▶ Each position belongs to an organization within the company





Positions

- Positions are used to control access to data within the application
 - ▶ For example, a sales representative's accounts are only visible to members of his or her sales team
- Employees may have one or more positions
 - ▶ One position is designated as the primary position, and is the position employees occupy when they log in
 - ▶ Employees only see data for their current position
 - ▶ Employees may change positions once they have logged in



Changing Positions

- If an employee has more than one position, he or she can change position during a session
 - ▶ From the application-level Tools menu, select User Preferences > Change Position
 - ▶ Becomes the Active Position for that session
- Changing the default login (primary) position for an employee is an administrator function

The screenshot shows the Siebel application interface. At the top, there is a navigation bar with various tabs: Home, Accounts, Contacts, Opportunities, Orders, Service, Administration - Group, and User Preferences. The User Preferences tab is highlighted. Below the navigation bar, there is a sub-menu bar with Profile, Availability, Behavior, Calendar, Communications, Correspondence, and DB Synchronization. The main content area is titled "Change Position". It contains a toolbar with "Change Position" and a "Menu" dropdown. Below the toolbar is a grid with three columns: Active Position, Organization, and Position. In the Active Position column, there is a dropdown arrow icon. In the Organization column, there is a checkmark icon. In the Position column, the value "Siebel Administrator" is displayed. A red box surrounds the "Change Position" button in the toolbar and the "Position" column in the grid. A red arrow points from the "User Preferences" item in the Tools menu (which is also highlighted with a red box) down to the "User Preferences" button in the bottom right corner of the application window.

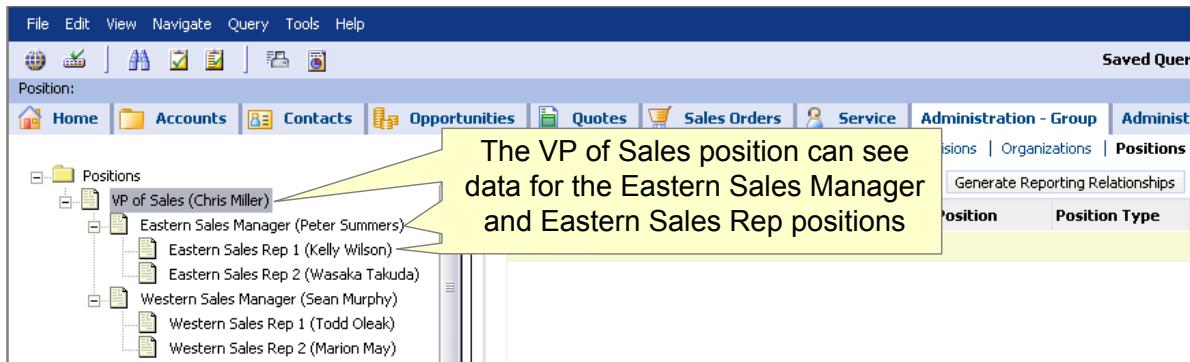
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Position Hierarchy

- Positions are arranged in a hierarchy
 - ▶ Defines a reporting structure that allows managers to see data from their direct and indirect reports
 - ▶ The Administration – Group > Positions view shows this hierarchy
 - Also shows the primary for each position



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Divisions and Organizations

- A company is divided into divisions representing lines of business, regions, or departments
- Divisions are arranged in a hierarchy
- Organizations are a special type of division used to restrict data access within that division
 - ▶ Data is shared among divisions within an organization

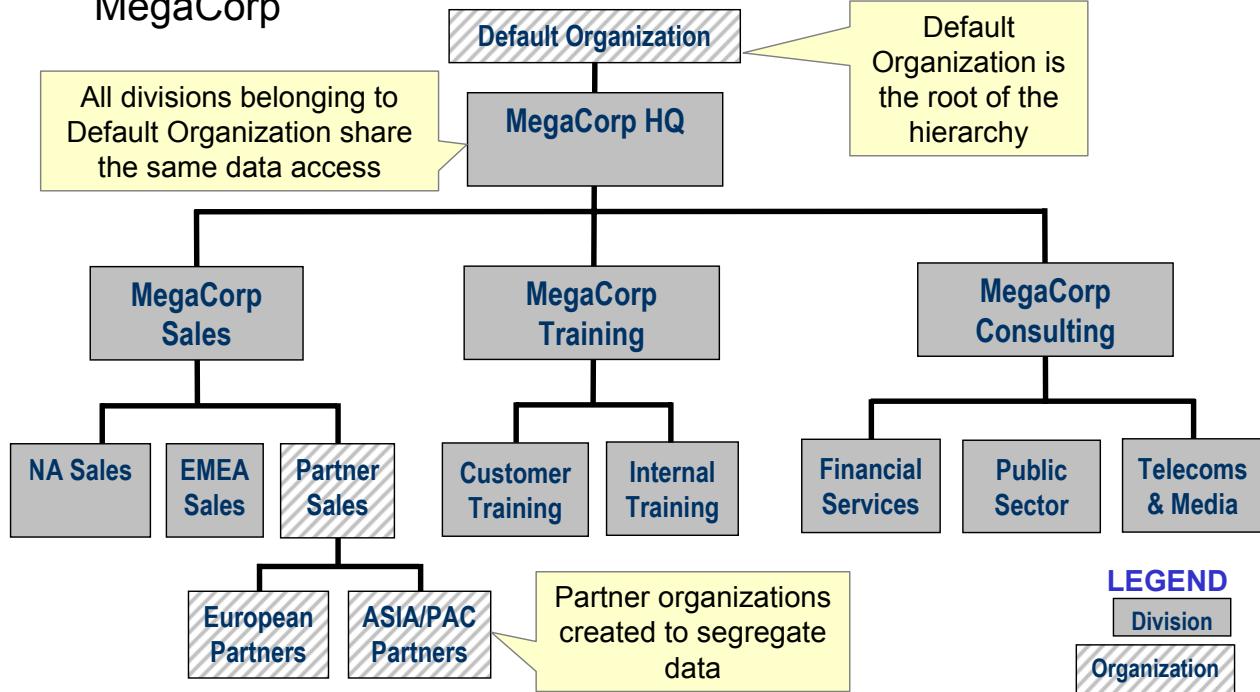
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Example: MegaCorp Organizational Structure

- Here is a sample organizational structure of a sample company, MegaCorp



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Positions and Divisions

- A position is assigned to one, and only one, division
- A position is associated with one, and only one, organization:
 - ▶ The organization to which the division belongs

The screenshot shows the Siebel Positions and Divisions interface. On the left, a navigation tree under 'Position' shows 'VP of Sales (Chris Miller)' and 'Eastern Sales Manager (Peter Sumrall)'. The main panel displays a grid of positions:

Division	Position	Parent Position	Position Type	Last Modified
MegaCorp East Sales	Eastern Sales Manager	VP of Sales	Sumrall	2007-01-02 10:00:00
MegaCorp West Sales	Western Sales Manager		Murphy	2007-01-02 10:00:00

A tooltip on the 'Eastern Sales Manager' row states: "The Eastern Sales Manager position is assigned to the MegaCorp East Sales division".

In the bottom right, a detailed view of the 'Eastern Sales Manager' record shows:

- Position: * Eastern Sales Manager
- Parent Position: VP of Sales
- Position Type:
- Division: *
- Organization: Default Organization
- First Name: Peter
- Job Title: Eastern Sales Manager
- Start Date: 1/2/2007
- End Date:

A callout box on the left indicates: "This position is associated with the MegaCorp East Sales division, which belongs to the Default Organization".

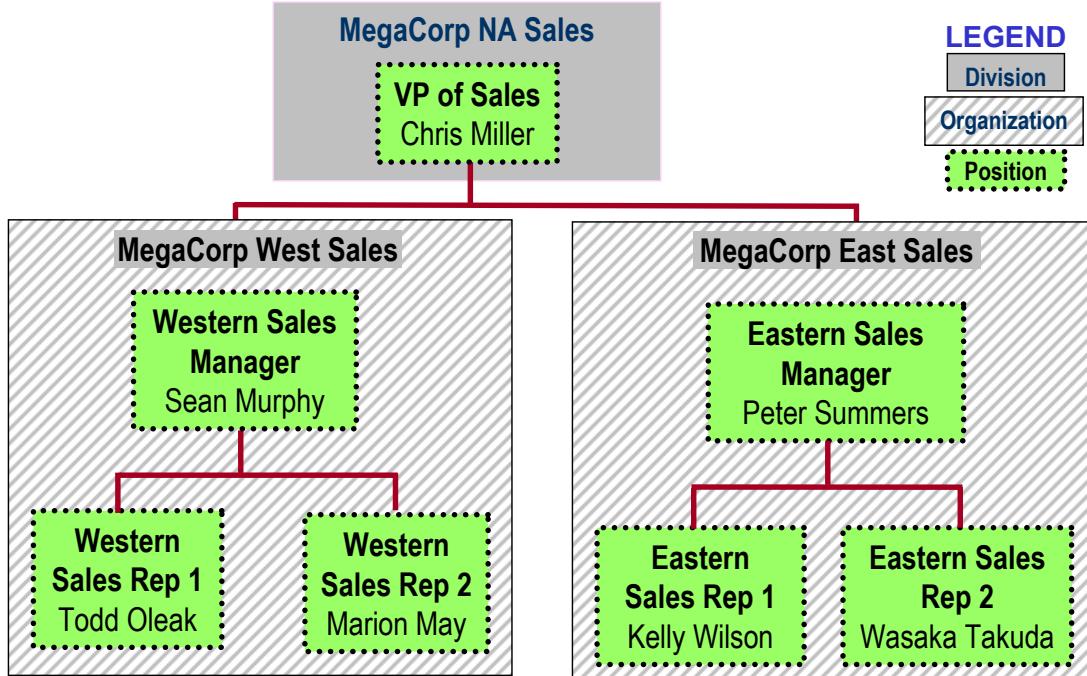
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Example: NA Sales with Positions and Users

- The NA Sales division (part of Default Organization) might have users and positions that look something like this:



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Implementing the Company Structure

1. Create Divisions and Division Hierarchy
2. Label Some Divisions as Organizations
3. Create Positions
4. Create Employees
5. Create Users

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1. Create Divisions and Division Hierarchy

- Create divisions in the Administration – Group > Internal Divisions view
 - ▶ Required fields are division name and currency
 - ▶ Be careful: Once divisions are created they cannot be deleted

Division Name	Organization Name	Address	City	State
MegaCorp Consulting	Default Organization			
MegaCorp EMEA Sales	Default Organization			
MegaCorp East Sales	MegaCorp East Sales			
MegaCorp HQ	Default Organization			
MegaCorp NA Sales				
MegaCorp Sales				
MegaCorp Training				

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2. Label Some Divisions as Organizations

- Label divisions as organizations by clicking the Organization Flag check box
 - ▶ Be careful: This cannot be undone

Division Name	Organization Name	Address	City	State
MegaCorp Consulting	Default Organization			
MegaCorp EMEA Sales	Default Organization			
MegaCorp East Sales	MegaCorp East Sales			
MegaCorp HQ	Default Organization			
MegaCorp NA Sales				
MegaCorp Sales				
MegaCorp Training				

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Default Organization Default Organization is one of the seed organizations in the Siebel application. Because much of the seed data is assigned to Default Organization, it should not be modified.

3. Create Positions

- Create Positions on the Administration – Group > Positions view
 - ▶ Positions require a name and a division
- Siebel applications provide some seed positions such as Siebel Administrator
- Recommended practice: Do not delete positions, as they are related to data

The Siebel application has four seed positions, including Siebel Administrator

Division	Position	Parent Position	Position Type	Last Name
Default Organization	Proxy Employee			Employee
Siebel Administration	Siebel Administrator			Administrator
Default Organization	Siebel Administrator	Siebel Administrator	Service Manager	

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4. Create Employees

- Use the Administration – User > Employees view to create employees
 - ▶ Employee will also appear as a user
- Required fields are First Name, Last Name, User ID, Position, and Organization
- By default, new employee records are in the same organization as the person creating the record
 - ▶ Used for access control of visibility of employee records
 - ▶ Can be changed to reflect appropriate access control

Last Name	First Name	Job Title	User ID	Position	Organization	Employee Type	Responsibility
Summers	Peter	Eastern Sales Manager	PSUMMERS	Eastern Sales Manager	Default Organization	Employee	Siebel Administrator

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5. Create Users

- Some users will not be employees
 - ▶ For examples, customers and partners
- Create them in the Administration – Users > Users view
 - ▶ Customers and partners require responsibilities, but not positions

The screenshot shows the Oracle Siebel User Administration interface. At the top is a menu bar with File, Edit, View, Navigate, Query, Tools, and Help. Below the menu is a toolbar with various icons. The main title is 'All User Administration'. Below that is a navigation bar with Home, Accounts, Contacts, Households, and Sales Org. The current view is 'Users'. A sub-menu bar below the navigation bar includes 'Users' (selected), Menu, New, Delete, and Query. The main data area is a table with columns: Last Name, First Name, User ID, and Responsibility. One row is visible: Partner, Joe, JPARTNER, and Partner Sales Manager.

Last Name	First Name	User ID	Responsibility
Partner	Joe	JPARTNER	Partner Sales Manager

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Module Highlights

- Users are individuals who log in to the application
 - ▶ Require responsibilities
- Employees are special users representing employees of the company
 - ▶ Hold at least one position
 - ▶ Belong to at least one organization
- Positions are similar to job titles, and are used to determine what data an employee can see
- Divisions represent divisions within the company
- Organizations are specialized divisions used to limit data visibility



Lab

- In the lab you will:
 - ▶ Implement a company structure, including divisions, organizations, positions, and employees

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Siebel 8.0 Essentials

Module 6: Controlling Access to Customer Data

6

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Module Objectives

After completing this module you should be able to:

- ▶ Describe the difference between customer and master data in Siebel applications
- ▶ Describe the different Access Control mechanisms used to restrict access to data in Siebel applications
- ▶ Identify the different view types used for different types of users

Why you need to know:

- ▶ To effectively use and administer Siebel applications, you need to understand how access to data is controlled
- ▶ Understanding view types is essential to properly assigning them to responsibilities



Business Challenge

- Users often perform the same job functions but on different sets of data
 - ▶ For example, sales representatives need access to the records for their own accounts, but not each others'
- Access to some data in the enterprise needs to be restricted
 - ▶ Users should only see records they need to do their job
 - ▶ Users should easily locate records of interest

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Business Solution: Access Control for Data

- Siebel applications provide mechanisms to restrict access to certain records based on:
 - ▶ The employee
 - ▶ The employee's position
 - ▶ The position's organization
- Limited access to data:
 - ▶ Increases business security
 - ▶ Increases user productivity

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Reference

Siebel Security Guide: Configuring Access Control



Relationship Between Views and Data

- Access to views is independent of access to data
 - ▶ But the view defines the Access Control mechanism that will be used to access data
- Data displayed within a view is based on the Access Control mechanism for the view
 - ▶ Example: Ted Arnold and Casey Cheng can access the same view based on their responsibilities, but see different data in the view

Casey Cheng (CCHENG) sees only her own service requests

My Service Requests ▾		Menu ▾	New	Delete	Query
SR # ▾	Summary	Account	Owner		
1-1323601	Environment: Production Special Consi Bell Canada	Bell Canada	CCHENG		
1-1826242	How do I setup a networked printer on m Marriott International	Marriott International	CCHENG		
1-1856014	Problem with resolution after self-installatir Marriott International	Marriott International	CCHENG		

Ted Arnold (TARNOLD) can access the same view but sees only his own service requests there

My Service Requests ▾		Menu ▾	New	Delete	Query
SR # ▾	Summary	Account	Owner		
1-10E-3B	Onsite PM service for Server.	3Com	TARNOLD		
1-1404156	Using Siebel Call center with Genesys C Puma Sports, Inc.	Puma Sports, Inc.	TARNOLD		
1-1404201	Dynamic Screen Pops not working on tr Hydro-Quebec	Hydro-Quebec	TARNOLD		

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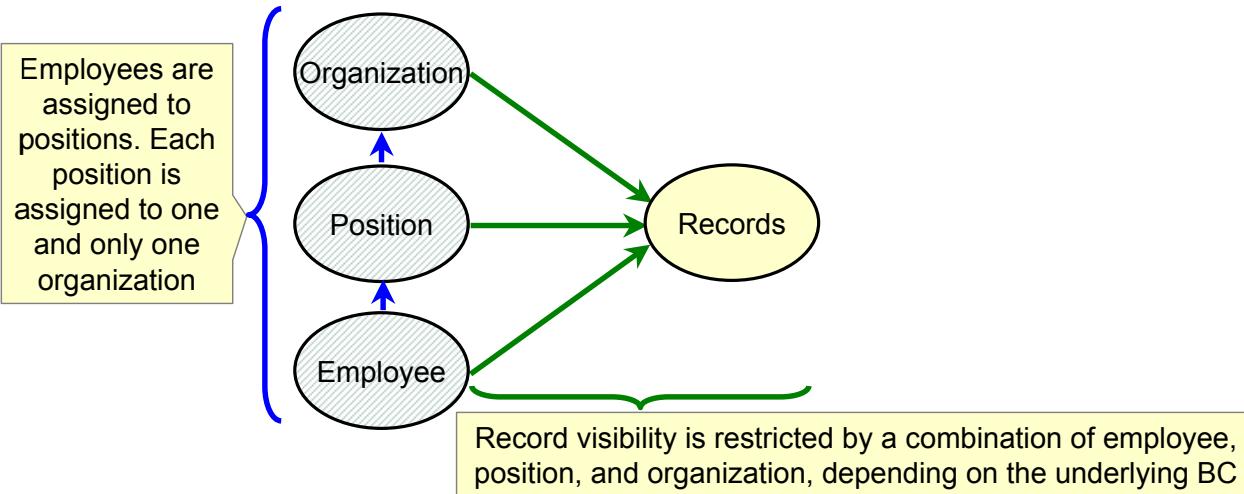


Data Classification

- Data in a Siebel Enterprise is classified as either customer data or master data
- Customer data:
 - ▶ Consists of dynamic, transactional data such as service requests and opportunities
 - ▶ Is typically created and managed by users of the application
 - ▶ Has access controlled at the record level according to employee, position, organization, or a combination thereof
- Master data:
 - ▶ Includes static, referential data such as products and literature
 - ▶ Is created and maintained by administrators
 - ▶ Can be grouped into categories and catalogs
 - ▶ Has access controlled according to catalog and category

Accessing Customer Data

- Individual records may be restricted by employee, position, organization, or a combination thereof
 - ▶ Data visibility is determined by Siebel-set properties of the underlying business component (BC)
 - ▶ Visibility may be restricted to an individual employee, position, or organization, or multiple employees, positions, or organizations





Viewing Customer Data

- For customer data that is access controlled, visibility is determined using the following drop-down visibility filters:
 - ▶ My views
 - ▶ My Team's views
 - ▶ All views
 - ▶ All Across My Organizations views
 - ▶ All Across Organizations views
- Assigning the appropriate views to the appropriate responsibilities is critical for data access control

The screenshot shows the Siebel Opportunities List interface. At the top, there is a menu bar with File, Edit, View, Navigate, Query, Tools, and Help. Below the menu is a toolbar with various icons. The main title is "Opportunity". Underneath the title, there are links for Home, Accounts, Contacts, and Opportunities. The Opportunities link is highlighted. Below these are links for Opportunities Home, Opportunities List, Charts, and Opportunity Explorer. A dropdown menu is open under the Opportunities List link, titled "My Opportunities". The options in the dropdown are: My Opportunities, My Team's Opportunities, All Opportunities, All Opportunities Across My Organizations, and All Opportunities Across Organizations. To the right of the dropdown, there is a table with columns for Count, Revenue, and Last Update. The table contains two rows of data: one for "Facebook" with a value of \$0.00, and another for "iott International" with a value of \$687,500.00.

The visibility filter drop-down list shows the views available according to the user's responsibilities

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My Views

- My views show records where you or your position is directly associated with the record
 - ▶ For example, My Accounts or My Contacts
- For some records such as Accounts or Opportunities there is a team of positions associated with each record
 - ▶ The record appears in My View if your position is on the team

Account Name ▲	Site	Status	Main Phone #
Boston Bakers			
> California Dreaming	Santa Cruz		

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Primaries

In order for a team-controlled record to be visible in the My views, a primary team member must be specified.

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My Personal Views

- Are used to display records directly owned by you or your position
- Are special-case views that are rarely used (for example, with Contacts)

My Personal Contacts ▾				
Last Name ▲	First Name	Work Phone #	Account	Mr/Ms
Byatt	Judy	(212) 989-4333	McMillan & Company	Ms.
Frazelle	Emily	(202) 334-5587		Mrs.
Furr	Justin	(909) 877-6655	Art.net	Mr.

A sales agent only
sees contacts for
which he or she is
the direct owner

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My Team's Views

- Are an additional view for managers that allow them to see records assigned to their direct and indirect reports
 - ▶ For records with teams of positions, only records where the primary is the direct or indirect report are displayed
 - ▶ Manager does not have to be assigned to the record
- Are typically assigned only to manager responsibilities
- Are implemented using the position hierarchy

Site	Main Phone #	Status
Santa		
Old Test Account		
TSP ACCOUNT 1		
TSP Account		Active

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All Views

- Are used to show all records belonging to your current organization
 - ▶ The organization of your current position
 - ▶ Not related to My or My Team's views, which are person or position oriented

All Service Requests ▾			
SR #	Owner	Status	Organization
1-3376213	BBRAHMBH	Open	Default Organization
1-3376219	BBRAHMBH	Pending	Default Organization
1-3547227	SADMIN	Open	Default Organization
1-3559557	SADMIN	Open	Default Organization
1-3594142	SADMIN	Open	Default Organization
1-3606701	PSINGH	Closed	Default Organization

A service agent sees all the service requests assigned to his or her organization, regardless of the owner

Primaries

In order for a team-controlled record to be visible in the All views, a primary team member must be specified.

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Customer Data and Organizations

- By default, when a record is created it is associated with the organization of the creator's current position
- To change the organization associated with a record, use the More Info view
 - ▶ Records may be associated with multiple organizations

Akamai Technologies, Inc.

Account Name:	Akamai Technologies, Ir	Site:	Cambridge, MA
Address:	118 Turnpike Rd	Address Line 2:	
City:	Southborough	State:	MA
Zip Code:	01772-2104	Country:	USA

More Info Activities Contacts Notes Opportunities Revenues Service Pro

Parent:	Account Type:	Commercial
Parent Site:	Organization:	PCS Americas

A record's Organization is usually shown under the More Info tab in the detail view

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All Across My Organizations Views

- Are used to display all data from an organization and its child organizations
 - ▶ Based on the relationships specified by the organizational hierarchy
- Are typically restricted to users who need to access records at the enterprise level
 - ▶ Mid-level executives
 - ▶ Partners
- Are typically used for only a few types of records
 - ▶ For example, opportunities
 - ▶ In the All Opportunities Across My Organizations view, a sales manager sees all opportunities in his or her organization and all of its child organizations

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All Across Organizations Views

- Are used to show all records in the enterprise that are assigned an organization
- Are typically restricted to only those users who need to access records across the whole company
 - ▶ Top-level executives

All Service Requests across Organizations ▾				Menu ▾
SR #	Owner	Status	Organization	
1-1693025	FRA_CCHE	Open	PCS France	
1-1693031	SADMIN	Open	Default Organization	
1-1693035	FRA_CCHE	Open	PCS France	
1-1700934	DEU_CCHE	Open	PCS Germany	
1-10E-3B	TARNOLD	Open	PCS Americas	

A vice president of sales can see all service requests that have been assigned



Administration Views

- Are used to display all database records, even those without a valid owner
 - ▶ For example, records that have just been imported but not yet assigned or records where the primary position has been deleted
- Are accessed from the Administration views for each major entity
- Should be restricted to a few users in the enterprise as they display all records in the database

The screenshot shows the Siebel application interface for managing accounts. At the top, there's a menu bar with File, Edit, View, Navigate, Query, Tools, and Help. Below the menu is a toolbar with icons for Home, Accounts, Contacts, Opportunities, Quotes, and Sales Orders. The main area is titled 'Accounts' and shows a list of accounts with columns for Account Name, Site, Main Phone #, and Status. One account, 'MKTG Account 106', is highlighted in yellow. A callout box with a blue border and white text points to this highlighted row, stating: 'Administration views are separate from the visibility filter drop-down list'. The bottom of the screen has a red footer bar with the text 'Copyright © 2007, Oracle. All rights reserved.' and '16 of 26'.

Account Name	Site	Main Phone #	Status
MKTG Account 106		(801) 555-6789	Active
MKTG Account 107		(801) 555-6789	Active
MKTG Account 108		(801) 555-6789	Active
MKTG Account 109		(801) 555-6789	Active
MKTG Account 110		(801) 555-6789	Active



Summary: Types of Views

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
Administration Views	Display all records in the database, even those without a valid organization

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Best Practices for Views

- My Views:
 - ▶ Individual contributors should always have access
 - Allows them to see records directly associated with them or their position
 - ▶ Managers and executives may or may not require access
 - Require access if they might be on a team associated with a record
 - Do not require access if they will never be associated with a record
- My Team's Views:
 - ▶ Individual contributors should not have access unless they have people who report to them
 - ▶ Managers should have access
 - Allows them to see records associated with their reports
 - ▶ Executives may or may not require access



Best Practices for Views Continued

- All Views:
 - ▶ Individual contributors may or may not need access
 - Call center agents should be able to see all of a company's service requests, hence should have an All Service Requests view
 - Sales representatives may or may not need to see all opportunities within their organization, depending on the business model
 - ▶ All views are typically restricted to users who need to access records at the organization level
 - Executives, administrators
 - Service agents who need to access all service requests
- All Across Organizations Views:
 - ▶ These views are usually reserved for upper managers and executives
 - Exception: Call center agents may need to see all service requests filed by a customer worldwide, hence may need access to these views



Review: Access to Customer Data

- Can be restricted by assigning individual records to:
 - ▶ Employees (specified by employee's user ID)
 - ▶ Positions
 - ▶ Organizations



Using Multiple Access Control Mechanisms

- A record can be restricted by more than one Access Control mechanism
 - ▶ Mechanisms are not mutually exclusive
- Each view is preconfigured to use only one mechanism at a time
 - ▶ If you want to use another mechanism, you create and configure another view

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Examples

- An employee's position may be assigned to an account that is not assigned to that employee's organization
 - ▶ Employee sees the account in the My View
 - ▶ Employee does not see the account in the All View
- Contacts have multiple access mechanisms: public (team-based), private (position- or employee-based), and manager
 - ▶ Employee sees public contacts in the My View
 - ▶ Employee sees private contacts in the My Personal View
 - ▶ Manager sees contacts for self and subordinates in the My Team's View

The image shows three separate Siebel contact lists side-by-side. Each list has a header bar with a dropdown arrow and a 'Menu' button. The first two lists have a 'Last Name ▲' column, while the third has a 'Last Name ▾' column.

Last Name	First Name
Rubin	Jason
Schmidt	David

Last Name	First Name

Last Name	First Name
Administrator	Siebel
Subzero	RepFreeze

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Summary of Record Assignment

- Standard Siebel business entities can be assigned to single or multiple employees, positions, or organizations

Access Method	Single-Valued Access	Multi-Valued Access
Employees	Service requests Expense reports Contacts	Assets Activities
Positions	Forecasts Quotes	Accounts Contacts Opportunities
Organizations	Assets Consumers Forecasts	Accounts Opportunities Quotes

Team
Access
Control

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Module Highlights

- Access to records may be restricted by employee, position, organization, or a combination thereof
- Which records are shown depends on the view selected from the visibility filter drop-down list
- Multiple Access Control mechanisms may be in place for a single record
 - ▶ For example, both position-based and organization-based Access Control



Lab

- In the lab you will:
 - ▶ Explore record visibility in the application
 - ▶ Add a position to a user and examine how it affects the various visibility filters

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Siebel 8.0 Essentials

Module 7: Catalogs and Master Data

7

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Module Objectives

- After completing this module you should be able to:
 - ▶ Identify how master data is organized into catalogs and categories
 - ▶ Identify how users are organized into access groups
- Why you need to know:
 - ▶ Administering master data requires an understanding of catalogs, categories, and access groups



Business Challenge

- Companies have large amounts of data that must be:
 - ▶ Classified, so that it is easy to organize, administer, navigate, and search
 - ▶ Controlled, so that users only have access to appropriate data
- Example: Companies want different sales divisions to have access to different product lists



Business Solution

- Siebel applications provide mechanisms for:
 - ▶ Organizing and classifying large amounts of static, referential data
 - ▶ Organizing users into groups for appropriate access to data



Master Data

- Is static, referential data managed by administrators
 - ▶ Products
 - ▶ Solutions
 - ▶ Literature
 - ▶ Resolution items
 - ▶ Auction items
 - ▶ Events
 - ▶ Decision issues
 - ▶ Competitors
 - ▶ Training courses
- Has its visibility controlled by:
 - ▶ Catalogs
 - ▶ Categories
 - ▶ Access groups

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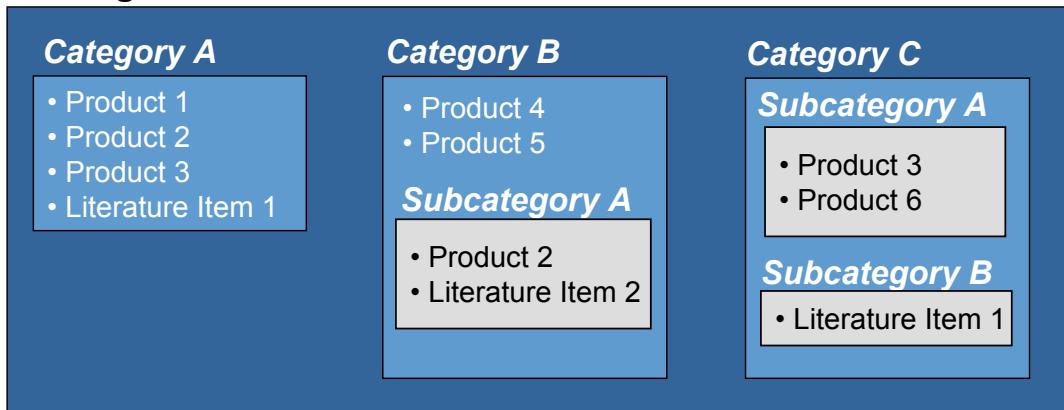
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Catalogs

- Are containers for hierarchies of categories
 - ▶ Do not contain master data themselves
- Are created to contain a specific subset of the master data
 - ▶ For example, customer documentation for credit card accounts

Catalog A



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Reference

Siebel Order Management Guide: Creating and Managing Catalogs

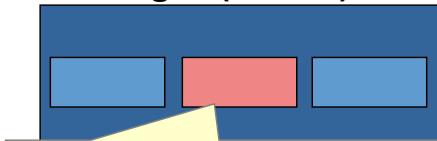


Catalogs

Continued

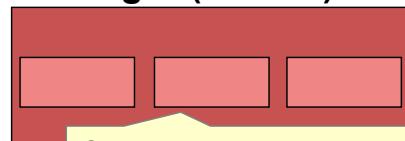
- May be declared public or private
 - ▶ Public catalogs are visible to all users
 - Categories within public catalogs may still be marked private
 - ▶ Private catalogs have their visibility limited to privileged groups known as access groups
- For example, a credit card documentation catalog might be public to allow users to see the service agreements and benefits
- However, a customer service documentation catalog might be private to restrict visibility to those with service agreements

Catalog A (Public)



A public catalog is visible to all users; individual categories within that catalog may still be marked private

Catalog B (Private)



Categories within private catalogs are private



Catalog Types

- Are assigned to catalogs
 - ▶ Catalogs should have a catalog type
 - ▶ Seed catalog types include:
 - Infocenter
 - Buying
 - Partner
 - eService FAQ
 - Customer
 - Multiselect Checkbox
 - Training
 - Partner Program
 - Training Curriculum
- Are used when querying for master data



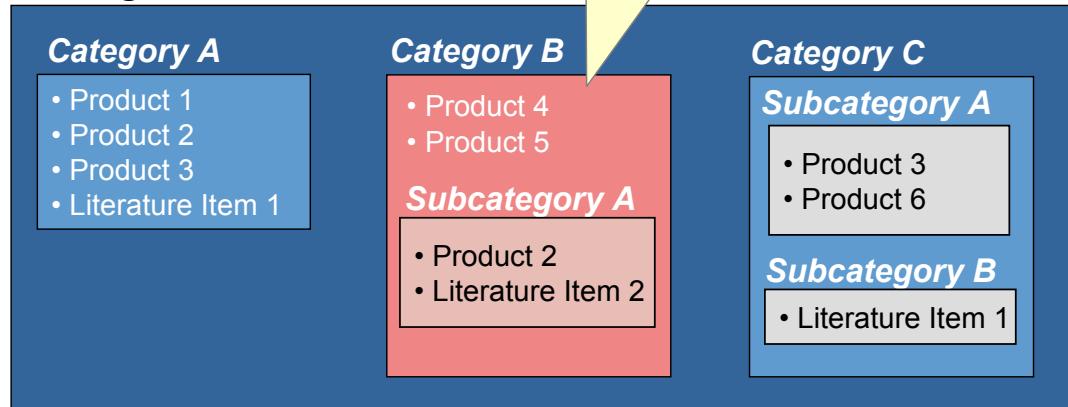
Categories

- Are nodes in a catalog that contain:
 - ▶ Master data
 - ▶ Other categories
- Are not shared between catalogs
 - ▶ However, multiple catalogs may contain categories with the same name
- May be declared public or private
 - ▶ If a category is declared private, all of its subcategories are also private
 - ▶ Private categories also have their visibility limited to specified access groups

Categories: Example

- Even though Category B and Category C both contain subcategories named Subcategory A, these two subcategories are distinct
- Since Category B is private, its Subcategory A is also private

Catalog A





Access Groups

- Are collections of positions, organizations, user lists, and households used to access private catalogs and categories
- Cannot contain individuals such as employees and users
 - ▶ To add an individual, create a user list with that individual as the only member

The screenshot shows the Siebel User Lists screen. At the top, there's a navigation bar with File, Edit, View, Navigate, Query, Tools, Help, and various icons. Below it is a toolbar with Home, Accounts, Contacts, Opportunities, Quotes, and Sales. The main area has tabs for User Lists, Menu, New, Delete, and Query. A callout box points to the 'New' button with the text: "Create User Lists in the Administration – Group > User Lists screen and add them to access groups". The table below shows three rows of user list entries:

Name
Administrator
Analytics (Executive) [ENU]
Call Center Operations Rep
Call Center [ENU]

Below this is another table with columns: Last Name, First Name, User ID, Mr./Ms., and Job Title. It contains three rows of data:

Last Name	First Name	User ID	Mr./Ms.	Job Title
Cheng	Casey	CCHENG	Ms.	Universal Agent (Ca
Miller	Lyncie	LMILLER		Siebel Universal Age
Lybrand	Sally	SLYBRAND		Call Center Manager

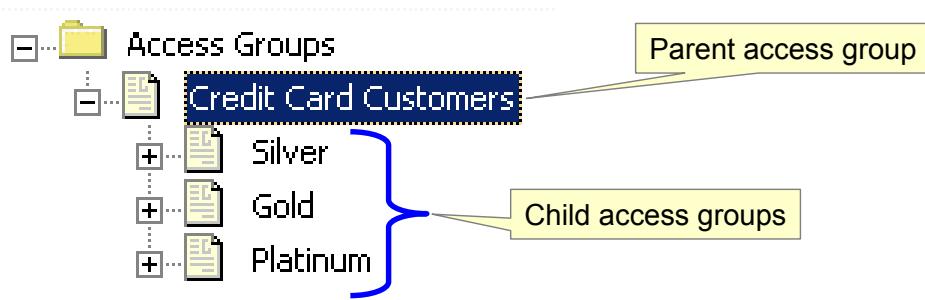
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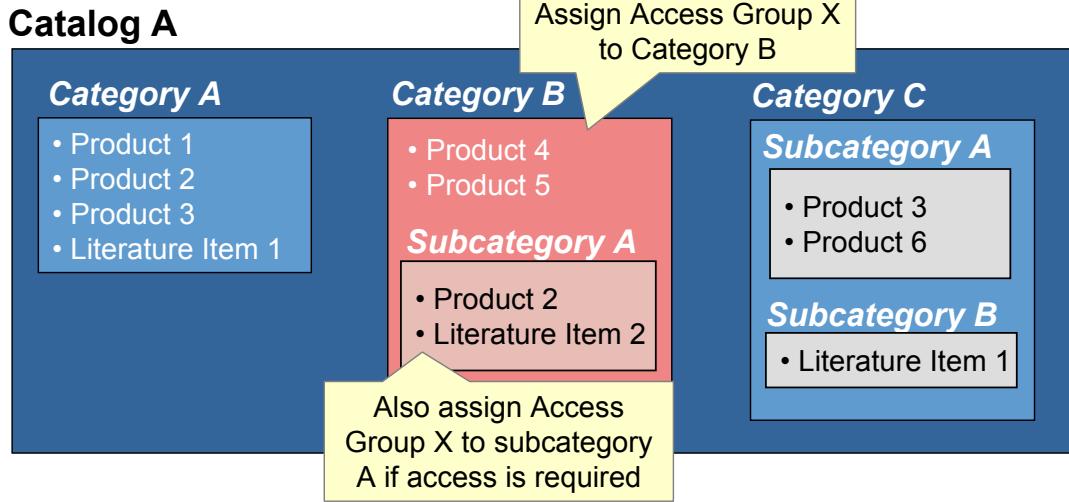
Access Group Hierarchies

- Access groups can be organized into a hierarchy
 - ▶ Child access groups inherit all of the access granted to their parents, hence have more privileges than their parents
 - ▶ Useful for giving more privileged users greater access



Access Control

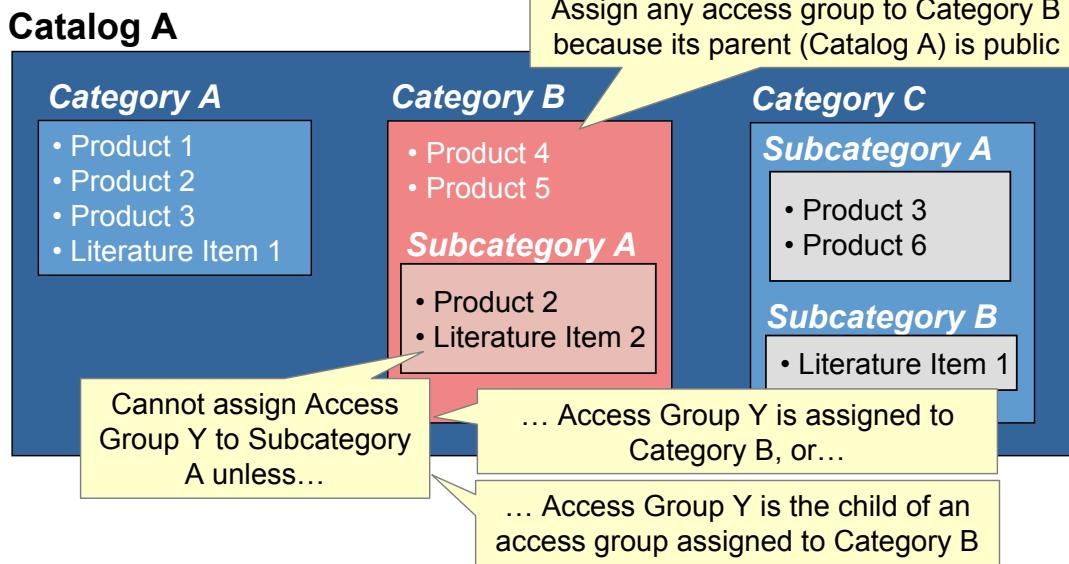
- Assign access groups to catalogs or categories
 - ▶ Unlike customer data, individual records are not controlled
- Access groups must be assigned to every catalog or category to which they need access
 - ▶ Access is not inherited along the category hierarchy



Access Control

Continued

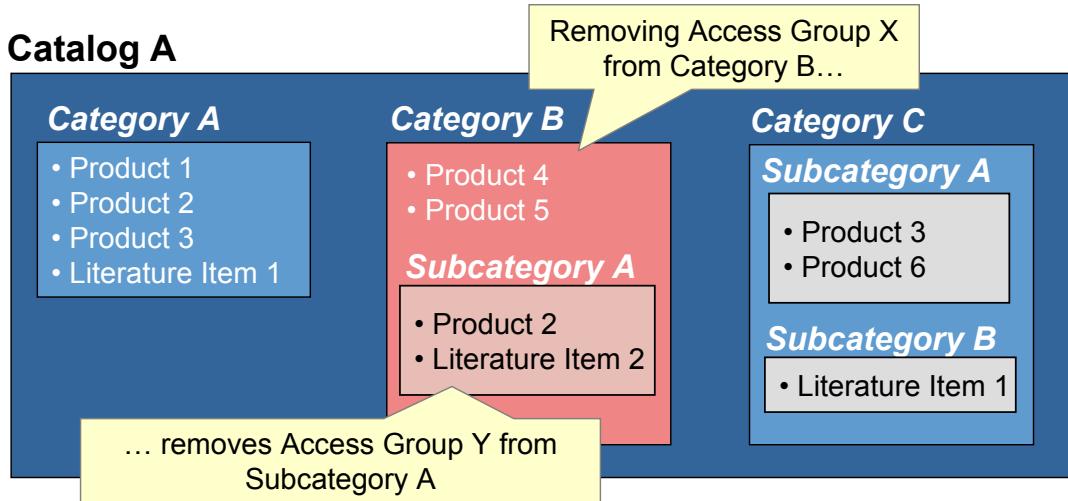
- An access group can only be added to a category if:
 - ▶ The access group is also assigned to the category's parent, or
 - ▶ The access group is a child of an access group assigned to the parent



Access Control

Continued

- Removing a parent access group from a category also removes all child access groups from all subcategories
- Example: Suppose Access Group Y is a child of Access Group X



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Building a Catalog

1. Create the Catalog
2. Add Categories to the Catalog
3. Associate Master Data with Categories
4. Declare Catalogs or Categories Private
5. Create Access Groups
6. Assign Access Groups

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1. Create the Catalog

- Navigate to Administration – Catalog > Catalogs
- Create a new catalog
 - ▶ Specify a name
 - ▶ Specify a catalog type
 - ▶ Specify other options

The screenshot shows the Siebel Catalog Administration interface. The top menu bar includes File, Edit, View, Navigate, Query, Tools, and Help. A toolbar with various icons is visible above the main content area. The title bar says "Catalog Administration". Below it, a sub-header says "Catalogs". The main area displays a table with columns: Name, Description, Catalog Type, Active, Private, and Sequence. A row is selected for "Credit Card Customers", which is described as a "Customer". Two callout boxes provide additional information:

- A box pointing to the "Active" column: "By default, the catalog is active; mark it as inactive to make it unavailable, for example, during updates"
- A box pointing to the "Sequence" column: "Specify sequence numbers to change the order in which catalogs appear"

2. Add Categories to the Catalog

- Drill down on the catalog name in the Catalog view to navigate to the Categories view
- Add categories to the catalog

The screenshot shows two Siebel application windows. The top window is titled 'Catalog Administration' and displays a list of catalogs. A catalog named 'Credit Card Customers' is selected and highlighted with a red box. A callout bubble points to this catalog with the text: 'Drill down on a catalog to see its categories'. The bottom window is also titled 'Catalog Administration' and is specifically for 'Categories'. It shows a list of categories under the catalog 'Credit Card Customers'. The category 'Gold' is selected and highlighted with a red box. A callout bubble points to this category with the text: 'Use buttons to promote and demote subcategories'. Both windows have standard Siebel navigation menus and toolbars.

Catalog Administration

Name	Description	Catalog Type	Active	Private	Sequence
> Credit Card Customers		Customer	✓		

Catalog Administration

Name	Display Name	Private	Sequence	Usage	Eff
Platinum	Platinum		3	10/1	
> Gold	Gold		2	10/1	
Silver	Silver		1	10/1	

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3. Associate Master Data with Categories

- Select the appropriate tab in the Categories view to add master data to a category

The screenshot shows the Siebel application interface with the following details:

- Top Navigation Bar:** File, Edit, View, Navigate, Query, Tools, Help.
- Saved Queries:** A dropdown menu.
- Catalog:** Home, Accounts, Contacts, Opportunities, Administration - Catalog.
- Sub-Header:** Catalog Administration.
- Main Content:** Categories view grid. The grid has columns: Name, Display Name, Private, Sequence, Usage. It lists categories like Platinum, Gold, Silver, Premium Customers, and Regular Customers.
- Bottom Navigation Bar:** More Info, Access Groups, Catalog Translations, Categories, Smart Answer Settings, Literature (highlighted).
- Sub-Sub-Header:** Access Groups, Category Detail, Category Translations, Competitors, Content Assets.
- Buttons:** Menu, Add, Delete, Query.
- Grid Footer:** Name, Summary, Local, Request File, Size (In Bytes), File Type.

A yellow callout box with a black border and arrow points from the text "For example, select the Literature tab to add product literature" to the "Literature" tab in the bottom navigation bar.

Name	Display Name	Private	Sequence	Usage
+ Platinum	Platinum		3	
+ Platinum	Gold		2	
Silver	Silver		1	
> Premium Customers	Premium Customers			
Regular Customers	Regular Customers			

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4. Declare Catalogs or Categories Private

- Set the Private flag at the catalog or category level to restrict data access
 - ▶ Subcategories are automatically marked as private

The screenshot shows the Siebel application interface with the 'Categories' view open. The 'Gold' category is selected and has its 'Private' checkbox checked. A callout box contains the following text: 'Marking the Gold category as private automatically causes the Premium and Regular Customers categories to be marked as Private'. The table below shows the category hierarchy and private status:

Name	Display Name	Private
Platinum	Platinum	✓
Gold	Gold	✓
Premium Customers	Premium Customers	✓
Regular Customers	Regular Customers	✓
Silver	Silver	1
Premium Customers	Premium Customers	✓
Regular Customers	Regular Customers	

5. Create Access Groups

- Navigate to Administration – Group > Access Groups
- Create the access group hierarchy as required
 - ▶ Create parents, then children
 - ▶ Specify parents for child records

File Edit View Navigate Query Tools Help

Saved Queries:

Access Group:

Home Accounts Contacts Opportunities Quotes Sales Orders Administration - Group

Access Groups | Internal Divisions | Organizations | Positions | User

Name	Group Type	Parent Access Group
Commercial Customers	Access Group	Platinum Customers
Residential Customers	Access Group	Platinum Customers

Specify the parent access group when creating the child access group; this requires creating the parent first

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5. Create Access Groups Continued

- Add positions, organizations, or user lists to access groups

The screenshot shows the Siebel Access Group interface. At the top, there's a navigation bar with tabs like Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, and Administration - Group. Below the navigation bar is a sidebar with a tree view showing 'Access Groups' and 'Platinum Customers'. The main area displays a table titled 'Access Groups' with one row: 'Platinum Customers' (Access Group) under 'Parent Access Group' 'Credit Card Customers'. A yellow callout box points to the 'New' button in the toolbar above the table, with the text 'Click New to add parties to an access group'. Below the table is a sub-dialog titled 'Add Access Group Members - Microsoft Internet Explorer' with a search bar ('Starting with Platinum') and a list of results. One result, 'Platinum Customers', is highlighted with a yellow background and has a yellow callout box pointing to it with the text 'Group type can be Position, Organization, User List, or Household'.

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6. Assign Access Groups

- Assign access groups to catalogs or categories
 - ▶ Use the Cascade button to automatically assign an access group to all child categories

The screenshot shows two overlapping windows. The top window is titled 'Catalog Administration' and displays a hierarchical list of categories: Gold (parent), Platinum (child), Commercial Customers (child), and Residential Customers (child). A yellow callout box points to the 'Gold' category with the text: 'Add access groups using the Access Group tab under Categories or Catalogs'. The bottom window is titled 'Access Groups' and shows a list of access groups. A yellow callout box points to the 'Cascade' button in the toolbar with the text: 'Select an Access Group and click Cascade to assign that access group to all child categories'. Below these windows is a browser window titled 'Add Access Groups - Microsoft Internet Explorer' showing a search results page for 'Platinum'.

Name	Display Name	Effective Start Date	Effective End Date	Sequence
Gold	Gold	10/19/2006 9:59:45		2
Platinum	Platinum	10/19/2006 9:59:30		3
Commercial Customers	Commercial Customers	10/19/2006 10:07:0		
Residential Customers	Residential Customers	10/19/2006 10:06:4		
		10/19/2006 9:59:52		1

Name	Access Group Type	Parent Access Group
Platinum Customers	Access Group	Credit Card Customers

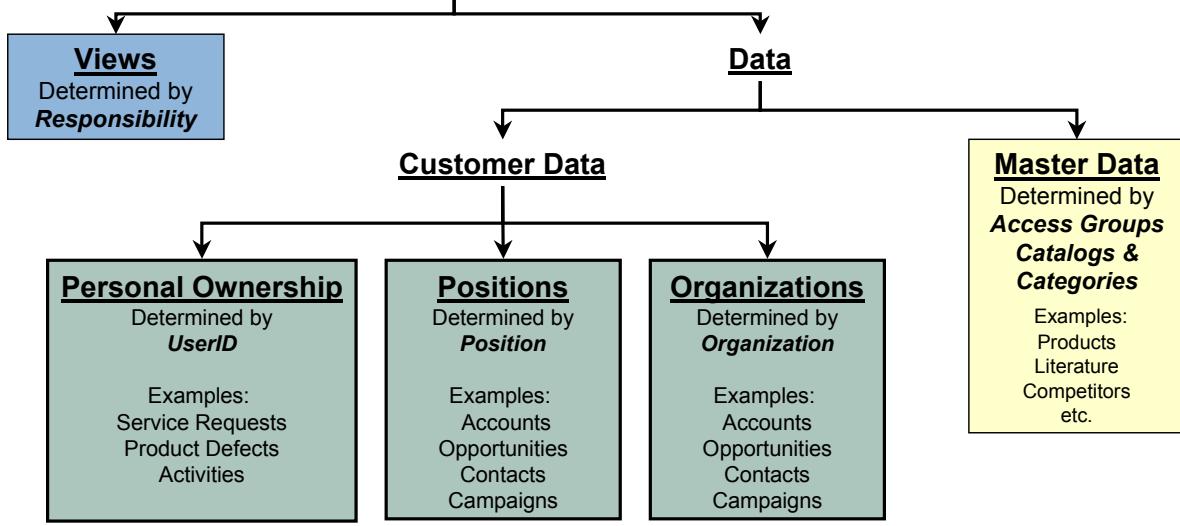
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Access Control Summary

Access Control Controls access to



Customer Data

- Is dynamic and transactional (can be updated)
- Is created and managed by users of the application
- Access is controlled at the record level

Master Data

- Is static, read-only material to the end user
- Is created and maintained by company administrators
- Access is controlled at the Catalog and Category level

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Module Highlights

- Master data is static, referential data such as product catalogs or product documentation
- Catalogs are containers for categories
 - ▶ Mark catalogs as private to restrict access to specific access groups
- Categories contain master data
 - ▶ Arranged in a hierarchy within the catalog
 - ▶ Mark categories as private to restrict access to specific access groups



Lab

- In the lab you will:
 - ▶ Navigate catalogs, categories, and access groups
 - ▶ Restrict access to master data contained in categories



Siebel 8.0 Essentials

Module 8: The Siebel Web Architecture

8

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Module Objectives

After completing this module you should be able to:

- ▶ Identify the pieces that make up the Siebel Web architecture
- ▶ Identify the role of each piece of the architecture
- ▶ Describe how Siebel requests are processed

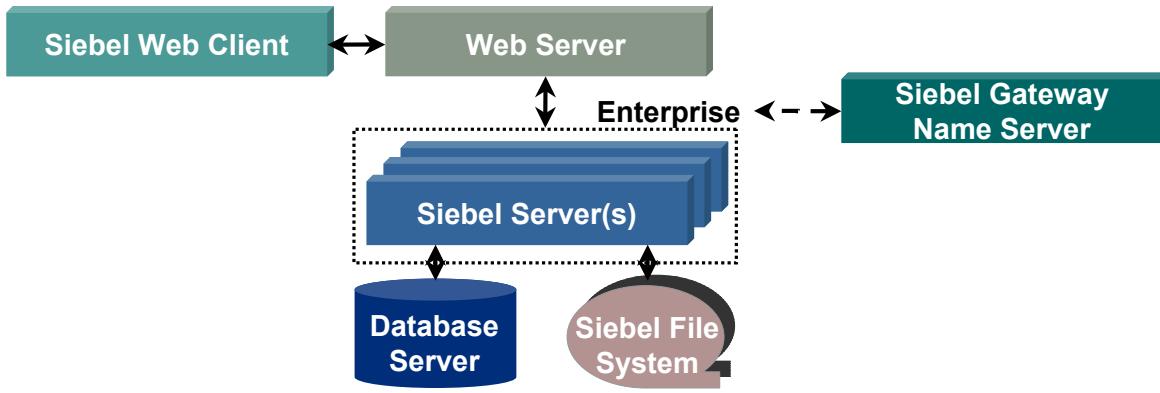
Why you need to know:

- ▶ Provides a foundation for understanding the relationship between the Siebel software components



Siebel Web Architecture Overview

- At a high level, the Siebel Web architecture consists of:
 - ▶ Siebel Web Clients that access and display the business data
 - ▶ A Gateway Name Server that stores configuration information
 - ▶ A Web server that handles interactions with the Web Clients and distributes requests to the Siebel Servers
 - ▶ Servers that manage the business data and provide batch and interactive services for clients
 - ▶ A relational database and file system that store business data



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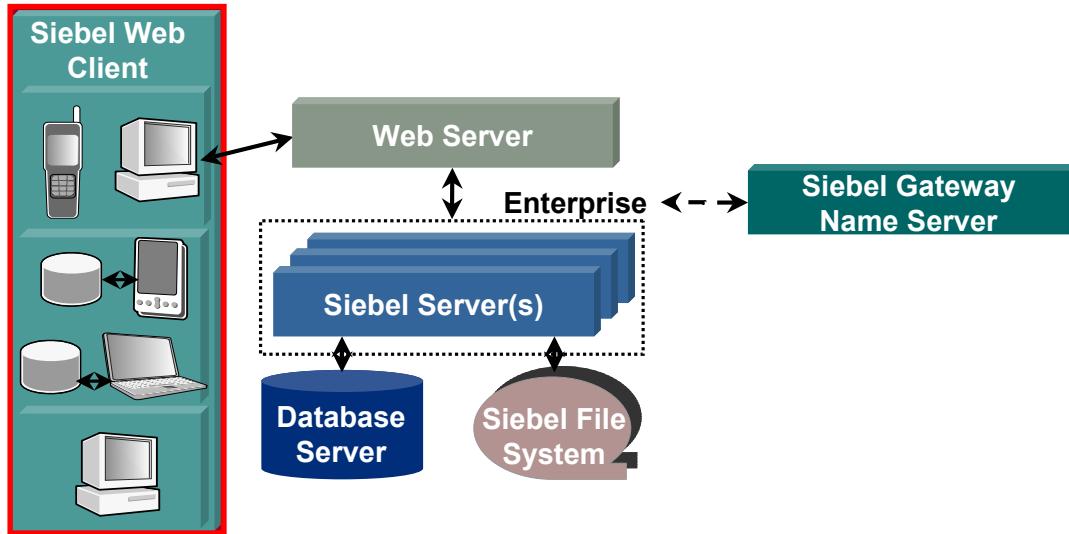
Reference

Siebel Deployment Planning Guide: Siebel Architecture Overview

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Siebel Web Client

- Displays the interactive Siebel application used to manage the Siebel data
- Runs in a variety of environments
 - ▶ Web browsers, Wireless Markup Language (WML) devices such as mobile phones, and personal digital assistants (PDAs)



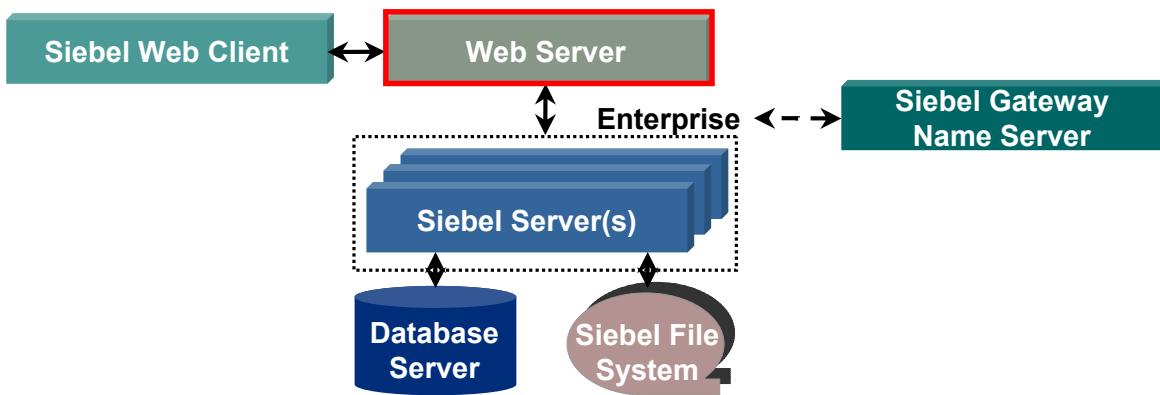
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Web Server

- Identifies and passes Siebel requests from Siebel Web Clients to the Siebel Servers
- Passes completed HTML application pages back to Siebel Web Clients
- Provides load balancing for multi-server installations
 - ▶ Supports either built-in or third-party load balancing



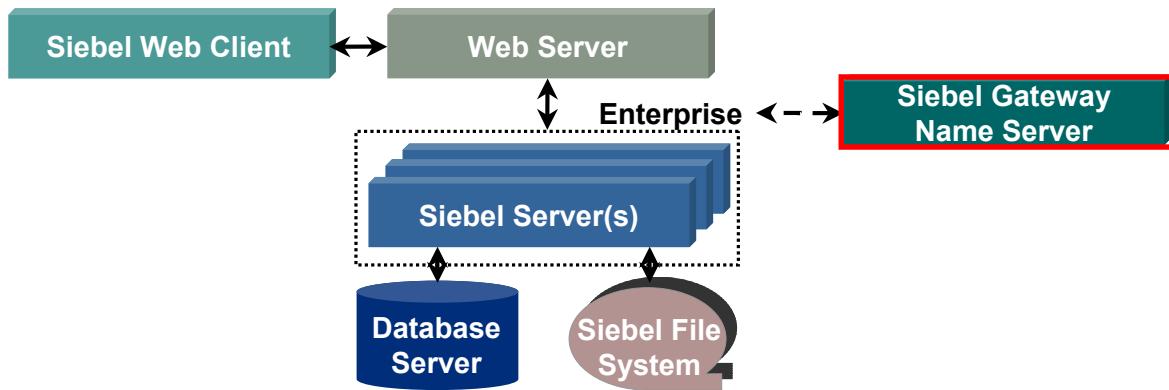
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Siebel Gateway Name Server

- Is a Windows service or UNIX daemon process
- Stores component definitions and assignments, operational parameters, and connectivity information
 - ▶ For example, connect strings to query servers for server/component availability
 - ▶ Information stored in siebns.dat file on Gateway Name Server



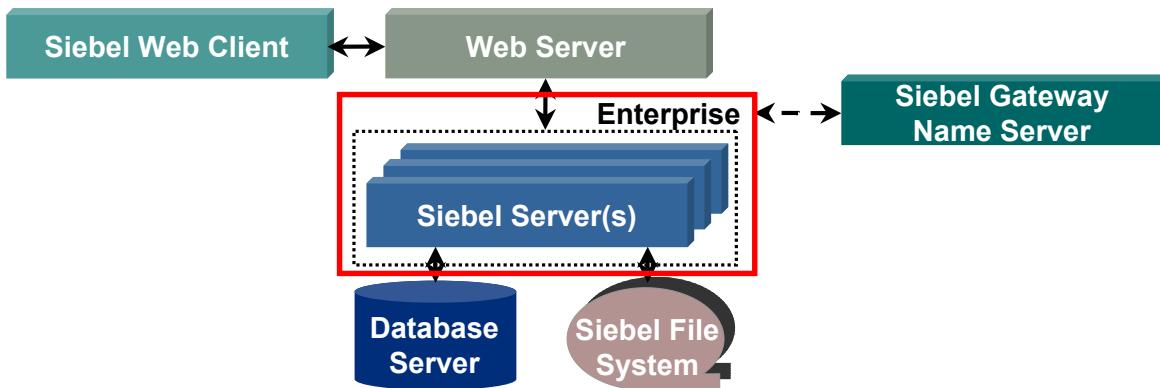
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Siebel Enterprise

- Is a logical collection of Siebel Servers that support users and access a single database server and the Siebel file system
- Logically groups Siebel Servers for common administration via Siebel Server Manager
- Supports sharing of common configuration information



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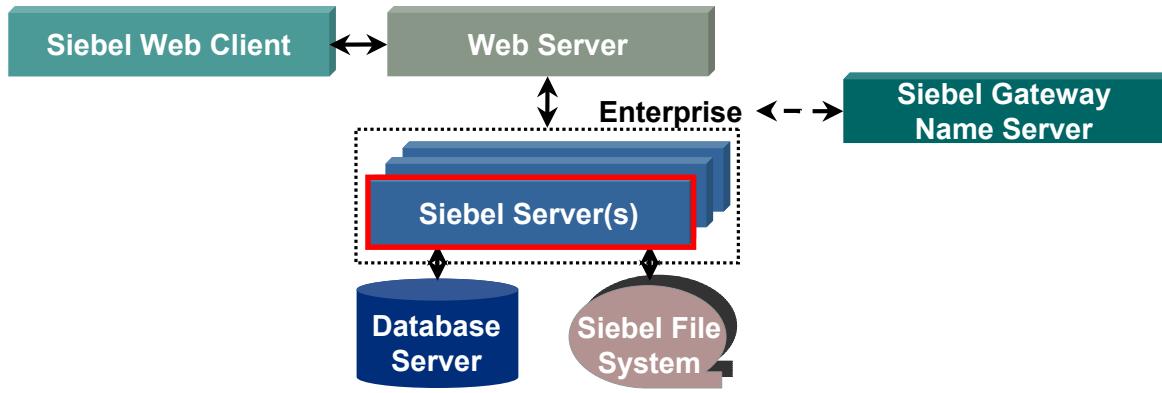
File System Partitioning

In Siebel 8, the file system may be partitioned over multiple directories and machines.

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Siebel Servers

- Execute tasks to manage the business data
 - ▶ Programs known as server components perform specific functions or jobs for the server
 - ▶ For example:
 - Importing and exporting data
 - Configuring the database to monitor for user-defined conditions
 - Processing of client requests
 - ▶ Tasks may run interactively, in the background, or as batch jobs



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Interactive Tasks	Interactive tasks wait for input from the user, such as the Siebel Web Client running Siebel Call Center.
Background Tasks	Background tasks always show as running and periodically perform system functions, such as invoking workflows or performing assignments.
Batch Jobs	Batch jobs run once, either when scheduled or when invoked by an administrator, for example, to perform data imports or exports.



Examples of Server Components

- The application object manager (OM) is a server component that provides the environment in which Siebel user sessions run
 - ▶ Users interact with an application-specific OM; for example, the Siebel Call Center Object Manager (SCCOBJMgr)
 - ▶ Runs in interactive mode
- The Workflow Monitor Agent periodically checks the system to determine whether workflows or assignments need to be run
 - ▶ Runs in background mode
- Enterprise Integration Manager performs data imports and exports
 - ▶ Runs in batch mode

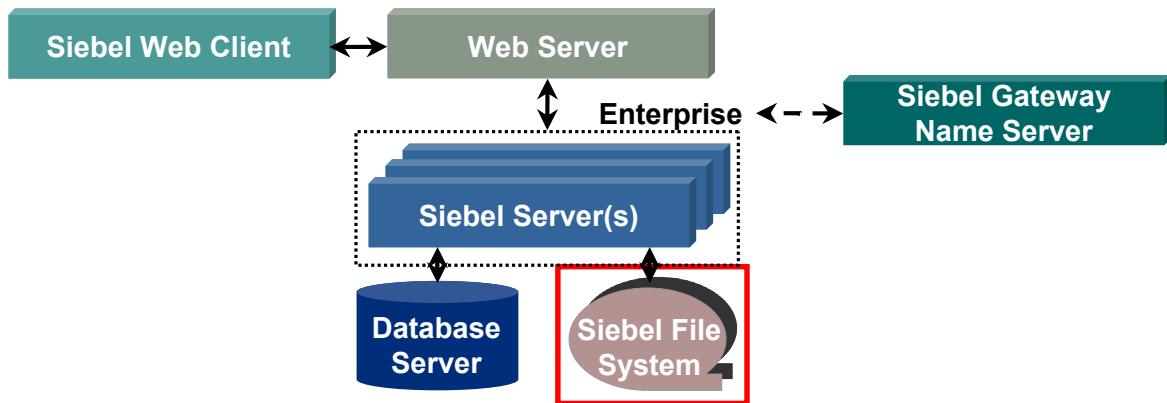
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Siebel File System

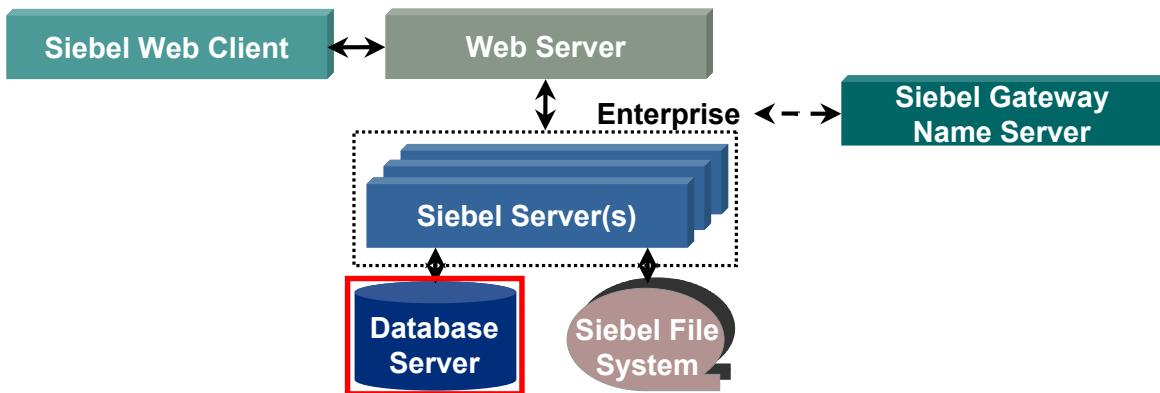
- Is one or more shared directories that store files used by Siebel applications
 - ▶ Files are compressed in a proprietary format to save space and provide security
 - ▶ Examples: Product literature, sales tools, presentations, user profiles



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Database Server

- Stores data used by Siebel applications in a predefined database schema
 - ▶ Single database for Enterprise provides data consistency for users
 - ▶ Data is accessed by components through a data manager layer
- Supports a variety of third-party relational database management systems (RDBMS)



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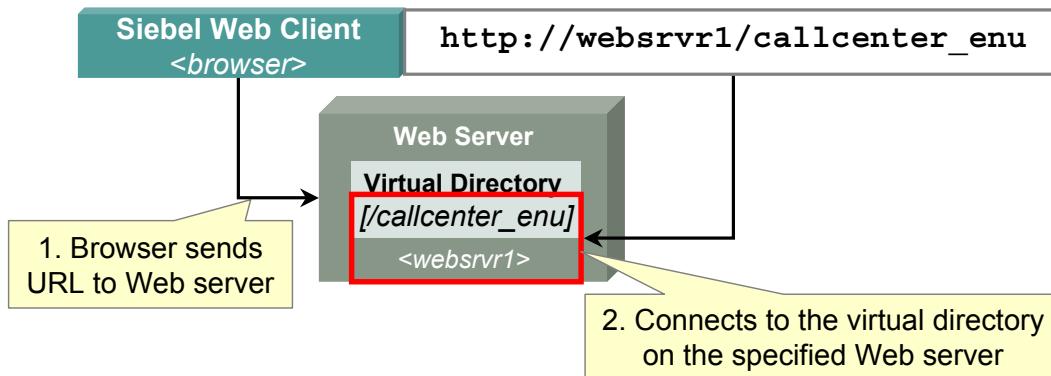
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Supported RDBMSes See the Siebel System Requirements and Supported Platforms document for a list of supported RDBMSs.

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Web Usage Login Scenario

- Siebel Web Client (browser) sends the URL to the Web server
 - ▶ URL specifies:
 - Either HTTP or HTTPS protocol
 - Web server machine name
 - Application and language
- URL initially connects to a Siebel-specific virtual directory on the Web server
 - ▶ Virtual directories are created as part of the Siebel installation



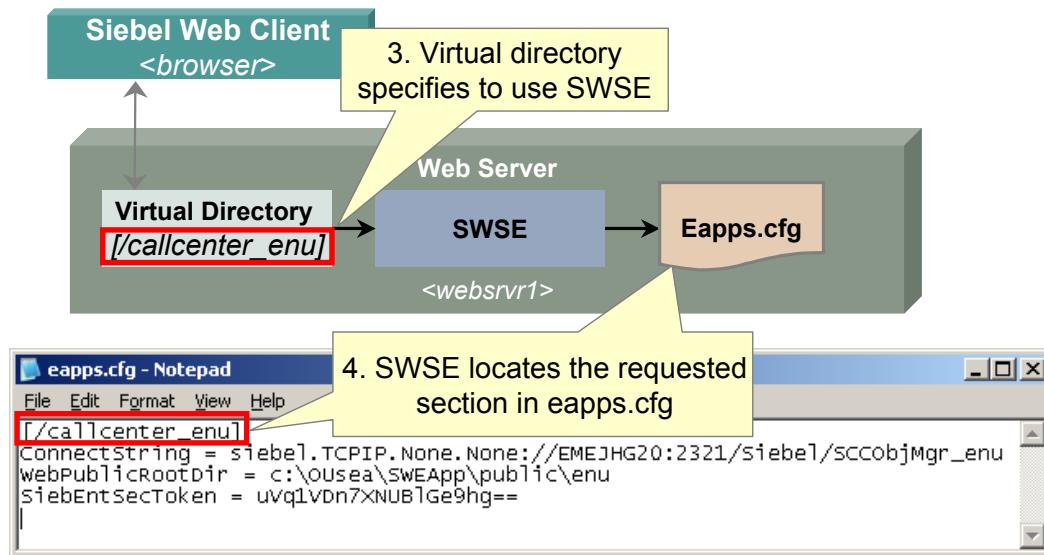
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Web Usage Login Scenario Continued

- Virtual directory forwards request to the Siebel Web Server Extension (SWSE) installed on the Web server
- SWSE uses the eapps.cfg configuration file to obtain connection parameters



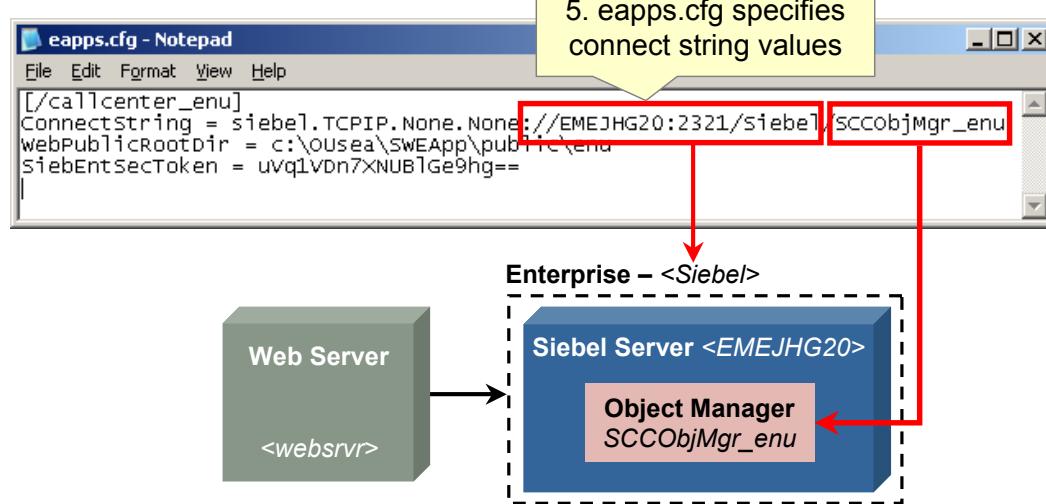
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Web Usage Login Scenario Continued

- Eapps.cfg specifies the location of the server, server connection broker port, Enterprise, and Object Manager information for initial connection
 - ▶ For multi-server installations provides load balancing information
 - ▶ Also provides generic login information for initial “anonymous” access to database



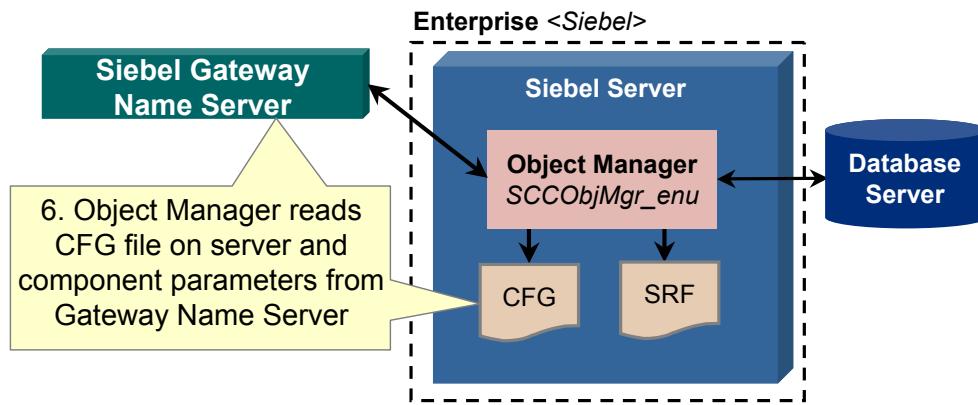
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Web Usage Login Scenario Continued

- Object Manager reads an application-specific configuration file and component parameters, which specify the application, the location of the Siebel Repository File (SRF), and so forth
 - ▶ Siebel Repository File is a separate binary file that defines one or more Siebel applications
 - Discussed in greater detail in subsequent modules
 - ▶ Most configuration information is specified by component parameters rather than in the configuration file



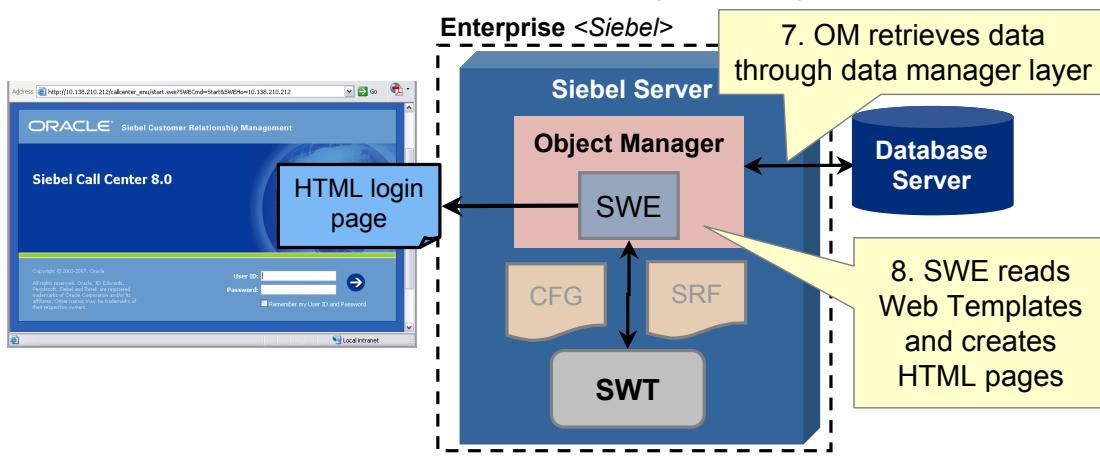
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Web Usage Login Scenario Continued

- Object Manager retrieves data through data manager
- The Siebel Web Engine (SWE), part of the Object Manager, reads a set of Web templates that are stored on the Siebel Server and creates HTML pages for the data requested
 - ▶ Siebel Web Templates (SWT) are a set of template files that specify how to render the UI in the user's browser
 - HTML files with embedded Siebel tags defining content



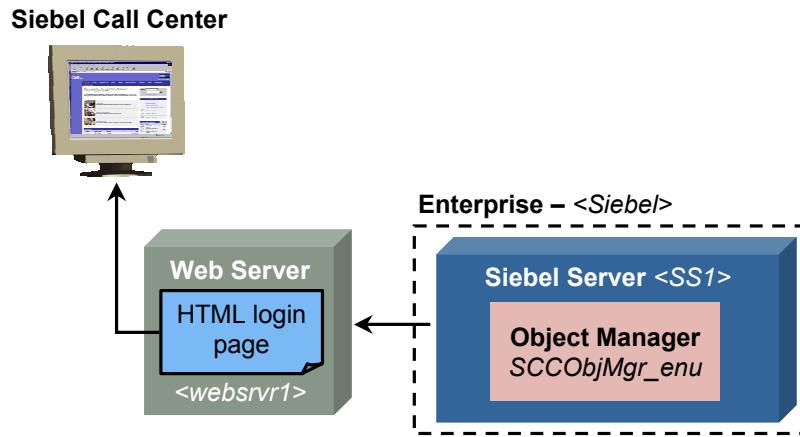
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Web Usage Login Scenario Continued

- The Object Manager sends the completed Web page to the Web server, which passes it back to the Siebel Web Client



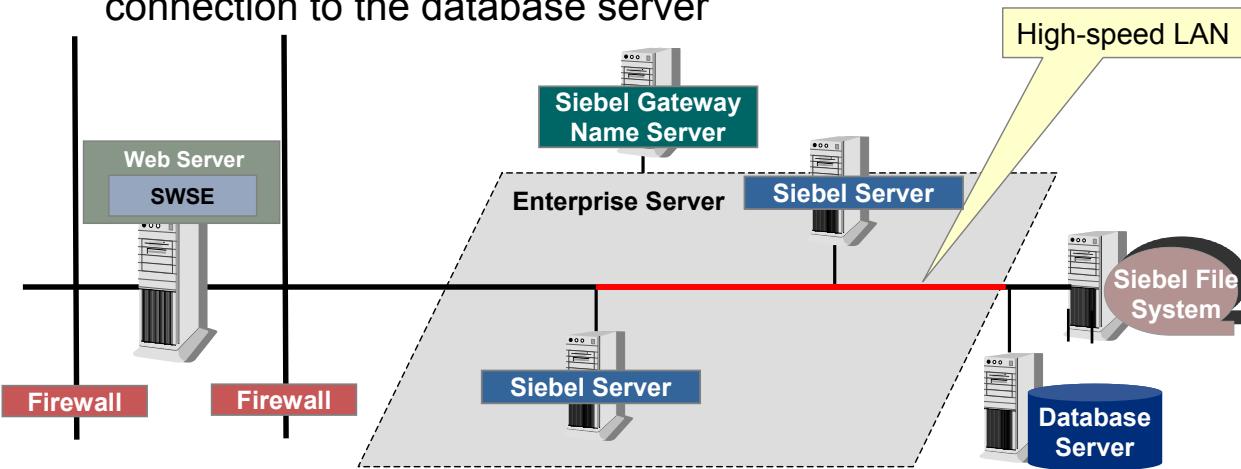
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Physical Architecture

- The Siebel Gateway Name Server, Siebel Server, database server, and File System can be implemented on one machine or spread across multiple machines
 - ▶ SWSE can be on that machine for development or test environments
- The Siebel Server(s) should have a high-speed LAN connection to the database server



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Recommended Practice

For development or test environments (such as we use in this classroom), it is possible to bundle the entire application on a single machine.

For production environments, the recommended practice is to have the Database Server, SWSE, and Siebel Enterprise on separate machines.



Module Highlights

- A Siebel Web Client displays the Siebel application in a standard Web browser
- A Siebel Web Server is a third-party Web server with the Siebel Web Server Extension (SWSE) installed and the Siebel application virtual directories created
- A Siebel Gateway Name Server stores parameters and connection information for Siebel Servers
- A Siebel Enterprise is a logical collection of Siebel Servers
- A Siebel Server is a set of processes that manage processing for all Siebel clients



Lab

- In the lab you will:
 - ▶ Examine the virtual directories and eapps.cfg
 - ▶ Verify the information contained in the files against information retrieved from the application



Siebel 8.0 Essentials

Module 9: Server Components and Parameters

9

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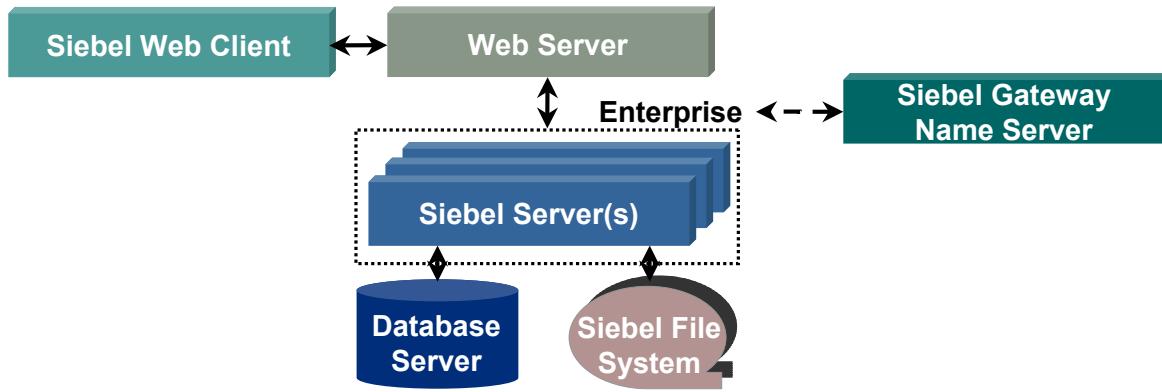
Module Objectives

- After completing this module you should be able to:
 - ▶ Define component groups
 - ▶ Define components
 - ▶ Describe parameters as inputs for components
 - ▶ Describe the various levels at which you can set parameters and how to set them
 - ▶ Describe named subsystems and job templates
- Why you need to know:
 - ▶ Server behavior is controlled by components and parameters, hence an understanding of how to find and configure them is essential



Review: Siebel Web Architecture

- The Siebel Web architecture consists of a Web Client, Web server, Gateway Name Server, and Enterprise containing one or more Siebel Servers
 - ▶ Each Siebel Server includes its own set of components: programs that run on the server to provide application functionality



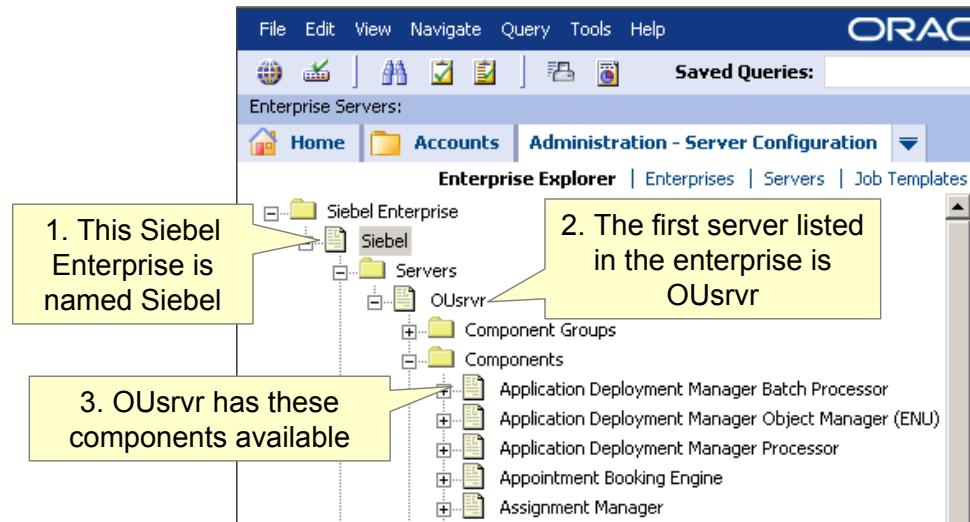
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Examining the Siebel Enterprise

- View the Siebel Enterprise hierarchy using the Enterprise Explorer View of the Server Administration – Configuration screen





Component Groups

- Are logical groupings of components
 - ▶ Components are enabled or disabled in groups
- Support major functional areas of the application
 - ▶ For example, Siebel Call Center, Siebel Remote, or Assignment Management

The screenshot shows the Siebel System Administration Guide interface. On the left, the Enterprise Explorer pane displays a hierarchical tree structure under 'Siebel Enterprise' with nodes like 'Siebel', 'Servers', 'Component Groups', and several management modules. A callout box points to this pane with the text: 'The Enterprise Explorer lists the available component groups'. On the right, the 'Enterprise Component Groups' pane shows a table with five rows of data. A callout box points to this pane with the text: 'The detail pane provides additional information such as the number of components in each group'. The table data is as follows:

Component Group	Alias	Number of Components	Enable state
Application Deployment Manager	ADM	3	Enabled
Assignment Management	AsgnMgmt	2	Enabled
Auxiliary System Management	SystemAux	5	Enabled
Communications Management	CommMgmt	8	Disabled
Content Center	ContCtr	2	Disabled

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Reference

Siebel System Administration Guide

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Enabling and Assigning Component Groups

- There are three steps to enable a component group on a server:

1. Enable the Component Group for the Enterprise
2. Assign the Component Group to the Server
3. Enable the Component Group on the Server

1. Enable the Component Group for the Enterprise

- Click the Enable or Disable buttons in the detail pane of the Enterprise Explorer to enable or disable component groups
 - ▶ By default, most component groups are enabled for the enterprise
 - ▶ Components within disabled component groups are not available on any of the servers in the enterprise
- Best Practice: Disable component groups which will never be used on any server
 - ▶ Enabled component groups take a small amount of resources on the Siebel Gateway Name Server

Click the appropriate button to Enable or Disable a component group for the enterprise

Component Group	Alias	Number of Comps	Enable state
Field Service	FieldSvc	9	Enabled
Marketing Server	MktgSrv	1	Enabled
PIM Server Integration Management	PIMSI	2	Disabled
Application Deployment Manager	ADM	3	Enabled
Workflow Management	Workflow	6	Enabled

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2. Assign the Component Group to the Server

- In Administration – Server Configuration > Enterprises, select the component group and server and click Assign
 - ▶ Stores component group information on the Siebel Gateway Name Server
 - ▶ Allocates memory for the component group on the Siebel Gateway Name Server

The screenshot shows the Oracle Siebel Server Configuration interface. The top navigation bar includes Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, Administration - Server Configuration, Enterprise Explorer, Enterprises, Servers, and Job Templates. The main window is titled 'Enterprise Servers' and shows a tree view under 'Enterprise Server Description' with 'Siebel' selected. Below it, 'Component Groups' is selected in the tab bar. A table lists component groups, with 'PIM Server Integration Management' and its alias 'PIMSI' selected. To the right, a 'Component Group Assignments' table shows a row for 'OUsrvr'. Three yellow callout boxes with arrows point to the following steps:

1. Select component group to assign
2. Select server
3. Click Assign

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3. Enable the Component Group on the Server

- Once you have assigned a component group to a server, enable or disable it on the server
 - ▶ By default, assigning a component group automatically enables it
- Best practice: Assign and disable component groups that you are not using now but may use in the future on that server
- Select the desired server and click the Enable or Disable button
 - ▶ Enabling allocates memory on the server for that component group
 - ▶ The component group is now available to the server

Enterprise Server Description

Siebel Siebel Enterprise Server

Component Groups | Component Definitions | System Alerts | Profile Configuration | Parameters | Synchronize

Menu | New | Query | **Enable** | Disable

Component Group	Alias	Number of Comp	Enable state
PIM Server Integration Management	PIMSI	2	Enabled

Components | Menu | Query | 1 - 2 of 2 |

Component	Alias	Description
PIMSI Dispatcher	PIMSIDispatcher	Executes real-time Business
PIMSI Engine	PIMSIEng	Executes real-time Business

Component Group Assignments | Menu | Query | Assign | Unassign | **Enable** | Disable

Server	Assigned?	Enabled on Server?
OUsrvr	✓	

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Synchronize Components

- Synchronize components after enabling or disabling a component group that includes batch components
 - ▶ Registers batch components with the Siebel Gateway Name Server
 - ▶ Makes these components available to the Siebel Enterprise
- Also possible to synchronize individual components

File Edit View Navigate Query Tools Help

powered by SIEBEL

Saved Queries:

Synchronize:

Home Accounts Contacts Opportunities Administration - Server Configuration

Enterprise Explorer | Enterprises | Servers | Job Templates

Enterprise Servers | Menu | Backup Enterprise

1 - 1 of 1

Enterprise Server Description

Siebel Siebel Enterprise Server

Component Groups Component Def

Synchronize

No Records

Component Alias Component Type Enabled? Business Service Description

Prior to initial synchronization, no components are available to run batch jobs

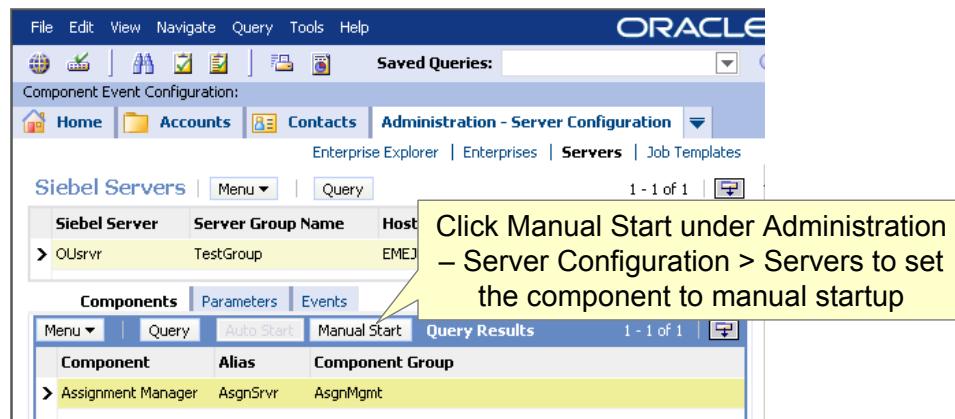
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Manage Individual Components

- Specify startup behavior for individual components
 - ▶ Auto Start: The component automatically starts up when the Siebel Server service starts
 - ▶ Manual Start: The component must be started manually
 - Prevents component from consuming memory or processor time until it is needed



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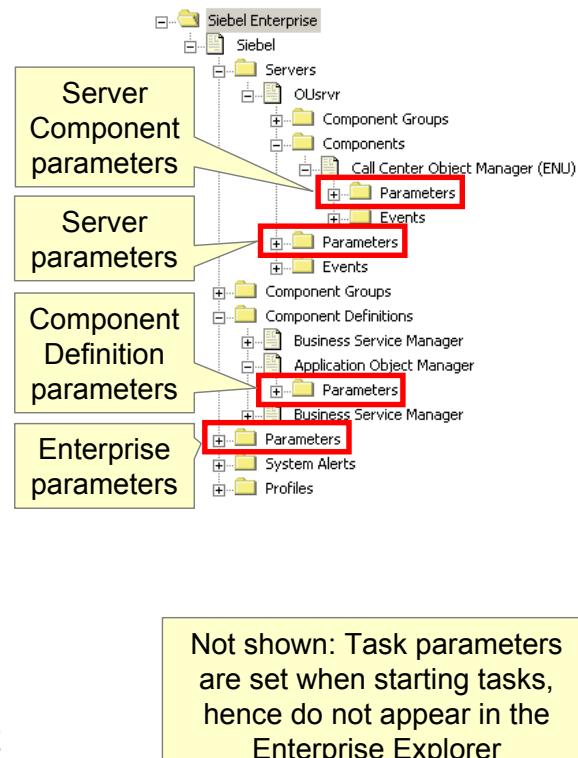
Executing Components

- When a component executes, it is called a task
 - ▶ Multiple instances of the same component may run simultaneously
- Components execute in one of three modes:
 - ▶ Batch components run once until completion
 - Batch component executions are also called jobs
 - Usually initiated by user action, event, or workflow
 - For example, data loads or database extracts
 - ▶ Background components run continuously in the background
 - Periodically “wake up” and execute
 - For example, transaction processor for tracking changes to the database
 - ▶ Interactive components run in response to client requests
 - For example, application object managers



Component Parameters

- Are input arguments for tasks
- Are set at one of five levels:
 - ▶ Enterprise parameters are set throughout the enterprise
 - ▶ Server parameters are set at the individual server level
 - ▶ Component Definition parameters are specific to a component, but enterprise-wide
 - ▶ Server Component parameters allow a server to override a component definition
 - ▶ Task parameters are for an individual component when it is run



Not shown: Task parameters are set when starting tasks, hence do not appear in the Enterprise Explorer

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Examples

The language code, ODBC data source name, and communication parameters are enterprise parameters.

The location of the server log file is a server parameter.

The sleep time for a background component that runs periodically is a component definition parameter.

Change the server component parameter to change that sleep time for one particular server.

The user ID of a mobile user to extract is a task parameter.

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Hidden and Advanced Parameters

- More advanced parameters are classified as hidden or advanced
- Click the appropriate button to see these parameters
- Click the Reset button to return to the normal set of parameters

Click Advanced or Hidden to see advanced or hidden parameters

Parameter	Value	Default Value
Business Object Cache Size	JAVA	JAVA
JVM Subsystem Name	100	100
Maximum Page Size	False	false
Enable Memory Metrics for EAI		

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Component Definitions

- Are sets of parameters associated with a component to determine its behavior when it is run
 - ▶ Set enterprise-wide, so that the component performs the same no matter which server it is run on
- Reconfigure definitions to modify component behavior
- Duplicate definitions to create new component definitions
 - ▶ Creates a duplicate component with a new name and a different set of input parameters

The screenshot shows the Siebel Enterprise interface. On the left is a tree view of 'Enterprise Servers' under 'Siebel Enterprise'. The main window is titled 'Component Parameters' and displays a table of parameters:

Parameter	Value
Business Object Cache Size	JAVA
JVM Subsystem Name	JAVA
Maximum Page Size	100
Enable Memory Metrics for EAI	False

A yellow callout box with a black arrow points from the right side of the table towards the bottom right of the slide content area. The text inside the callout box is:

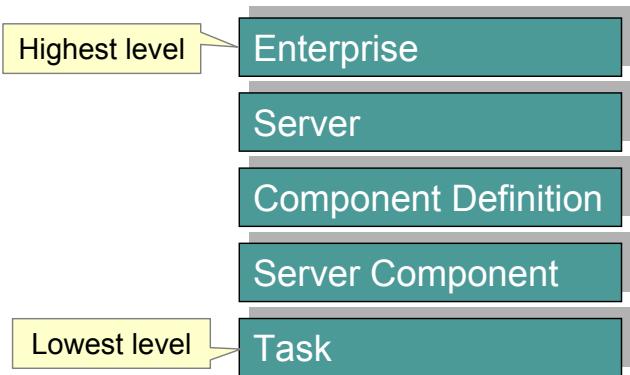
Modify parameters or duplicate a definition to create a new component with different set of parameters

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Parameter Inheritance

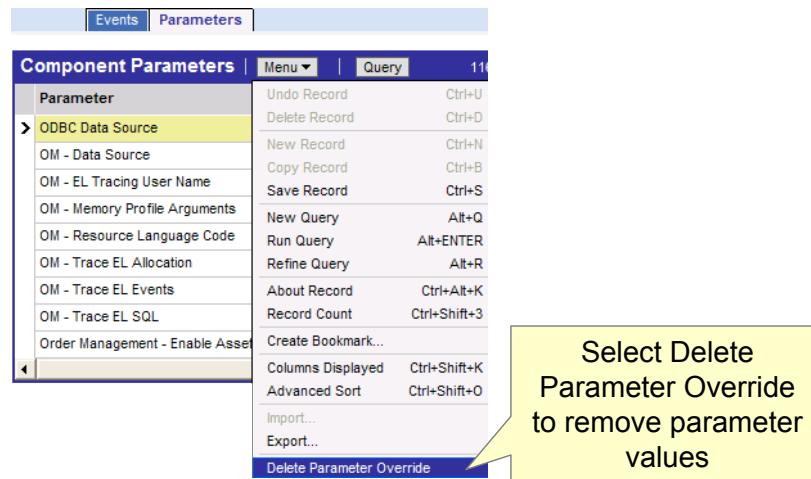
- Parameters are set at any of five levels
 - ▶ Parameters set at any level are inherited at all lower levels
 - For example, parameters set at the **enterprise** level are inherited for the levels below it
 - ▶ Parameters set at any level override parameters set at a higher level
 - For example, parameters set when starting a **task** override those set at higher levels



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Removing Parameters

- Do not attempt to delete parameters by setting their value to zero or null
 - ▶ Causes zero or null value to be passed to component
- Use Delete Parameter Override to remove parameter settings at a given level



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Profiles

- Are sets of parameters that may be used by multiple components
 - ▶ Also referred to as “named subsystems”
- Are edited to modify behavior of multiple components

The screenshot shows the Siebel Enterprise Server Description screen under Administration - Server Configuration. The 'Profile Configuration' tab is selected. A callout box highlights the 'Administrator Email Alerts' profile, stating: "For example, the set of parameters used to send email alerts to administrators is used by multiple components". Another callout box highlights the 'Administrator email addresses' parameter in the table below, stating: "Modify the profile parameters to change the behavior of all components using this profile".

Parameter	Alias	Data Type	Value	Description
Administrator email addresses	AdminEmailAddress	String	CHANGE_ME	Email address list for the administrator's to be notified (comma delimited)
Dll Name	DLLName	String		
From Address	FromAddress	String		
SMTP Server Port Number	SMTPServerPort	Integer		
SMTP Server Name	SMTPServer	String		
Additional Message	Message	String		Additional message to be sent with the notification email

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Profiles and Parameters

Parameters set in Profiles override those set at the Enterprise, Server, or Server Component level.



Job Templates

- Job templates are predefined sets of parameters for use with batch components
 - ▶ Recall: When a batch component is executed it is called a “job”
- Multiple job templates can exist for the same component
 - ▶ For example, weekly assignments versus daily assignments
 - Both assignment jobs run the same component; only the set of input parameters is different
- Unlike profiles, job templates are specific to a single component

For example, a job template containing parameters for a weekly batch assignment job

The screenshot shows the Siebel Job Templates interface. At the top, there's a navigation bar with tabs like Sales Orders, Administration - Server Configuration, etc. Below the navigation bar, there's a toolbar with buttons for New and Query. The main area has two tables. The first table, titled 'Job Templates', lists a single row: 'Weekly Batch Assignment' (WkBBatch) under 'Name', 'Assignment Manager' under 'Component', and 'AsgnSrvr' under 'Business Service'. A tooltip over this row states: 'This job template is specific to the Assignment Manager component'. The second table, titled 'Job Parameters', lists two rows: 'Assignment Mode' (AsgnMode) with value 'Assign' and 'Assignment Type' (AsgnType) with value 'People'. A tooltip over this table states: 'Assignment Mode: Type of Assignment (Match, Assign, MatchAssign, Denorm, or Both). Assignment Type: Type of assignment (People, Organizations, or Both)'.

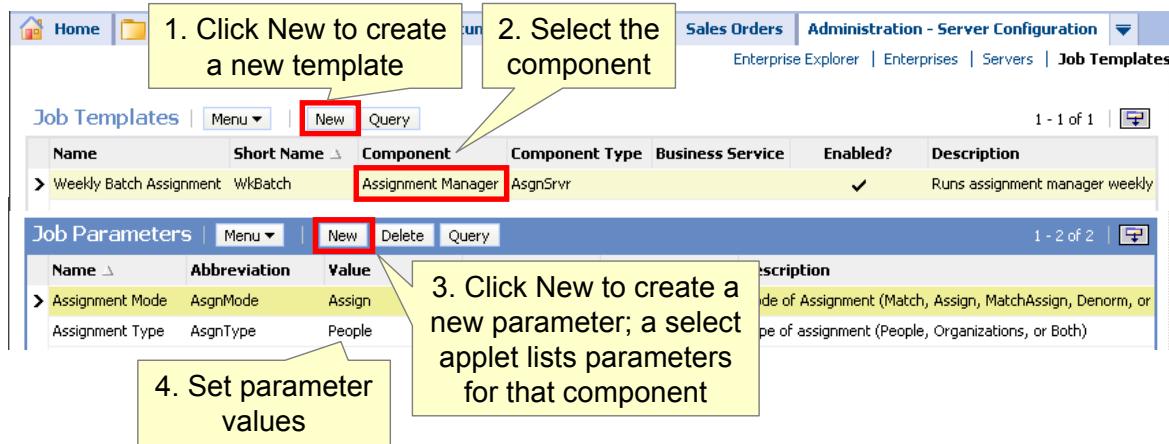
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Job Templates Continued

- Create job templates by specifying the batch component to be used and entering the job-specific parameters
 - ▶ Located under Administration – Server Configuration > Job Templates



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Module Highlights

- Component Groups are logical groupings of server components
- Enable component groups on the enterprise, assign them to a server, and enable them on that server
- Set individual components to automatic or manual start up
- Set component parameters at one of five levels: Enterprise, Server, Component Definition, Server Component, or Task
 - ▶ Parameter values are inherited from higher levels
 - ▶ Use Delete Parameter Override to restore inheritance
- Profiles are sets of parameters used by multiple components
 - ▶ Also known as “named subsystems”
- Job templates are sets of parameters used to execute batch components



Lab

- In the lab you will:
 - ▶ Use the Enterprise Explorer to examine component groups, components, and parameters
 - ▶ Examine parameter inheritance
 - ▶ Enable a component group on a server



Siebel 8.0 Essentials

Module 10: Server Management

10

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Module Objectives

- After completing this module you should be able to:
 - ▶ Monitor the state of the enterprise, and individual servers and components within that enterprise
 - ▶ Perform routine administrative tasks on the enterprise, including:
 - Managing components
 - Backing up and restoring the enterprise
 - Setting logging options
 - Submitting jobs
- Why you need to know:
 - ▶ These administrative tasks must frequently be performed while configuring and testing a deployment



Server Administration

- Once components have been enabled and their parameters have been defined, perform common administration tasks:
 - ▶ Monitor the system
 - ▶ Change component parameters or component states, preferably without shutting down the server
 - ▶ Back up the system after making these changes
 - ▶ Submit batch jobs for processing
- Perform these tasks using the Administration – Server Management screen
 - ▶ A command-line interface is also available
 - Useful for using scripts to interact with the enterprise

```
C:\SUsea\siebsrvr\BIN>srvrmgr /g SiebSrvr /e Siebel /u SADMIN /p SADMIN
```

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Reference

Siebel System Administration Guide: Using the Siebel Server Manager Command-Line Interface

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Server Groups

- Add servers to a Server Group using the command-line tool:
`change attribute groupname=<group name> for server <server name>`
- Connect to all servers in the group simultaneously:
`srvrmgr /g <gateway> /e enterprise /z <group name> /u <user> /p <password>`
- Performing groupwide manipulations such as changing parameters:
`change parameter NotifyHandler=newHandler`
 - ▶ Changes the parameter for all servers in the server group

```
srvrmgr:OUsrvr> change attribute groupname=TestGroup for server OUsrvr  
Command completed successfully.
```

Adding a server to a server group allows you to manipulate all servers in that group simultaneously from the command line interface

Siebel Server:	Home	Accounts	Administration - Server Configuration
Siebel Servers	Menu	Query	1 - 1 of 1
OU	Siebel Server	Server Group Name	Host Name
OUsrvr	TestGroup	EMEJHG20	C:\OUseal\siebsrvr



Monitor the Enterprise

- Monitor the enterprise from the Administration – Server Management screen
 - ▶ Provides status icons for servers, components, jobs, tasks, sessions, and the enterprise

Administration – Server Management > Enterprises shows the states of servers and their components within the enterprise

State (Icon)	Component	Running Tasks	Running MTS	Max
Yellow	Assignment Manager	0	1	1
Yellow	Batch Assignment	0		
Yellow	Call Center Object Manager (ENU)	3	1	1

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Monitor Sessions

- Use the Session Monitor to monitor users logged in and their current activity
 - ▶ Sessions are tasks running the associated Object Manager
- Navigate to Administration – Server Management > Sessions

State (Icon)	PID	Session ID	Component	OM Login	Task Hung State	State	OM Applet
>		12582952		SCCOBJMgr_enu	MWEST		Running
>		12582948					

State Value	Type	Current Value
Applet Name	String	Completed: Account List Applet (ExecuteQuery)
Business Component	String	InfraObjMgr
Business Service	String	InfraObjMgr
Database Login Id	String	InfraObjMgr
Query Cancel Status	String	InfraObjMgr

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Manage Component States

- Manage components across the entire enterprise from the Administration – Server Management > Components screen
- Manage components on a particular server from the Administration – Server Management > Servers screen
- In either case, components may be paused, resumed, started up, or shut down

The screenshot shows the Siebel Administration - Server Management > Components screen. The interface includes a top navigation bar with File, Edit, View, Navigate, Query, Tools, Help, and a Queries dropdown. Below the navigation is a toolbar with various icons. The main area has tabs for Home, Accounts, Contacts, Opportunities, Quotes, and Administration - Server Management, with Administration - Server Management selected. A sub-navigation bar below shows Components as the active tab, along with Servers, Jobs, and a dropdown. Below this is a table titled 'Components' with columns: State (Icon), Component, Running Tasks, State, and Running MTS. The table lists four components: Application Deployment Manager Batch Processor, Application Deployment Manager Object Manager (ENU), Application Deployment Manager Processor, and Call Center Object Manager (ENU). The first three are listed as Online, while the fourth is Running. A yellow callout box points to the 'State' column header, stating 'Current component state in the enterprise'. At the bottom right of the main window is a vertical scroll bar.

State (Icon)	Component	Running Tasks	State	Running MTS
Yellow/Red	Application Deployment Manager Batch Processor	0	Online	1
Yellow/Red	Application Deployment Manager Object Manager (ENU)	0	Online	1
Yellow/Red	Application Deployment Manager Processor	0	Online	1
Yellow/Red	Call Center Object Manager (ENU)	1	Running	1

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Component States

- Running: The component is available and at least one component task is currently running
- Online: The component is available but no component tasks are currently running
- Unavailable: The component is unavailable and no component tasks are running
- Paused: The component is online but is not accepting new tasks
- Shutting Down: The server is shutting down; currently-running tasks will execute to completion, but no new tasks can be run
- Shutdown: The server component is shut down



Change Component Parameters

- Change component parameters by changing the Value or Value on Restart
- Examine the Effective setting to see when the parameter change will become effective

The screenshot shows the Siebel Server Administration interface. In the top navigation bar, 'Administration - Server Configuration' is selected. Below it, the 'Servers' tab is active. The main area displays two tables: one for 'Siebel Servers' and another for 'Components'. The 'Components' table lists 'Call Center Object M SCCObjMgr_enu' under 'Component' and 'CallCenter' under 'Component Group'. A modal dialog box is open over the components table, titled 'Component Parameters'. It contains a table with columns 'Parameter', 'Value', 'Value on Restart', and 'Default Value'. A single row is visible for 'Log File' with values '<Case Required>', '<Case Required>', and '<Case Required>'. To the right of this table is a configuration section titled 'Effective' with four checkboxes: 'Immediately' (checked), 'At Next Task' (checked), 'At Component Re-Start' (unchecked), and 'At Server Re-Start' (unchecked). A note in the dialog states: 'Effective setting indicates when parameter change will become effective'. At the bottom of the dialog is a 'Description:' field and a 'Require Reconfiguration:' checkbox.

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Immediately	The parameter change is effective immediately.
At Next Task	The parameter change is effective for all new tasks running that component; currently-running tasks execute with the old parameter.
At Component Re-Start	The parameter change does not take effect until the component is stopped and restarted.
At Server Re-Start	The parameter change does not take effect until the Siebel Server is restarted.
Require Reconfiguration	The component must be reconfigured to change the parameter. This is common for parameters that work with or are dependent on other parameters.



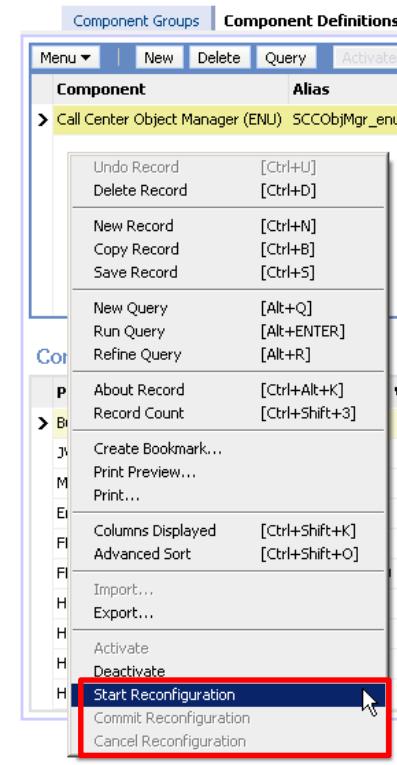
Reconfigure Component Definitions

- Modifies component parameters without shutting down the server(s)
 - ▶ Useful during site migrations or application updates
 - ▶ Useful when changing multiple parameters and changes should all be performed at once
 - For example, when changing both a user name and a password parameter, changing one at a time would lead to authentication issues
- During reconfiguration:
 - ▶ Tasks started before and during reconfiguration continue to run with the old parameters
 - ▶ Tasks started after the reconfiguration is committed run with the new parameters



Reconfigure Component Definitions Continued

- From the Administration – Server Configuration > Enterprises screen
- Start Reconfiguration:
 - ▶ Opens existing component parameters for modification
- Commit Reconfiguration:
 - ▶ Commits the updated Component Definition
 - ▶ All tasks started after the commit run with the new parameters
- Cancel Reconfiguration:
 - ▶ Cancels the current reconfiguration; component definition remains unaltered



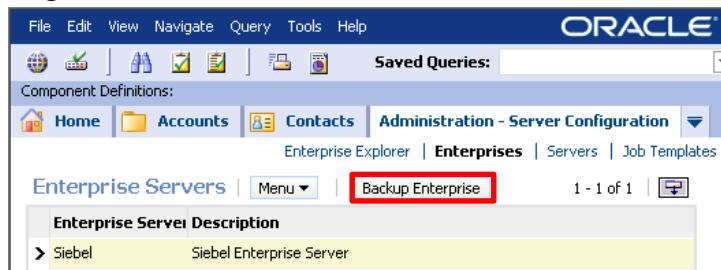
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Back Up the Enterprise

- Recommended practice: Back up the enterprise after making any configuration changes such as modifying component parameters
 - ▶ Creates a backup copy of siebns.dat
 - siebns.dat stores information about components, parameters, and servers
 - ▶ May also be used for backup or migration purposes
 - ▶ Do not try to manually duplicate this file
 - File is in use as long as Siebel Gateway Name Server is running



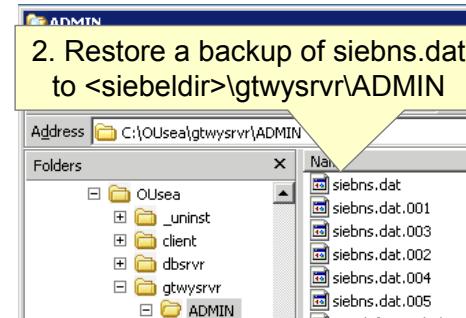
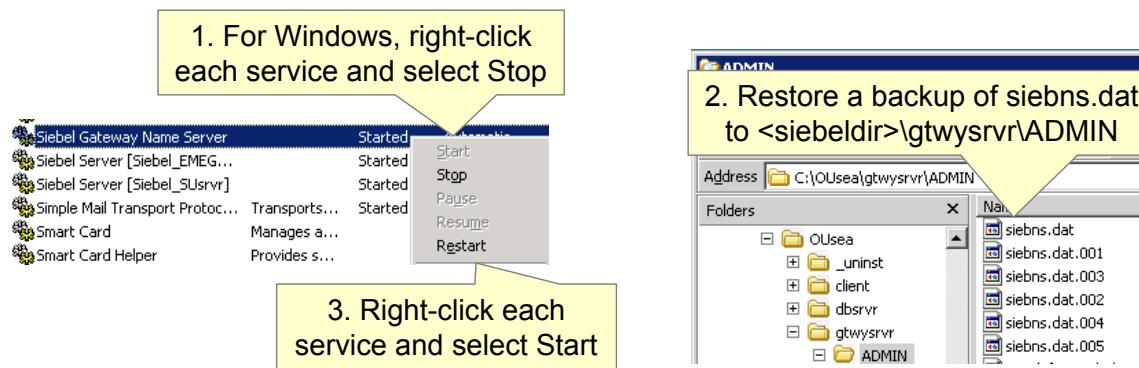
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Restore the Enterprise

- Restore a previous enterprise configuration with these steps:
 1. Shut down the Siebel Gateway Name Server and the Siebel Server
 2. Replace the existing siebns.dat file with a working backup
 3. Start the Siebel Gateway Name Server and the Siebel Server



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Server Event Logging

- Monitor server events by setting their log levels
- Navigate to Administration - Server Configuration > Servers > Server Event Configuration
 - ▶ Set the log level for each Siebel Server event of interest

Select the Siebel Server for which you want to log events

The screenshot shows the Siebel Server Event Configuration interface. At the top, there are tabs for Contacts, Opportunities, Administration - Server Configuration, Enterprise Explorer, Enterprises, Servers, and Job Templates. Below that is a table for Siebel Servers with columns for Siebel Server, Server Group Name, Host Name, and Install Directory. One row is selected for 'SUSrvr' with host name 'EMEJHG20' and install directory 'C:\SUsea\siebsrvr'. Below this is a table for Events with columns for Event Type, Alias, Log Level, and Description. Three rows are listed: Component Tracing (Alias Trace, Log Level 1, Description: A trace condition was met (used)), Component Assignment (Alias CompAssign, Log Level 3, Description: Signifies the assignment or de-assignment of a component), and Component Definition (Alias CompDef, Log Level 1, Description: Signifies the creation or deletion of a component). A yellow callout box points to the 'Events' tab in the navigation bar.

Select the event type you want to log and enter a logging level from 0 to 5 in the Log Level field

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Reference

Siebel System Monitoring and Diagnostics Guide



Log Levels

- There are six available logging levels for server events:
 - ▶ 0: Fatal
 - ▶ 1: Errors
 - ▶ 2: Warnings
 - ▶ 3: Informational
 - ▶ 4: Details
 - ▶ 5: Diagnostic
- Higher log levels generate larger log files and may affect system performance, hence the recommended practice is to only use these levels when troubleshooting

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Component Event Logging

- Use the Component Event Configuration view to set the log level of component event types

The screenshot shows the Siebel Server Configuration interface. At the top, there are tabs for Home, Accounts, Administration - Server Configuration, Enterprise Explorer, Enterprises, Servers (which is selected), and Job Templates. Below this, there are two main sections: 'Siebel Servers' and 'Components'. In the 'Components' section, there are three tabs: Components, Parameters, and Events. The Components tab is selected, showing a list of components with columns for Component, Alias, and Component Group. One row is highlighted: 'Call Center Object Manager (ENU)' with alias 'SCCObjMgr_enu' and group 'CallCenter'. Below this is the 'Events' tab, which also has three tabs: Menu, Query, and Auto Start. The Events tab is selected, showing a list of event types with columns for Event Type, Log Level, and Description. Several rows are highlighted: 'DBC Connection' (Log Level 1, Description: DB connection trace), 'DBC Debug' (Log Level 1, Description: Extremely detailed debugging information), 'DBC Input' (Log Level 1, Description: Input trace), 'DBC Log' (Log Level 1, Description: Generic DB Connectivity log), and 'DBC Output' (Log Level 1, Description: Output trace). A yellow callout box points to the 'Components' tab with the text: 'Select the component for which you want to log events'. Another yellow callout box points to the 'Events' tab with the text: 'Select the event type you want to log and enter a logging level in the Log Level field'.

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Examine Logs

- Each task creates a log of its execution

The screenshot shows the Siebel Server Management interface. At the top, there's a navigation bar with Home, Accounts, Administration - Server Management, Servers, Components, Jobs, Tasks, Sessions, and Enterprises. Below it is a table for Servers, showing one entry: OUsvr, State: Running, Host: EME. A yellow callout box points to the task number 10485770 in the first table, with the text "Drill down on the task number ...". A red arrow points from this number to the Task column in a second table titled "Tasks". This second table also has columns for State (Icon), Siebel Server, Task, Component, PID, State, and Status. It shows the same OUsvr entry with Task ID 10485770, Component Call Center Object Manager (ENU), PID 3144, State Running, and Status Handling Request. A yellow callout box points to this table with the text "... to view the Task Information Log". Below these tables is a Log table with columns Log ID, Timestamp, Level, and Text. It contains two entries: Log ID 1 at 1/9/2007 05:42:27 F 1 with text "(cscfg.cpp (165)) SBL-CSR-00418: Communication: User is not associated v"; and Log ID 2 at 1/9/2007 05:44:20 F 1 with text "(cscfg.cpp (165)) SBL-CSR-00418: Communication: User is not associated v".

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Examine Log Files

■ View the log file on the Siebel Server

The screenshot shows the Oracle Siebel Server Management interface. At the top, there's a navigation bar with Home, Accounts, Administration - Server Management, Servers, Components, Jobs, Tasks, Sessions, and Enterprises. Below that is a sub-navigation bar for Servers, with options for Menu, Query, Startup, Shutdown, and a status indicator showing 1 - 1 of 1. A table lists a single server named OUsrvr with a green icon, labeled as Running. Below this are tabs for Component Groups, Log, Statistics, Tasks, and Sessions. Under Tasks, two entries are listed: 11534338 (Server Manager) and 10485770 (Call Center Object Manager (ENU)). A callout box labeled "1. Note the task number" points to the task number 10485770. To the right, another callout box labeled "2. Locate the log file in the <Siebel>\siebsrvr\log directory" points to a file browser window showing a folder structure under C:\Ousea\siebsrvr\log. A file named SCCObjMgr_enu_0010_10485770.log is selected and highlighted with a red border. Below the browser is a Notepad window titled "SCCObjMgr_enu_0010_10485770.log - Notepad" displaying log file content. A callout box labeled "3. Examine the file" points to this Notepad window. The log file content is as follows:

```

2021-01-09 17:42:27 0000-00-00 00:00:00 +0000 00000000 001 003f 0001 09 SCCObjMgr_enu
10485770 3144 708 C:\Ousea\siebsrvr\log\SCCObjMgr_enu_0010_10485770.log.8.0 [20405] ENU
ObjMgrLog Error 1 00000000445a30c48:0 2007-01-09 17:42:27 (cscfg.cpp
(165)) SBL-CSR-00418: Communication: User is not associated with any communication
configuration in the database.
ObjMgrLog Error 1 00000000445a30428:0 2007-01-09 17:44:20 (cscfg.cpp
(165)) SBL-CSR-00418: Communication: User is not associated with any communication
configuration in the database.
ObjMgrLog Error 1 0000001545a30428:0 2007-01-09 17:44:40
(sweview.cpp (1410)) SBL-UIF-00401: View: Home Page View (wcc) does not contain applet: .
ObjMgrLog Error 1 0000001545a30428:0 2007-01-09 17:44:43 (cthd.cpp
(3321)) SBL-UIF-00335: We are unable to process your request. This is most likely because
you used the browser BACK or REFRESH button to get to this point.

```

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Log File Archiving

Whenever the Siebel Server service is restarted, the log files are moved from the log directory to the logarchive directory.



System Alerts

- System alerts collect information about the failure of tasks or unavailability of components, and send email alerts to administrators
- Examples:
 - ▶ A component fails to restart
 - ▶ Critical system throughput thresholds are achieved
- Create additional alerts to notify additional individuals or to handle different types of alerts

1. Select System Alerts in Enterprise Explorer

The screenshot shows the Siebel Enterprise Explorer interface. On the left, there is a tree view of components under 'Siebel Enterprise'. A red box highlights the 'System Alerts' node under the 'Parameters' category. On the right, a table titled 'System Alerts' displays one row of data:

Alert Definition Name	Alias	Media	Description
Administrator Email Alerts	AdminEmailAlert	EmailNotification	Configuration for sending automated noti

2. Define new system alerts and alert parameters to notify additional individuals or to handle different types of alerts

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Required Component The AdminNotify component must be enabled in order for system alerts to be processed. This component is part of the Auxiliary System Management component group and is enabled by default.



Using System Alerts

- To configure a component to use these system alerts:
 - ▶ Navigate to Administration – Server Configuration > Servers > Components
 - ▶ Select the component of interest
 - ▶ Specify the notification handler for that component
 - One of the system alert profiles previously created

Notification
handler is a
parameter for
every component
that specifies
which system
alert to use

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The screenshot shows the Siebel Server Configuration interface under the Administration - Server Configuration tab. The main pane displays the Siebel Servers list, showing one entry for SUsrvr with host name EMEJHG20 and install directory C:\SUsea\siebsrvr. Below this, the Components tab is selected, listing a single component named Call Center Object with alias SCCObjMgr_enu and component group CallCenter. At the bottom, the Component Parameters tab is selected, showing a single parameter named Notification Handler with value AdminEmailAlert. A yellow callout box points from the text "Notification handler is a parameter for every component that specifies which system alert to use" to the "Notification Handler" parameter row.

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Submit Batch Jobs

- Navigate to Administration – Server Management > Jobs
- Create a new job or copy an existing job
 - ▶ Job templates as well as components are listed for new jobs

The screenshot shows the Siebel interface with the 'Administration - Server Management' tab selected. In the 'Jobs' section, there is a table with columns: State (Icon), ID, Component/Job, Repeating?, Requested Server, Execution Server, and Request Key. A row is selected, and a red box highlights the 'Component/Job' column. A pop-up window titled 'Components/Jobs - Microsoft Internet Explorer' lists various components. A yellow callout box points to the list with the text: 'Both job templates and batch components are listed in the pick applet'. The list includes:

Short Name	Name	Type	Component	Enabled?	Description
GenNewDb	Generate New Database	Component		✓	Generates a new database.
GenTrig	Generate Triggers	Component		✓	Generates triggers.
ICMCalcEngine	ICM Calc Engine	Component		✓	ICM Calc Engine.
ICMCalcImport	ICM CalcWkbk Import	Component		✓	ICM CalcWkbk Import.
ICMContainerCalc	ICM Container Calculation	Component		✓	ICM Container Calculation.
ICMContainerRetro	ICM Container Recalculator	Component		✓	ICM Container Recalculator.
ICMOrderImport	ICM Order Import	Component		✓	ICM Order Import.
TCMContainerImport	TCM Container Import	Component		✓	TCM Container Import.

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Submit Batch Jobs Continued

- Specify job parameters
- Optionally, schedule the job to repeat at regular intervals or to run on a preferred server if it is available
- Submit the job

Create and define job parameters

Submit the job once all options have been set

Jobs can be set to repeat periodically or to have a preferred server on which to run

Specific parameters depend on the job you are submitting

Name	Abbreviation	Description
16K Tablespace Name	16KTblSpace	16K Tablespace name for the Siebel Database schema
32K Tablespace Name	32KTblSpace	32K Tablespace name for the Siebel Database schema
Alert Level	AlertLevel	Alert Level for tracing start/stop/cancel/killed/success
Client Db Type		
DBA password		password to be used for DB connection
DataBase Rollback Segment Name		rollback segment name for debugging (internal use)
Debug Flags		
Debugger	dbg	Debugger program name
Disable Autocommit	DB2DisableAutoCommit	Disables autocommit in DB2 390 connector. This parameter is used for DB connection
Disable DB2 CLI MinMemMode	DB2DisableMinMemMode	Disable MinMemMode in DB2 connector

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Manage Batch Jobs

- Cancel, pause (hold), or resume jobs from the Administration – Server Management > Jobs screen

State (Icon)	ID	Component/Job	Repeating?	Requested Server	Execution
>	1-SUV	Generate New Database		OUsrvr	

- Monitor the progress of the job from the Administration – Server Management > Tasks screen

State (Icon)	Siebel Server	Task	Component	PID	State	Status
>	OUsrvr	17825794	Server Manager	1320	Running	Processing "List"
>	OUsrvr	16777218	Generate New Database	3080	Completed	

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Module Highlights

- Monitor the state of the enterprise, servers, components, tasks, jobs, and sessions from the Administration - Server Management screen
- Change component parameters
 - ▶ May require reconfiguring component definitions
- Back up the enterprise after changing configurations
- Set logging options and system alerts to monitor the system
- Submit and monitor batch jobs



Lab

- In the lab you will:
 - ▶ Perform common administration tasks

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Siebel 8.0 Essentials

Module 11: Siebel Client Types

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Module Objectives

After completing this module you should be able to:

- ▶ Identify the various Siebel clients
- ▶ Describe files associated with each client, including configuration files and local databases
- ▶ Describe how each client accesses Siebel servers and data

Why you need to know:

- ▶ Not all users will be able to use the Siebel Web Client at all times, hence understanding other client types is essential



Business Challenge

- Not all Siebel application users have access to the Web at all times
 - ▶ Some users spend a great deal of time traveling
 - Sales representatives
 - Executives
 - Instructors
- Other users may want to access the application using their mobile phones or Personal Digital Assistants (PDAs)
- Developers may need to access Siebel data when a Siebel Server or even the entire enterprise is down

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Business Solution

- Oracle provides five client types for use with the Siebel application:
 - ▶ Siebel Web Client
 - ▶ Siebel Wireless Web Client
 - ▶ Siebel Mobile Web Client
 - ▶ Siebel Handheld Client
 - ▶ Siebel Developer Web Client

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References

- Siebel System Administration Guide
- Siebel Wireless Administration Guide
- Siebel Remote and Replication Manager Administration Guide
- Siebel Sales Handheld Guide

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Siebel Web Client Scenario

Wayne is an employee working from home, and connected to his company's network. He would like to frequently and quickly view and update the activities of his assigned accounts. Since his computer has a browser, but no Siebel software, he types the appropriate URL to access the account data.



Wayne is using the Siebel Web Client

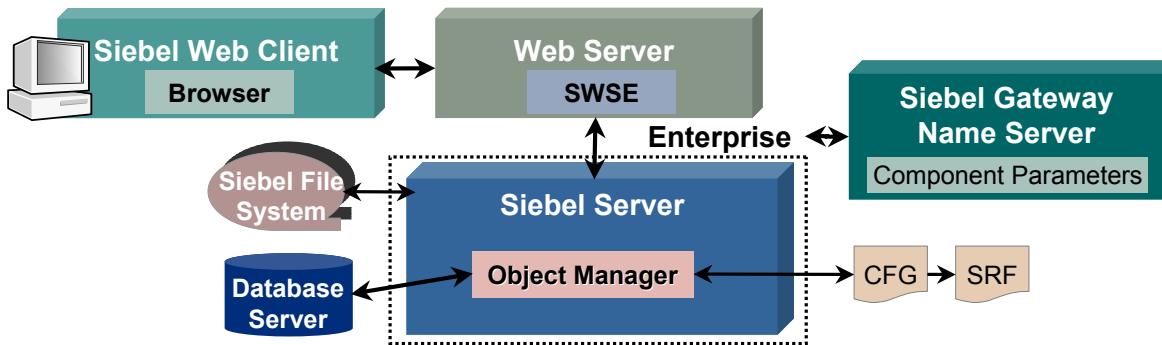
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Siebel Web Client

- Is a “near zero footprint” client
 - ▶ Uses only a Web browser and a network connection
 - ▶ For High Interactivity (HI) clients, includes ActiveX controls so not truly zero-footprint in HI mode
- Accesses Siebel Servers through the Web Server running the Siebel Web Server Extension (SWSE)
- Accesses Siebel data through an Application Object Manager (OM)



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Supported Browsers The Standard Interactivity (SI) client supports most Web browsers. Because the High Interactivity client requires ActiveX controls, it requires Internet Explorer. For details see the System Requirements and Supported Platforms Guide.



Siebel Wireless Web Client Scenario

Wendy is a salesperson. She has a meeting set up with one of her opportunities. Since she is running late, Wendy uses her Web-enabled phone to retrieve the meeting information from the Siebel database. As an outcome of the meeting, she updates the sales stage of the opportunity.

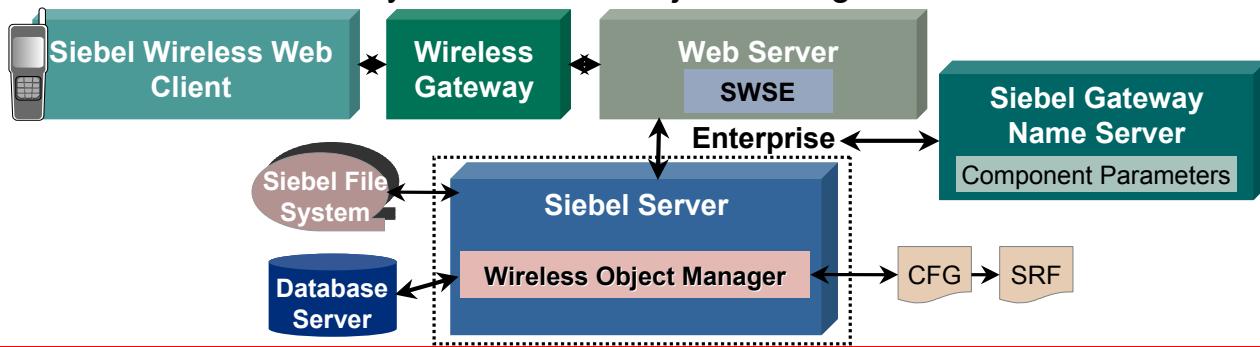


Wendy is using the Wireless Web Client

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Siebel Wireless Web Client

- Allows users to read from, write to, and search the Siebel database through a wireless connection between a mobile device and the Siebel Web Server
 - ▶ Requires a wireless gateway to translate HTTP data generated by Siebel Wireless to Wireless Application Protocol (WAP)
- Uses the same logical data model as the Siebel Web Client
 - ▶ Same business objects, business components, and so forth
- Uses wireless-specific applets, screens, and views
 - ▶ Determined by the Wireless Object Manager



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Supported Markup Languages

For a list of supported Wireless Markup Languages, see the Siebel Wireless Administration Guide.



Siebel Mobile Web Client Scenario

Mary is a consultant. She is at the airport waiting for her flight and would like to access contact information for an active opportunity. Since she cannot access the server, she is retrieving this information from a local database on her laptop.

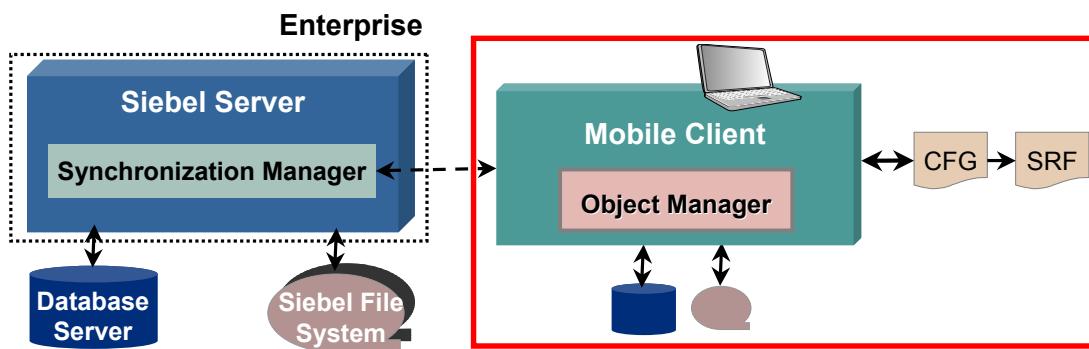


Mary is using the Mobile Web Client

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Siebel Mobile Web Client

- Is designed to provide full Siebel application functionality without requiring a network connection
 - ▶ A local executable providing full application functionality must be installed on the client
 - ▶ This local executable accesses local .cfg and .srf files, and stores its data in a local database and Siebel File System
- Directly connects to a designated Siebel Server for synchronization of data and files



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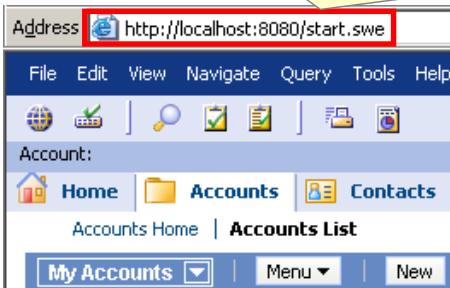
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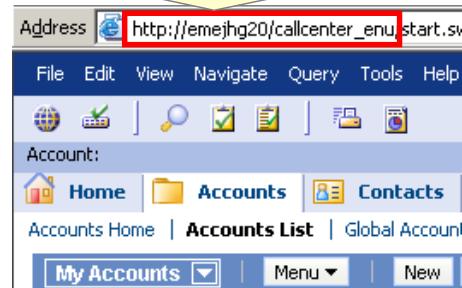
Siebel Mobile Web Client Caveats

- Many users mistake the Mobile Web Client for the Web Client
 - ▶ Application functionality is almost the same, so users forget which is which
- To determine which application is running, check the URL
 - ▶ The Mobile and Developer Web Clients have a port number in the URL, and no application name
 - ▶ The Web Client usually does not have a port number in the URL, and includes the application name

Mobile Web Client URL has a port number and no application name



Web Client URL has no port number and includes the application name



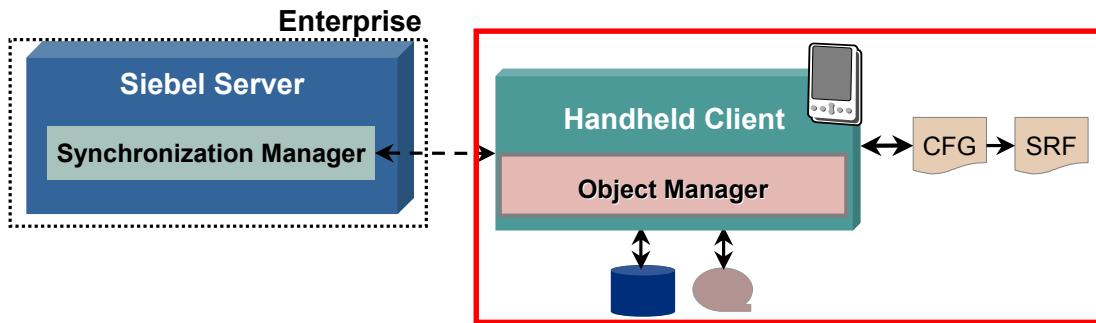
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Siebel Handheld Client

- Architecture is similar to the Siebel Mobile Web Client:
 - ▶ The handheld client includes local database, file system, and configuration files
 - ▶ The handheld client synchronizes with a specific Siebel server
- Architecture is not identical to Siebel Mobile Web Client:
 - ▶ Only runs on Windows-based mobile devices
 - ▶ Supports a focused subset of application functionality
 - Screens, views, and applets customized for Siebel Handheld
 - Applications customized for Siebel Handheld



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Siebel Developer Web Client Scenario

Dana is a system administrator. She has the client software installed locally because she requires access to the application even when the servers are not available.

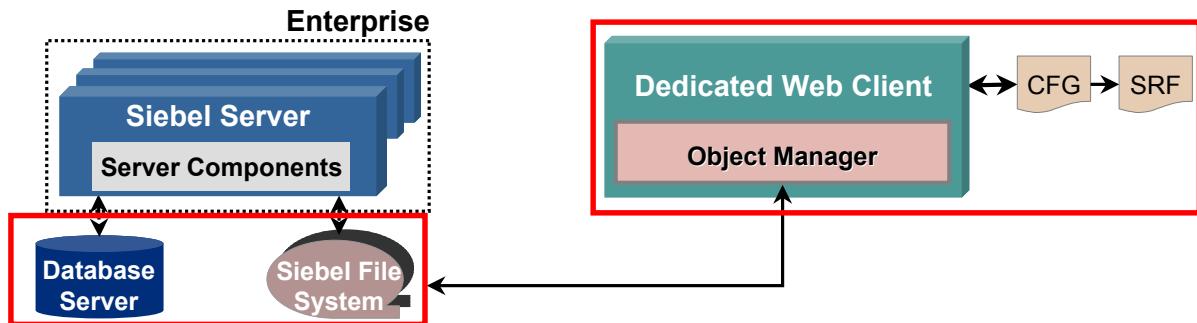


Dana is using the Siebel Developer Web Client

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Siebel Developer Web Client

- Is used by developers and system administrators for direct access to the Siebel database
 - ▶ Siebel servers do not have to be running
 - ▶ Does not require a Web server
- Is similar to the Siebel Mobile Web client in that:
 - ▶ A local application must be installed on the client
 - ▶ Local configuration files must be stored on the client
- However, can access any Siebel database and file system, including a local one or the enterprise's



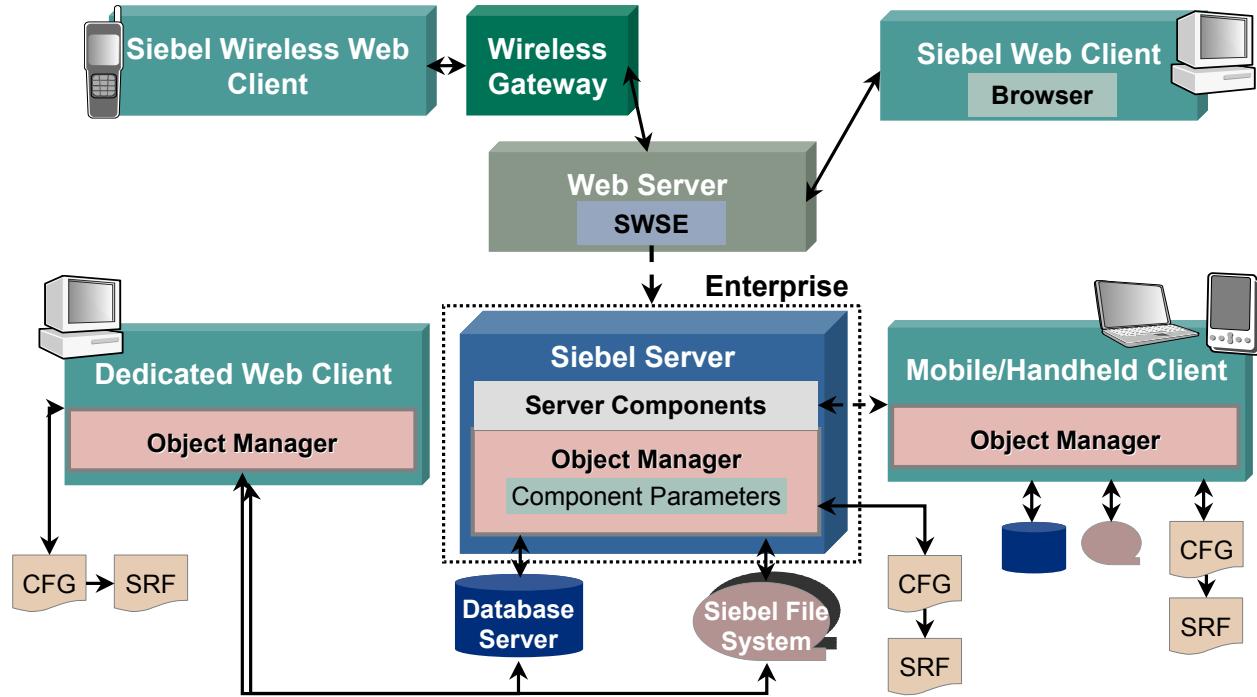
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The Big Picture

- The Siebel application supports a mixture of clients, depending on your users' business requirements



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Module Highlights

- The Siebel Web Client accesses the Siebel Enterprise and Siebel Servers through a Web server running SWSE
- The Siebel Wireless Web Client connects to a WAP-enabled Web server, and is otherwise similar to the Siebel Web Client
- The Siebel Mobile Web Client is a local executable that connects to a local database and provides full Siebel application functionality
- The Siebel Handheld Client is similar to the Siebel Mobile Web client, but runs on handheld devices
- The Siebel Developer Web Client is used by developers and system administrators for direct access to the Siebel database and for development and administrative changes



In-Class Discussion

- Which client is best suited for:
 - ▶ Disconnected remote users needing access to their data
 - ▶ A user with a cell phone needing access to his or her data
 - ▶ Users needing frequent and fast access to their data (easily scalable and maintained)
 - ▶ Server administrator needing access (to shut down a server component)

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Lab

- In the lab you will:
 - ▶ Answer questions about client types
 - ▶ Use the Developer and Mobile Web Clients

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12

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Module 12: Securing Access to the Application

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Module Objectives

- After completing this module you should be able to:
 - ▶ Describe the types of user authentication supported by Siebel applications
 - ▶ Explain the role of the security adapter
 - ▶ Describe Single Sign On (SSO) security and how it differs from other authentication methods
- Why you need to know:
 - ▶ You must understand the security mechanisms in order to be able to implement them

Siebel Application Security

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- Siebel applications are secured at several levels:
 - ▶ Data visibility and view access should be restricted so users see only the appropriate views and data
 - Subject of previous module
 - ▶ Access to the application should be restricted to authorized users
 - Subject of this module
 - ▶ Communication between architecture components may need to be secured
 - Subject of subsequent module



Authentication

- Is the process of validating a user's identity
- Verifies the identity of users *before* they gain access to a Siebel application
- Typically consists of collecting a set of user credentials such as user ID and password and comparing them to pre-stored values

Supported Authentication Methods

- Siebel applications support authentication by either the Siebel servers or the Web server:
 - ▶ Siebel security adapters are software programs that allow Siebel servers to authenticate users
 - ▶ Single Sign On (SSO) allows the Web server to authenticate users
 - Siebel Web Server Extension performs authentication check
 - Security adapter is still involved in verifying the “trust token” passed to it by the Web server

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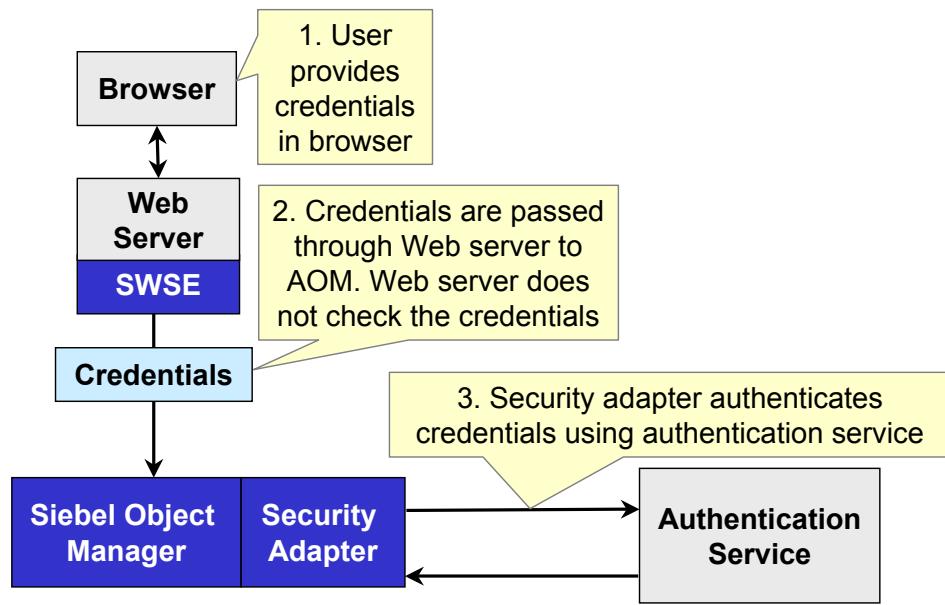
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Trust Token

Similar to an authentication certificate, a trust token is a software object confirming the identity of the sender. The trust token may contain additional information such as user identity or database login to be passed to the server.

Siebel Security Adapters

- A security adapter is a piece of software that connects to an authentication service
 - ▶ Implemented as part of the Application Object Manager (AOM)



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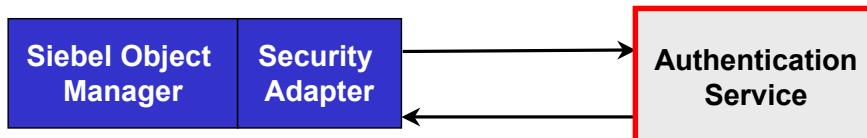
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Authentication Service

An authentication service is a store of credentials (typically user IDs and passwords) plus a mechanism to compare user provided credentials against the stored credentials.

Authentication Services

- Siebel applications support multiple authentication services:
 - ▶ Database authentication
 - ▶ Lightweight Database Authentication Protocol (LDAP)
 - ▶ Active Directory Services Interface (ADSI)
 - ▶ Custom authentication using the Siebel Security Adapter Software Developer's Kit (SSASDK)
 - Creating custom security adapters is beyond the scope of this course
 - Refer to the Siebel Security Adapter SDK in Bookshelf



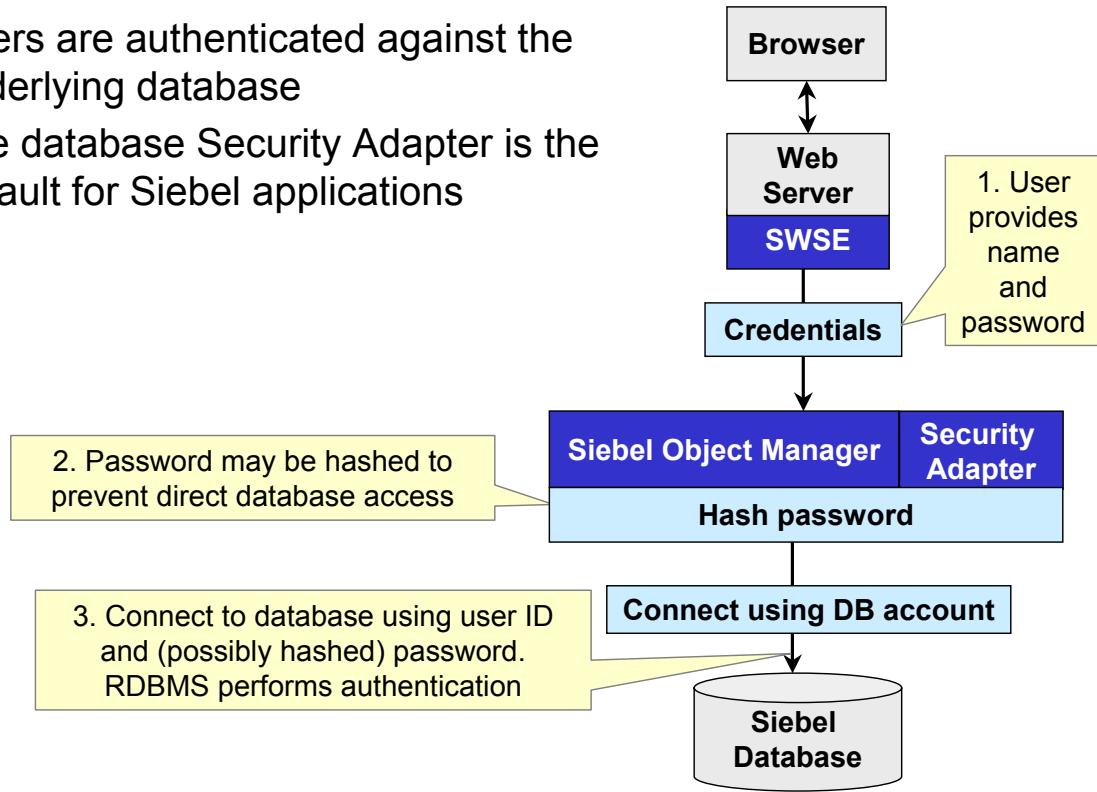
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Database Authentication

- Users are authenticated against the underlying database
- The database Security Adapter is the default for Siebel applications



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Password Hashing

A hash function is an operation that generates a unique output value for each input, typically of a fixed length. This differs from encryption because the hash may lose information and is not reversible.

Database Authentication Considerations

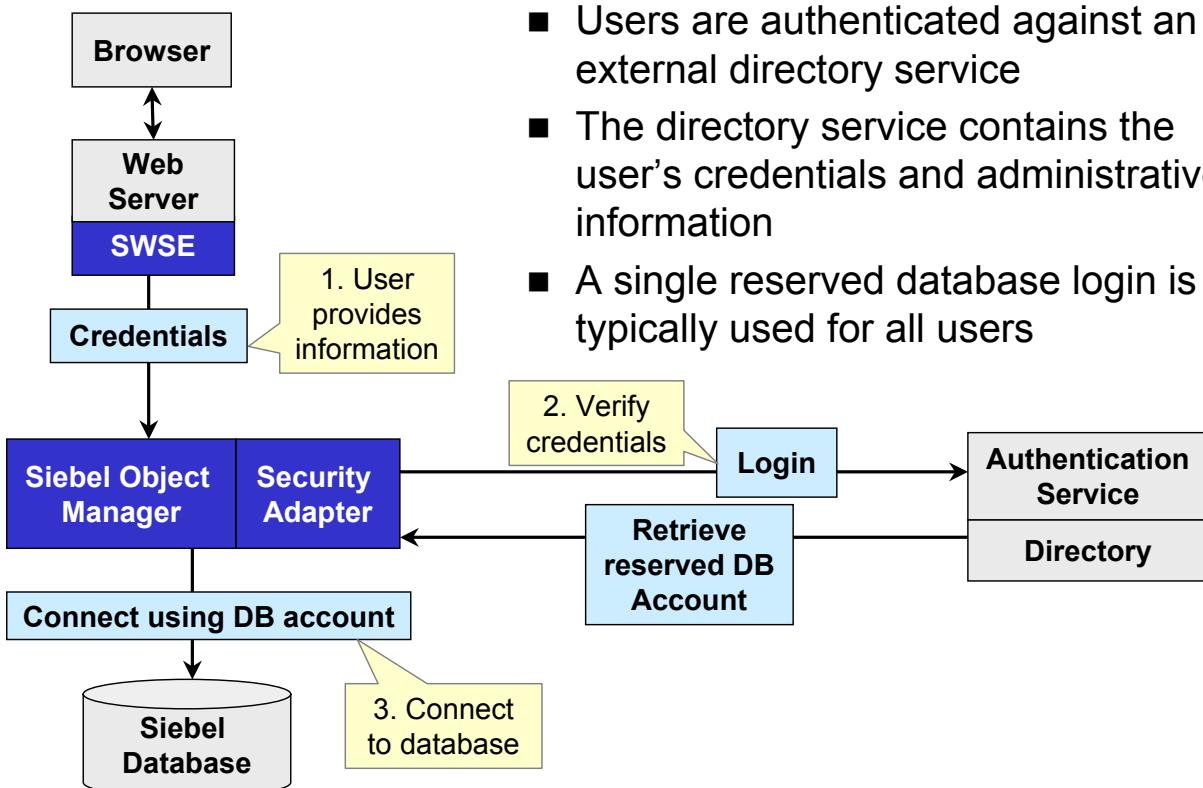
- Does not require additional infrastructure components such as directory servers
- Uses a separate database login for each user
 - ▶ Requires ongoing support from a database administrator
- May support account policies based on those of the RDBMS
 - ▶ Password expiration
 - ▶ Password syntax
 - ▶ Account lockout
- Supports minimal user self-management
 - ▶ User cannot perform self-management without being granted direct access to the database server

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Directory Server Authentication



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Default Login

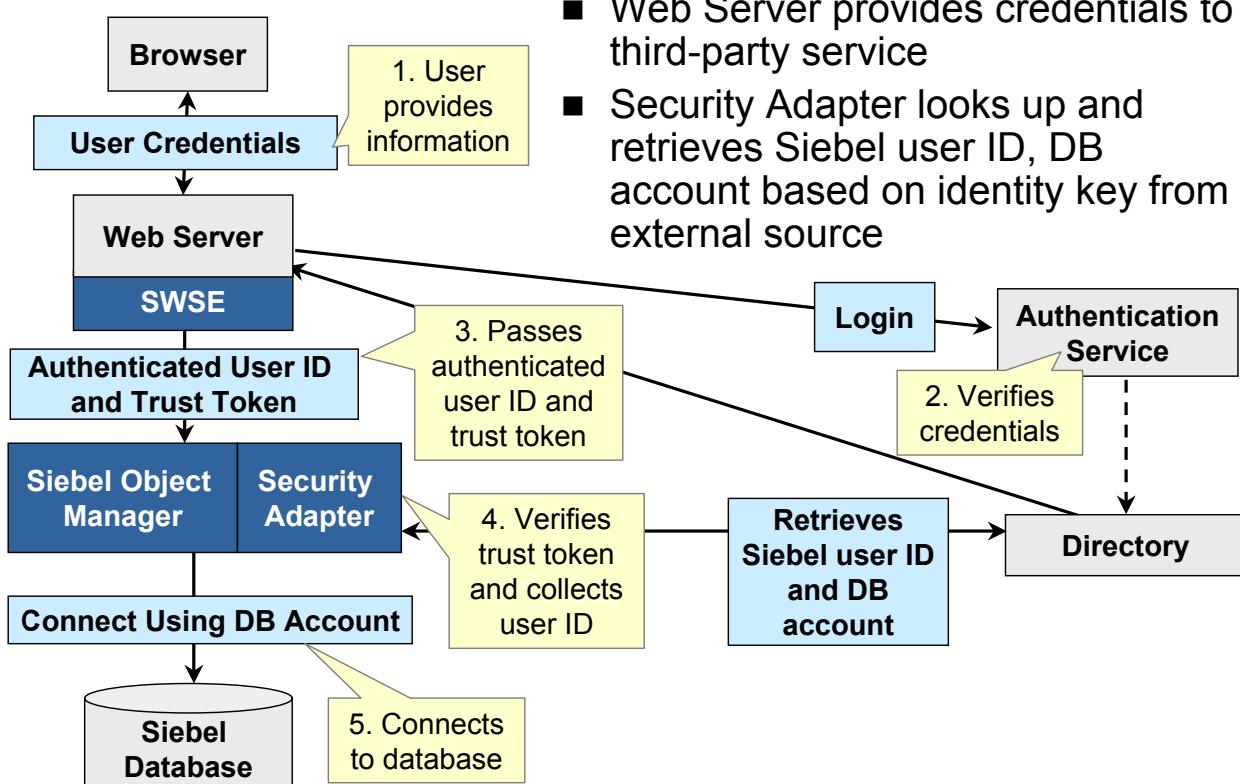
The default database login for directory server authentication is LDAPUSER.

Directory Service Considerations

- Reduces administrative overhead
 - ▶ Eliminates maintenance of a separate database login for each user
 - ▶ Allows Web users to self-register and maintain login information
 - ▶ Allows automated creation of users from User Administration view
 - ▶ Allows external delegated administration of users
- Allows credentials store to be shared across multiple applications
- May support account policies based on those of the directory service
 - ▶ Password expiration
 - ▶ Password syntax
 - ▶ Account lockout

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Single Sign On



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Single Sign On Considerations

- Allows users to access multiple applications without any further login
 - ▶ For example, Windows Integrated Authentication allows users to access Siebel applications directly once they have logged in to their Windows accounts
- Uses credentials that are collected and verified by the Web server
 - ▶ Management of authentication can be performed from a single centralized location
- Requires the use of a trust token
 - ▶ Secret value shared by the Web server and Object Manager
- Allows Siebel applications to be deployed into existing Web sites and portals



Single Sign On Considerations Continued

- Some Siebel User Administration features that are not available using SSO should be disabled for consistency, for example:
 - ▶ User self-registration
 - ▶ Delegated administration of users
 - ▶ Change password
- Requires synchronization of users between the Siebel application and the external authentication system

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Comparing Authentication Methods

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	Database Authentication	Directory Service Authentication	Single Sign On
Requires additional infrastructure	No	Yes	Yes
Supports account policies such as password expiration	Depends on RDBMS	Depends on directory service	Depends on directory service
Supports user self-management	No	Yes	No
Allows creation of users from within the Siebel application	No	Yes	No
Allows using same credentials across multiple applications	No	Yes	Yes
Allows single sign-on	No	No	Yes
Allows external management of users	No	Yes	Yes

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Module Highlights

- Siebel applications support three mechanisms for authenticating users:
 - ▶ Database authentication is the default; the Siebel Server passes the authentication information to the RDBMS for authentication
 - ▶ Directory Service authentication uses a directory service such as LDAP or ADSI to perform the authentication; the Siebel Server passes the authentication information to the directory service
 - ▶ Single Sign On uses a directory service at the Web server level to allow single sign-on to multiple applications; the Siebel Web Server passes the authentication information to the directory service and passes the returned trust token to the Siebel Server

Lab

12

- In the lab you will:
 - ▶ Create a database account for a new user



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Module 13: Installing Siebel Applications

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Module Objectives

- After completing this module you should be able to:
 - ▶ Describe pre-installation steps necessary to prepare your environment for a Siebel installation
 - ▶ Install the Siebel application
 - ▶ Perform post-installation steps to verify your Siebel environment
 - ▶ Describe how to use the multi-server update tool to automate installations
- Why you need to know:
 - ▶ Successful configuration of the Siebel environment requires successful installation



Business Challenge: Enterprise Installation

- Installing enterprise-level software requires careful planning and preparation
 - ▶ Hardware and software prerequisites must be met
 - ▶ Multiple installers must be run in the correct sequence
 - ▶ Configuration parameters must be properly set before, during, and after installation
 - ▶ Installation may be required on many machines

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Business Solution: Siebel Installation Tools

- Siebel provides several tools to assist with the installation of Siebel environments:
 - ▶ Bookshelf documentation:
 - Deployment Planning Guide and System Requirements and Supported Platforms guide to prepare the system
 - Installation Guide [Windows or UNIX] to perform the installation
 - ▶ Step-by-step installers
 - Guide you through the installation process itself
 - ▶ Environment Verification Tool (EVT)
 - Performs verification tests on system at any time during the installation to check:
 - ▶ Prerequisites
 - ▶ Configuration settings
 - ▶ Installations
 - ▶ Siebel Multi-Server Update Tool
 - Upgrades multiple server instances from a central administration point

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Reference	Installation Guide for Microsoft Windows Installation Guide for UNIX System Requirements and Supported Platforms
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Performing a Successful Installation

- Has three separate phases:
 - ▶ Pre-installation
 - ▶ Installation
 - ▶ Verification

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Pre-Installation Tasks

Plan the System Topology

Verify System Requirements

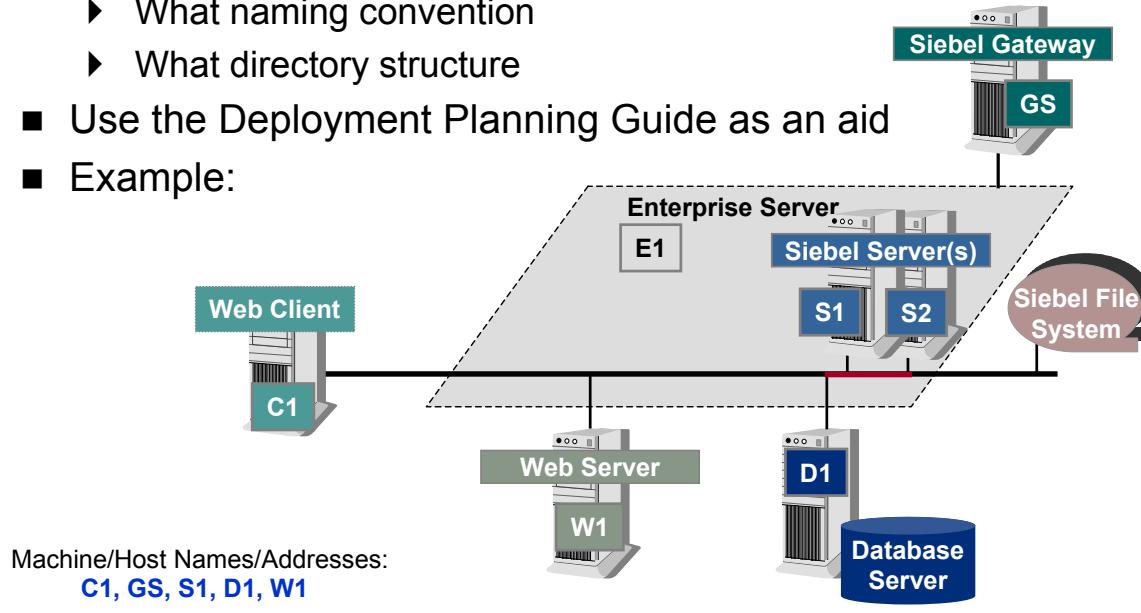
Create Prerequisite Objects

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Plan the System Topology

- Identify where software will be installed
 - ▶ Which machine(s)
 - Consider hardware and networking requirements
 - ▶ What naming convention
 - ▶ What directory structure
- Use the Deployment Planning Guide as an aid
- Example:



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Verify System Requirements

- Verify that hardware and software meets Siebel requirements
 - ▶ Consult the System Requirements and Supported Platforms Guide
 - ▶ Check the Release Notes for any updates to these requirements
- Confirm that required third-party software is installed
 - ▶ For example, a third-party RDBMS on the database server machine
 - Installation Guide has recommendations for RDBMS configuration settings

Verify System Requirements Continued

- Optionally, run the Environment Verification Tool (EVT) to verify prerequisites
 - ▶ Command-line tool for checking environment
 - ▶ Installed as part of the Siebel Server installation, so it must be copied from another installation to be run prior to server installation

```
C:\SUsea\siebsrvn\BIN>evt
Running checks defined in file C:\1990-2003 Siebel Systems, Inc. Environment Verification Summary Report Run by [student] on [Tue Oct 21 17:20:02 2008]
Report Run by [student] on [Tue Oct 21 17:20:02 2008]
Installed Version [NOT DETECTED] Installed Build [NOT DETECTED]
Running a [8.0] version validation with [UAN] flavor

Total Checks : 8
Checks Passed : 6
Checks Failed : 1 (<1 critical failures, 0 warnings)
Checks Skipped: 1

Critical Failures:

Network Configuration Checks
Please set TCP parameter MaxUserPort to 65534 - the current value is 65535
Complete list of checks:

Environment Settings
USERDUMP is not installed - It is recommended to install this utility using the following instructions http://support.siebel.com/knowledgebase/article/00000000000000000000000000000000
Environment variable SIEBEL_STRING_REFCOUNT has correctly not been defined

Network Configuration Checks
TCP parameter TcpTimedWaitDelay is correctly set to 30
Please set TCP parameter MaxUserPort to 65534 - the current value is 65535
TCP parameter MaxFreeTcbs is correctly set to 10000
TCP parameter MaxHashTableSize is correctly set to 2048

Operating System Checks
Operating System version 5.2 is up-to-date
Operating System version 1 is up-to-date
```

Run EVT with no flags to check the pre-installation environment

Checks system software, network settings, and recommended OS tools, but does not verify RDBMS

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Create Prerequisite Objects

- Create the Siebel database
 - ▶ Install the proper version of your chosen supported RDBMS software
 - ▶ Create an empty database/tablespace with appropriate space defined
 - ▶ Consult the platform-appropriate Siebel Installation Guide for recommended database configuration parameter settings
- Create the Siebel file system
 - ▶ Create the Siebel file system as a directory on a disk with sufficient space
 - Alternatively, partition the file system across multiple directories and servers
 - ▶ Must be accessible from machines running Siebel Servers
 - ▶ Must support long and case-sensitive file names

Create Prerequisite Objects Continued

- Create a Siebel service owner account
 - ▶ Used to run Enterprise processes and components
 - Siebel Gateway Name service
 - Siebel Server service
 - ▶ Name must be consistent across all servers:
 - Siebel Gateway Name Server
 - Siebel Servers
 - Server on which Siebel File System resides
 - ▶ Recommended practice: On Windows use a domain account rather than separate accounts on each machine
- Consult the platform-appropriate Siebel Installation Guide for exact steps and privileges

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Installation Tasks

Create the Installation Image

Install the Enterprise

Configure the Server(s)

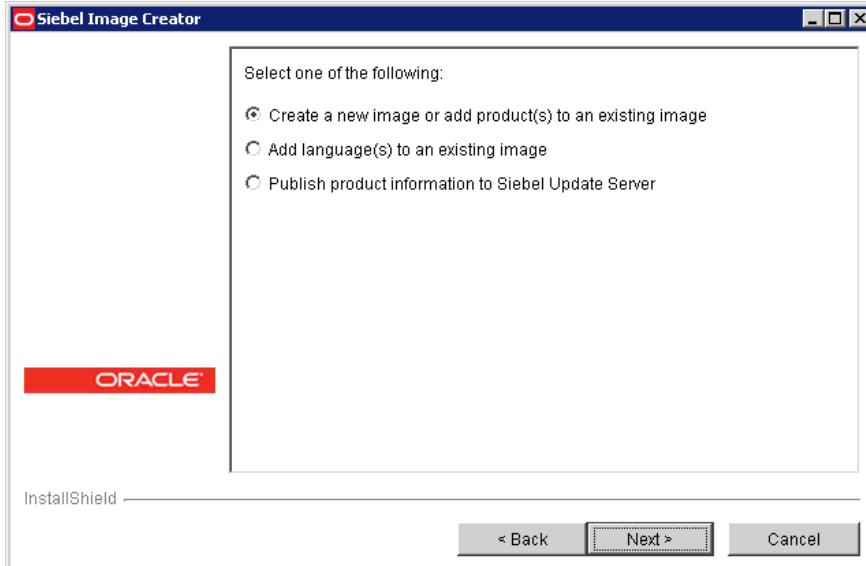
Install the Database

Install the Siebel Web Server Extensions

Install Additional Applications

Create the Installation Image

- Run the Siebel Image Creator utility provided on your media to generate an installation image
 - ▶ Refer to the Siebel Installation Guide for detailed steps



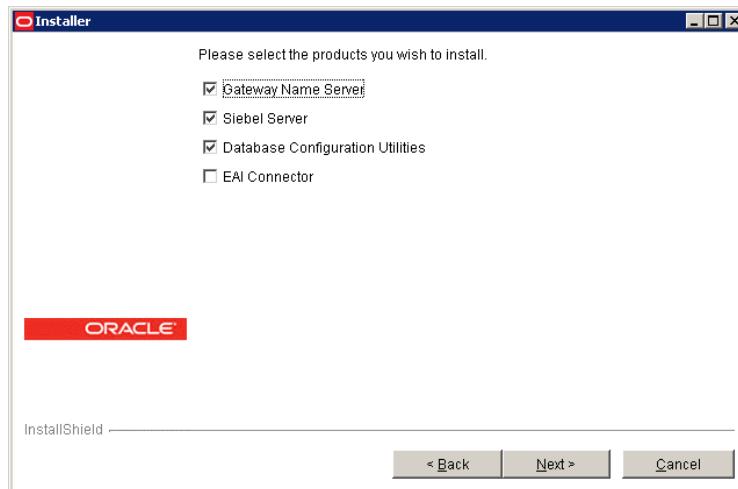
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Install the Enterprise

- Use the Siebel Enterprise Server installer to install the Gateway Name Server, Siebel Servers, Database Configuration Utilities, and EAI Connectors
 - ▶ Each component may be installed separately
 - ▶ Parameters include the directory name, setup type, and language

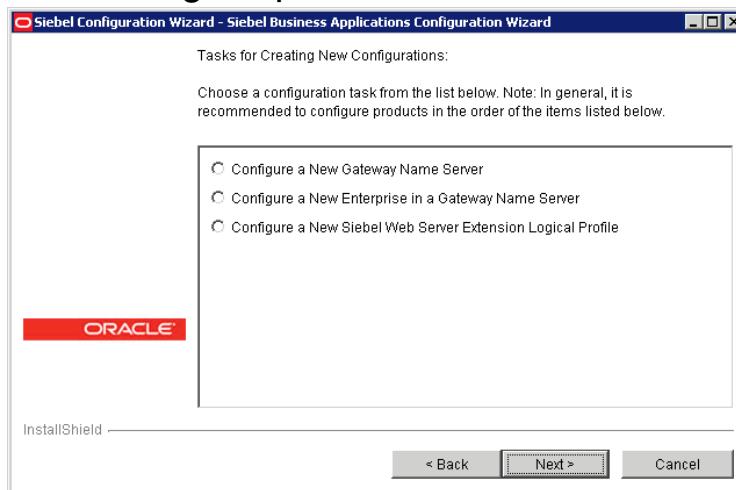


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Run Siebel Enterprise Configuration Tool

- Once installation completes, the enterprise configuration tool runs automatically to set system parameters
 - ▶ Alternatively, run <InstallDir>/gtwysrvr/bin/ssincfgw.exe manually at a later time
- Create Gateway Name Server, Enterprise, and Siebel Web Server Extension logical profile



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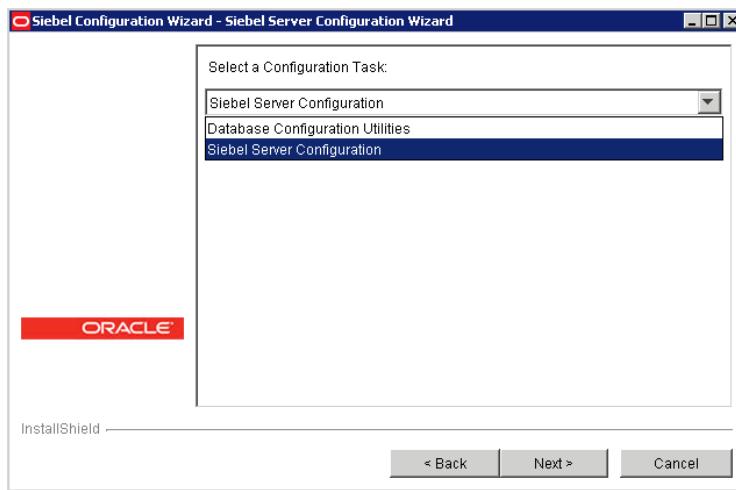
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Key Enterprise Configuration Parameters

- To configure a new Gateway Name Server requires:
 - ▶ Gateway Name Server port, language for server messages and logs, and service account
- To configure a new Enterprise requires:
 - ▶ An existing Siebel Gateway Name Server
 - ▶ An Enterprise name, Siebel file system, database platform and login information, and security type (database/LDAP/ANSI/custom)
- To configure a new Siebel Web Server Extension logical profile requires:
 - ▶ An existing Siebel Gateway Name Server and Enterprise
 - ▶ A directory in which to store the profile, network configuration parameters such as HTTP and HTTPS ports, High Interactivity and Standard Interactivity default login names, and an Enterprise security token

Configure the Server(s)

- Once enterprise configuration completes, the server configuration tool runs automatically to set system parameters
 - ▶ Alternatively, run <InstallDir>/siebsrvr/bin/ssincfgw.exe manually at a later time
- Configure a Siebel Server



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Key Server Configuration Parameters

- Configuring a new Siebel Server requires:
 - ▶ An existing Gateway Name Server and Enterprise
 - ▶ The Siebel Server name
 - ▶ Which component groups to enable on that server
 - ▶ The language for server messages
 - ▶ The languages to deploy
 - ▶ Various port settings, including:
 - The connection broker port, used by the Siebel Web Server Extensions and other server components for communication
 - The Siebel Remote Synchronization Manager port
 - The database connection port
 - ▶ Server clustering information

Install the Database

- Run grantusr.sql in the dbsrvr/<RDBMS> directory on the database created during pre-installation
- Manually run the database configuration utility and install a new database
 - ▶ Creates appropriate schema and populates database with seed data
 - ▶ Optionally, enter license key during database initialization

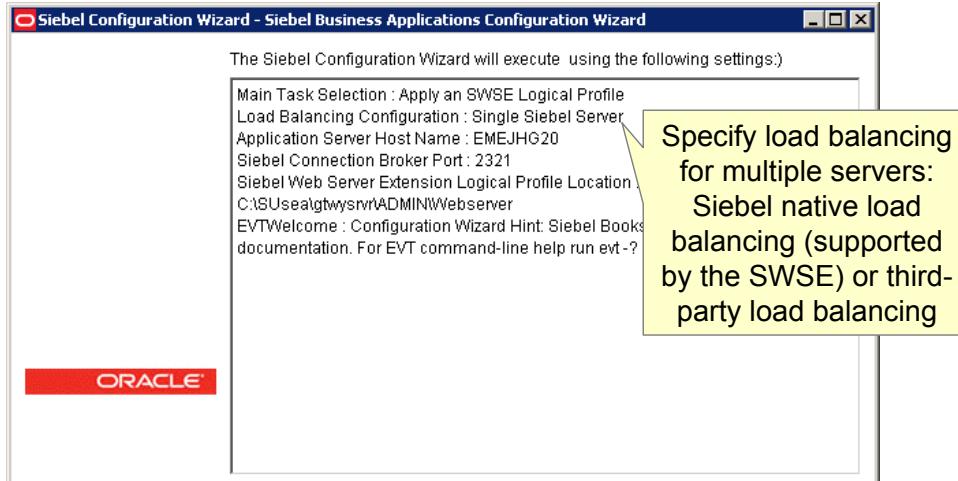


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Install the Siebel Web Server Extensions

- Use the SWSE installer to install the Siebel Web Server Extension on the machine hosting the Web server
 - ▶ The Siebel Enterprise Server must already have been run to generate the Enterprise-specific SWSE profile
 - ▶ Specify parameters, including load-balancing strategy for multi-server installations and connection broker port



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Install Additional Applications

- Install the Siebel Mobile or Siebel Developer Web clients on individual user machines
 - ▶ Both applications use the Siebel Web Client installer
- Install Siebel Tools on development machines
- (Optional) Install the Sample database on development machines
 - ▶ Pre-populated database allowing testing of configuration changes
- (Optional) Install Siebel Management Server to support the Application Deployment Manager (ADM) or Diagnostic Console
- (Optional) Install Siebel Update Server and clients to support multi-server updates

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Verification Tasks

Check Installation Logs

Verify Services

Run EVT

Log In to Applications

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Check Installation Logs

- Every step of configuration generates a log file:
 - ▶ Siebel Gateway Name Server configuration log is /gtwysrvr/log/sw_cfg_util.log
 - ▶ Siebel Server configuration log is /siebsrvr/log/sw_cfg_util.log
 - ▶ Siebel Web Server Extention configuration log is /SWEApp/log/sw_cfg_util.log
- Check these logs for severe or fatal errors

Informational messages are listed as GenericErrors with a severity level of 1

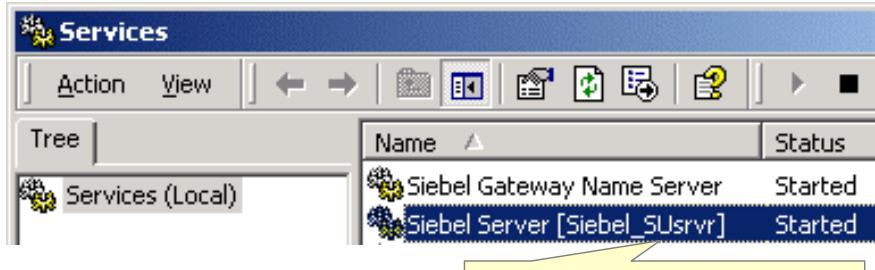
```

sw_cfg_util.log - Notepad
File Edit Format View Help
2006-10-21 23:12:08,0000-00-00 00:00:00 +0000 00000000 001 003f 0001 09 sw_cfg_util 2708 2588 C:\Susea\siebsrvr\log\sw_C...
GenericLog GenericError 1 0000007453a0a94:0 2006-10-21 23:12:08 Executing step: CreateOrExisting
GenericLog GenericError 1 0000007453a0a94:0 2006-10-21 23:12:08 Executing step: MainAction
GenericLog GenericError 1 0000007453a0a94:0 2006-10-21 23:12:08 Executing step: TempJTCHelpURL
GenericLog GenericError 1 0000007453a0a94:0 2006-10-21 23:12:08 Executing step: TempIdCentricRoot
GenericLog GenericError 1 0000007453a0a94:0 2006-10-21 23:12:08 Executing step: GatewayHost
GenericLog GenericError 1 0000007453a0a94:0 2006-10-21 23:12:08 Executing step: EnterpriseName
GenericLog GenericError 1 0000007453a0a94:0 2006-10-21 23:12:08 Executing step: SiebelServerRoot
GenericLog GenericError 1 0000007453a0a94:0 2006-10-21 23:12:08 Executing step: DbsrvrRoot
GenericLog GenericError 1 0000007453a0a94:0 2006-10-21 23:12:08 Executing step: ResourceLanguage
GenericLog GenericError 1 0000007453a0a94:0 2006-10-21 23:12:08 Executing step: DatabasePlatform

```

Verify Services

- Verify that the Siebel Gateway Name Server service is running
- Verify that the Siebel Server services are running on each machine hosting a server



Run EVT

- Use the Environment Verification Tool to check the status of your enterprise
 - ▶ Tool reads evt.ini file to determine what checks to perform
 - ▶ Tool supports checking Siebel Gateway Name Server, Siebel Server, Siebel Web Server Extension, third-party Web server, and third-party database
 - ▶ Output can be text, text file, HTML, or HTML file
 - ▶ For complete details on using the EVT, see your platform-specific Installation Guide

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EVT Example

- The following example runs the EVT with the default options and outputs the results to output.html

The -o flag specifies the output file format

```
C:\sea77\siebsrvr\BIN>evt -o HTML > c:\temp\output.html  
Running checks defined in file [evt.ini]. Please wait..
```

Database Setup Checks

Please upgrade Oracle Client version to 8.1.7.4, 9.2.0.4 - the current version is not defined

The output is color-coded for readability

Environment Settings

USERDUMP is not installed - It is recommended to install this utility using the following instructions <http://support.microsoft.com/?kbid=241215>. Please rerun EVT after installation if required.

Environment variable SIEBEL_STRING_REFCOUNT has correctly not been defined

Network Configuration Checks

TCP parameter TcpTimedWaitDelay is correctly set to 30 - required value is 30

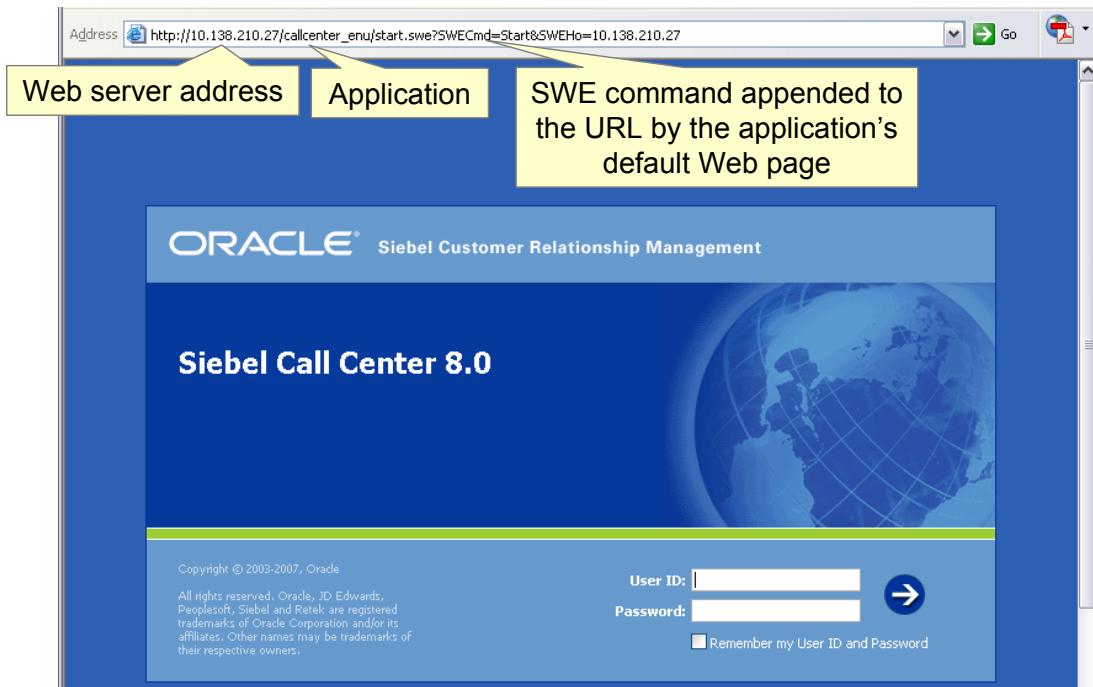
TCP parameter MaxUserPort is correctly set to 65534 - required value is 65534

TCP parameter MaxFreeTcbs is correctly set to 10000 - required value is 10000

TCP parameter MaxHashTableSize is correctly set to 2048 - required value is 2048

Log In to Applications

- Log in to the Siebel application to confirm connectivity to the Web server and Siebel server

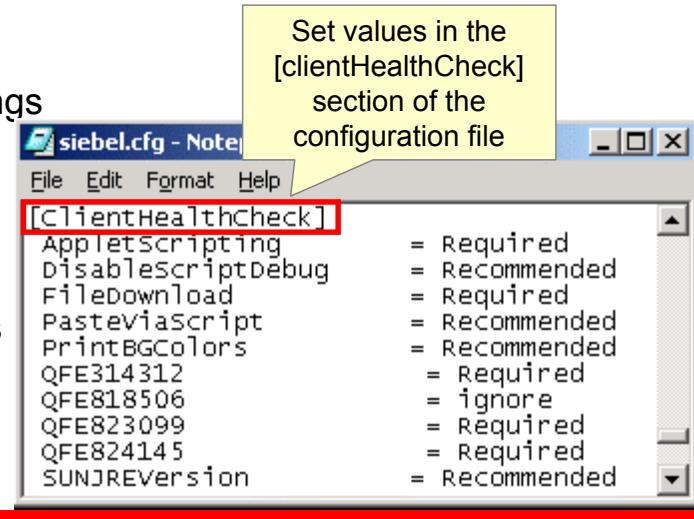


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Browser Health Check

- Is a utility that runs on the browser to verify that it is properly configured for High Interactivity
 - ▶ Runs when the Web client is invoked if it is enabled in the [SWE] section of siebel.cfg
- Checks the client environment on which the Siebel application is running
 - ▶ Internet options
 - ▶ Java setting
 - ▶ Environment/registry settings
- Performs checks using values set in the application configuration file
 - ▶ Each check can have one of the following values
 - Required
 - Recommended
 - Ignore



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Multi-Server Updates

- The Siebel Update Server provides a single administration point for patching and updating multiple Siebel servers
- Allows quick monitoring of each server's current patch level
- Supports both push and pull models of software updates
 - ▶ Administrator can send updates out to all servers (push)
 - ▶ Servers can periodically query the update server for updates (pull)

Siebel Update Server provides a centralized administration point for managing updates on Siebel servers

The screenshot shows the Siebel Update Service interface. On the left, there is a sidebar with links like Welcome Assistant, Evaluation Assistant, and Latest Help Topics. The main area is titled 'Start Page' and shows 'Recent Activity' with a table of recent updates:

Name	Type	Last Modified	User Name
(ENU) Client 8.0.0.0	Product Version	11/22/2006	administrator
(ENU) Client 8	Product	11/22/2006	administrator
Siebel Enterprise Servers 8.0.0.0 Install PackageUpdate	Product	11/22/2006	administrator
Siebel Enterprise Servers 8.0.0.0	Product Version	11/22/2006	administrator
Siebel Enterprise Servers 8	Product	11/22/2006	administrator

Below this is a 'Featured Content' section with an 'Alerts' table and a 'Customer Usage' chart.

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Siebel Update Server

- Is a Web-based installation tool based on Macrovision Installshield
 - ▶ Uses a Tomcat/JSP Web server on the Update Server
 - ▶ Includes a local database on the Update Server for storing all product information across an enterprise
- Currently supports server updates and patches
 - ▶ Gateway Name Server, Siebel Enterprise, Siebel Server, Siebel Web Server Extension, and so forth

Siebel Update Server Architecture

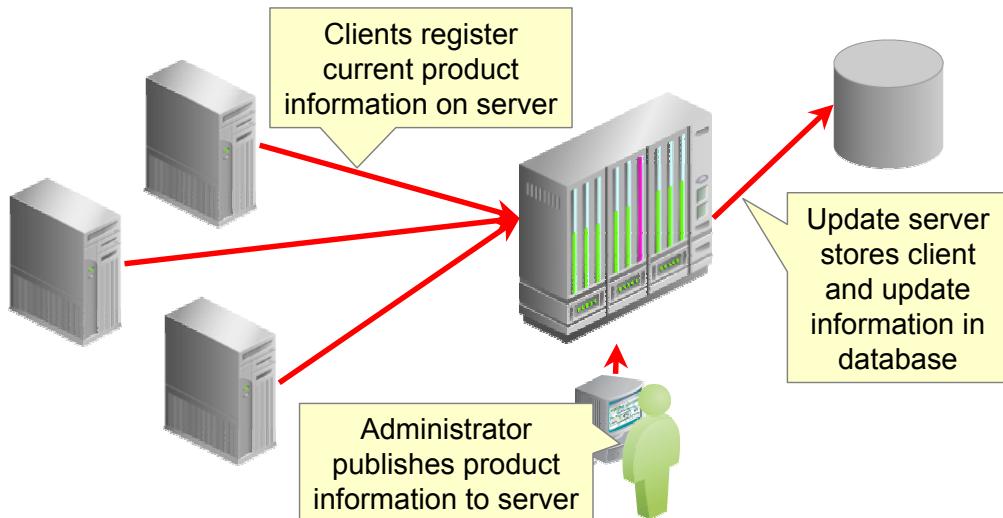
- A single update server provides a central access point to multiple clients
 - ▶ Siebel Update Server software is installed on server
 - ▶ Siebel Update Client software is installed on each client
 - Clients have other Siebel software installed, such as Siebel Server or Siebel Web Server Extension





Siebel Update Server Functionality

- Clients register current software information on server
 - ▶ Currently installed software and version information
 - ▶ Stored in database on server
- Administrator publishes product update information to server
 - ▶ Location of update, version information, and so forth

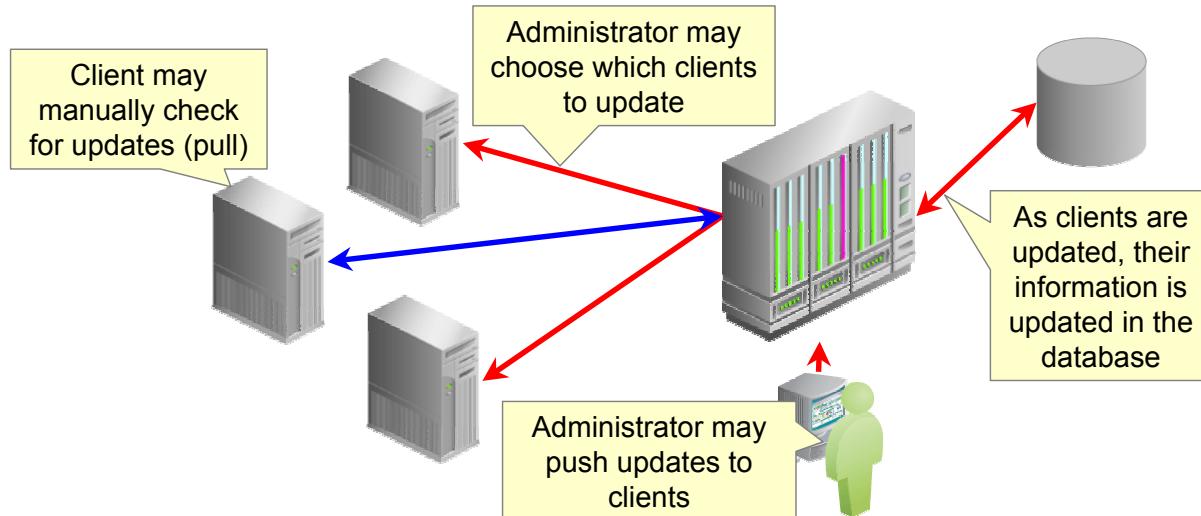


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Siebel Update Server Functionality Continued

- Administrator may select client machines and schedule updates for them (push method)
- Clients may check for updates and download them when it is convenient (pull method)



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Recommended Practice

The push method is recommended because the pull method may result in unexpected server restarts, for example, after downloading a patch that requires a restart.



Module Highlights

- Installing Siebel applications is a three-step process:
 - ▶ Perform pre-installation tasks
 - ▶ Perform software installations
 - ▶ Perform post-installation tasks
- Pre-installation tasks include planning the topology, verifying prerequisites, and creating required objects such as the Siebel database
- Software installations require multiple installers, which guide you through the installation process step-by-step and automatically run the appropriate configuration tools
- Post-installation tasks include checking the installation logs, checking the services, running the EVT, and logging in to the application
- Siebel Update Server supports multi-server updates



Siebel 8.0 Essentials

Module 14: Siebel Application Architecture

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Module Objectives

- After completing this module you should be able to:
 - ▶ Describe the major types of object definitions
 - ▶ Describe the relationships between them
- Why you need to know:
 - ▶ Enables you to explore an existing application effectively
 - ▶ Provides the foundation you need to configure the object definitions that form the basis of an application



The Siebel Application Architecture

- Recall that the Siebel Application consists of:
 - ▶ An execution engine that provides the application behavior
 - The Siebel Server(s); more specifically, their components
 - ▶ Configuration files and the Siebel Gateway Name Server that specify operating parameters for the execution engine
 - Most configuration parameters are stored in the Gateway Name Server
 - ▶ A relational database that stores user data
 - ▶ A set of physical User Interface (UI) files that specify how to render the UI in the user's
 - ▶ A Siebel Repository File (SRF) containing compiled object definitions

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Reference

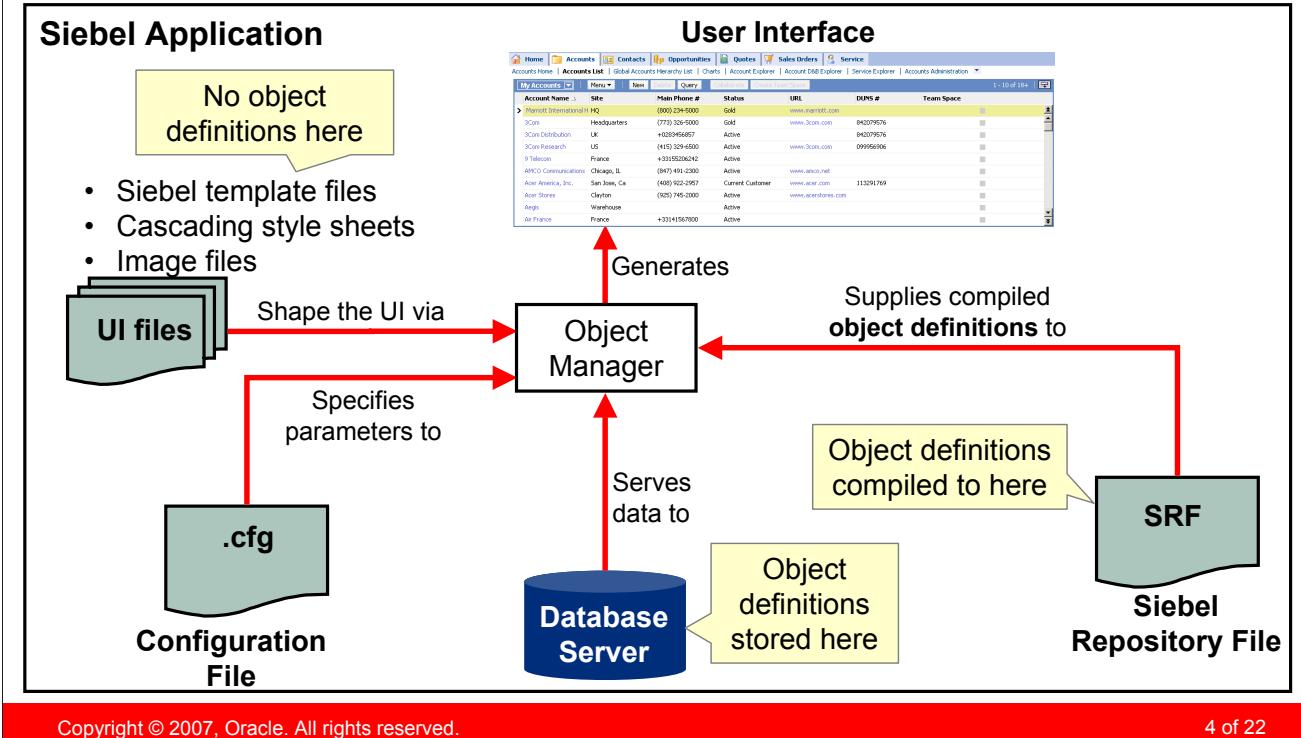
Configuring Siebel Business Applications: Overview of Configuring Siebel Applications

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The Siebel Application Architecture continued

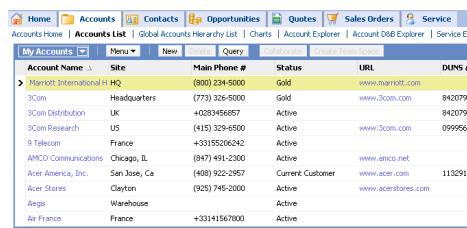
- Object definitions are created, modified, and stored in special tables in the database and compiled to the SRF



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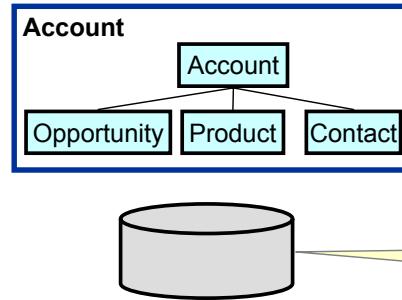
Siebel Repository File (SRF)

- Contains compiled *object definitions* that specify:
 - ▶ Presentation of data
 - ▶ Business logic
 - ▶ Physical table storage

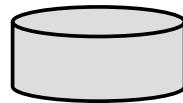


A screenshot of the Siebel Accounts List interface. The top navigation bar includes links for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Service. Below the navigation is a toolbar with buttons for New, Query, and Refresh. The main area displays a table titled 'Accounts List' with columns: Account Name, Site, Main Phone #, Status, URL, and DUNS #. The table lists various accounts such as Marriott International HQ, 3Com, 3Com Distribution, 3Com Research, 9 Telecom, AMCO Communications, Acer America, Inc., Acer Stores, Aegis, and Air France, each with their respective details.

UI layer
definitions



Business layer
definitions



Data layer
definitions

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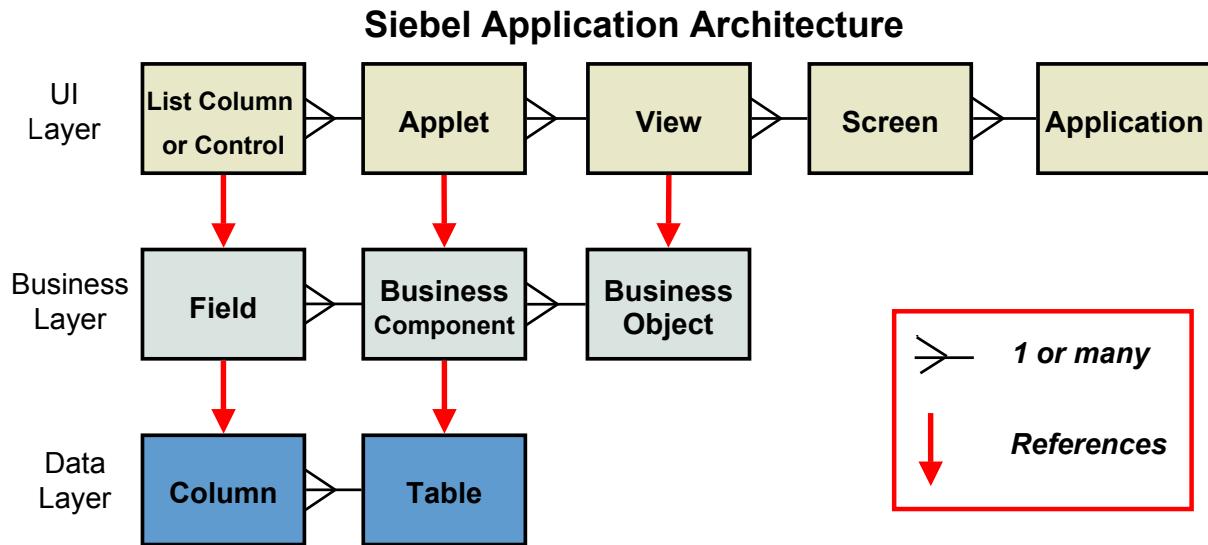
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Object Definitions

- Provide the foundation for application execution
- Are grouped in three layers with different purposes
- Refer to definitions in the next lower layer

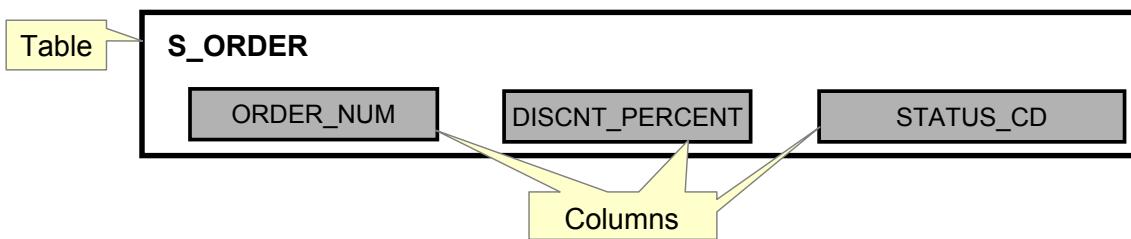


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Data Layer

- Data layer object definitions specify the logical structure of the physical database
 - ▶ Definitions are metadata, not data
- In the Data layer, there are two principal data object definitions:
 - ▶ Table definitions
 - ▶ Column definitions



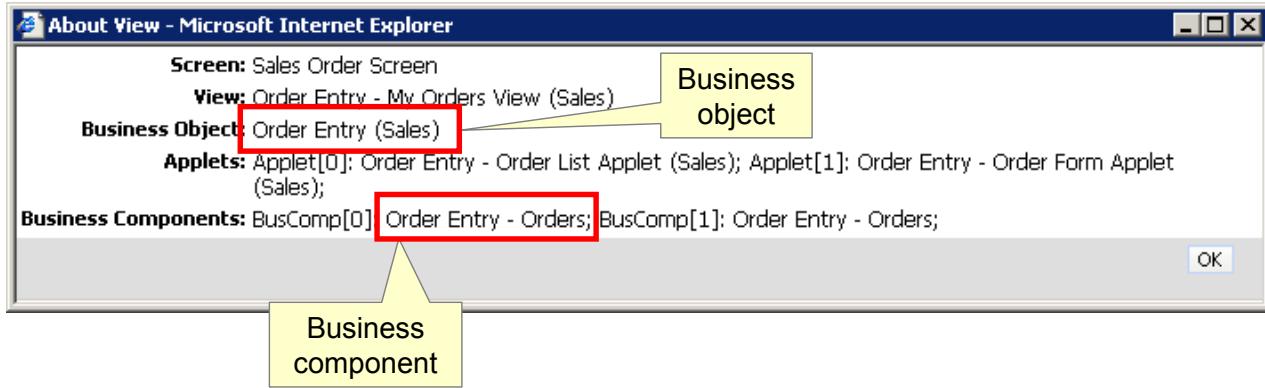
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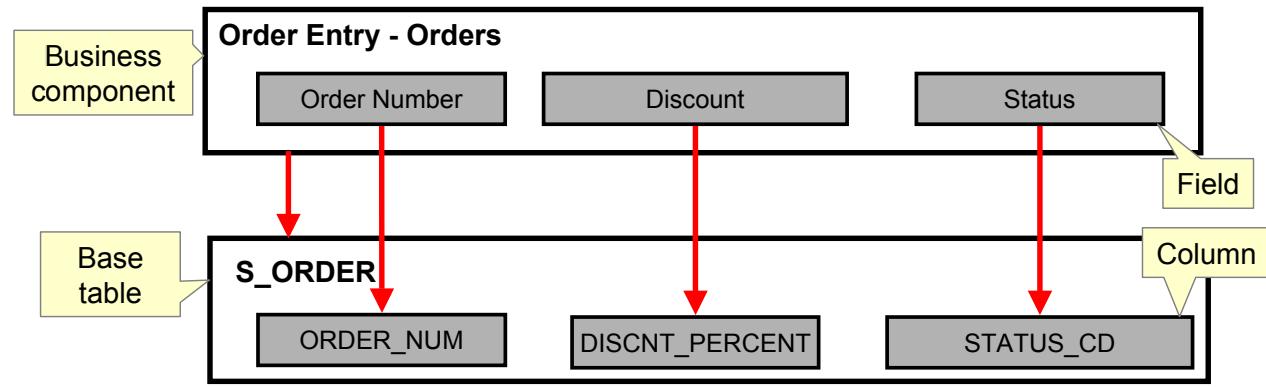
Business Layer

- Business object definitions specify the business logic for the application
- In the Business layer, there are two principal objects:
 - ▶ Business component
 - ▶ Business object



Business Component (BC)

- Represents one fundamental business entity in the enterprise
 - ▶ For example: Service Request, Contact, Activity
- Represents a logical grouping of data from one or more tables
- Refers to a base table
- Consists of multiple fields that characterize the business component
 - ▶ Many fields within the business component reference columns in the base table



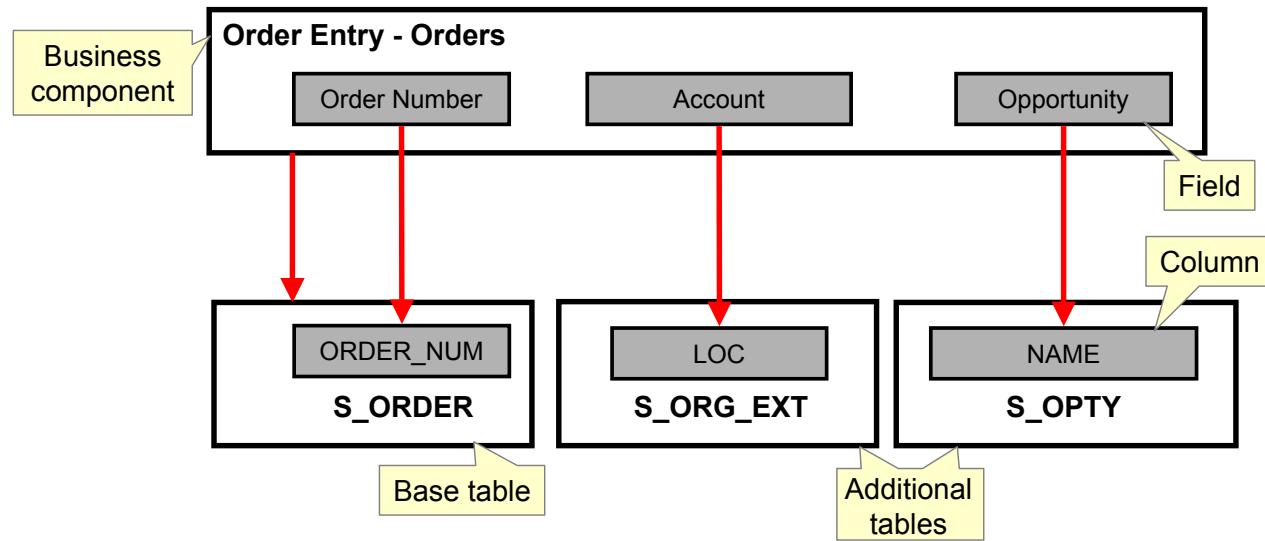
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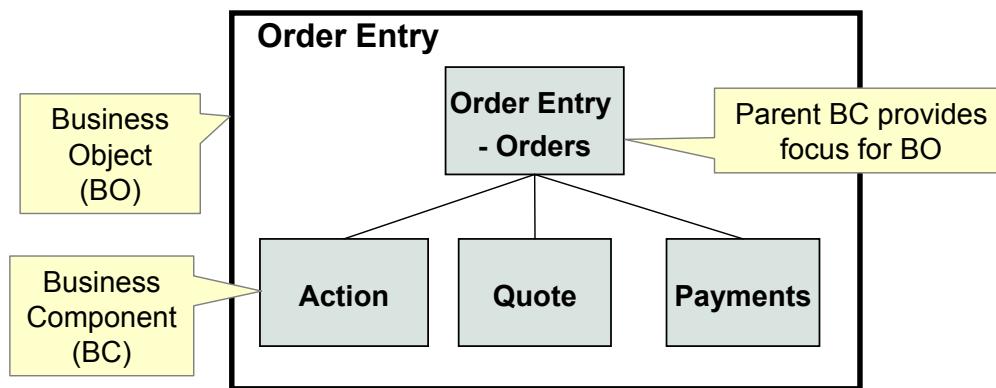
Business Component Continued

- Can include data from additional related tables
 - ▶ Some fields map to columns in these related tables



Business Object (BO)

- Is a collection of related Business components (BCs)
- Represents a major functional area of the enterprise
 - ▶ For example, order management
- Contains specific details about the relationships between BCs
 - ▶ One BC is the master or driving BC
 - ▶ Organizes related business components

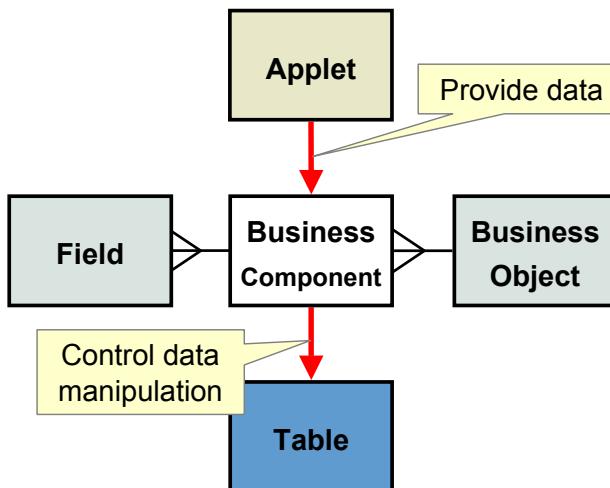




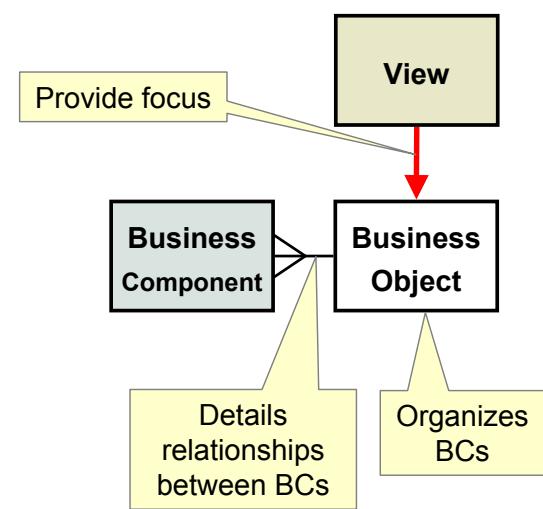
Comparing Business Components and Business Objects

- Business Objects provide focus to *views* and organize BCs
- Business Components provide data to *applets* and control data manipulation in tables

Business Component



Business Object



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UI Object Definitions

- There are five principal UI objects within the user interface

The screenshot shows a Siebel application window titled "Siebel Call Center - Microsoft Internet Explorer". The window displays a list of sales orders and a detailed view of one specific order.

Annotations:

- 1. Application:** A yellow box pointing to the top navigation bar.
- 2. Screen:** A yellow box pointing to the main content area containing the list of sales orders.
- 3. View:** A yellow box pointing to the detailed view of a sales order at the bottom of the screen.
- 4. Applet:** A yellow box pointing to the "Opportunities" button in the top menu bar.
- 5. List Column or Control:** A yellow box pointing to the "Opportunity" column in the list of sales orders, which contains a tooltip "1000 Users of 768MB RDRAM".

Sales Order List View:

Order #	Type	Account	Last Name	Sales Rep	Priority	Status	Opportunity	Discount
I-2876302	Sales Order	Puma Sports, Inc.	Bochini	SADMIN	Medium	Open	1000 Users of 768MB RDRAM	
1-3542257	Sales Order	Telstra Corporation	Blondy	SADMIN	High	Closed		8%
1-3544286	Sales Order	Alberta Treasury Br	Metayer	SADMIN	Medium	Open		
1-3544320	Sales Order	Appicast	Kelly	SADMIN	High	Pending		
1-3544337	Sales Order	Appicast	Andersen	SADMIN	High	Pending		
1-3544354	Sales Order	Appicast	Thompson	SADMIN	Low	Pending		
1-3544371	Sales Order	Assurances Group	Limbach	SADMIN	Medium	Pending		
1-3544405	Sales Order	Broadband e2e	Mertens	SADMIN	Medium	Open		
1-3544694	Sales Order	LivePerson	Merideth	SADMIN	Medium	Open		
1-3544728	Sales Order	LivePerson	Ferguson	SADMIN	High	Pending		

Sales Order Detail View:

Menu	New	Delete	Query	Revise	Submit
Order #:*	1-2876302	Account:	Puma Sports, Inc.	Opportunity:	1000 Users of 768*
Revision:	1	Site:	Call Center	Status:	Open
Type:	Sales Order	Last Name:	Bochini	Created:	11/1/2001 9:30:51
					Currency: * USD

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Control and List Column Object Definitions

- Provide the ability to display and manipulate data

The screenshot shows the Siebel application interface. At the top, there is a navigation bar with links: Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Service. Below the navigation bar is a toolbar with buttons for Home, List, Line Items Analysis, and Charts. The main area displays two views:

- List View:** A table titled "My Sales Orders" with columns: Order #, Type, Account, Last Name, Sales Rep, Priority, Status, Opportunity, and Discount. The "Opportunity" column contains a yellow background with text: "1000 Users of 768f RDRAM". A callout box points to this cell with the text: "This column displays data in a columnar list".
- Form View:** A "Sales Order" form with fields: Order #: 1-2876302, Revision: 1, Type: Sales Order, Sales Rep: SADMIN, Account: Puma Sports, Inc., Site: Call Center, Last Name: Bochini, First Name: Augusto, Opportunity: 1000 Users of 768f, Status: Open, Created: 11/1/2001 9:30:51, Due:, Total: \$1,762, Price List:, Currency: USD, and Discount:. A callout box points to the "Opportunity" field in the form with the text: "This control displays data in a field via a form".

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Applet Object Definition

- A section of a view, such as a list or form
- References one business component whose data can be viewed and edited through the list or form
- Consists of list column or textbox control object definitions
 - ▶ Refer to fields in the applet-referenced business component
 - ▶ Specify how the data for the fields is displayed in the list or form

The diagram illustrates the mapping of fields from a Sales Order applet to an Order Entry - Orders business component. Red arrows point from specific fields in the applet interface to corresponding objects in the business component.

Sales Order Applet Fields:

- Order #: 1-2876302
- Revision: 1
- Type: Sales Order
- Sales Rep: SADMIN
- Account: Puma Sports, Inc.
- Site: Call Center
- Last Name: Bodini
- First Name: Augusto
- Opportunity: 1000 Users of 768f
- Status: Open
- Created: 11/1/2001 9:30:51
- Due:
- Total: \$1,762,010.70
- Price List:
- Currency: USD
- Discount:

Business component (Order Entry - Orders):

- Order Number
- Account
- Opportunity

A yellow callout box labeled "Business component" points to the "Order Entry - Orders" box. Three red arrows originate from the "Order #: 1-2876302" field in the applet, the "Account: Puma Sports, Inc." field in the applet, and the "Opportunity: 1000 Users of 768f" field in the applet, and point respectively to the "Order Number", "Account", and "Opportunity" fields in the business component box.

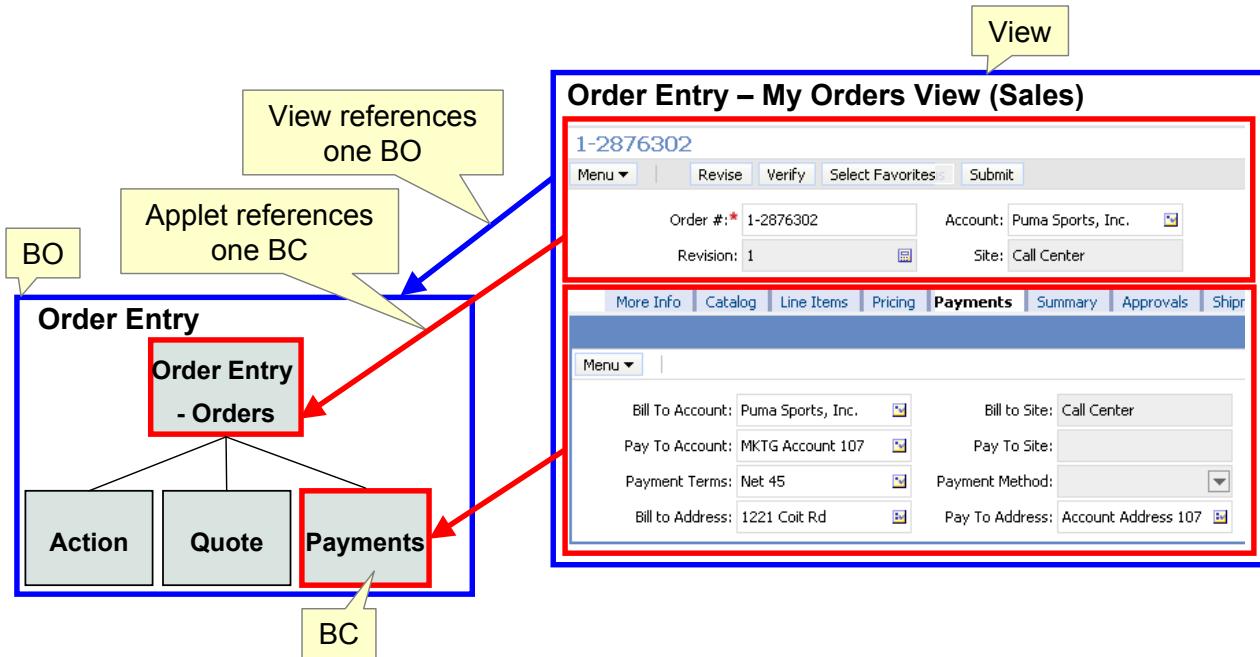
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View Object Definition

- Specifies a view in a Siebel application
- Contains multiple applet object definitions

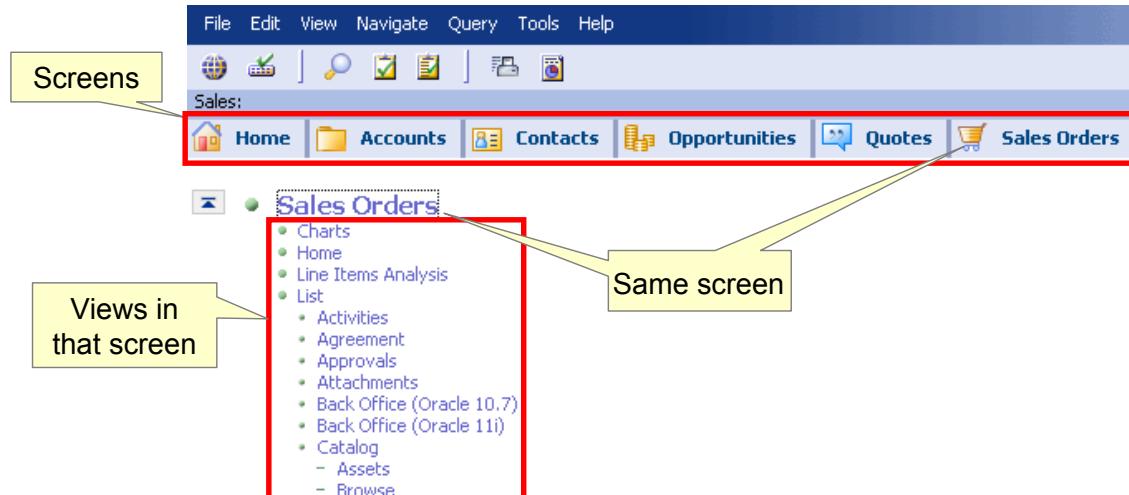


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Screen Object Definition

- Specifies a screen in a Siebel application
 - ▶ Is associated with a major functional area of the enterprise
- Contains multiple view object definitions that usually refer to the same business object
 - ▶ Administration screens are an exception



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Application Object Definition

- Specifies a particular collection of screens available in a Siebel application

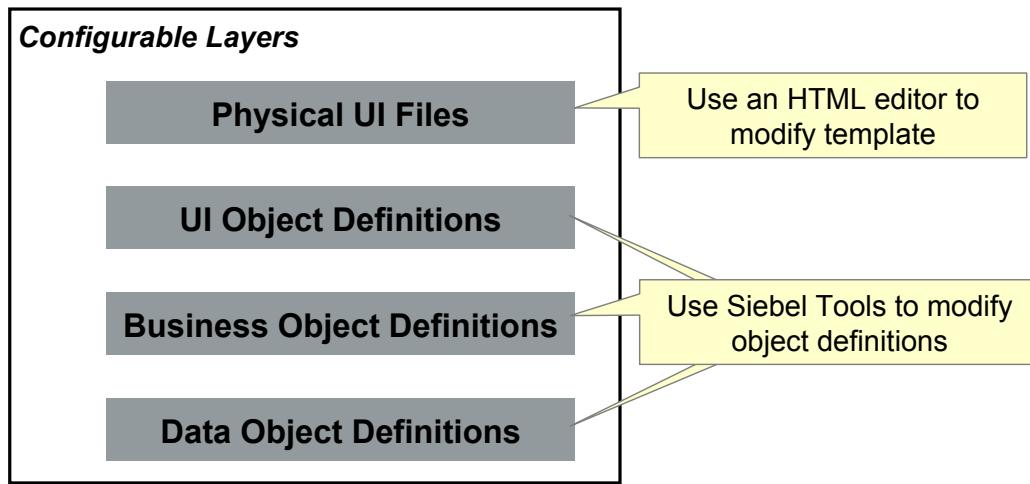


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Configuring Siebel Applications

- Is accomplished by using:
 - ▶ An HTML editor to modify template and other physical UI files
 - ▶ Siebel Tools to modify object definitions





Module Highlights

- Siebel architecture uses object definitions that specify application behavior
- Use Siebel Tools to:
 - ▶ Create, store, and modify object definitions in the database
 - ▶ Compile object definitions into the SRF for more efficient run-time access
- Object definitions are grouped into three layers:
 - ▶ UI Layer
 - Includes applications, screens, views, applets and list columns/controls
 - ▶ Business Layer
 - Includes business objects and business components
 - ▶ Data Layer
 - Includes tables and columns



Lab

- In the lab you will:
 - ▶ Examine how UI layer object definitions reference business layer object definitions

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Module 15: Using Siebel Tools to Examine Object Definitions

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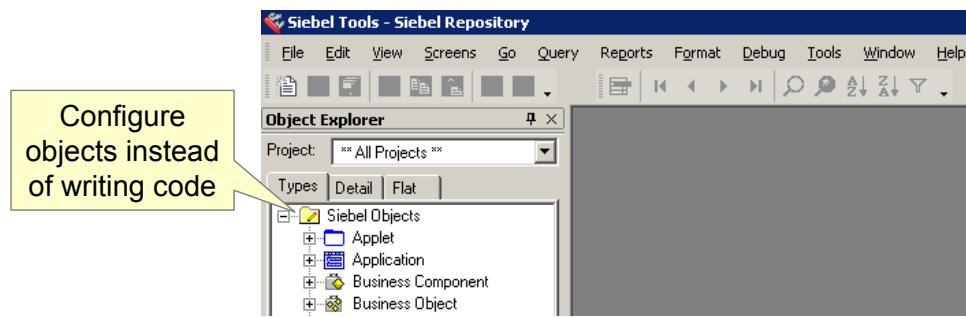
Module Objectives

- After completing this module you should be able to:
 - ▶ Describe the differences between object types and object definitions
 - ▶ Use Siebel Tools to examine parent and child object definitions
- Why you need to know:
 - ▶ Enables you to configure Siebel applications effectively
 - ▶ Enables you to examine mappings that support bulk data transfer

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Siebel Tools

- Is an Integrated Development Environment (IDE)
- Is a declarative configuration tool
 - ▶ Is used to create and modify object definitions (metadata) that define Siebel applications
 - Set properties for objects that control behavior
 - No need to modify source code or write SQL



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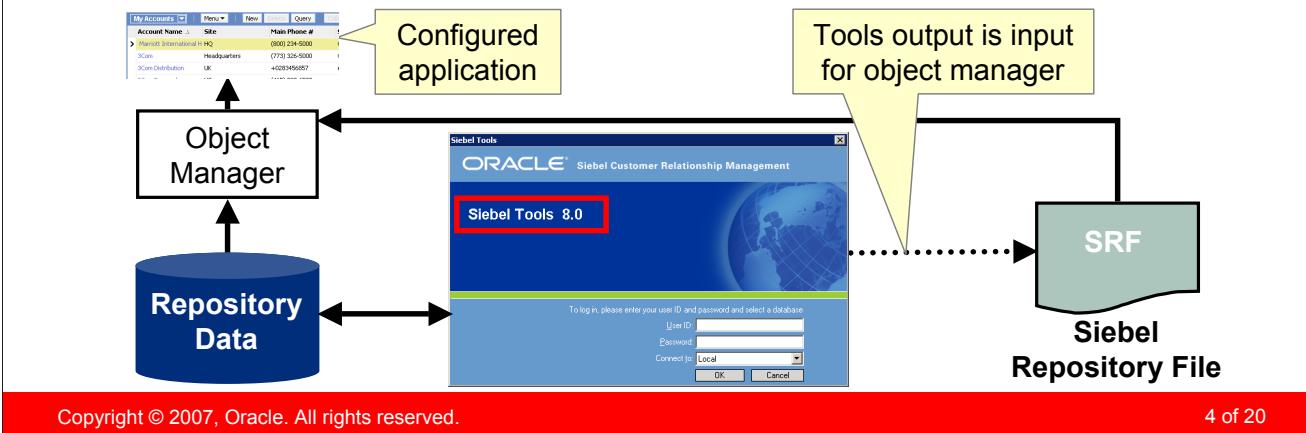
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Object Definitions

- Are metadata that define elements of the user interface, business logic, and data storage
- Are stored in the Siebel Repository, a subset of tables in the Siebel database
- Are examined, created, and edited using Siebel Tools
- Are compiled into the repository file for a configured application

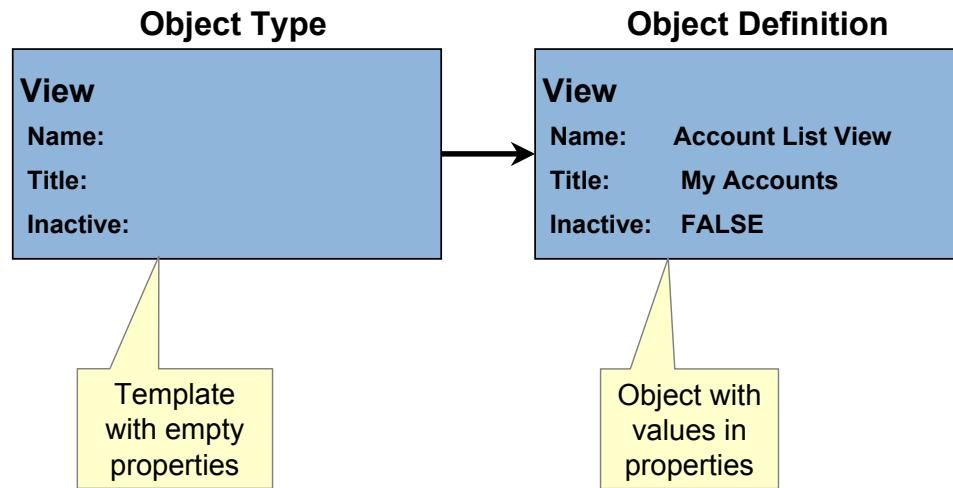


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Object Definition

- Consists of a set of properties with assigned values
- Is created from a template called an object type



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Object Terminology

The terms *object type* and *object definition*, as used here, should not be confused with similar terms (*object*, *object class*, *object instance*) found in object-oriented design and programming languages.

Object Definition Properties

Object definition properties describe characteristics of the object definition and have the following value types: user-defined names, numerical values, Boolean values (TRUE and FALSE), Siebel-defined constants, and references to the names of other object definitions.

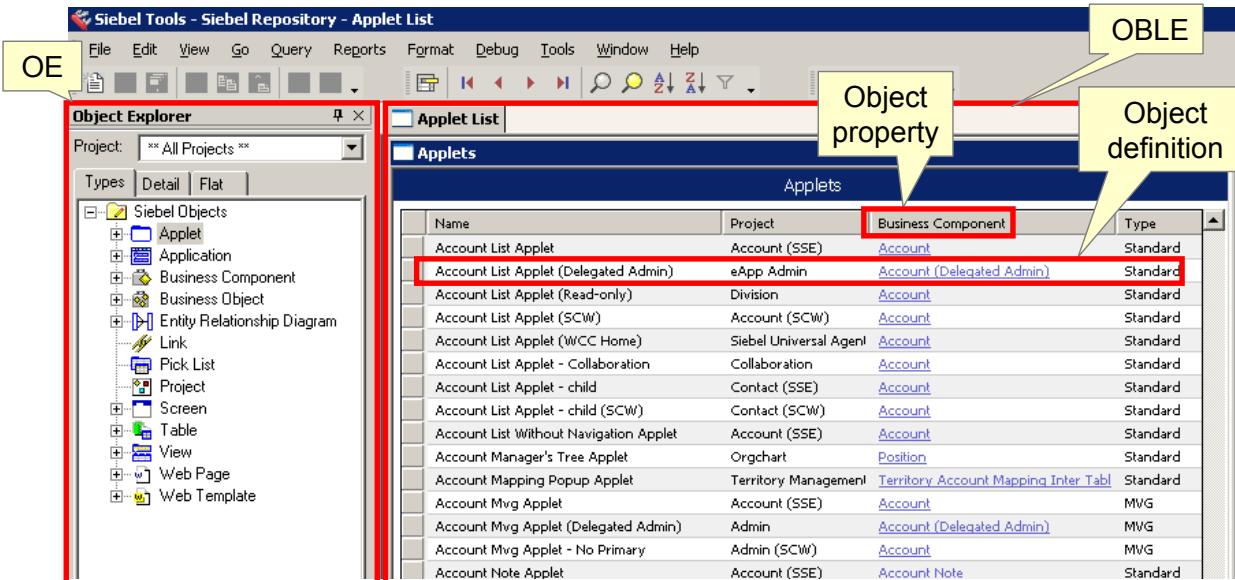
Referencing Names

A property that references the name of another object definition must match the name exactly in spelling (spaces do count) and cases. A value of Prod is not the same as PROD.

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Examining Object Definitions

- Use the Object List Editor (OBLE) to display object definitions
 - ▶ Select an object type in the Object Explorer (OE)
 - ▶ Object definitions appear in the Object List Editor



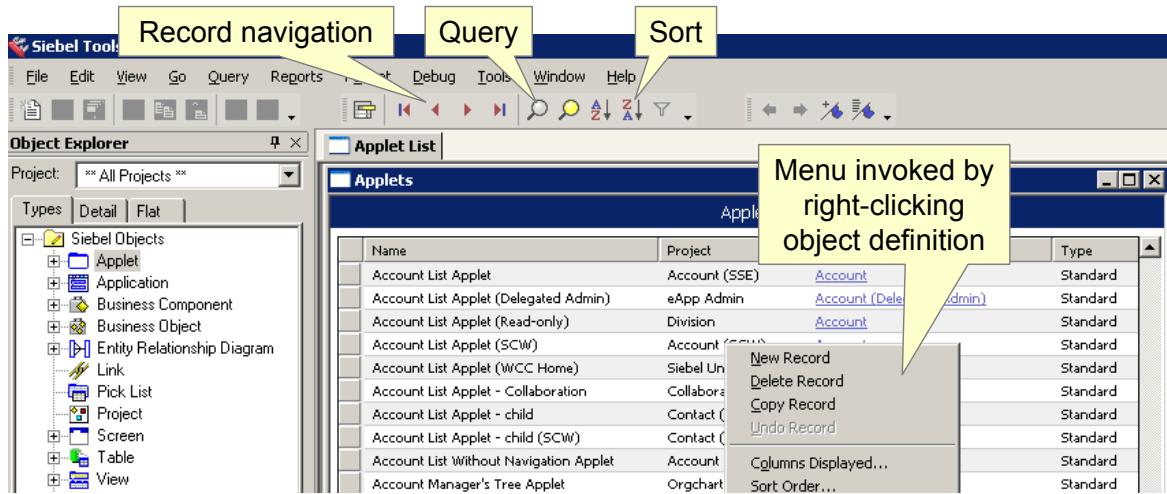
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Siebel Tools User Interface

- Differs from the client application
- Has toolbar icons for common user operations



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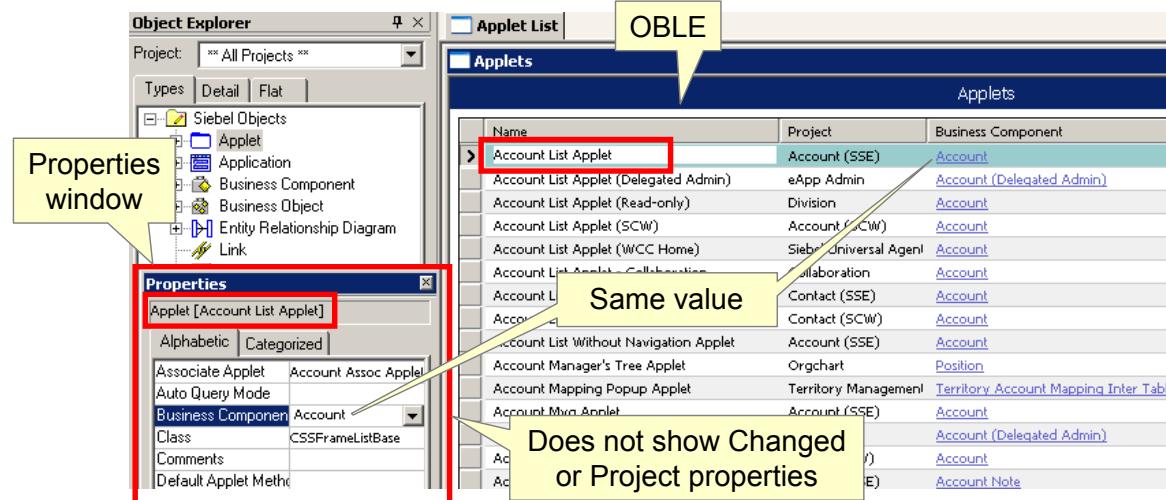
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Properties Window

- Displays the properties for the object definition selected in the OBLE
- ▶ Select View > Windows > Properties Window
- ▶ Properties are listed in alphabetical order
- ▶ The value is shown next to property name

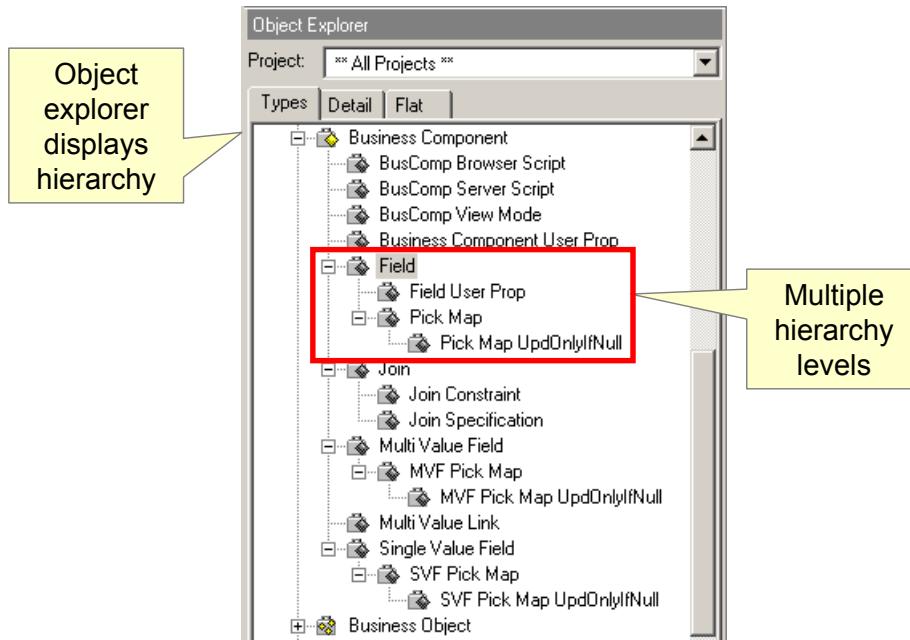


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Hierarchy of Object Types

- Some object types contain child object types
 - ▶ For instance, Field is a child object type of the Business Component object type



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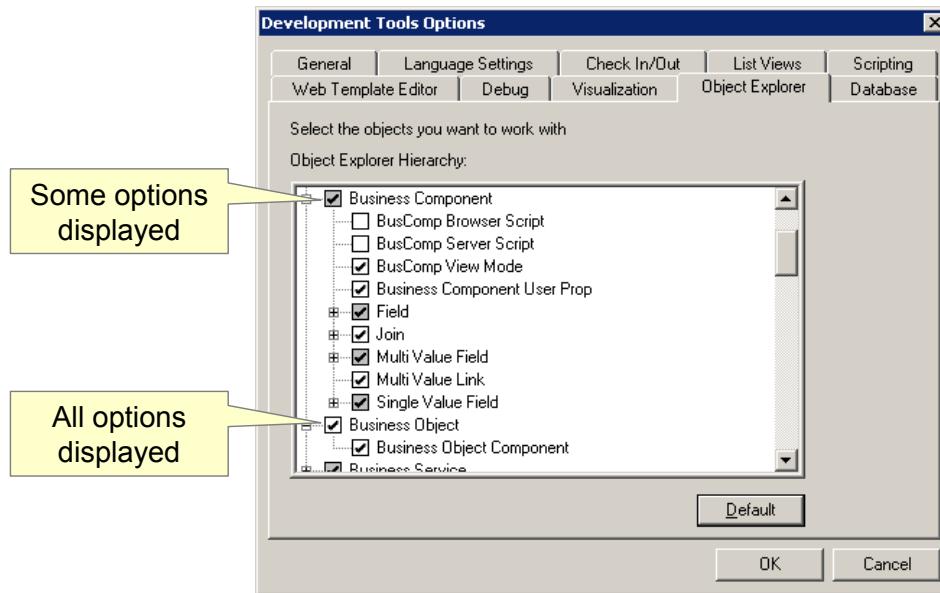
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Object Explorer

- Displays by default a small set of the most commonly used object types
 - ▶ Select View > Options and click the Object Explorer tab to add or remove object types from the Object Explorer



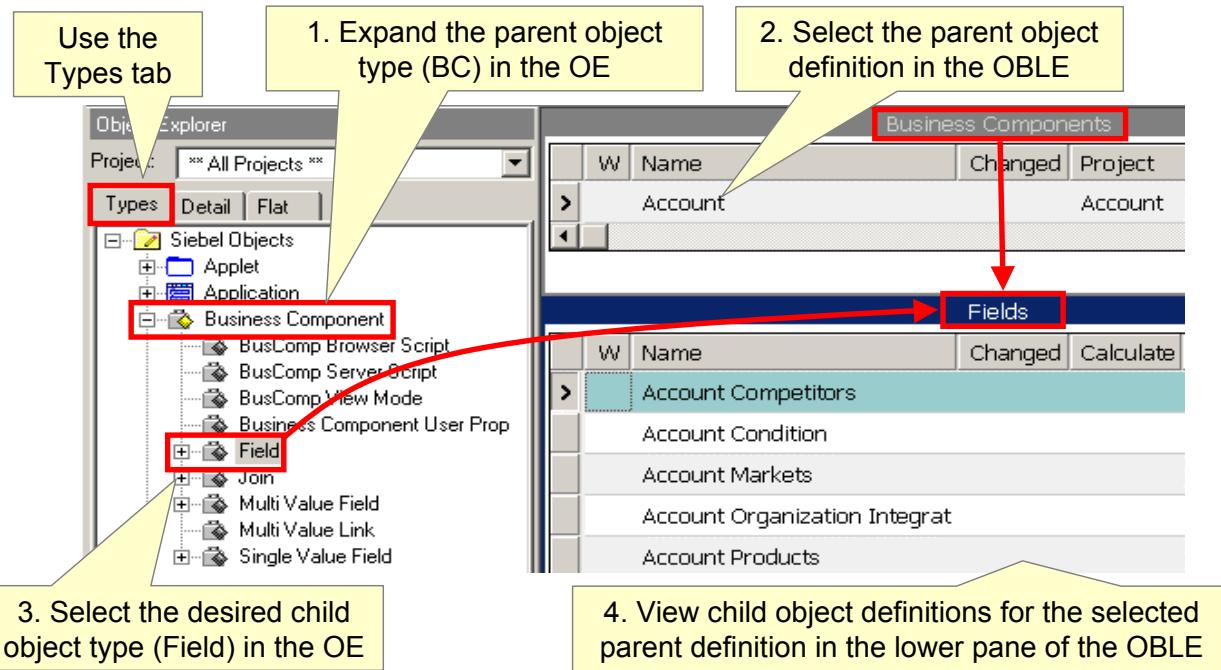
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Viewing Parent/Child Object Definitions

- Select object types and definitions alternately to examine child object definitions



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Additional Navigation Techniques

Hyperlinks

Back and Forward Buttons

Bookmarks

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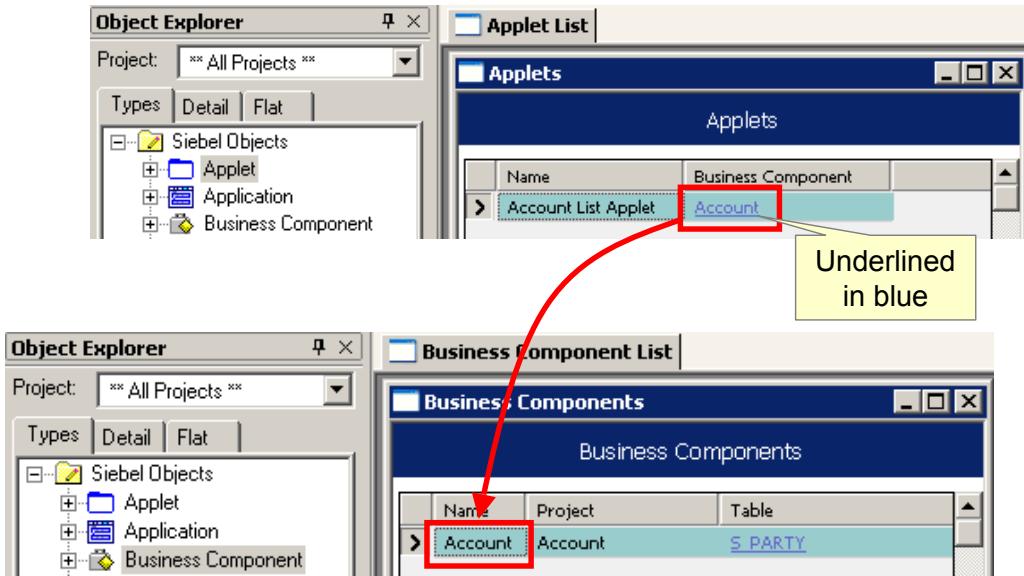
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Hyperlinks

- Drill down on a hyperlink to navigate to that object definition
 - ▶ For example, applet to business component
 - ▶ For example, business component to table



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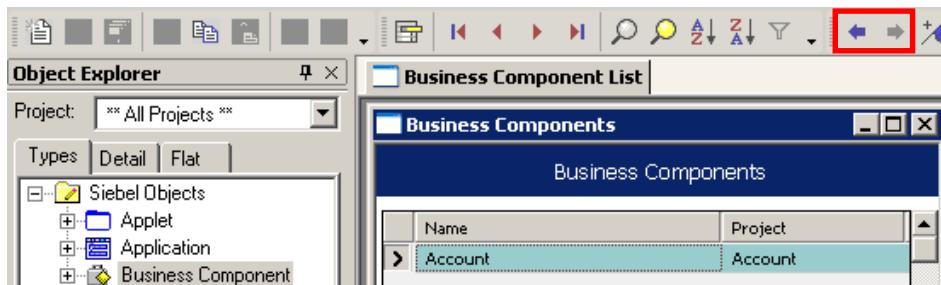
Using Drilldown

Siebel Tools users must have the Developer responsibility in order to drill down.

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Back and Forward Buttons

- Use the Back button to return to the object definition last examined
- Use the Forward button to return to the current object definition



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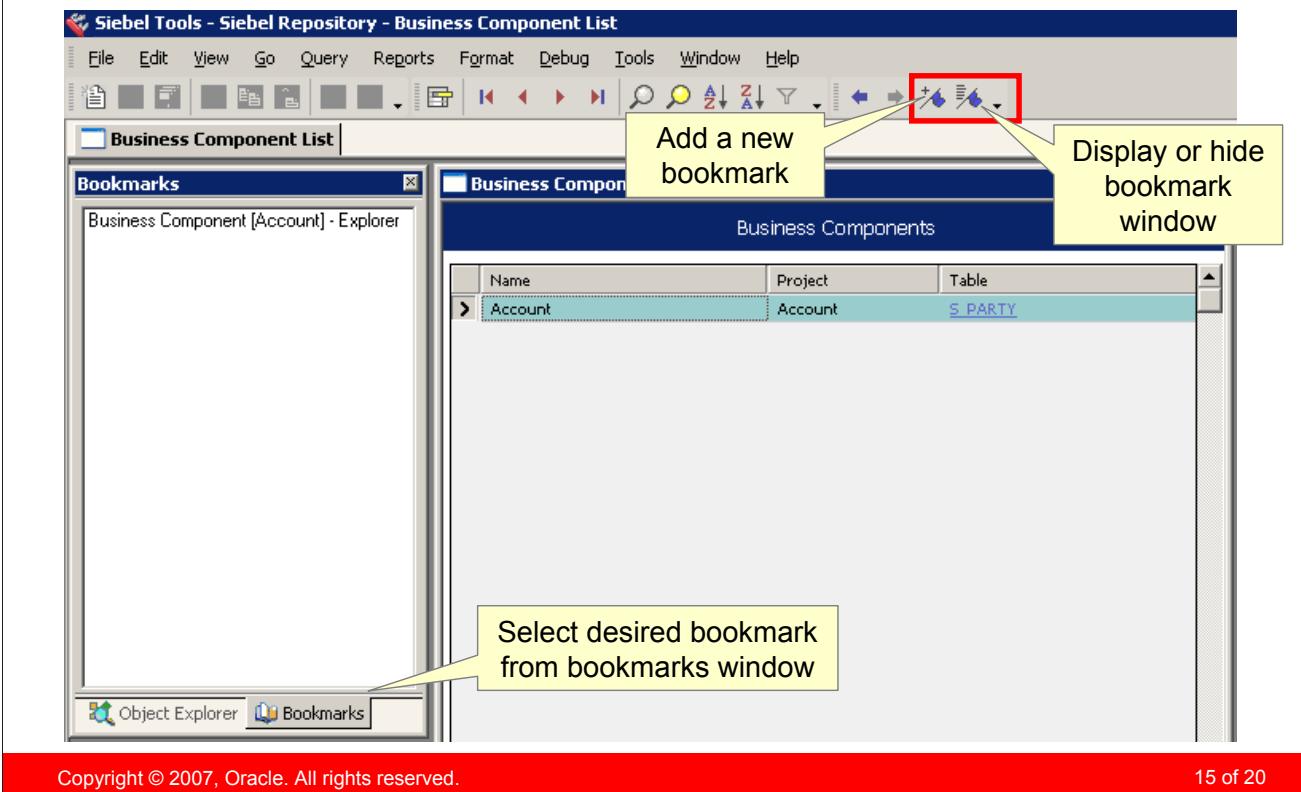
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Best Practice

The Forward and Back buttons have limited functionality; instead use bookmarks as a navigation aide. Bookmarks are discussed on the next slide.

Bookmarks

- Use bookmarks to navigate directly to a specific object definition



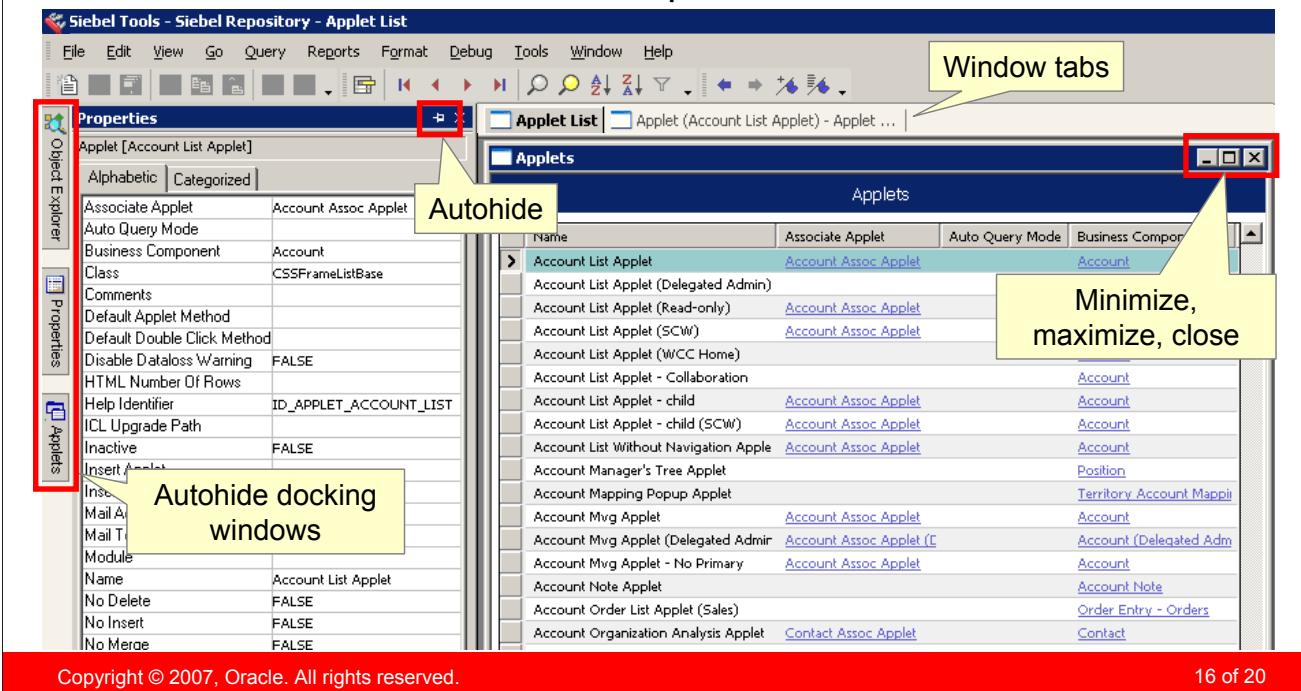
Bookmarks

Bookmarks can serve very effectively as predefined queries.

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Window Navigation

- Use dockable windows and tabs for frequently-accessed tools such as the Properties window
- Undock windows to resize and place



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Object Explorer: Flat Tab

- Removes all hierarchy and shows all object types in a single list
- Helps developers:
 - ▶ Find a child object with an unknown parent
 - ▶ See how object definitions and properties are typically used

Object Explorer

Project: [dropdown]

Types | Detail | **Flat**

- Chart Element
- Chart Element Locale
- Chart Locale
- Column
- Control**
- Control Locale
- Control User Prop
- Drilldown Object
- Own Object Locale

Select any object type in the OE

W	Name	Parent Applet
	Account Name	SWLS eChannel Action Action Detail Applet
	Account Name Label	SWLS Activity Account Pick Applet
	Account Name Label	SWLS Contact Account Pick Applet
	Account Name Label	SWLS Account Association Applet
	Account Number	SAP 4x Account Entry Applet
	Account Number	SAP 4x Account Form Applet
	Account Number	Account Form Applet (MO)

Controls

Parent object definition displayed (parent applet for the control)



Module Highlights

- Siebel Tools is a declarative configuration tool
- Object definitions consist of a set of properties with assigned values
 - ▶ Are created from a template called an object type
- The Object Explorer (OE) lists object types
- Object definitions appear in the Object List Editor (OBLE)
- Properties Window displays the object definition selected in the OBLE
- Flat tab removes all hierarchy and shows all object types in a single list



Lab

- In the lab you will:
 - ▶ Use Siebel Tools to examine object definitions in the Siebel repository

Tools navigation convention used in the labs

Select Business Component :: Account | Field :: Account Role

Parent Object
Type in OE

Child Object
Type in OE

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Siebel 8.0 Essentials

Module 16: The Siebel Data Model

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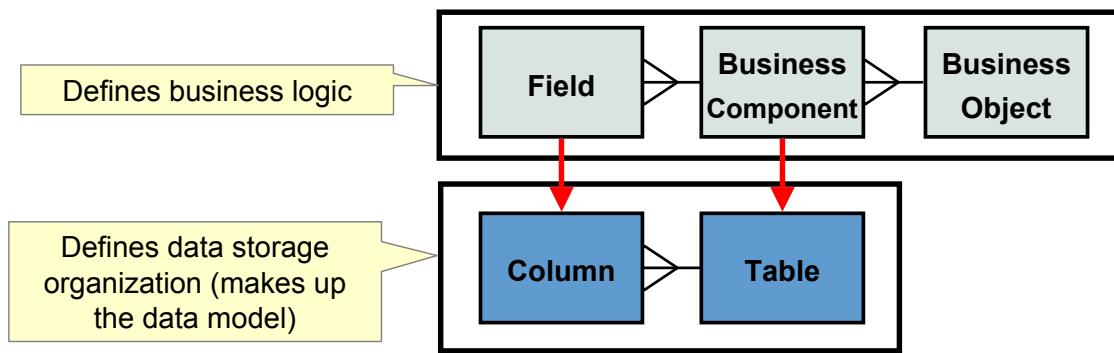


Module Objectives

- After completing this module you should be able to:
 - ▶ Describe the purpose of the Siebel Data Model
 - ▶ Describe the role of primary and foreign keys, indexes, and user keys
 - ▶ Identify prominent tables in the Siebel Data Model
- Why you need to know:
 - ▶ Enables you to understand how data is accessed in existing Siebel applications
 - ▶ Enables you to understand how to map your business logic to the Siebel Data Model
 - ▶ Enables you to configure the Data layer as necessary for your implementation

The Siebel Data Model

- Defines how the data used by Siebel applications is stored in a standard third-party relational database
 - ▶ Specifies the tables and relationships
- Is designed to support the data requirements across Siebel applications



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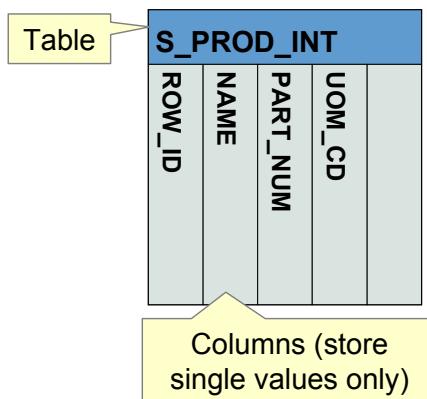
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Siebel Data

- Is organized and stored in normalized tables in a relational database
 - ▶ Each table has multiple columns storing atomic data (single-value, cannot be logically further sub-divided)
 - ▶ The data schema is organized to eliminate repeated storage of data



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Reference

Configuring Siebel Business Applications: Configuring Tables and Columns

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Primary Key (PK)

- Is a column that uniquely identifies each row in a table
 - ▶ ROW_ID serves as the primary key for Siebel tables

S_PROD_INT				
ROW_ID	NAME	PART_NUM	UOM_CD	

Primary key

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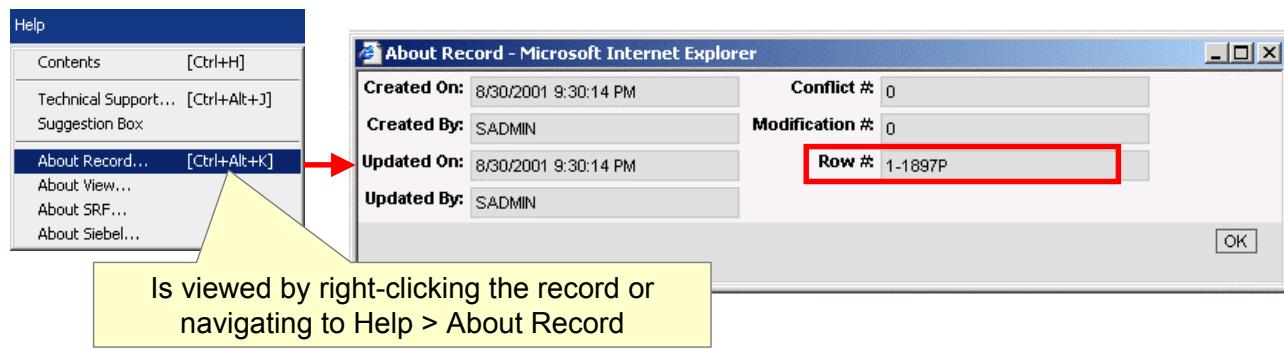
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ROW_ID

- Is a column in every table
 - ▶ Contains a Siebel application-generated identifier that is unique across all tables and mobile users
- Is managed by Siebel applications and must not be modified by users



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Understanding the Data Model

Tables

Columns

User Keys

Indexes

Relationships Between Tables

Extension Tables

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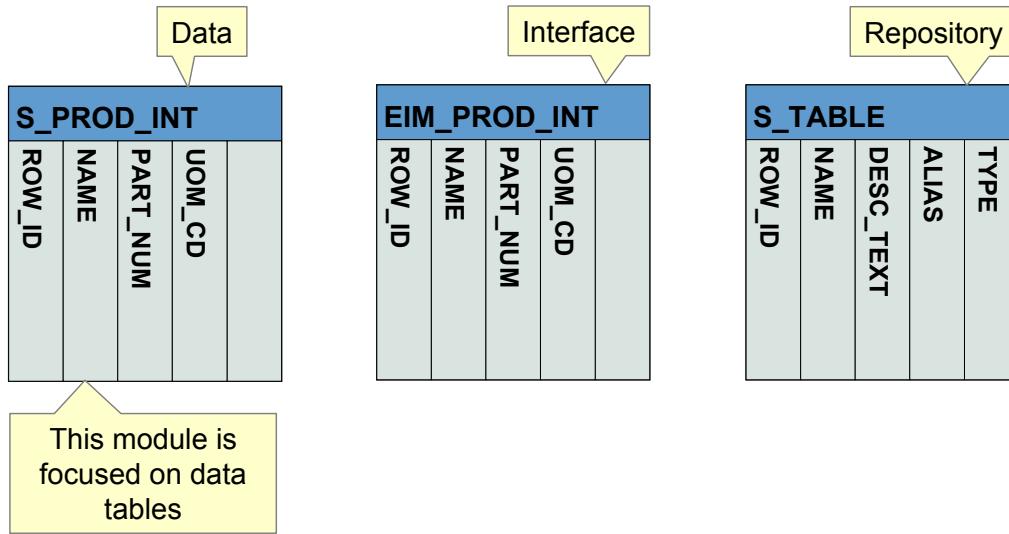
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Tables

- Approximately 3,000 tables in the database
- Three major types: Data, Interface, and Repository



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Creating the Schema The database schema is created during the Siebel database server installation. Additional tables can be created by developers using Siebel Tools.

Type The type of a table is specified by its Type property.

Data Tables

- Store the user data
 - ▶ Business data
 - ▶ Administrative data
 - ▶ Seed data
- Are populated and updated by:
 - ▶ Users through the Siebel applications
 - ▶ Server processes such as: Enterprise Integration Manager (EIM) and Assignment Manager
- Have names prefixed with S_
- Are documented in the Siebel Data Model Reference

Seven Prominent Data Tables

- Store data for the major business entities

Opportunity

S_OPTY
ROW_ID
STG_NAME
PROG_NAME
BDGT_AMT

Service Request

S_SRV_REQ
LAST_UPD
ASGN_DT
DESC_TEXT
SR_NUM
ROW_ID

Contact

S_CONTACT
MID_NAME
FST_NAME
LAST_NAME
ROW_ID

Asset

S_ASSET
MFG_DT
ROW_ID
NAME
PROG_NAME
ASSET_NUM
SERIAL_NUM
BDGT_AMT

Account

S_ORG_EXT
EMP_COUNT
ROW_ID
DIVISION
DEPT_NUM
DESC_TEXT

Activity

S_EVT_ACT
OPTY_ID
ROW_ID
ACTIVITY_UID
TODO_CD

Internal Product

S_PROD_INT
NAME
ROW_ID

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Columns

- Each table has multiple columns to store user and system data
 - ▶ Defined by Column child object definitions
- Columns determine the data that can be stored in that table

The screenshot shows the Oracle Siebel Object Explorer interface. On the left, the Object Explorer tree view is open, showing categories like Siebel Objects, Applet, Application, Business Component, Business Object, Entity Relationship Diagram, Link, Project, Screen, Table, Column, Index, User Key, and View. A red arrow points from the 'Column' node under 'Table' to the 'Columns' window on the right. The 'Columns' window has a title bar 'Columns' and a sub-header 'Tables'. It contains two tables: a top-level 'Name' table with one entry 'S_PROD_INT' highlighted, and a detailed 'Columns' table below it. The 'Columns' table has columns: Name, Type, Physical Type, and Length. The data is as follows:

Name	Type	Physical Type	Length
ACCRUAL_RATE	Data (Public)	Number	22
ACTIVE_FLG	Data (Public)	Character	1
ALC_BELOW_SFTY_FLG	Data (Public)	Character	1
ALIAS_NAME	Data (Public)	Varchar	100
ALOC_ASSETS_FLG	Data (Public)	Character	1
APPLY_EC_RULE_FLG	Data (Public)	Character	1
AUTO_ALLOCATE_FLG	Data (Public)	Character	1
AUTO_SUBST_FLG	Data (Public)	Character	1

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Column Properties

- Determine size and type of data that can be stored in column
- Limit proposed modifications to a standard application
- Do not edit existing properties

The screenshot shows the Siebel Object Explorer on the left and the Column List window on the right. The Object Explorer displays a tree structure of Siebel Objects, with 'Table' selected. The Column List window shows a 'Tables' list with 'S_PROD_INT' and a detailed 'Columns' list below it. A yellow callout points to the 'Physical Type' and 'Length' columns in the 'Columns' list, which are highlighted with a red border. The 'Physical Type' column lists 'Number', 'Character', 'Varchar', and 'Character'. The 'Length' column lists '22', '1', '100', and '1' respectively.

Name	Type	Physical Type	Length
ACCRUAL_RATE	Data (Public)	Number	22
ACTIVE_FLG	Data (Public)	Character	1
ALC_BELOW_SFTY_FLG	Data (Public)	Character	1
ALIAS_NAME	Data (Public)	Varchar	100
ALOC_ASSETS_FLG	Data (Public)	Character	1
APPLY_EC_RULE_FLG	Data (Public)	Character	1

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Data Type and Length Properties

- Physical Type identifies the type of data to be stored
- Length determines the maximum size

Name	Type	Physical Type	Length
ACCRUAL_RATE	Data (Public)	Number	22
ACTIVE_FLG	Data (Public)	Character	1
ALC_BELOW_SFTY_FLG	Data (Public)	Character	1
ALIAS_NAME	Data (Public)	Varchar	100
ALOC_ASSETS_FLG	Data (Public)	Character	1
APPLY_EC_RULE_FLG	Data (Public)	Character	1
AUTO_ALLOCATE_FLG	Data (Public)	Character	1
AUTO_SUBST_FLG	Data (Public)	Character	1

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System Columns

- Exist for all tables to store system data
- Are maintained by Siebel applications and tasks

The screenshot shows the Oracle SQL Developer interface. On the left is the Object Explorer pane, which lists various Siebel objects like Applet, Application, Business Component, etc. Under Table, there is a 'Column' node. On the right is the Column List pane, which has tabs for 'Tables' and 'Columns'. It shows a list of columns for a table named 'S_PROD_INT'. A yellow callout points to the 'Type' column in the grid, highlighting the 'System' entries for several columns: CONFLICT_ID, CREATED, CREATED_BY, DB_LAST_UPD, DB_LAST_UPD_SRC, DCKING_NUM, LAST_UPD, LAST_UPD_BY, MODIFICATION_NUM, and ROW_ID.

Name	Type	Physical Type	Length
CONFLICT_ID	System	Varchar	15
CREATED	System	UTC Date Time	7
CREATED_BY	System	Varchar	15
DB_LAST_UPD	System	UTC Date Time	7
DB_LAST_UPD_SRC	System	Varchar	50
DCKING_NUM	System	Number	22
LAST_UPD	System	UTC Date Time	7
LAST_UPD_BY	System	Varchar	15
MODIFICATION_NUM	System	Number	22
ROW_ID	System	Varchar	15

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User Keys

- Are used to determine the uniqueness of records when entering, importing, or integrating data
- Are predefined and cannot be changed

User Key Columns

Name	User Key Type
S_PROD_INT: Export Only	Export Only
S_PROD_INT_II	Integration Id
S_PROD_INT_U1	Traditional U1 Index

User Key Columns

Name	Column	Column Sequence
BU_ID	BU_ID	0
NAME	NAME	0
VENDR_OU_ID	VENDR_OU_ID	0

Column Combination provides a unique value

All columns in user key may not be required

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User Keys

Customers cannot modify user keys. Expert Services can assist customers in evaluating strategies to remap data in their implementations to make use of the current user key structure within their specific business requirements.

The information about the user keys for a table has been incorporated into data that support EIM and remote synchronization. In addition, there is a predefined index (see next slide) based on the Siebel-defined user key.

Indexes

- Are a separate data structure that stores a data value for a column and a pointer to the corresponding row
 - ▶ Used to retrieve and sort data rapidly
- Are predefined by Siebel as a set of standard indexes

The screenshot shows the Siebel Object Explorer interface. The left pane displays a tree view of Siebel Objects, including Applet, Application, Business Component, Business Object, Entity Relationship Diagram, Link, Project, Screen, and Table. Under Table, there are sub-folders for Column, Index, User Key, and User Key Attribute. The right pane shows two windows: 'Index Column List' and 'Index Columns'. The 'Index Column List' window has tabs for 'Indexes' and 'Index Columns'. The 'Indexes' tab shows three entries: S_PROD_INT_M8 (System), S_PROD_INT_M9 (System), and S_PROD_INT_P1 (Primary Key). The 'Index Columns' tab shows a list of columns for a specific index, with one entry highlighted: S_PROD_INT_U1 (User Key). A callout box points to this entry with the text '_P index based on primary key'. The 'Index Columns' window below it lists columns BU_ID, CONFLICT_ID, NAME, and VENDR_OU_ID, each with a 'Sequence' value (3, 4, 1, 2) and a 'Sort Order' of Asc. A red box highlights the 'Sequence' column. A callout box points to this column with the text '_U index based on user key'. Another callout box points to the bottom of the 'Index Columns' window with the text 'Sequence affects sort order'.

Name	Type
S_PROD_INT_M8	System
S_PROD_INT_M9	System
S_PROD_INT_P1	Primary Key
S_PROD_INT_U1	User Key

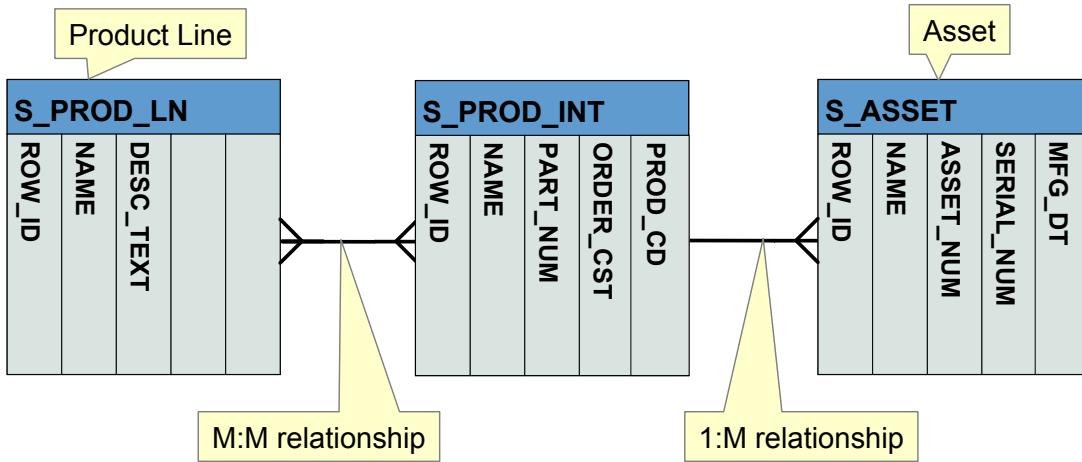
Column Name	Sequence	Sort Order
BU_ID	3	Asc
CONFLICT_ID	4	Asc
NAME	1	Asc
VENDR_OU_ID	2	Asc

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Relationships Between Tables

- Siebel tables have many predefined relationships to support the as-delivered application
 - ▶ 1:M – one-to-many
 - ▶ M:M – many-to-many



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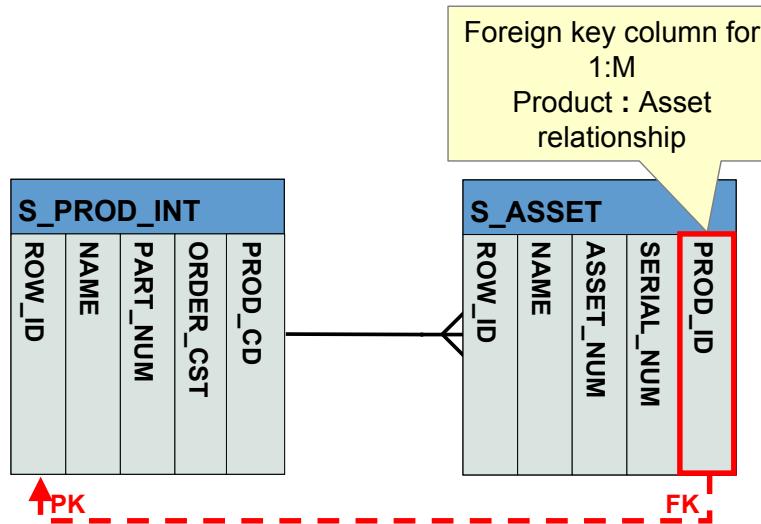
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1:M Relationships

- Are captured using foreign key (FK) table columns in the table on the many side of the relationship
- FK column on many side of the relationship references PK column on one side



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Foreign Key Columns

Since a product could have many assets (product instances) associated with it, a foreign key column cannot be located in the **S_PROD_INT** table. It might then have to contain multiple **ROW_ID**s, which would violate the basic rule of a single value for a column.

Foreign Key Table Columns

- Are columns in a table that refer to the primary key column of a related (parent) table
 - ▶ Many are named with suffix _ID
- Are maintained by Siebel applications and tasks to ensure referential integrity and should never be updated directly via SQL



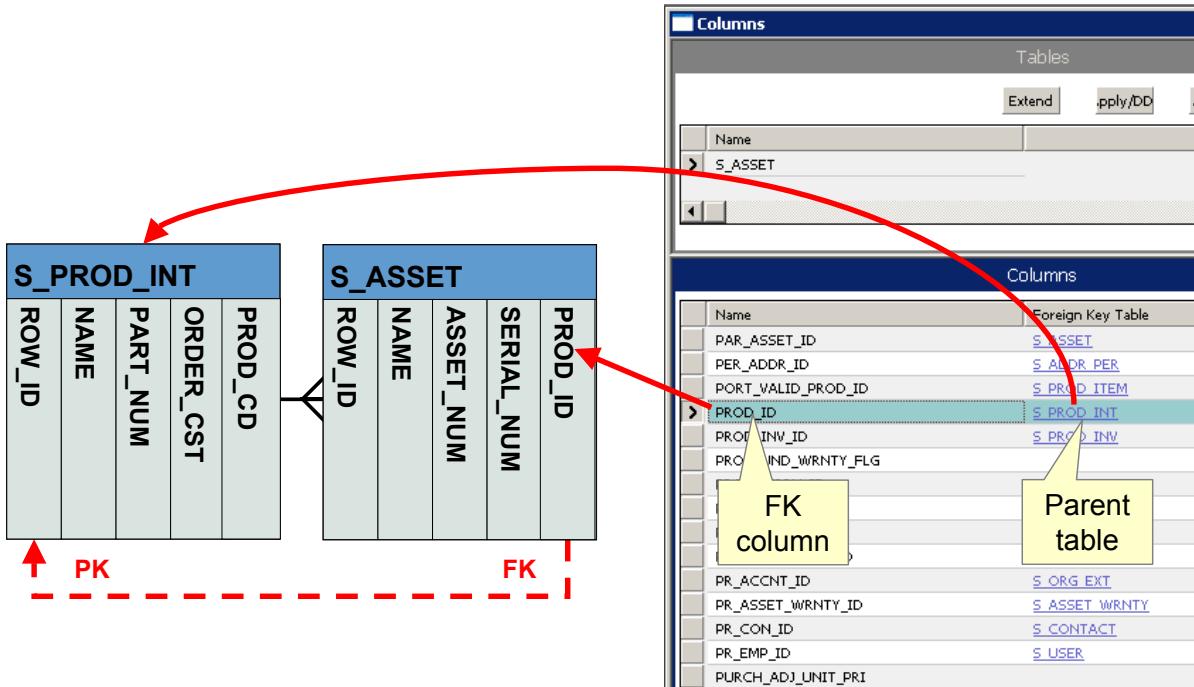
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Finding Foreign Keys for 1:M Relationships

- Inspect the Foreign Key Table property in a Column object definition to determine the column that serves as the FK

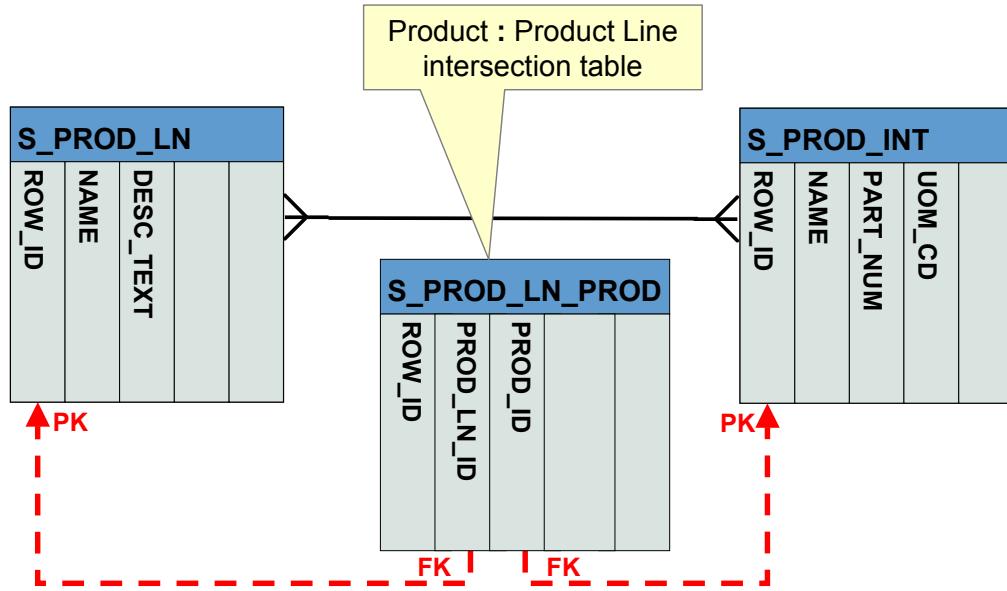


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M:M Relationships

- Are captured using foreign key columns in a third table called the intersection table

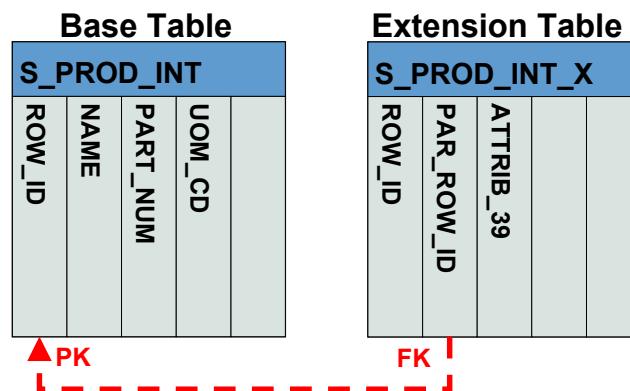


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1:1 Extension Table

- Is a special table that has a 1:1 relationship with a base table
 - ▶ Foreign key for the relationship:
 - Is located in the extension table
 - Is named PAR_ROW_ID
- Provides additional columns for business components referencing the base table
 - ▶ A base and extension table can be considered as a single logical table



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ROW_ID

The ROW_ID for a row in a 1:1 extension table is, by convention, the same as that of the related row in the base table, and is an exception to the general rule that ROW_IDS are unique across all tables.

Rows in Extension Tables

A row in an extension table is created only if there is data to store in one of its columns. For example, a new product record that does not have a value for any fields referencing the extension table would create a row in the base table, but not in the extension table.

Standard 1:1 Extension Tables

- Prebuilt for many major tables
 - ▶ Have the name of the base table with suffix _X
- Contain 40-plus generic columns of varying types
 - ▶ Store data for new business component fields that are in addition to those mapped to the base table

Tables

Name	Type	Comments
S_OPTY_PROD_X	Extension	(OBSOLETE for 7.0). Opportunity Product 1:1 Extension. Siebel Extension Table for Opportu
S_OPTY_STG_X	Extension	Opportunity Sales Stage 1:1 Extension. Siebel Extension Table for Opportunity Sales Cycle his
S_OPTY_X	Extension	Opportunity 1:1 Extension. Siebel Extension Table for Opportunities.
S_ORDER_ITEM_X	Extension	Order Item 1:1 Extension. Siebel Extension Table for Order Items.
S_ORDER_X	Extension	Order 1:1 Extension. Siebel Extension Table for Orders.
S_ORG_EXT_X	Extension	S_ORG_EXT 1:1 Extension table. Siebel Extension table for custom attributes intrinsic to any or
S_ORG_GROUP_X	Extension	Household 1:1 Extension. Siebel Extension table for Households.
S_ORG_INT_X	Extension	S_ORG_EXT 1:1 Extension. Siebel Extension table for custom attributes of Internal Divisions de
S_PART_RPR_X	Extension	Repair Part 1:1 Extension. Siebel Extension Table for Repair Parts.
S_PRI_LST_ITEM_X	Extension	Price List Item 1:1 Extension. Siebel Extension Table for Price List Items.
S_PRI_LST_X	Extension	Price List 1:1 Extension. Siebel Extension Table for Price Lists.
S_PROD_DEFECT_X	Extension	Product Defect 1:1 Extension. Siebel Extension table for Product Defect.
S_PROD_EXT_X	Extension	External Product 1:1 Extension. Siebel Extension Table for External or Competitor Products.
S_PROD_INT_X	Extension	Product Internal 1:1 Extension. Siebel Extension Table for Internal Products or Products sold i
S_PROD_LN_X	Extension	Product Line 1:1 Extension. Siebel Extension Table for Product Lines.
S_PROD_SPEC_X	Extension	Product Specification 1:1 Extension. Siebel Extension Table for Product Specifications.
S_PROJITEM_X	Extension	Project Items 1:1 Extension. Siebel Extension Table for Project Items.

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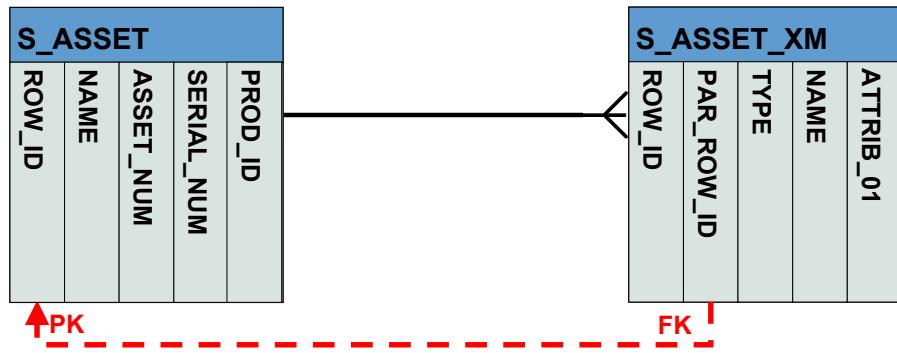
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1:M Extension Table

- Is a special table for storing child data related to an existing parent table
- Allows you to track entities that do not exist in the as-delivered Siebel applications



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Standard 1:M Extension Tables

- Are prebuilt for many tables
- Have the name of the main table appended with _XM

Name	Type	Physical Type	Length
TYPE	Data (Public)	Varchar	30
ROW_ID	System	Varchar	15
PAR_ROW_ID	System	Varchar	15
NAME	Data (Public)	Varchar	100
MODIFICATION_NUM	System	Number	22
LAST_UPD_BY	System	Varchar	15
LAST_UPD	System	UTC Date Time	7
DB_LAST_UPD_SRC	System	Varchar	50
DB_LAST_UPD	System	UTC Date Time	7
CREATED_BY	System	Varchar	15
CREATED	System	UTC Date Time	7
CONFLICT_ID	System	Varchar	15
ATTRIB_47	Data (Public)	Varchar	255
ATTRIB_46	Data (Public)	Varchar	100
ATTRIB_45	Data (Public)	Varchar	100

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Module Highlights

- Siebel Data Model defines how data is stored in a third-party relational database
- A primary key (PK) is a column that uniquely identifies each table row
- ROW_ID is a column in every table
 - ▶ Contains a Siebel application-generated unique identifier
- User keys specify the columns used to determine uniqueness of records when entering, importing, or integrating data
- Foreign Key Table columns are columns in a table that refer to the PK column of a related table
- 1:1, 1:M, and M:M relationships are predefined within the model



Lab

- In the lab you will:
 - ▶ Examine tables, columns, indexes, and user keys that make up the Siebel Data Model
 - ▶ Determine the form of relationships between tables in the Siebel Data Model

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Siebel 8.0 Essentials

Module 17: Siebel Business Components

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Module Objectives

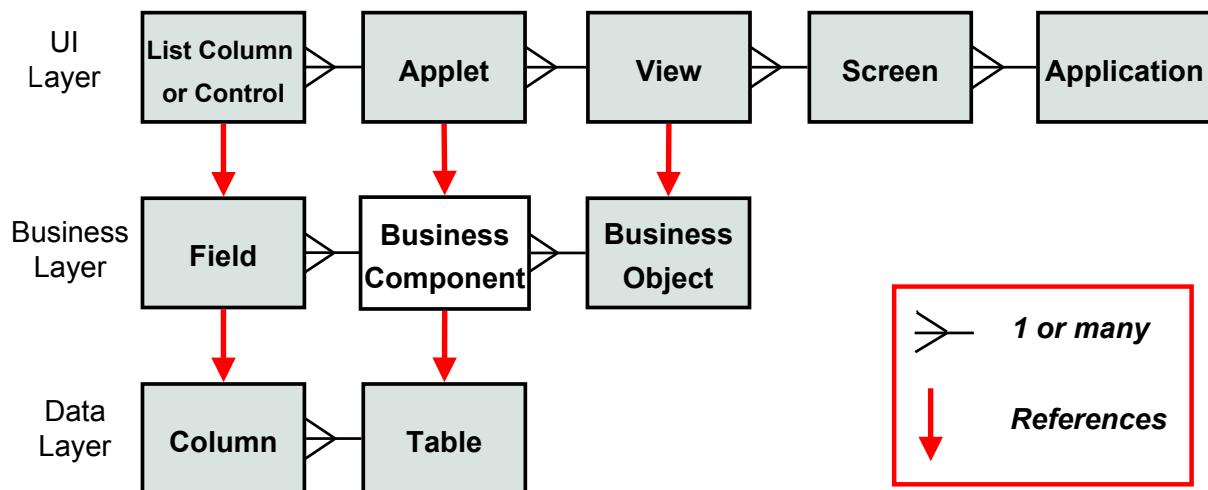
- After completing this module you should be able to:
 - ▶ Define a business component
 - ▶ Describe how business component fields at the business object layer are mapped to columns at the data layer
 - ▶ Describe how base and joined tables are used as a part of this mapping
- Why you need to know:
 - ▶ The business component is a fundamental object in the Siebel Application Architecture

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Application Architecture: Business Components

- Provide a way to group data according to business logic
- Are referenced by applets
- Specify access to tables (read, write, and update)
- Are used by business objects to provide data to views

Siebel Application Architecture



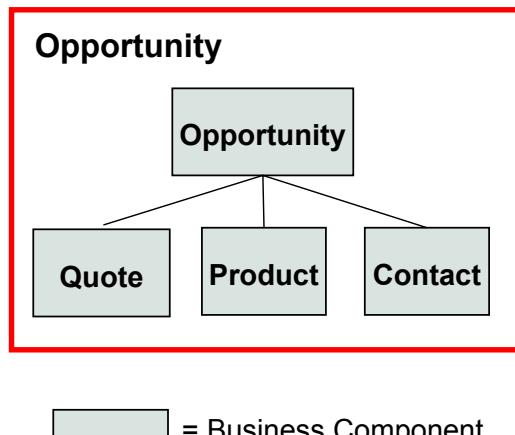
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Business Component

- A business component (BC) is a person, place, thing, or event about which data must be stored
 - ▶ Represents a fundamental business *entity*
- Provides the foundation for controlling how data is selected, inserted, and updated in underlying tables



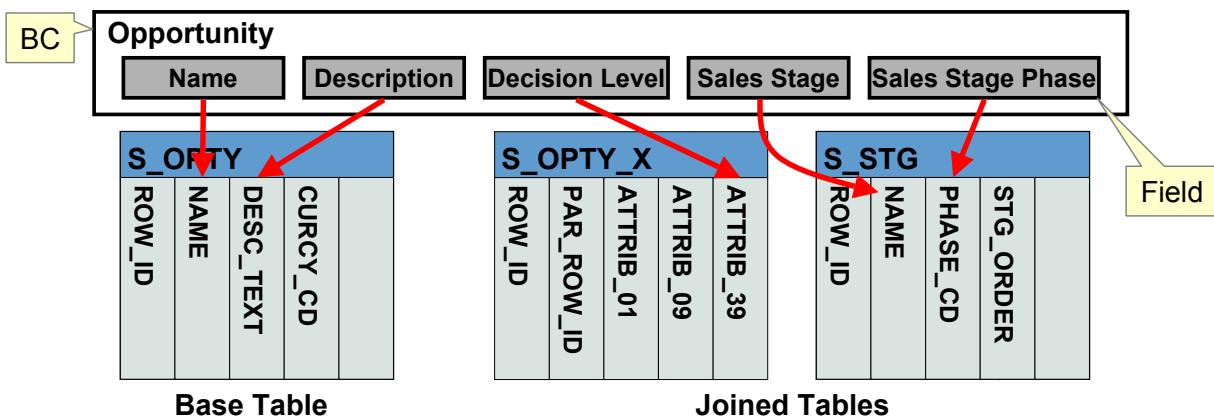
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Business Component Continued

- Arranges data from one or more tables into a logical grouping
- Consists primarily of fields and joins
 - ▶ Each field references a single column in a table
- Is not a table
 - ▶ Does not store data
 - ▶ Stores metadata: data about data



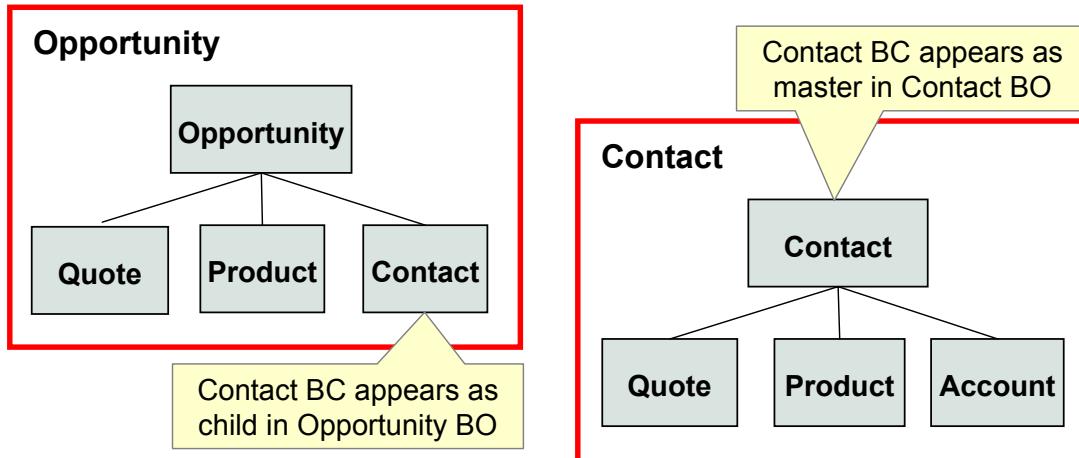
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Business Component Reuse

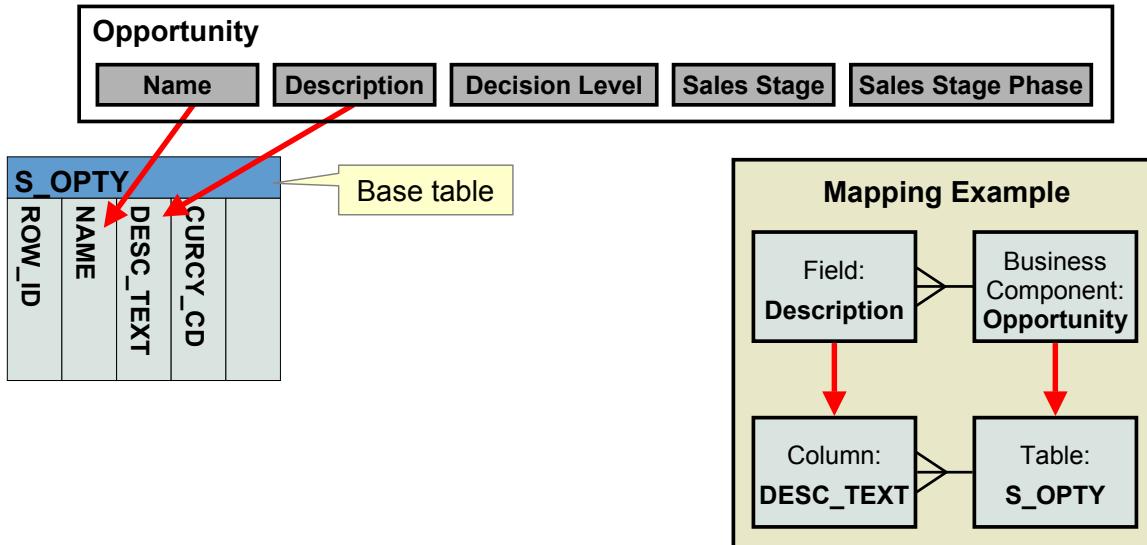
- A business component can be:
 - ▶ Defined once in terms of a logical collection of columns from one or more tables
 - ▶ Then used in many different business object contexts



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Base Table

- Contains the main columns for the business component
- Every business component references only one base table
- Many BC fields are mapped to base table columns
- Fields referencing base tables are editable in the UI



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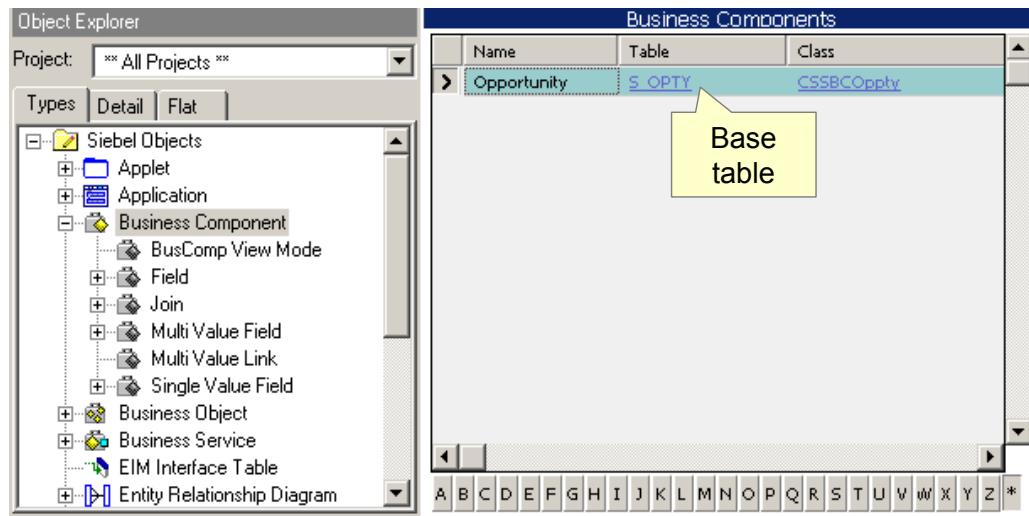
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Business Component Table Property

- Each business component contains a table property that specifies the base table



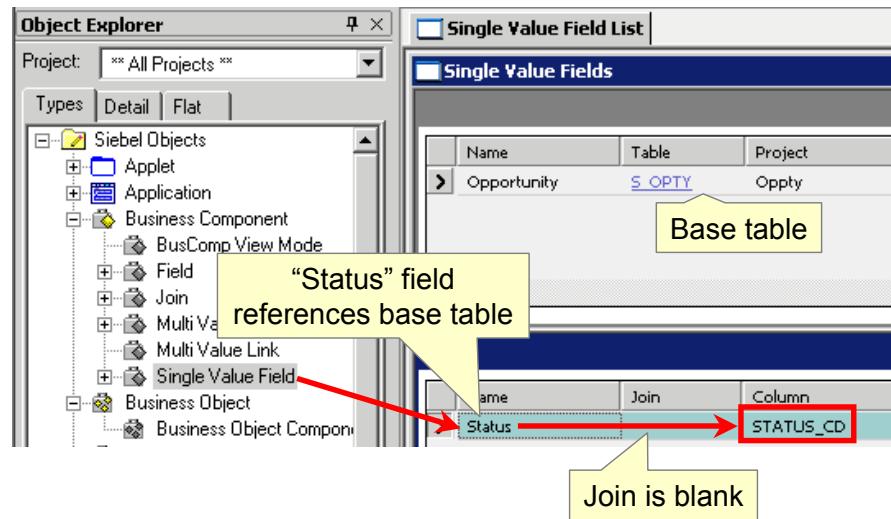
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Fields That Map to a Base Table

- Column property maps to a column in the base table
 - ▶ Join property is blank

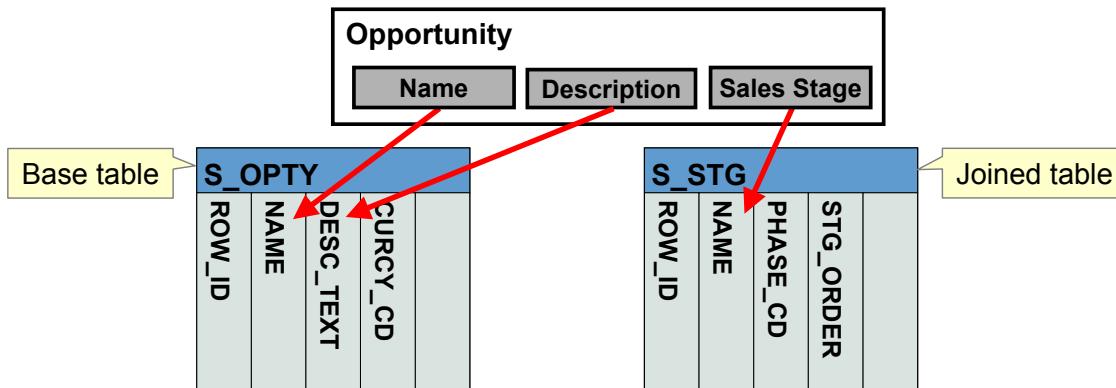


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Explicit Join

- Is a join that brings in data from tables other than the base table to meet the business component's data display requirements
 - ▶ Most fields referencing explicitly joined tables are read-only in the applet
- Includes a join definition and a join specification
- BC field references the join definition



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Fields That Map to a Joined Table

- Join property specifies the join object definition being referenced
- Column property maps to a column in the joined table

The screenshot shows the Siebel Object Explorer and the Single Value Field List interface.

Object Explorer: Shows the project "All Projects" and various object types under "Siebel Objects". A red arrow points from the "Single Value Field" node in the "Business Component" section to the "Single Value Fields" list in the main pane.

Single Value Field List: Shows a table with columns "Name", "Table", and "Join". One row is selected for "Opportunity" with "S_OPTY" as the Table and "Sales Stage" as the Join.

Single Value Fields: Shows a table with columns "Name", "Join", and "Column". It lists fields: "Sales Stage" (Join: Sales Stage, Column: NAME), "Sales Stage Description" (Join: Sales Stage Description, Column: DESC_TEXT), "Sales Method" (Join: Sales Method, Column: NAME), and "Sales Method Id" (Join: Sales Method Id, Column: SALES_METHOD_ID).

Annotations with yellow boxes and arrows explain the mapping:

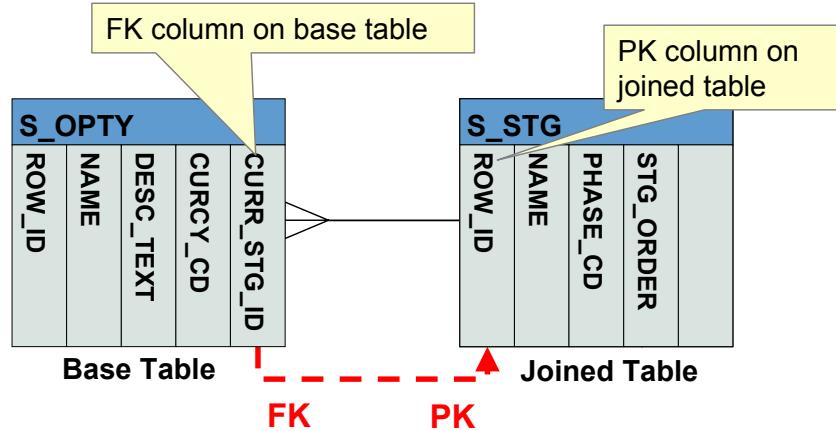
- "Sales Stage field maps to Sales Stage join" points to the "Sales Stage" entry in the "Single Value Fields" table.
- "Name of join that maps to S_STG table" points to the "Join" column of the "Single Value Fields" table.
- "The S_STG column, "NAME," contains sales stage data" points to the "NAME" column of the "Single Value Fields" table.

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Joining Data from Joined Tables

- Returns only one row from the joined table
- There is a 1:1 or 1:M relationship from the joined table to the BC
- Relationship is established using a FK column on the base table to join to the PK column on the joined table





Displaying Fields from Joined Tables

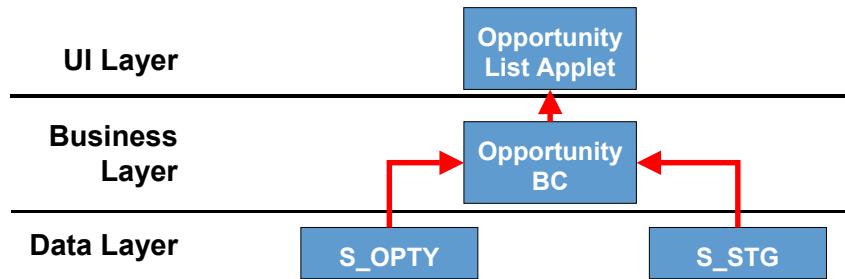
- The UI layer specifies how information joined at the business layer will be displayed

Screenshot of the Siebel Opportunities List screen:

Opportunity Name	Account	Sales Stage
200 PCS CS Laptop units	AT&T	J1 - Prospecting
200 PCS Puma Laptop EB units	Imperial Tobacco	J2 - Qualification
200 PCS Puma Laptop EB units	Broadband e2e	

Annotations:

- A red bracket under the first two columns is labeled "From Base Table".
- A red bracket under the third column is labeled "From Joined Table".



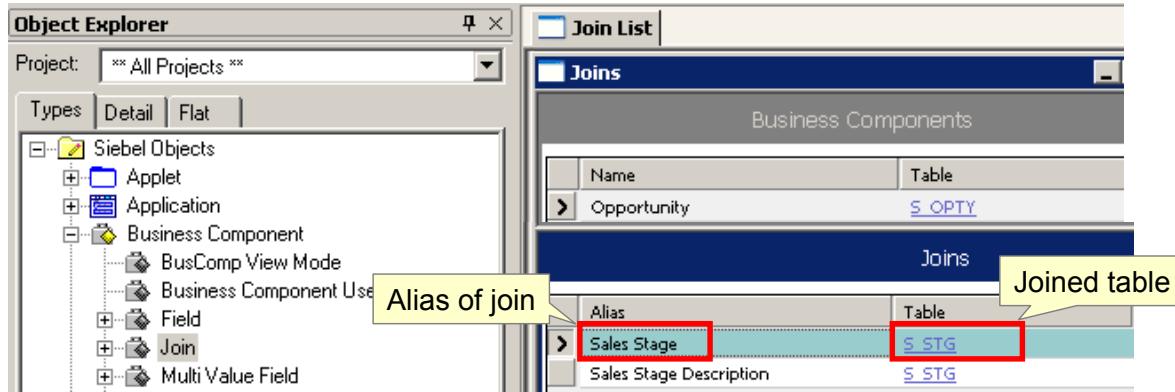
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Join Definition

- Specifies the joined table from which to retrieve data
 - ▶ Is a child object of the business component
- Defaults the alias property to the name of the joined table
 - ▶ Modify alias when there is more than one join to same table



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Join Specification

- Specifies how to retrieve the related row from the joined table
 - ▶ Based on the foreign and primary keys used to relate the base and joined tables

The diagram shows the Siebel Object Explorer and the Join Specification List interface.

Object Explorer: Shows the project structure under Siebel Objects > Business Component > Join > Join Specification.

Join Specification List: Shows the 'Join Specifications' table with one entry:

Alias	Table	Outer Join Flag
Sales Stage	S_STG	✓

Join Specifications: Shows the 'Join Specifications' table with one entry:

Name	Source Field	Destination Column
Sales Stage Id	Sales Stage Id	ROW_ID

Tables:

- Opportunity:** Contains columns Name, Description, Sales Stage Id.
- S_OPTY:** Contains columns ROW_ID, NAME, DESC_TEXT, CURCY_CD, Curr_Stage_Id.
- S_STG:** Contains columns ROW_ID, NAME, PHASE_CD, STG_ORDER.

Relationship: A dashed red arrow points from the Curr_Stage_Id column in S_OPTY to the ROW_ID column in S_STG. Labels 'FK' (Foreign Key) and 'PK' (Primary Key) are placed near these columns respectively.

Annotations:

- A yellow callout labeled "Foreign Key field" points to the Curr_Stage_Id column in the Opportunity table.
- A yellow callout labeled "Primary key column" points to the ROW_ID column in the S_STG table.

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Implicit Joins

- Base tables are automatically joined to their extension tables
 - ▶ Known as implicit joins
 - ▶ Make extension table rows available to the BC
 - ▶ An explicit join to describe the relationship is not needed
- Come pre-configured as part of the Siebel object architecture
 - ▶ Name of an implicit join is always the name of the _X table
- Do not appear as Join object definitions
- Do appear in the picklist for the Join property in an SVF

The screenshot shows three windows illustrating Siebel's handling of implicit joins:

- Left Window: Joins**
A table titled "Joins" with columns "Alias" and "Table". It lists several joins, including "S_LST_OF_VAL" to "S_LST_OF_VAL", "Parent Opportunity" to "S_OPTY", "S_ORG_EXT" to "S_ORG_EXT", "S_ORG_EXT_T" to "S_ORG_EXT_T", "S_POSTN" to "S_POSTN", "Sales Method" to "S_SALES_METHOD", and "S_OPTY_X" to "S_OPTY_X". A yellow callout box points to the last entry: "S_OPTY_X does not appear here".
- Middle Window: Single Value Fields**
A table titled "Single Value Fields" with columns "Name", "Join", and "Column". It shows a single row: "An Extension Field" under "Join".
- Right Window: Join**
A window titled "Join" containing a list of joins. A red arrow points from the "Join" column in the middle window to this list. The list includes "S_OPTY_T", "S_OPTY_X" (which is highlighted in blue), "S_ORG_EXT", and "S_ORG_EXT_T". A yellow callout box points to "S_OPTY_X": "S_OPTY_X does appear here".

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Fields That Map to an Extension Table

- Join property specifies the extension table being referenced
- Column property references a column in the extension table
- Field is editable in the UI

The S_OPTY_X column, "ATTRIB_44," contains budget amount data

Name	Join	Column
Budget Amt	S_OPTY_X	ATTRIB_44
Budget Amt Score		
Budget Available		BDGT_AVAILABLE_DT
Budgeted	S_OPTY_X	ATTRIB_09

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Module Highlights

- A BC is a person, place, thing, or event about which data is stored
- A BC can be defined once then re-used by different BOs
- Each BC references a single base table
- A BC can include data from joined tables
- A join definition specifies joined table
- A join specification specifies how to access joined table via PK/FK
- An extension table extends data in the BC
- Fields on extension tables use implicit joins

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Siebel 8.0 Essentials

Module 18: Siebel Party Business Components

18

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Module Objectives

- After completing this module you should be able to:
 - ▶ Define a party business component
 - ▶ Describe the role of S_PARTY and its extension tables in storing party business component data
 - ▶ Describe how data is stored differently for non-party business components and party business components
 - ▶ Describe how implicit and explicit joins are used with party business components
- Why you need to know:
 - ▶ Party business components are a fundamental element of the application architecture



Business Challenge: Modeling Party Data

- Party data is the ubiquitous information found in most RDBMS
 - ▶ Some prominent *party types* include Contacts, Employees, Positions, Accounts, User Lists, Organizations, and Access Groups
- *Party types* are often related to each other
 - ▶ Employees are related to positions
 - ▶ Positions are related to accounts
 - ▶ Access groups are related to organizations
 - ▶ and so forth
- Relationships may be dynamic or ad hoc
 - ▶ A contractor becomes an intern, then an employee
 - ▶ An access group is required for participants of the January 2007 Big Release Roll-Out Event

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Reference

- Siebel Security Guide: Configuring Access Control
- Configuring Siebel Business Applications: Configuring Tables and Columns: About the S_PARTY Table

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Business Challenge: Modeling Party Data Continued

- Representing these relationships could result in data models that do not have optimal normalization
 - ▶ Multiple records may be created for each relationship
 - A separate record is created for a contractor, another for an intern, and a third for an employee
 - ▶ A special entity may have to be created for each new ad hoc relationship

Contractor Table

1. An individual is a contractor . . .

First Name	Last Name	Phone
Navdeep	Singh	321-654-0987

Intern Table

2 . . . becomes an intern . . .

First Name	Last Name	Phone
Navdeep	Singh	321-654-0987

Same data, three different places

Employee Table

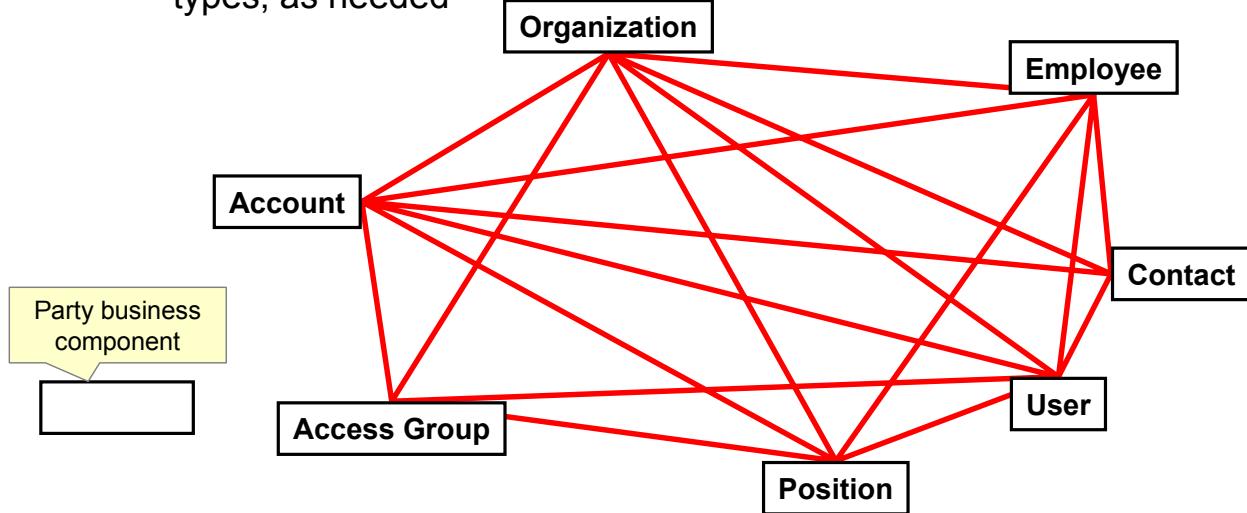
3 . . . then an employee.

First Name	Last Name	Phone
Navdeep	Singh	321-654-0987

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Business Solution: Party Business Component

- Provides a way to create a network of relationships between party types to reflect changes and complexities in the business environment
- Infuses flexibility into the data model
 - ▶ Can establish and change relationships between various party types, as needed



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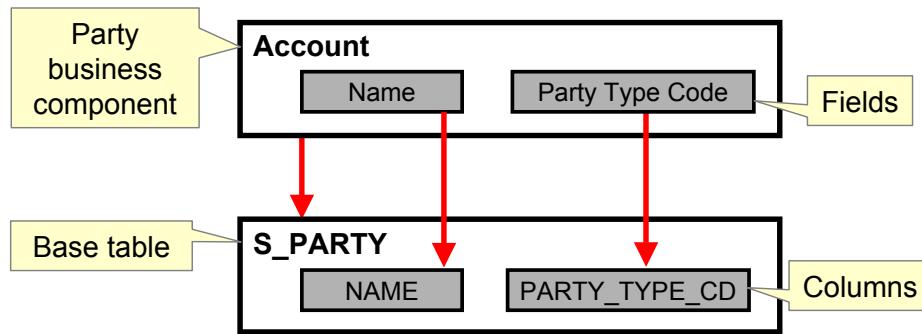
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Party Business Components

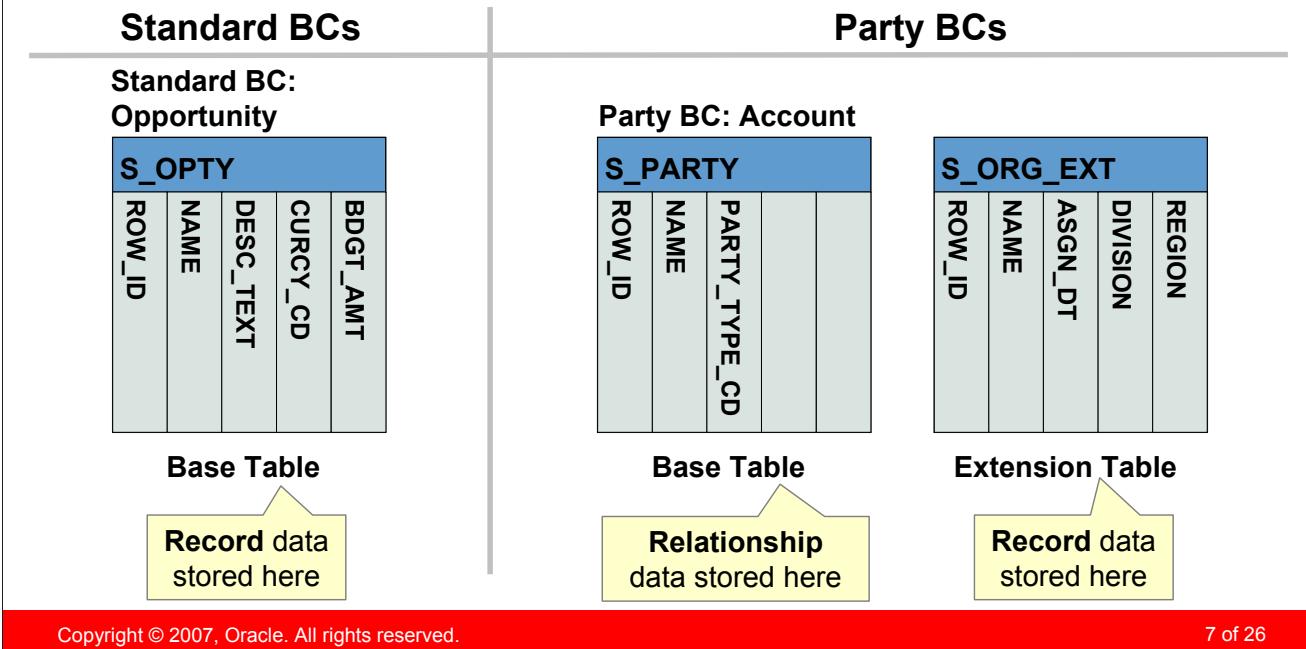
- Are similar to standard business components; they:
 - ▶ Group data according to business logic
 - ▶ Are referenced by applets
 - ▶ Specify access to tables
 - ▶ Have fields that map to columns



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Differences Between Party and Non-Party BCs

- In standard BCs, most data is stored in the base table
- In party BCs, data is stored in extension tables
- S_PARTY acts solely as a linking mechanism between types



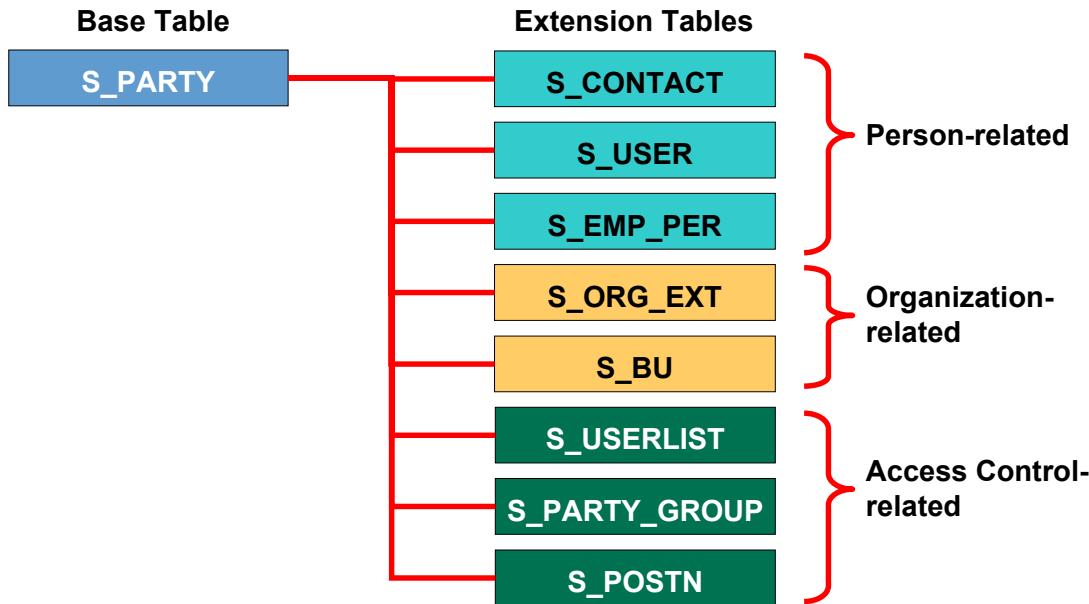
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S_PARTY and Its Extension Tables

- Eight prominent S_PARTY extension tables store the data



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Other S_PARTY Extension Tables

Tables such as **S_CONTACT_X** (which is the 1:1 extension table for the **S_CONTACT** table) are formally an **S_PARTY** extension table.

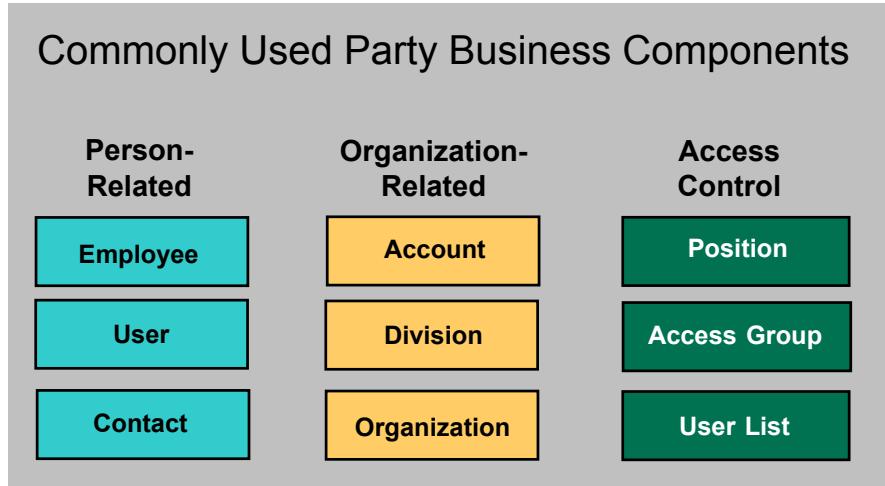
To list the complete set of **S_PARTY** extension tables, execute a query in Siebel Tools to retrieve all tables with the Base Table property = **S_PARTY**.

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Commonly Used Party Business Components

- Represent a variety of entities that can be arranged into groups related to persons, organizations, or access control



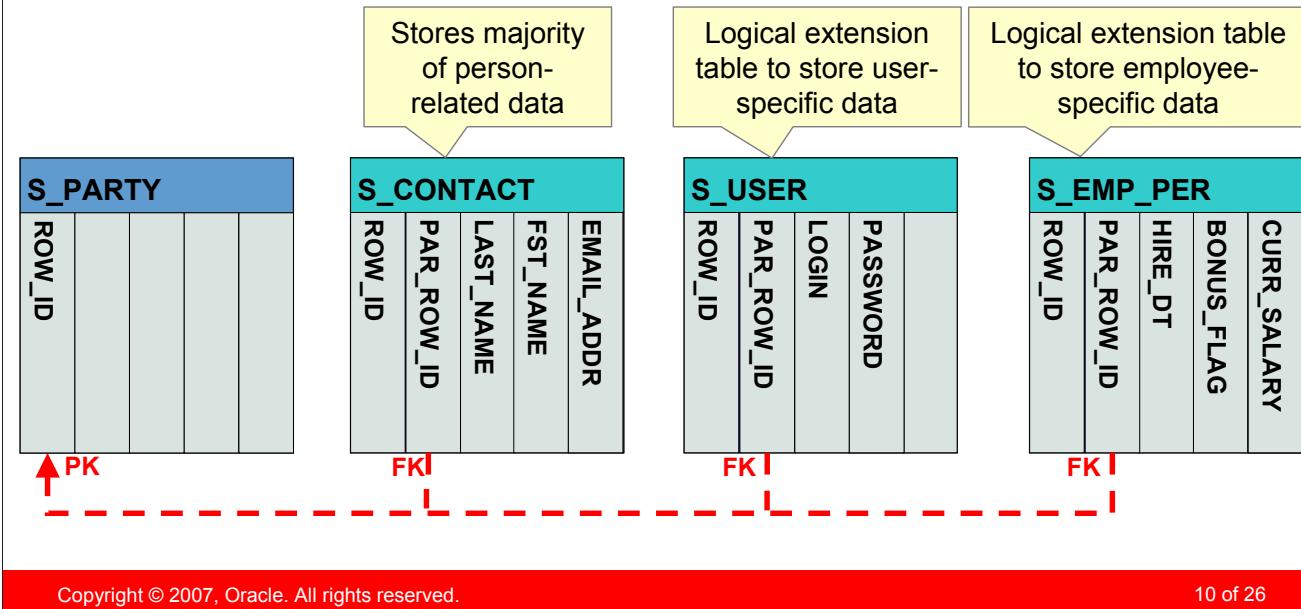
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Person-Related Party Business Components

- Store their main data in S_CONTACT
- May store additional data in S_USER and S_EMP_PER
 - ▶ Serve as logical extension tables

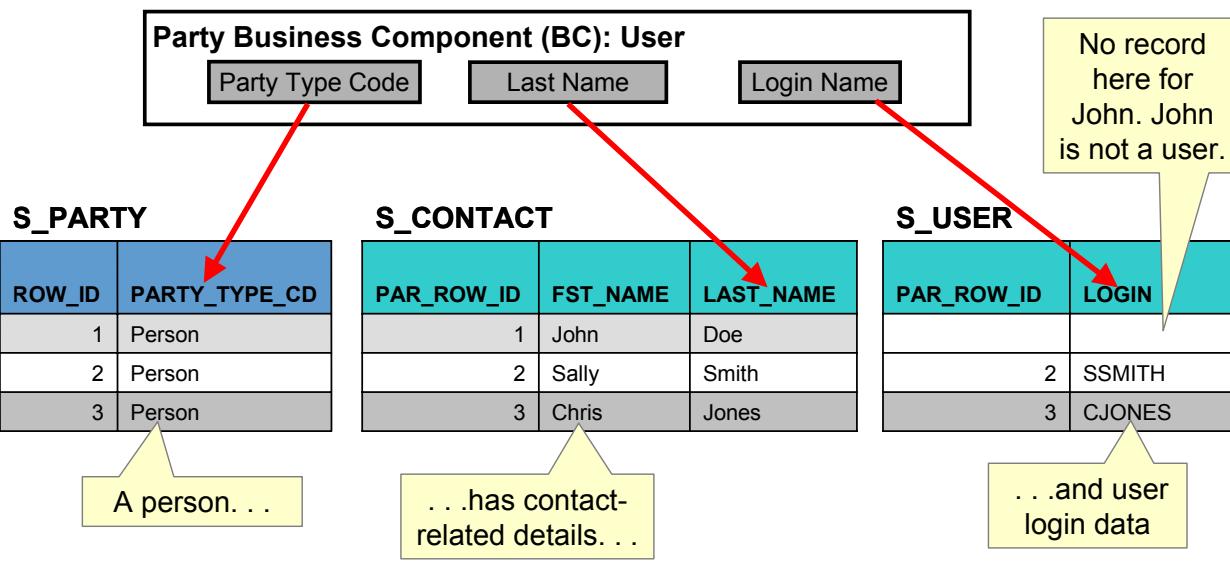


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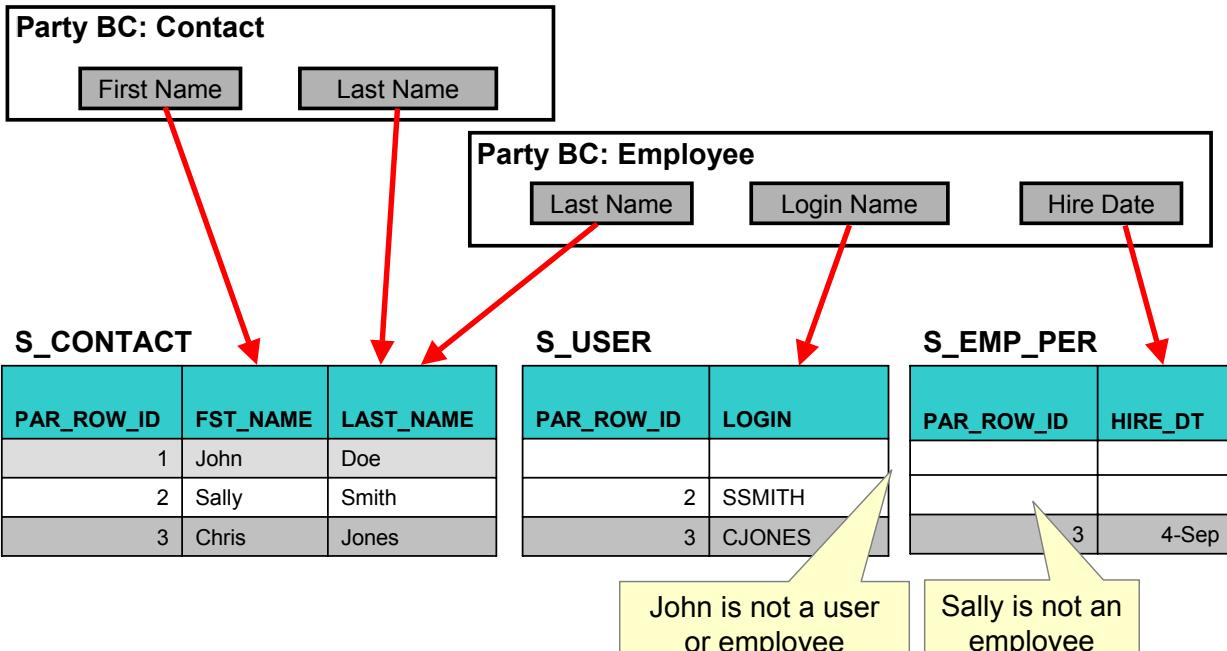
Person-Related Party Business Components Continued

- Primarily reference person-related S_PARTY extension tables



Person-Related Party Business Components Continued

- A number of person-related business components use these tables

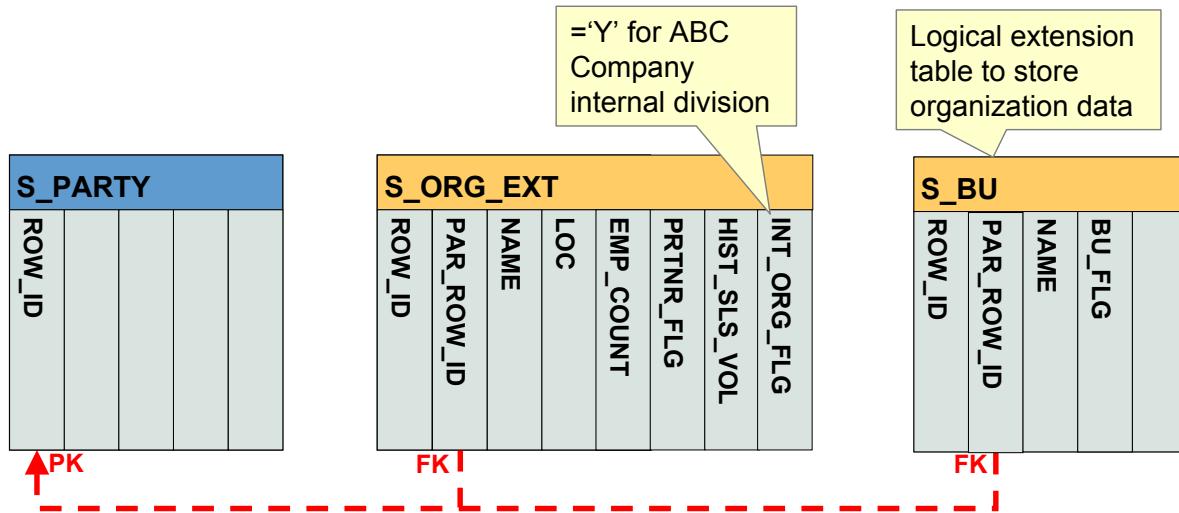


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Organization-Related Party Business Components

- Store their main data in S_ORG_EXT
- May store additional data in S_BU
- May include account, division, organization, or household data



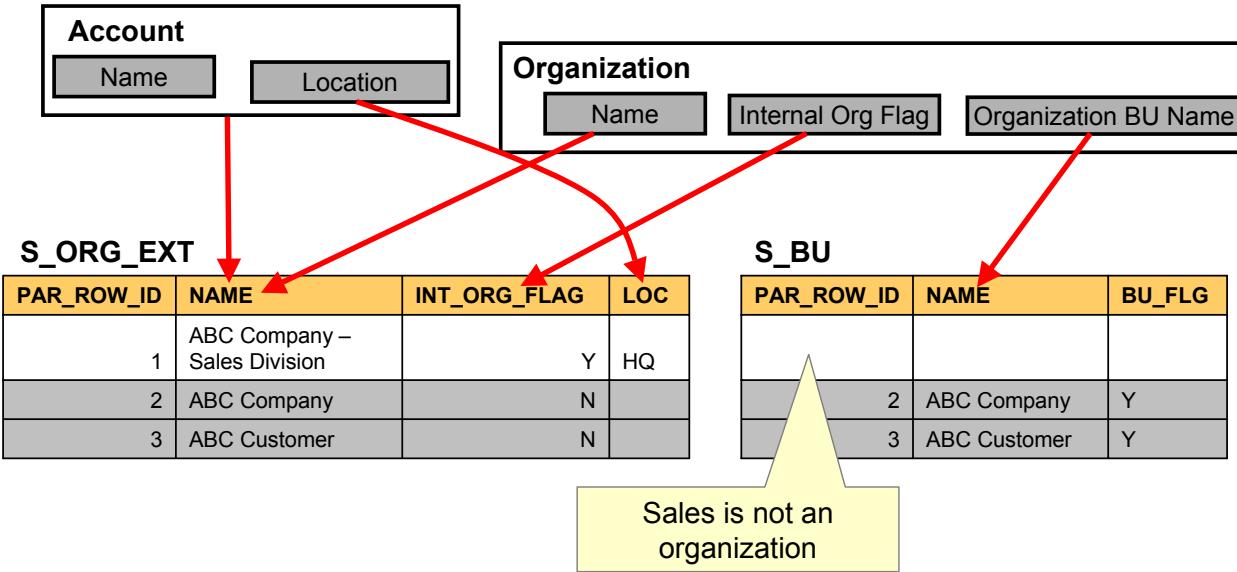
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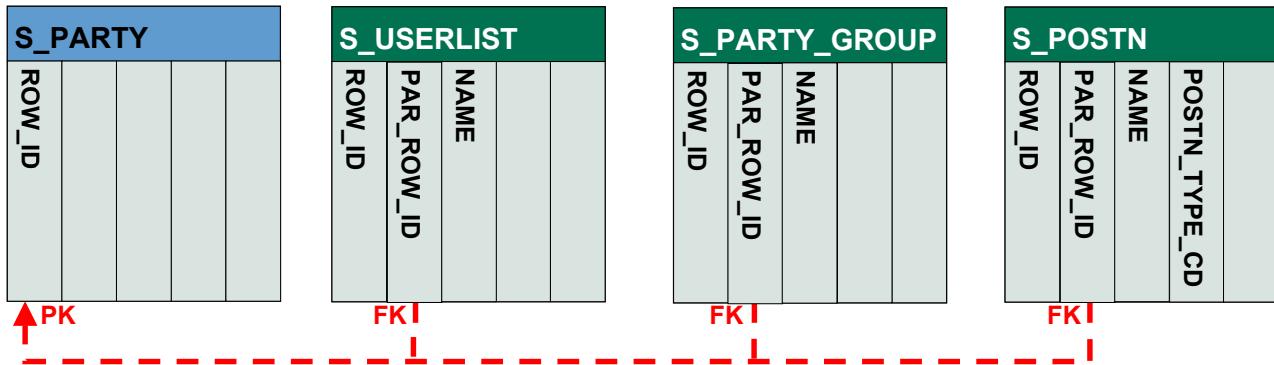
Organization-Related Party Business Components Continued

- Multiple organization-related business components use these tables



Groupings for Access Control

- Represent groupings of party instances
 - ▶ User List
 - ▶ Access Group
 - ▶ Position



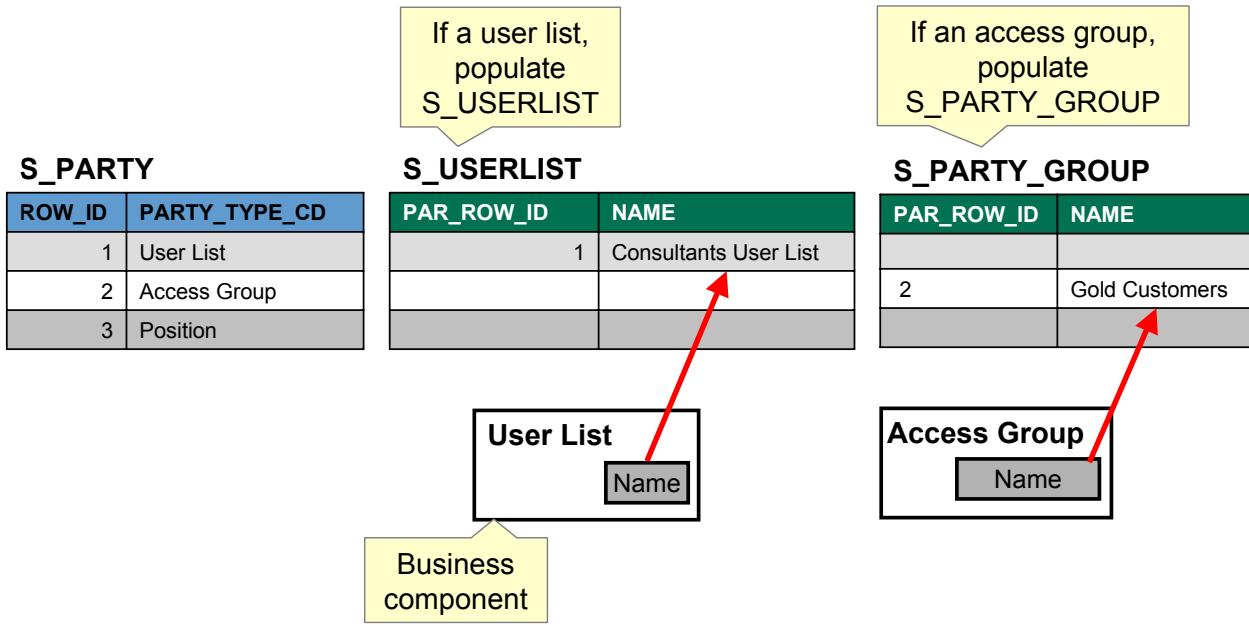
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Groupings for Access Control continued

- Access Group, User List, and Position are party business components



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Example, Relating Party Data

- A user list can be associated with persons via the S_PARTY intersection table S_PARTY_PER
- There are relationships in S_PARTY
 - ▶ They are represented in S_PARTY_PER
 - ▶ ROW_ID in S_PARTY is used to relate party types

S_PARTY_PER

PARTY_ID	PERSON_ID
003	001
003	002

S_PARTY

ROW_ID	PARTY_TYPE_CD	NAME
001	Person	Smith, Mary
002	Person	Smith, John
003	User List	ABC User List

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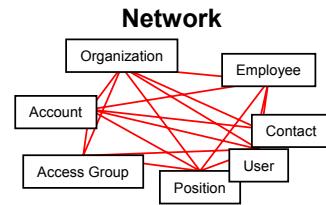
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Example, Relating Party Data Continued

- An access group can then be networked with those users, or other user lists, or most any other S_PARTY type
 - ▶ Person, User List, Organization and Account party types can be related to an Access List party type

**S_PARTY_PER**

PARTY_ID	PERSON_ID
003	001
003	002
005	003
005	004

S_PARTY

ROW_ID	PARTY_TYPE_CD	NAME
001	Person	Smith, John
002	Person	Smith, Mary
003	User List	ABC User List
004	Organization	ABC Org
005	Access List	ABC Access Group

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Party Implicit Joins

- Used to populate the prominent S_PARTY extension tables
- Created automatically for these extension tables
- Are similar to implicit joins for standard business components
 - ▶ Do not appear in join object definitions
 - ▶ ROW_ID in base table is always the PK
 - ▶ PAR_ROW_ID in extension is always the FK

S_PARTY	
ROW_ID	PARTY_TYPE_CD
1	Person
2	Person
3	Person

S_CONTACT		
PAR_ROW_ID	FST_NAME	LAST_NAME
1	John	Doe
2	Sally	Smith
3	Chris	Jones

S_USER	
PAR_ROW_ID	LOGIN
2	SSMITH
3	CJONES



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Explicit Join: Non-Party Business Component

- Data in a party table can be joined into a non-party business component
- Example: Bringing account data into the Opportunity business component for display in an Opportunity applet

The screenshot shows the Siebel Opportunities List screen. At the top, there's a navigation bar with links like Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Service. Below that is a sub-navigation bar with Opportunities List, Charts, Opportunity Explorer, Manager's Explorer, and Opportunities Administration.

The main area is titled "My Opportunities" and contains a table with columns: New, Opportunity Name, Account, and Revenue. The "Opportunity Name" column and the "Account" column are highlighted with red boxes. Red arrows point from these boxes down to a callout box labeled "Non-Party BC: Opportunity" which contains four buttons: Name, Description, Account, and Account Location.

New	Opportunity Name	Account	Revenue
*	Fast Ethernet NIC PCI 10/100 - 2500 units	Marriott International HQ	\$687,500.00
*	Digi Phones for mobile field engineers	Economy Printing & Copying	\$500,000.00
*	Pentium Server for new web sites	RS Semiconductors	\$250,000.00
*	Monitor - 17" CRT - flat tube - 1000 units	Marriott International HQ	\$200,000.00
*	New Digi Phones for Field	Apex Graphics Inc	\$200,000.00
*	Client desktops for new video tracking system	Video On Demand, Inc	\$150,000.00
	2111x PCS Chev Desktop ES 1-22ONP	Imperial Tobacco	\$0.00
	262x PCS Chev Desktop ES 1-22ONP	Citicorp Capital Asia Ltd	\$0.00

Non-Party BC: Opportunity

Name Description Account Account Location

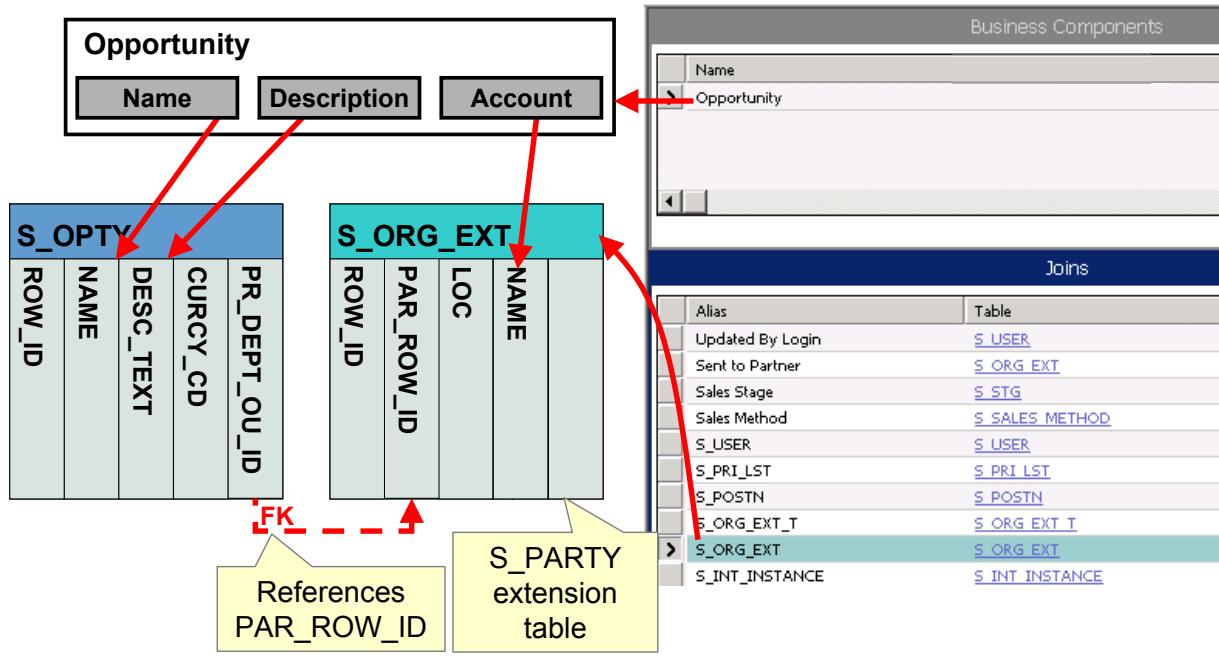
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Explicit Join Definition

- References the extension table that contains data of interest



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Explicit Join: Another Party Business Component

- Uses an explicit join to the party table, and not the implicit one
 - ▶ Example: Bringing parent account data into the Account business component for display in an Account applet

All Accounts Across Organizations | **Menu** | **New** | **Delete** | **Query** | **Collaborate** | **Create Team Space**

Account Name	Site	Parent Account Name	Parent Account Site
Harley-Davidson Europe Ltd.	HQ-WINDSOR-503337735	Harley-Davidson Holding Co Inc	HQ-MILWAUKEE-796217339
Kelly Industries	UK	Kelly Industries	HQ
Corporate I/T		Empire Chemical, Inc.	HQ
Chemical/Specialty	Brunswick, NH	Empire Chemical, Inc.	HQ
Petroleum/Retail		Empire Chemical, Inc.	HQ
Continental Distribution Europe	EMEA Headquarters - Paris	Continental Distribution	HQ
Continental Distribution	Americas Headquarters	Continental Distribution	HQ

Account

Name
Location
Parent Account Name
Parent Account Location

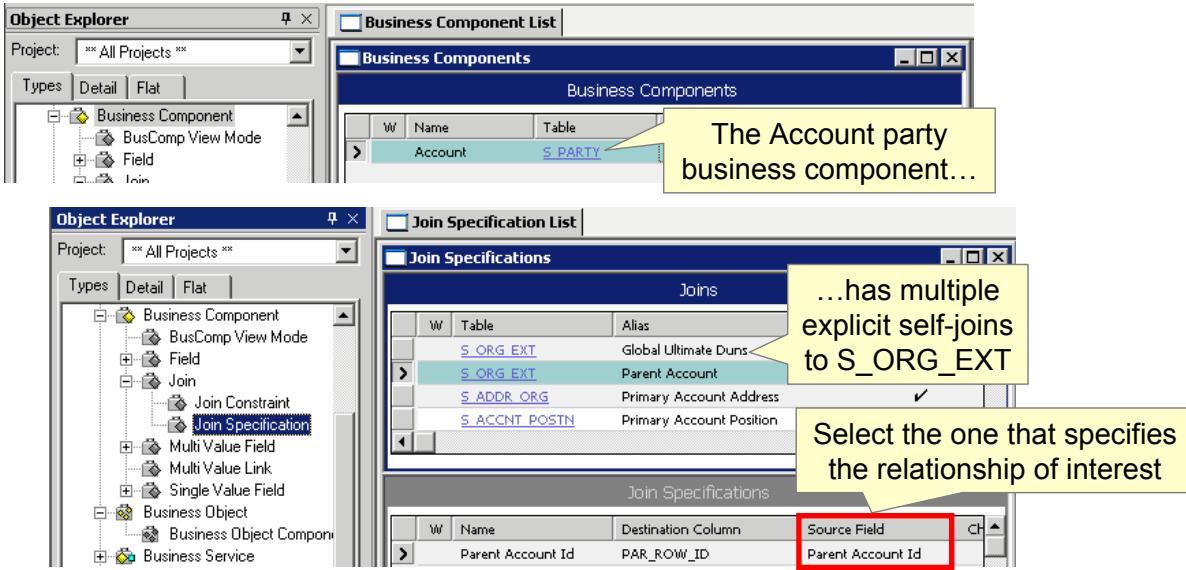
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Explicit Join Definition

- Select or create an explicit join to the desired S_PARTY extension table
 - ▶ Use a join specification to specify the relationship



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Module Highlights

- Party types have dynamic or ad hoc relationships
- Party BCs create relationships between party types
- Party BCs are similar to standard BCs but data is stored in extension tables
- Eight prominent S_PARTY extension tables store data
- Person-related party BCs store data in S_CONTACT
- Organization-related party BCs store data in S_ORG_EXT
- Access Group, User List, and Position are party BCs
- Party implicit joins populate S_PARTY extension tables
- Explicit joins reference extension tables that contain data



Lab

- In the lab you will:
 - ▶ Examine how fields in a (non-party) business component map to columns in base and joined tables
 - ▶ Examine how fields in a party business component map to columns in S_PARTY, its extension tables, and joined tables



Siebel 8.0 Essentials

Module 19: Siebel Business Objects

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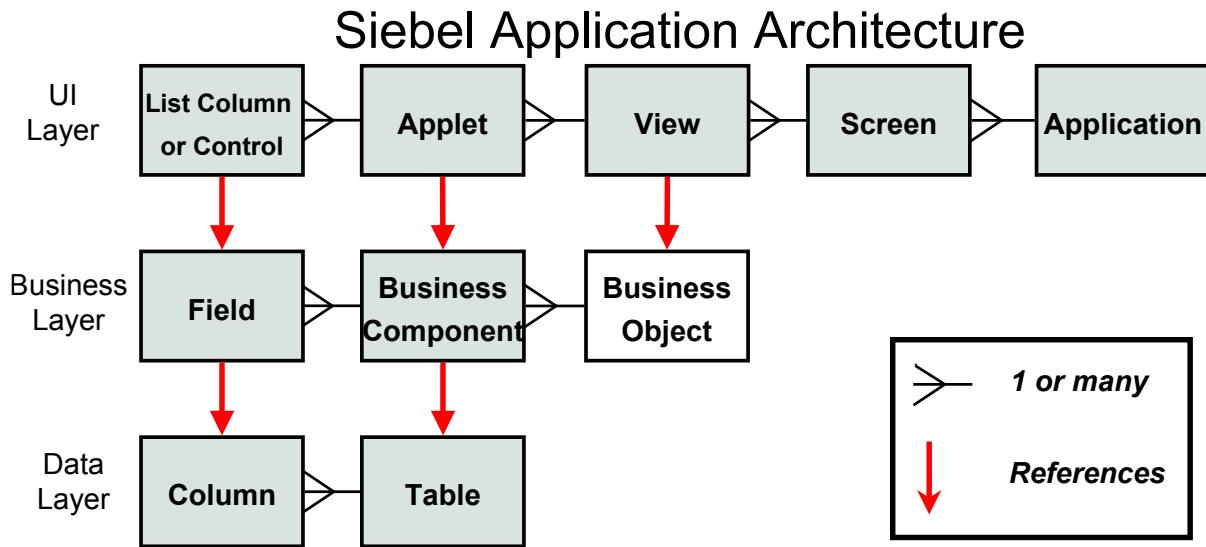
Module Objectives

- After completing this module you should be able to:
 - ▶ Describe how business objects focus data presented in the UI based on context
 - ▶ Describe how views reference business objects
 - ▶ Describe how links are used to relate parent business components to child business components
- Why you need to know:
 - ▶ Business objects enable you to configure your company's business logic

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Application Architecture: Business Objects (BO)

- Provide a way to organize BCs into major areas according to your business logic requirements
- Provide context to views



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Reference

Configuring Siebel Business Applications: Configuring Business Objects

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Business Challenge

- Business components provide a way to group data according to business logic, but they do not address the need for context
 - ▶ For example, the opportunity BC defines how to retrieve opportunity data, but not related activity data

The screenshot shows a Siebel application window titled "Opportunity". The top navigation bar includes links for Home, Accounts, Contacts, Opportunities (selected), Quotes, Sales Orders, and Service. Below the navigation bar, there are links for Opportunities Home, Opportunities List, Charts, and Opportunity Explorer.

The main form is titled "Laptops for Kaboom". It contains fields for Opportunity Name (Laptops for Kaboom), Revenue (\$25,000.00), Currency (USD), Account (JRUBIN), Close Date (9/14/2006), Committed (unchecked), Sales Team (JRUBIN), Sales Stage (dropdown menu), Lead Quality (1-Excellent), Territories (dropdown menu), Probability % (70%), and Organization (PCS Americas).

Below the main form, a tab bar includes More Info, Activities (selected), Assessments, Attachments, Contacts, Quotes, and Revenue. A secondary tab bar below that includes Menu, New, Delete, and Query.

A yellow callout box with a red question mark icon points to the "Activities" tab. The text inside the callout box reads: "How is it that the Activities view shows only activities related to the Kaboom opportunity?"

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Business Solution: Business Objects Provide Focus

- Business objects contain relationships used to access records from a child business component
 - ▶ Identifies records to display depending on context in which they are viewed
 - ▶ Ensures that only records related to parent BCs are returned from queries

The screenshot shows a Siebel application window titled "Laptops for Kaboom". At the top, there are fields for Opportunity Name, Account, Sales Team, Territories, Revenue, Close Date, Currency, Committed, Sales Stage, Lead Quality, and Probability %. Below this, a navigation bar includes "More Info", "Activities", "Assessments", "Attachments", "Contacts", "Quotes", and "P...". A red arrow points from the "Activities" tab to a callout box. The "Activities" section displays a table with columns: Created, Created By, Type, and Description. The table contains three rows of activity data:

Created	Created By	Type	Description
9/14/2006 7:23:29 PM	JRUBIN	Assessment	Call to perform initial assessment
9/14/2006 7:25:12 PM	JRUBIN	In Store Visit	Visit Kaboom to validate assessment
9/14/2006 7:27:29 PM	JRUBIN	Demonstration	Visit Kaboom to demo assembled configuration

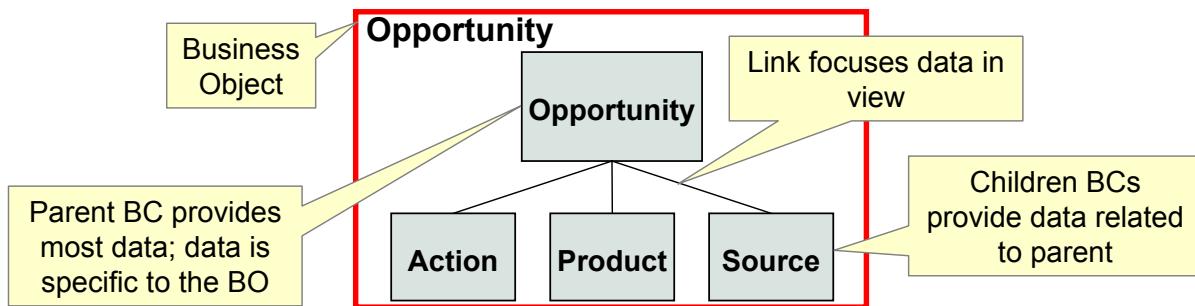
A yellow callout box with a black border and a black arrow pointing to the third row of the table contains the text: "Activities pertaining to Kaboom opportunity, and only Kaboom, are displayed".

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Business Objects

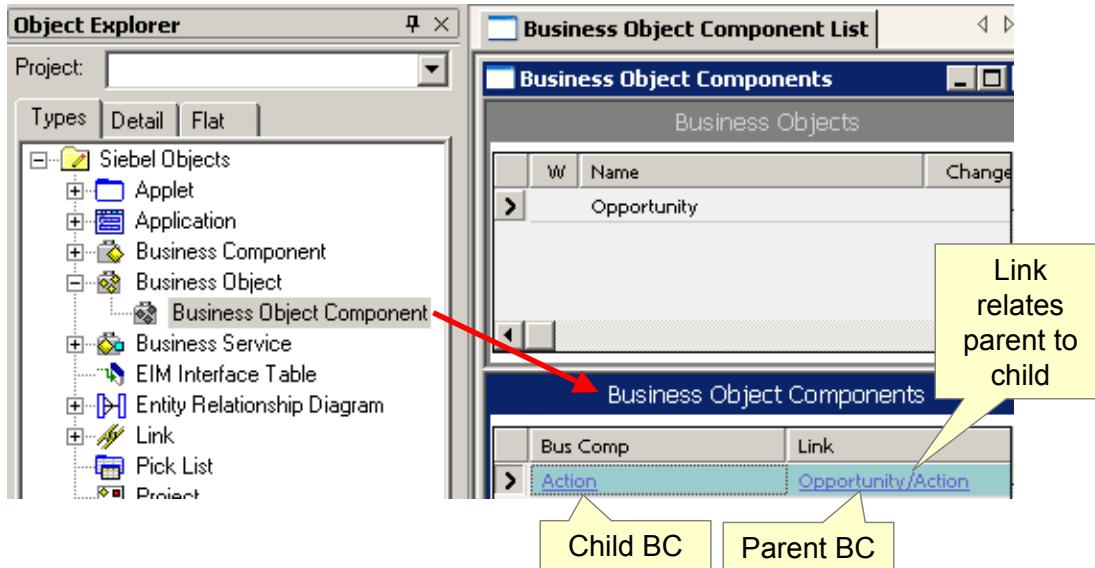
- Are a collection of related business components that represent a major area of the business
 - ▶ Contain parent and child business components
 - ▶ Relate parent and child components via links
 - ▶ Links focus records displayed based on the context in which they are viewed
- Provide a container for grouping business components
- Provide context for views



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Business Object Component

- Contains Link and BusComp properties that relate the parent and child business components to each other

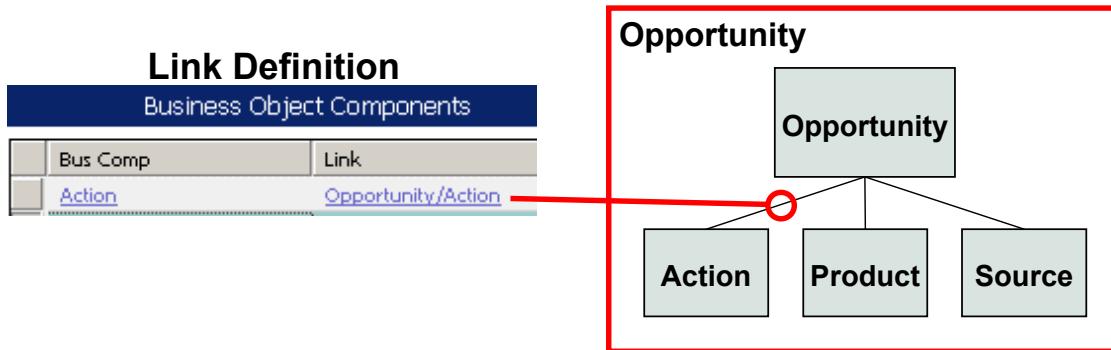


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Link Definition

- Identifies the PK/FK relationship
 - ▶ Identifies which records to retrieve from the child business component
 - ▶ Identifies the foreign keys to populate when new child records are created
- Is used with both 1:M and M:M relationships between parent and child data



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1:M Link

- Used for 1:M relationship between parent and child business components

Link Definition

The screenshot shows the Siebel Object Explorer interface. On the left, the Object Explorer tree displays various Siebel objects like Applet, Application, Business Component, Business Object, Business Service, EIM Interface Table, Entity Relationship Diagram, Link, and Pick List. The Business Object node is expanded, showing Business Object Component as a child. In the center, the Business Object Components list shows a single entry named 'Opportunity'. At the bottom, there are two tabs: 'Bus Comp' and 'Link'. The 'Link' tab is selected, showing two entries: 'Action' and 'Opportunity/Action'.

Link [Opportunity/Action]	
	Alphabetic Categorized
Cascade Delete	None
Child Business Component	Action
Comments	
Destination Field	Opportunity Id
Inactive	FALSE
Inter Child Column	
Inter Child Delete	
Inter Parent Column	
Inter Table	
Module	
Name	Opportunity/Action
No Associate	FALSE
No Delete	FALSE
No Insert	FALSE
No Inter Delete	FALSE
No Update	FALSE
Object Language Locked	
Object Locked	FAL
Object Locked By Name	
Object Locked Date	
Parent Business Component	Opp
Primary Id Field	
Search Specification	
Sort Spec	
Source Field	

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M:M Link

- Used for M:M relationship between parent and child business components
- Uses an intersection table to resolve the link

Business Object Components

Bus Comp	Link
Source	Opportunity/Source

Properties

Link [Opportunity/Source]

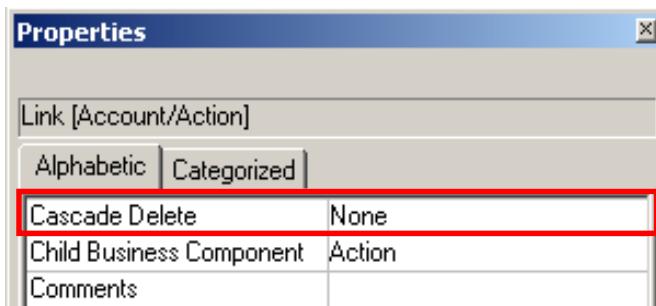
Cascade Delete	None
Child Business Comp	Source
Comments	
Destination Field	
Inactive	FALSE
Inter Child Column	SRC_ID
Inter Child Delete	FALSE
Inter Parent Column	OPTY_ID
Inter Table	S_OPTY_SRC

Intersection table with FK columns



Cascade Delete Property

- The Cascade Delete property of a link specifies whether child records of a 1:M relationship are deleted when the parent record is deleted
 - ▶ None: Neither deletes nor clears the foreign key column
 - ▶ Clear: Does not delete, but clears the foreign key column
 - ▶ Delete: If a parent record is deleted, all child records are deleted



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Cascade Delete Property continued

- Determined by your business logic
 - ▶ Should all activities be deleted if parent contact is deleted?
 - ▶ Should all child opportunities be deleted if the parent account is deleted?

The screenshot shows the Siebel interface with two main windows. The top window is an 'Account' view for 'AT'. It displays fields like Account Name (AT&T), Address (350 Main Street), City (Edison), Zip Code (08675), Site (Edison, NJ), Account Team (JRUBIN), Main Phone # (800) 788-1000, Main Fax # (800) 788-1500, and URL (www.att.com). A yellow callout box labeled 'Deletion cascades' points to the 'Delete' button in the toolbar. The bottom window is an 'Opportunities' list view. It shows two entries: 'Fast Ethernet NIC PCI 10/100 Server' and 'Enterprise Agreement - AT&T', both associated with the 'AT&T' account. A large red 'X' is drawn across the entire bottom window, indicating that opportunities will be deleted when the account is deleted.

Properties

Link [Account/Action]

Alphabetic | Categorized

Cascade Delete Delete

Child Business Component Action

Comments

AT

Menu | New | Delete | Query

Account Name: * AT&T

Address: 350 Main Street

City: Edison

Zip Code: 08675

Site: Edison, NJ

Account Team: JRUBIN

Address Line 2:

State: NJ

Country: US

Main Phone #: (800) 788-1000

Main Fax #: (800) 788-1500

URL: www.att.com

More Info Activities Attachments Contacts Notes Opportunities Service Requests Orders Quotes

Opportunity Name Account Revenue Committed Team Space Sales Stage

> Fast Ethernet NIC PCI 10/100 Server AT&T \$150,000.00 ✓ 09 - Closed

Enterprise Agreement - AT&T AT&T \$1,175,000.00 01 - Prospective

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Grandchild Business Components

- Business objects may include grandchild business components
- Used in parent-child-grandchild views

The screenshot illustrates the hierarchy of business components in Siebel:

- Parent BC: Account** (Top Level): The main account record for "Art.net" is shown. A yellow callout box labeled "Activity plans for Art.net" points to the "Activity Plans" tab in the navigation bar.
- Child BC: Activity Plan** (Middle Level): An activity plan titled "Quarterly Status Check" is selected. A yellow callout box labeled "Activities for selected Art.net activity plan" points to the list of activities below.
- Grandchild BC: Activity Plan Action** (Bottom Level): The detailed list of activities under the selected plan, including "Check up on proge: Call" and "Send out survey car Email - Outbound".

Arrows indicate the navigation flow from the parent account to the child activity plan, and then to the grandchild activity list.

Description	Type	Start	End	Status	Priority	Employees
Check up on proge: Call	Call	2/8/2007 3:42:37 PM	2/13/2007 3:42:37 PM	Unscheduled	2-High	
Send out survey car Email - Outbound	Email - Outbound	2/27/2007 3:43:59 PM	2/28/2007 3:43:59 PM	Scheduled	3-Medium	

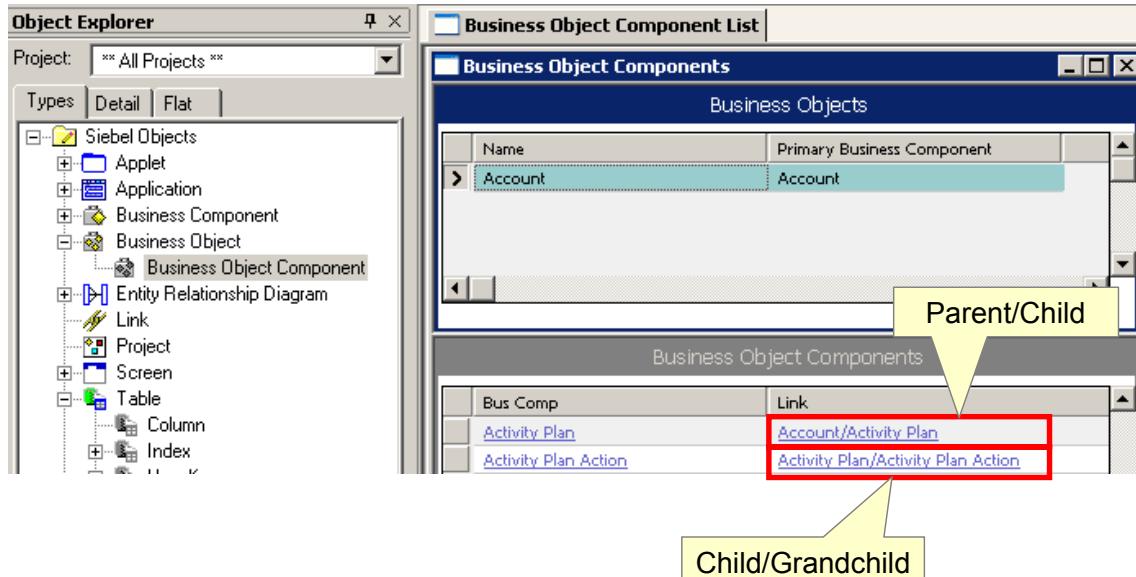
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Links for Grandchild Data

- Specify how the grandchild and child business component are related
 - ▶ Used to retrieve grandchild records on parent-child-grandchild views



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Module Highlights

- Business objects
 - ▶ Provide a way to group BCs according to business logic
 - ▶ Provide context to views
 - ▶ Contain parent and child BCs associated via links
- Links provide a way to focus records based on context
- Links relate parent and child BCs
- Link definitions specify which records to retrieve from child BCs
- A 1:M link is used for a 1:M relationship between parent and child BCs
- A M:M link is used for a M:M relationship between parent and child BCs
 - ▶ A M:M link uses an intersection table to resolve the link
- BOs may include grandchild BCs

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Siebel 8.0 Essentials

Module 20: Configuration Strategy

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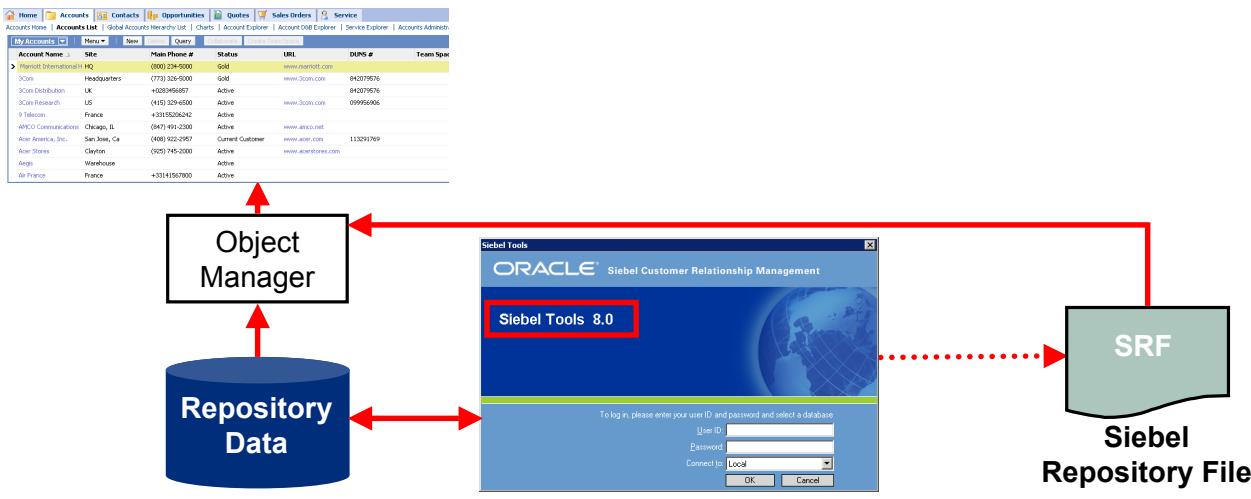
Module Objectives

- After completing this module you should be able to:
 - ▶ List the critical elements of the Siebel configuration strategy
- Why you need to know:
 - ▶ Following a reasonable configuration strategy can expedite your configuration efforts and make your configured application robust and upgradeable



Configuring a Siebel Application

- Configuring is the process of using Siebel Tools to modify an as-delivered Siebel application to meet business needs
- Object definitions are edited and created
 - ▶ Developers do not modify code in siebel.exe
 - ▶ Developers do not write SQL directly



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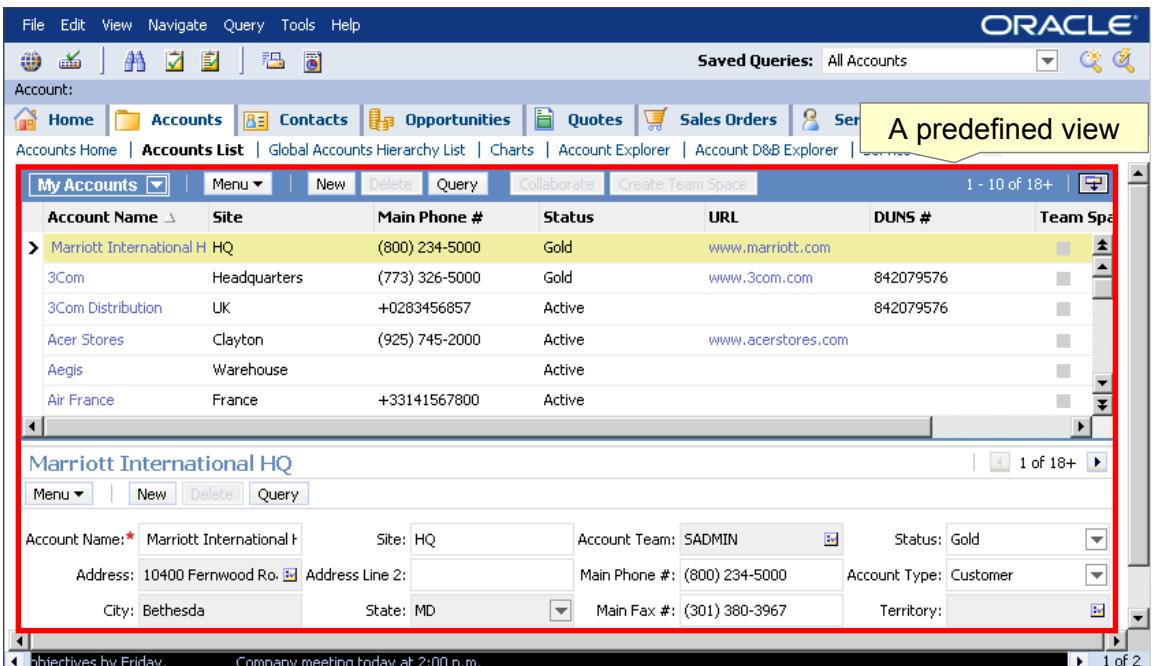
3 of 16

Reference

Using Siebel Tools

Developing and Deploying Siebel Business Applications: Setting Up a Developer's Local Database

Siebel Applications



The Siebel Applications interface is shown, featuring a top navigation bar with File, Edit, View, Navigate, Query, Tools, and Help. A toolbar below includes icons for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Services. The main area is titled "Saved Queries: All Accounts". A yellow callout box points to the "Accounts List" link in the breadcrumb trail. The main content displays a grid of account records with columns for Account Name, Site, Main Phone #, Status, URL, DUNS #, and Team Space. One record, "Marriott International HQ", is selected and highlighted with a red border. A detailed view of this record is shown in a modal window, also bordered in red. The modal contains fields for Account Name, Site, Account Team, Status, Address, Main Phone #, Account Type, City, State, Main Fax #, and Territory. The bottom of the interface shows a footer with copyright information and page numbers.

A predefined view

My Accounts | Menu | New | Delete | Query | Collaborate | Create Team Space | 1 - 10 of 18+ | 

Account Name Site Main Phone # Status URL DUNS # Team Space

> Marriott International HQ (800) 234-5000 Gold www.marriott.com

3Com Headquarters (773) 326-5000 Gold www.3com.com 842079576

3Com Distribution UK +0283456857 Active 842079576

Acer Stores Clayton (925) 745-2000 Active www.acerstores.com

Aegis Warehouse Active

Air France France +33141567800 Active

Marriott International HQ | 1 of 18+ | 

Account Name: * Marriott International HQ Site: HQ Account Team: SADMIN Status: Gold

Address: 10400 Fernwood Ro. Address Line 2: Main Phone #: (800) 234-5000 Account Type: Customer

City: Bethesda State: MD Main Fax #: (301) 380-3967 Territory: 

objectives by Friday. Company meeting today at 2:00 p.m. | 1 of 2 | 

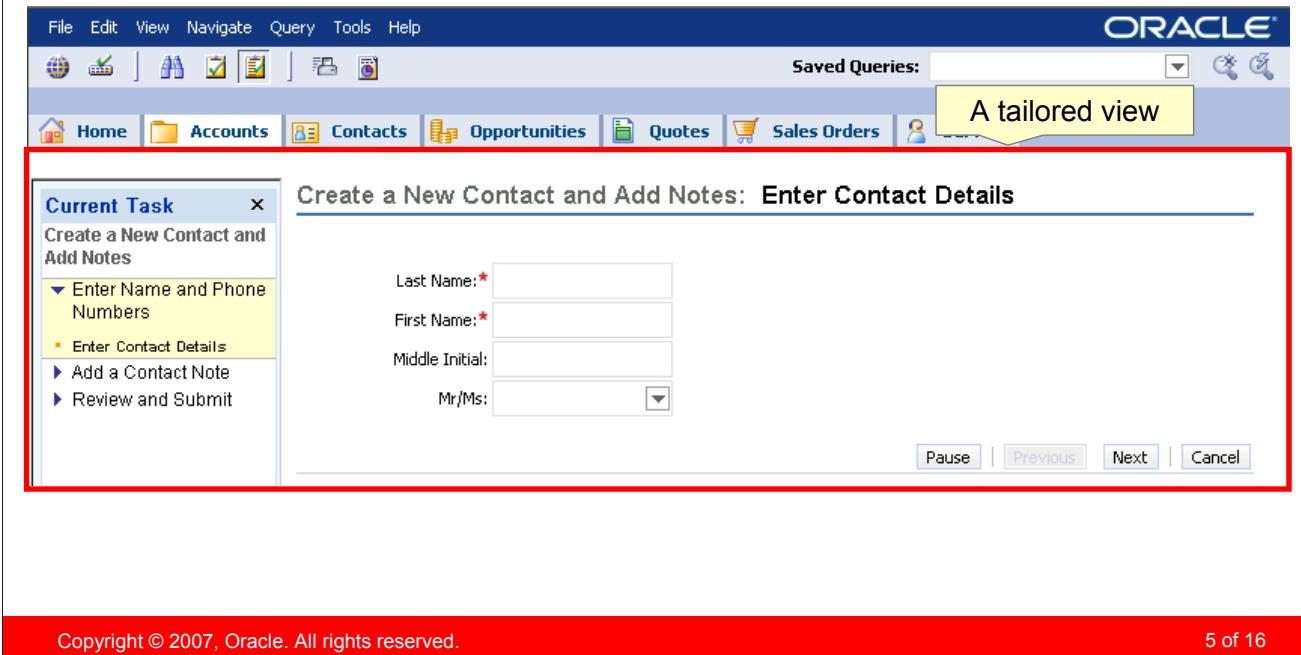
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Tailoring the Logical User Interface

- Developers tailor the as-delivered Siebel screens, views, lists, and forms to better support users' business needs



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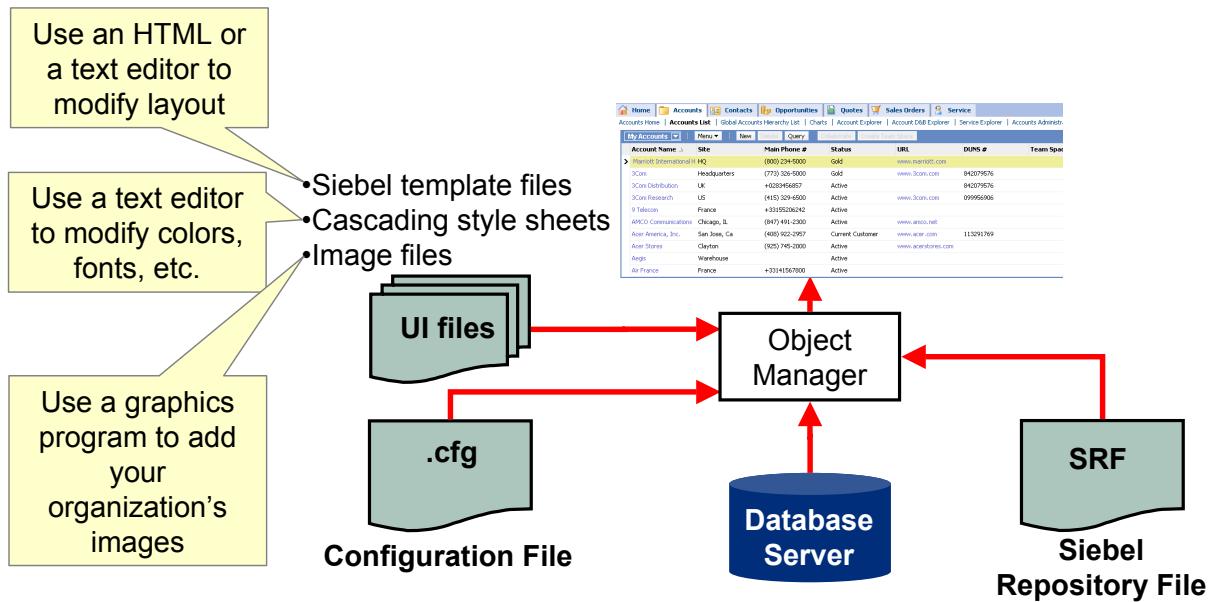
5 of 16

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Tailoring the Physical User Interface

- Use the existing physical UI files whenever possible
- When necessary, copy existing files and modify as needed



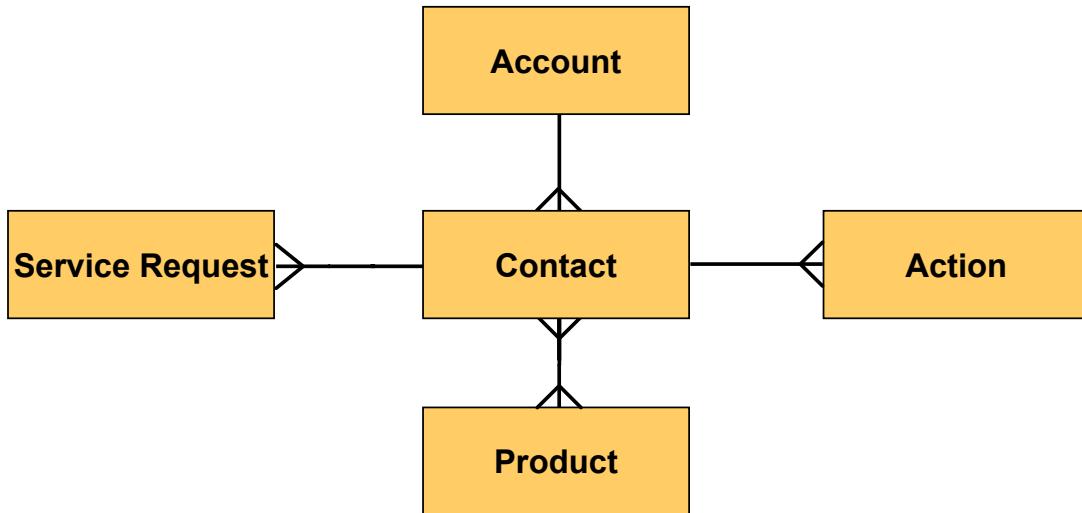
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Siebel Business Entities

- Siebel as-delivered applications utilize a set of Siebel business components that implement the defined business logic



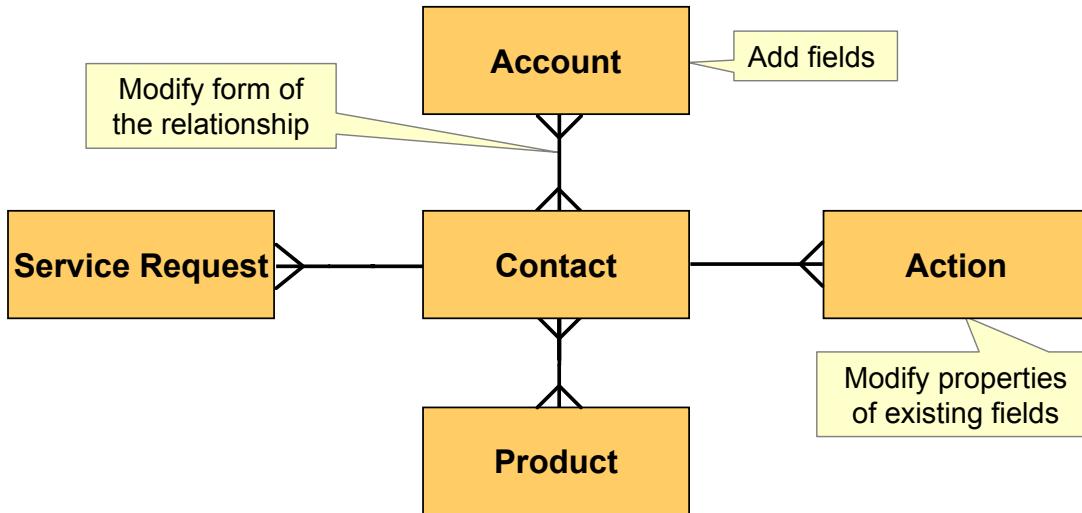
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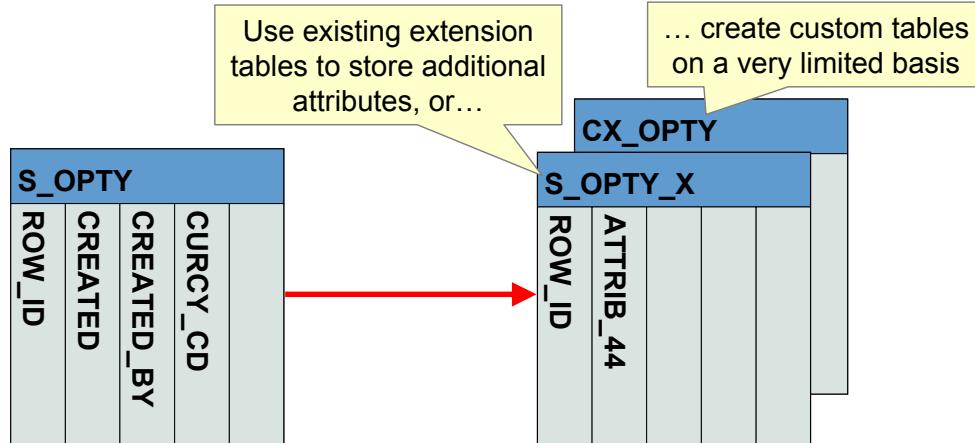
Tailoring the Business Logic

- Developers also tailor the application by modifying the definitions of the business components to implement the business logic appropriate to the users' organization



Extending the Data Layer

- Siebel as-delivered applications contain a large, predefined set of database tables
- Developers can tailor the application by extending the set of database tables
 - ▶ Recommendation is to perform this in a limited and controlled manner





Configuration Strategy

- Make minimal changes to the as-delivered application
- Use existing object definitions in the as-delivered repository whenever possible
 - ▶ Ensures that a new configuration can be upgraded with minimal effort
- Modify definitions as required, rather than creating new ones
 - ▶ Creating new object definitions can lead to redundant configuration and increase the maintenance effort

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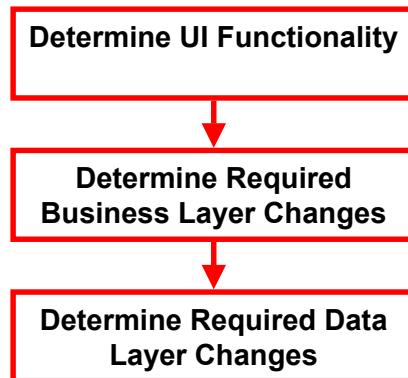
Configuration Strategy Continued

- Do not delete, make inactive, or rename seemingly unused object definitions
 - ▶ Other object definitions might reference them
 - ▶ Deleting does not save memory, storage space, or improve performance
- Use existing template files
 - ▶ Modify only when changes are essential
 - ▶ Modifying a template for one view or applet can have unexpected consequences if another view or applet uses the same template

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Configuration Strategy Continued

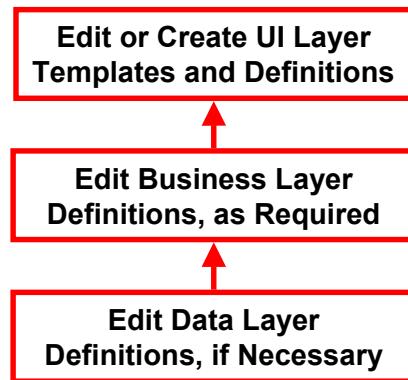
- Plan your configuration project from the top down
 - ▶ First, determine UI and application functionality
 - ▶ Then, determine what changes are necessary at the Business layer to implement UI functionality
 - ▶ Finally, determine what changes are necessary at the Data layer to implement Business layer changes
 - Keep changes to a minimum





Configuration Strategy Continued

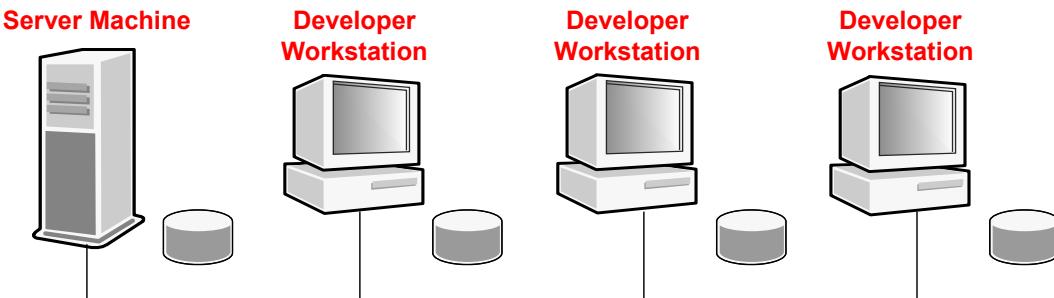
- Make changes from the bottom up
 - ▶ First, edit Data layer definitions, if necessary
 - ▶ Then, edit Business layer definitions, as required
 - ▶ Finally, edit or create the templates and UI layer definitions to display the data correctly





Create a Separate Development Environment

- To isolate the development effort from the enterprise's production database, set up a development environment
- Each developer or group can work on a different aspect of the development effort
 - ▶ Use Siebel-supplied mechanisms to separate the development effort into projects
- Test all customization and extensions thoroughly before deploying to end users



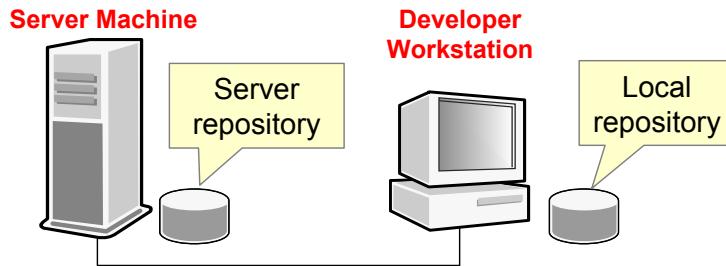
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Develop on the Local Repository

- Always make changes to the object definitions in the local repository
 - ▶ Cannot undo or back out changes when made directly on the server
 - ▶ Changes made directly on the server are immediately available to other developers
 - Incomplete changes on the server cause problems
- Use Siebel-supplied mechanisms to copy definitions between server and local databases



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Module Highlights

- Configuring is the process of using Siebel Tools to modify an as-delivered Siebel application
- Recommended configuration strategy:
 - ▶ Tailor existing logical UI, physical UI, and business entities to minimize development and support effort
 - ▶ Do not delete, make inactive or rename unused object definitions
 - ▶ Use existing template files
- Plan configuration project from the top down, make changes from the bottom up
- Development and production environments are separate
 - ▶ Enables developer or group to work independently
 - ▶ Enables developer to test customizations before deploying



Siebel 8.0 Essentials

Module 21: The Configuration Process

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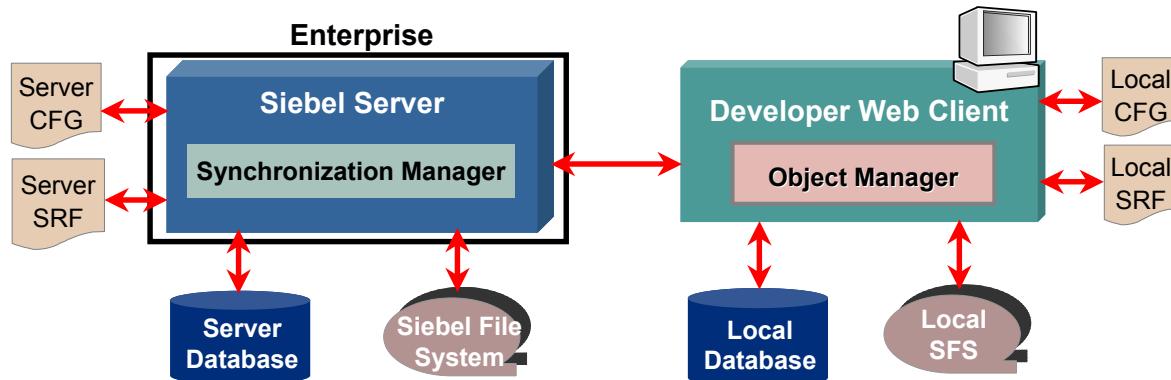
Module Objectives

- After completing this module you should be able to:
 - ▶ Describe the development environment architecture
 - ▶ Set up the development environment
- Why you need to know:
 - ▶ Being able to set up the development environment is critical to carrying out a successful configuration



The Development Environment

- Siebel Remote is used to establish a local development environment
- Siebel Developer Web Client provides full Siebel application functionality in a local environment
 - ▶ Accesses a local DB containing a subset of the server database
 - ▶ Synchronizes with the server database, as necessary
 - ▶ Implements a development and testing environment for individual developers



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Reference

Using Siebel Tools

Siebel Remote and Replication Manager Administration Guide

Developing and Deploying Siebel Business Applications: Setting Up a Developer's Local Database

Procedure for Setting Up the Development Environment

1. Enable the Development Environment
2. Create the Developer
3. Create a User Login
4. Generate the Local Database Template
5. Extract User Data
6. Modify and Verify Configuration Settings
7. Initialize Local Database
8. Extract Repository Data

Enable the Development Environment

- Enable the Siebel Remote component group to enable development using a local database
 - ▶ After enabling a component group, do not forget to restart the Siebel Server and synchronize components

The screenshot shows the Siebel Server Configuration interface. At the top, there's a navigation bar with links like Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, Administration - Server Configuration, and others. Below that is a sub-navigation bar for Enterprise Servers, showing '1 - 1 of 1'. The main area is titled 'Enterprise Server Description' and shows a tree view with 'Siebel' expanded, revealing 'Siebel Enterprise Server'. Below this is a 'Component Groups' table:

Component Group	Alias	Number of Components	Enable state	Description
MWC Real Time Sync	RTSRremote	4	Enabled	Siebel Remote Real Time Sync Components
Siebel Remote	Remote	8	Enabled	Siebel Remote Components

A yellow callout box with the text 'Enable Siebel Remote' points to the 'Enable' button for the 'Siebel Remote' row. Below this is another table for 'Component Group Assignments':

Component	Alias	Description	Run Mode	Server	Assigned?	Enabled on Server?
Database Extract	DbExtract	Extracts visible data	Batch	SUsrvr	✓	✓

At the bottom of the page, there's a red footer bar with the text 'Copyright © 2007, Oracle. All rights reserved.' and '5 of 20'.

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Create the Developer

- Add the developer as an employee
- Associate a position and responsibility
- Register the developer as a mobile client

The image shows a Siebel application interface with three main windows:

- Employees List:** Shows a table with columns: Last Name, First Name, User ID, Responsibility, and Position. A row for "Penguin" is selected, highlighted with a red border. A yellow callout bubble points to this row with the text "Add employee record".
- Parent Server Configuration:** A form with fields: Server Name (HQ), App Server Name (Not Available), Parent Server Name, End Date, Description (Headquarters), Routing Group, Sync Password, Local Database Extracted, Hardware Serial #, and Hardware Manufacturer.
- Mobile Clients List:** Shows a table with columns: Mobile Client, User ID, Routing Model, and User Last Name. A row for "PPENGUIN" is selected, highlighted with a red border. A yellow callout bubble points to this row with the text "Register mobile client".

At the bottom of the interface, there are copyright and page navigation details:

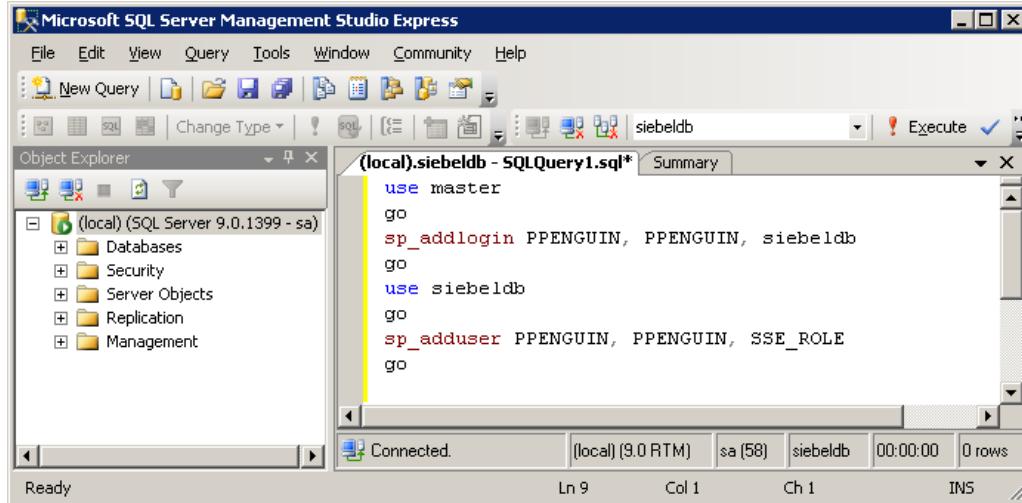
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Create a User Login

- If necessary, create a corresponding database login using RDBMS tools and the grantusr.sql script as a template
- Example:



The screenshot shows the Microsoft SQL Server Management Studio Express interface. The Object Explorer on the left shows a connection to '(local) (SQL Server 9.0.1399 - sa)' with nodes for Databases, Security, Server Objects, Replication, and Management. The central pane displays a query window titled '(local).siebeldb - SQLQuery1.sql*' containing the following T-SQL script:

```
use master
go
sp_addlogin PPENGUIN, PPENGUIN, siebeldb
go
use siebeldb
go
sp_adduser PPENGUIN, PPENGUIN, SSE_ROLE
go
```

The status bar at the bottom indicates 'Connected.', '(local) (9.0 RTM)', 'sa (58)', 'siebeldb', '00:00:00', '0 rows', and 'INS'.

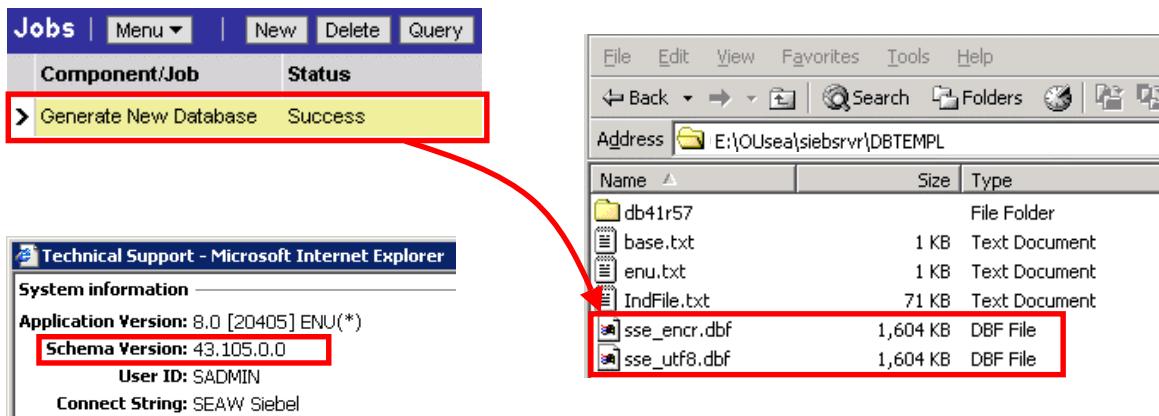
Screen shot from Microsoft SQL Server Management Studio Express copyright © Microsoft Corporation

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Generate the Local Database Template

- Run the Generate New Database server task to generate a local database template
 - ▶ Snapshot of the current version of the database schema (tables, columns, indexes, and so forth)



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Extract User Data

- Run the Database Extract server task to extract *user* data
 - ▶ Generates compressed data files
 - Stored on the server
 - ▶ User data is extracted for the user(s) specified in the job parameters

Jobs:

The screenshot shows the Siebel interface with the following details:

- Header:** Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, Administration - Server Management.
- Sub-Header:** Servers, Components, Jobs, Tasks, Sessions.
- Job List:**

State (Icon)	ID	Component/Job	Execution Server Mode	Status
Green	1-3PSP	Database Extract	OUsrvr	Asynchronous Success
- Message Box:** "Data is extracted to the specified mobile user's directory" (highlighted with a yellow box).
- File Explorer:**
 - Address: E:\OUsea\siebsrvr\docking\PPENGUIN
 - Folders: siebsrvr (expanded), ACTUATE, ADMIN, BIN.
 - File List:

Name	Type	Date Modified
inbox	File Folder	2/5/2007 12:55 PM
outbox	File Folder	2/5/2007 1:02 PM
00000000.log	Text Document	2/5/2007 1:02 PM
dobjinst.dbf	DBF File	2/5/2007 1:02 PM

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Modify Configuration Settings

- Modify configuration information for Siebel Tools in ..\tools\BIN\<Language Code>\tools.cfg
 - ▶ For example, ..\tools\BIN\ENU\tools.cfg
- Modify configuration information for Siebel Developer Web Client in ..\client\BIN\<Language Code>\<application>.cfg
 - ▶ For example, ..\client\BIN\ENU\uagent.cfg for the Siebel Call Center Developer Web client
- Both configuration files hold critical information to ensure proper behavior of local executables:
 - ▶ Native client connection information for the local database
 - ▶ ODBC connection for the server
 - ▶ ODBC connection for the local database
 - ▶ Location of the local Siebel file system

Example Configuration Settings

- Example: tools.cfg (edited for length)

```

tools.cfg - Notepad
File Edit Format View Help

[Siebel]
RepositoryFile      = siebel.srf
ApplicationName     = Siebel Tools
ClientRootDir        = c:\0usea\tools
LocalDbODBCDataSource= SSD Local db default instance
ServerDbODBCDataSource= SSD default instance

[Datasources]
Local                = Local
Sample               = Sample
ServerDataSrc         = Server

[Local]
Docked               = FALSE
ConnectionString     = c:\0usea\client\local\sse_data.dbf -q -m -x NONE -gp 4096 -c256m -ch256m
Tableowner            = SIEBEL
DockedDBFilename     = CHANGE_ME
DockConnstring       = CHANGE_ME
EnterpriseServer     = Siebel

[ServerDataSrc]
Docked               = TRUE
ConnectionString     = SSD default instance
Tableowner           = dbo
Filesystem            = c:\siebfile
GatewayAddress       = localhost
EnterpriseServer     = Siebel

```

Overall configuration: Name of SRF file, application name, root directory, and ODBC connections to local and server databases for testing connectivity

Available data sources. Add more if needed.

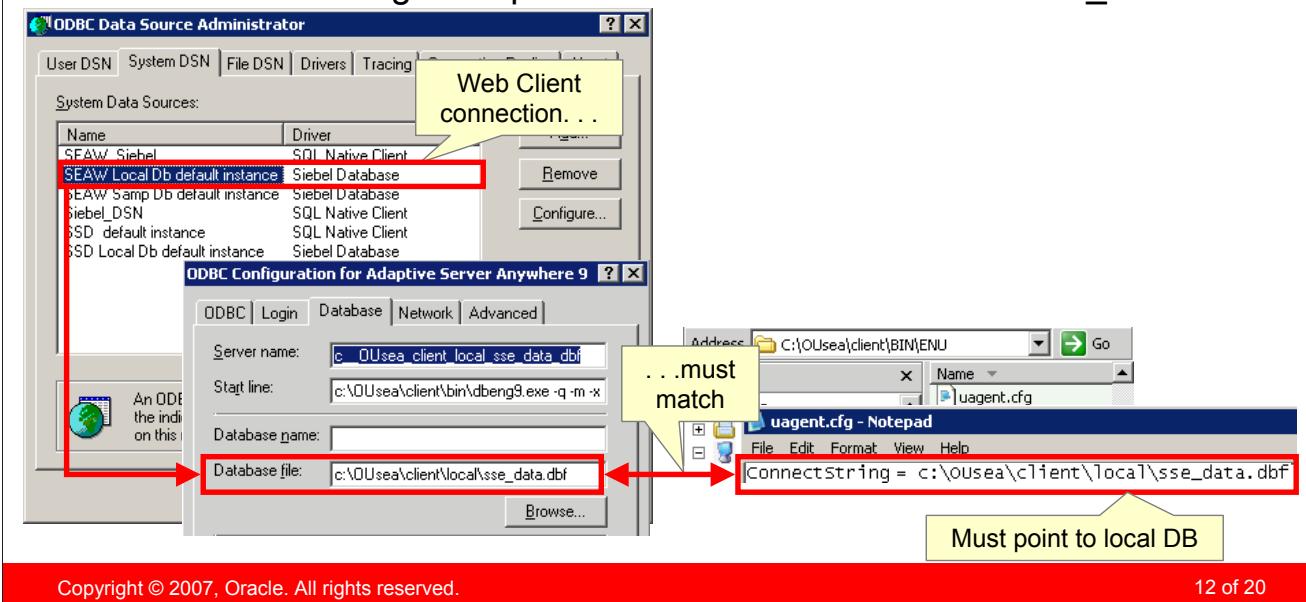
Server connection information

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Verify Web Client ODBC Connections

- Ensure that the Web Client ODBC connection references the local database
 - ▶ The database file parameter of SEAW Local Db default instance must match ConnectString in [Local] section of uagent.cfg
 - ▶ ConnectString must point to local DB: \client\LOCAL\sse_data.dbf

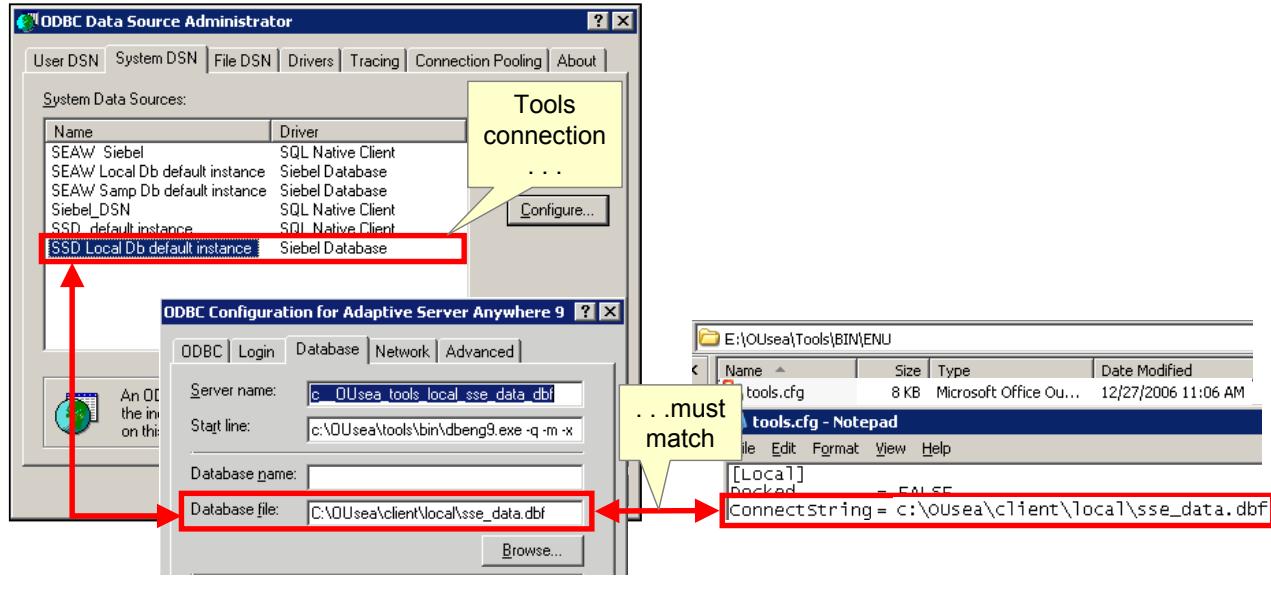


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Verify Tools ODBC Connections

- Ensure that the Tools ODBC connection references the local DB
 - ▶ The database file parameter of SSD Local Db default instance must match ConnectString in [Local] section of tools.cfg

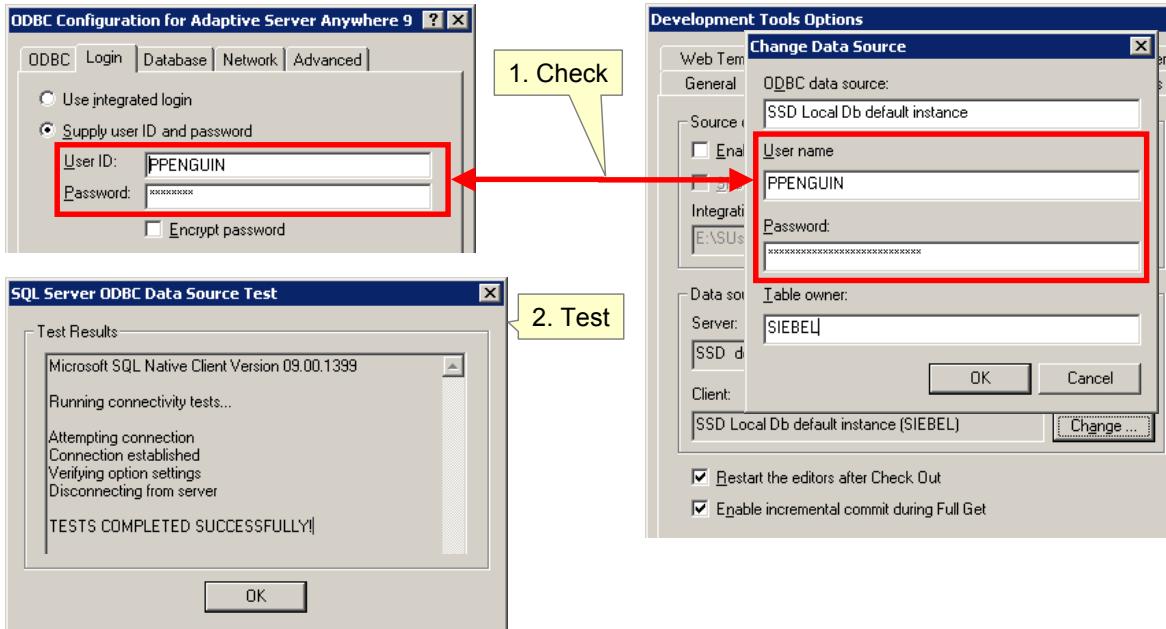


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Test Tools ODBC Login

- Check user IDs and passwords, and then test the connection

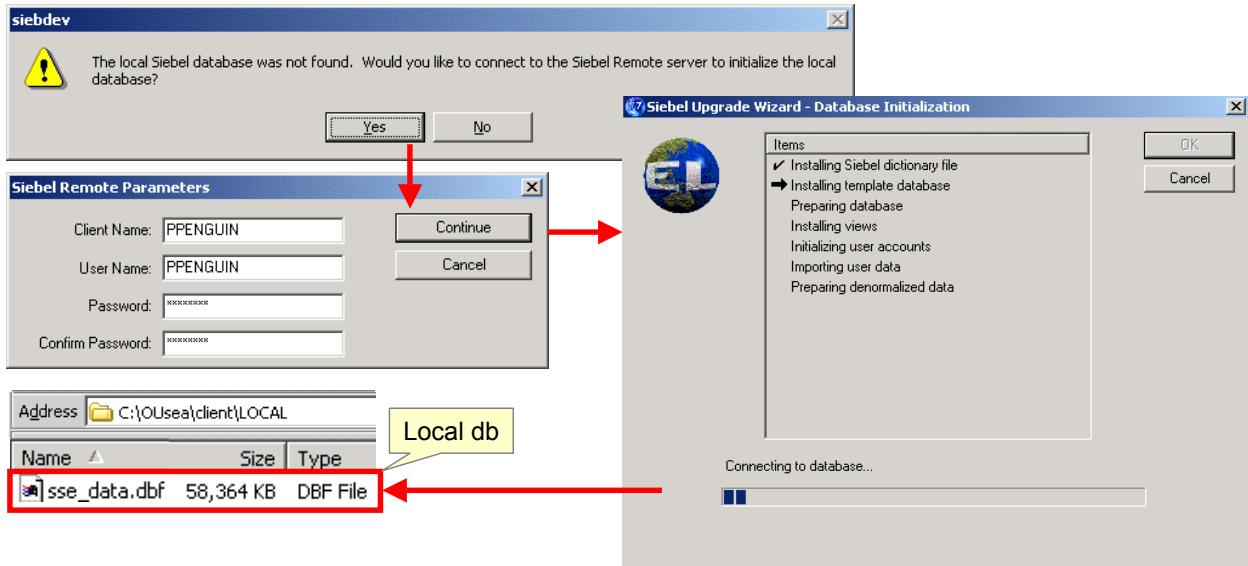


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Initialize Local Database

- Local database is initialized upon first login to client
 - ▶ Creates local database (sse_data.dbf) from template
 - ▶ Populates local database with data from compressed files

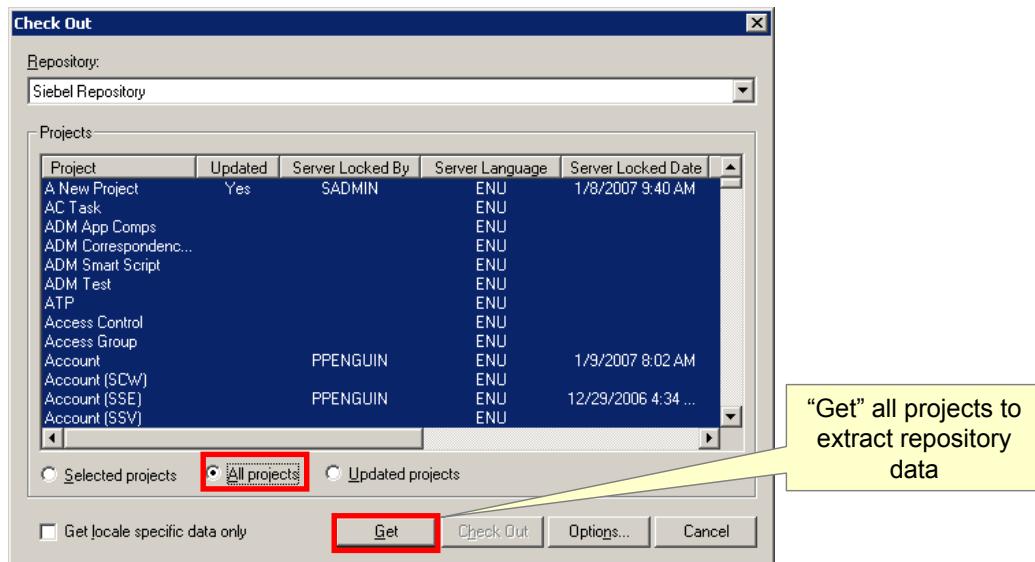


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Extract Repository Data

- Perform a Get to extract repository data
 - ▶ Copies all objects from the server repository to the local repository
 - ▶ Must be performed before compiling
 - SRF must be based on the full set of Siebel objects

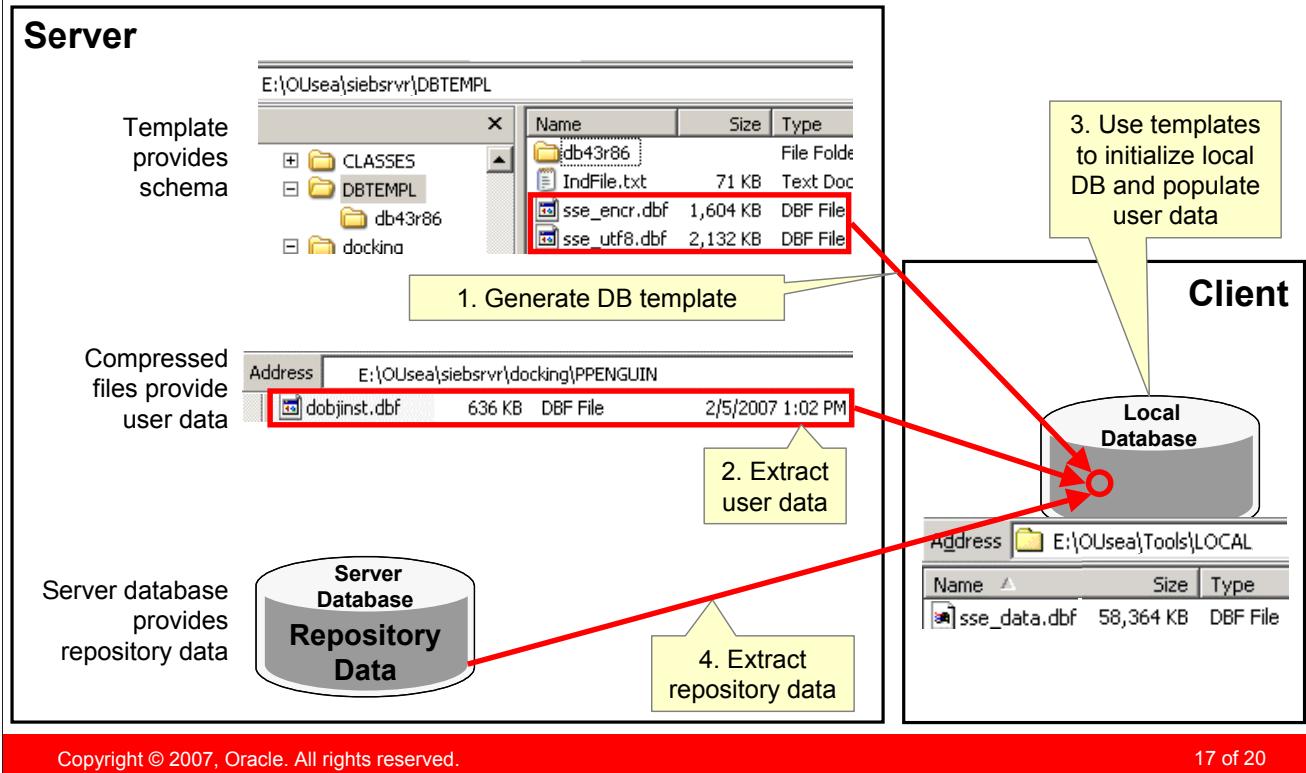


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The Big Picture

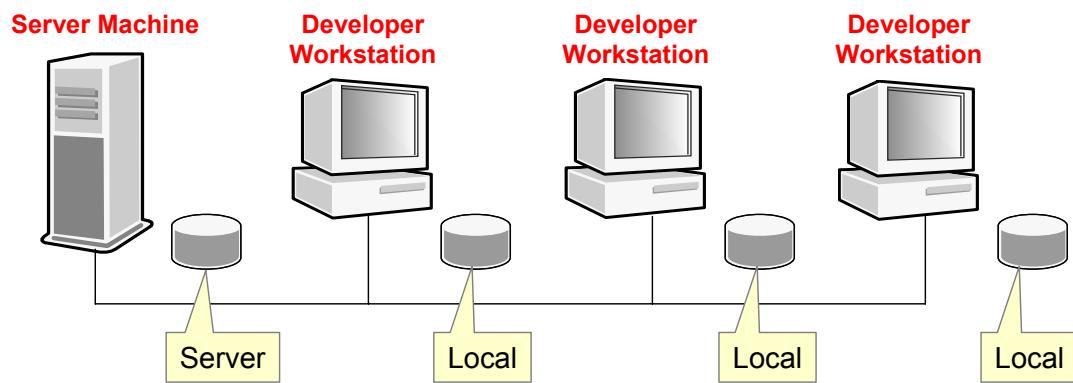
- Steps to create a usable local database



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Additional Developers

- For each additional developer:
 1. Create the developer
 2. Create a user login
 3. Extract the local database
 4. Initialize the local database
 5. Verify login and data sources



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Module Highlights

- Siebel Remote is used to establish a local development environment
- An individual developer uses Siebel Developer Web Client to develop and test custom configurations
- Create the development environment by:
 - ▶ Installing Siebel Tools on the client
 - ▶ Enabling Siebel Remote on the server
 - ▶ Creating a developer, login, and remote user on the server
 - ▶ Generating, extracting, and initializing a local database
 - ▶ Verifying login and data sources



Lab

- In the lab you will:
 - ▶ Set up an employee as a developer
 - ▶ Extract a local database for the developer
 - ▶ Populate the developer's local database with user and repository data

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Siebel 8.0 Essentials

Module 22: Managing Object Definitions

22

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22



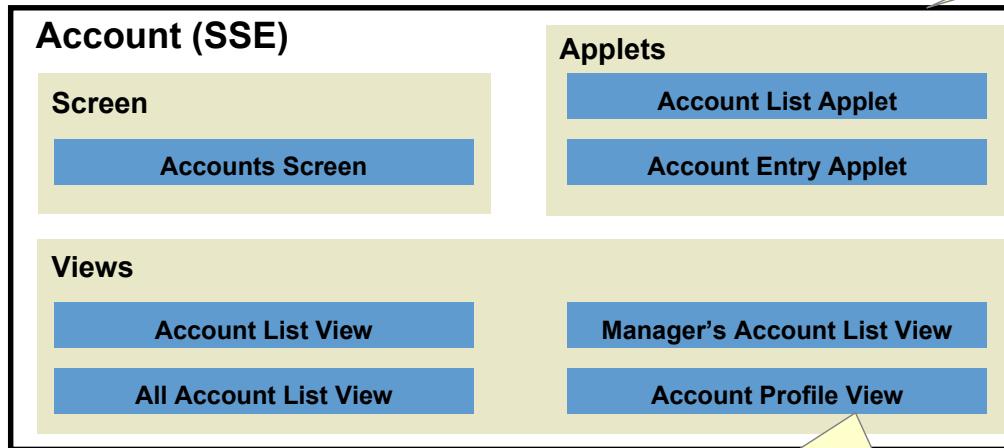
Module Objectives

- After completing this module you should be able to:
 - ▶ Explain the role of projects
 - ▶ Manage object definitions using Check Out and Check In
 - ▶ Lock projects locally
- Why you need to know:
 - ▶ Checking projects in and out are critical tasks that enable multiple developers to work together on a configuration effort

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Projects

- Are named sets of object definitions in a repository
 - ▶ Only one version of a project exists in a repository at a time
- Are a mechanism to organize object definitions so that a single developer can exclusively work on them as a group

Project

Object definition with Project
property = Account (SSE)

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Reference

Using Siebel Tools

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Existing and New Projects

- The as-delivered Siebel application contains a large number of existing projects
- New projects are created by:
 - ▶ Selecting the Project object type, and
 - ▶ Creating a new record in the Object List Editor

The screenshot shows the Siebel Object Explorer and the Project List window side-by-side.

Object Explorer: Shows a tree view of Siebel Objects under the Project: ** All Projects ** dropdown. The nodes include Siebel Objects, Applet, Application, Business Component, Business Object, Entity Relationship Diagram, Link, and Project.

Project List: Shows a grid of projects. The columns are Name, Changed, Inactive, Locked, and Locked By Name. The rows show:

Name	Changed	Inactive	Locked	Locked By Name
A New Project	✓			
ABC New Applets	✓		✓	PPENGUIN
ABC New Bus Comps	✓		✓	PPENGUIN
ABC New Views	✓		✓	PPENGUIN
ABC Strings	✓		✓	PPENGUIN
AC Task				

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Assigning Object Definitions to Projects

- Every object definition must belong to one, and only one, project
 - ▶ Either a Siebel-supplied project, or
 - ▶ A user-created project
- A top-level object definition has a Project property
 - ▶ Child object definitions belong to the parent's project

The screenshot shows the Siebel Control List interface. On the left is the Object Explorer with a tree view of Siebel Objects under a selected 'Applet' node. The main window is titled 'Control List' and contains two tables: 'Applets' and 'Controls'. The 'Applets' table has columns for Name, Project, and Business Component. The 'Controls' table has columns for Name, Changed, and Caption. A callout box points from the 'Controls' table to a note: 'Child belongs to parent's project. It does not have a project property.' A red box highlights the 'Project' column in the 'Applets' table.

Name	Project	Business Component
Account Entry Applet	Account (SSE)	Account
Account Entry Applet - Child	Account (SSE)	Account
Account Entry Applet - Child - Admin	Account (SSE)	Account
Account Entry Applet - Toggle	Account (SSE)	Account

Name	Changed	Caption
Account Name Title		
AccountStatus		

Child belongs to parent's project. It does not have a project property.

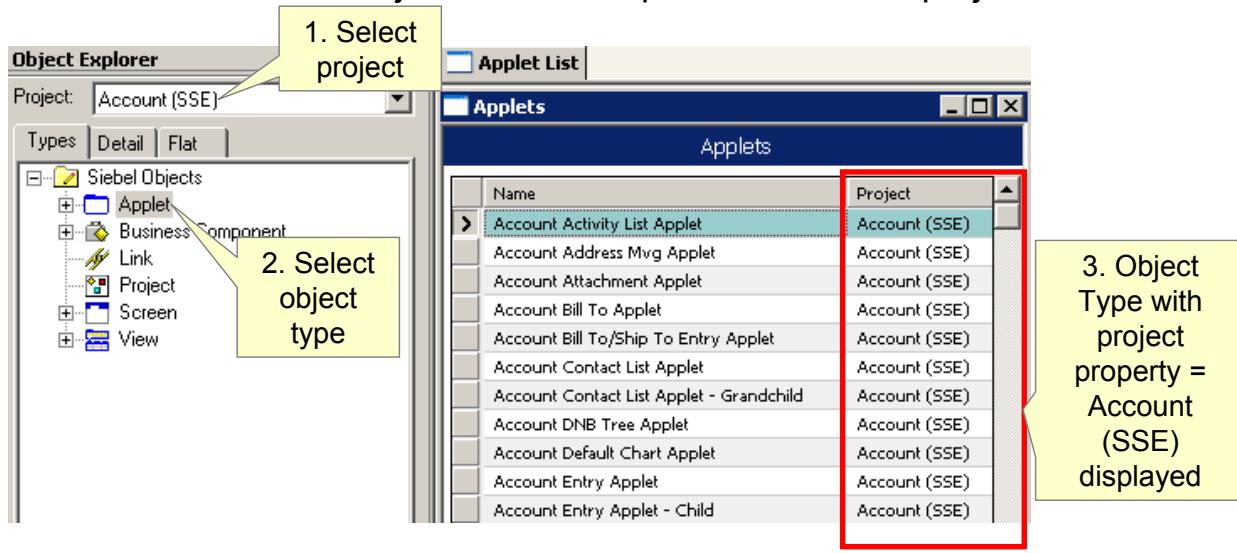
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Viewing Object Definitions by Project

- View object definitions in a project using the Project drop-down list
 - ▶ Displays object types for which there are object definitions in the selected project
 - ▶ Select **All Projects** at the top of list to see all projects



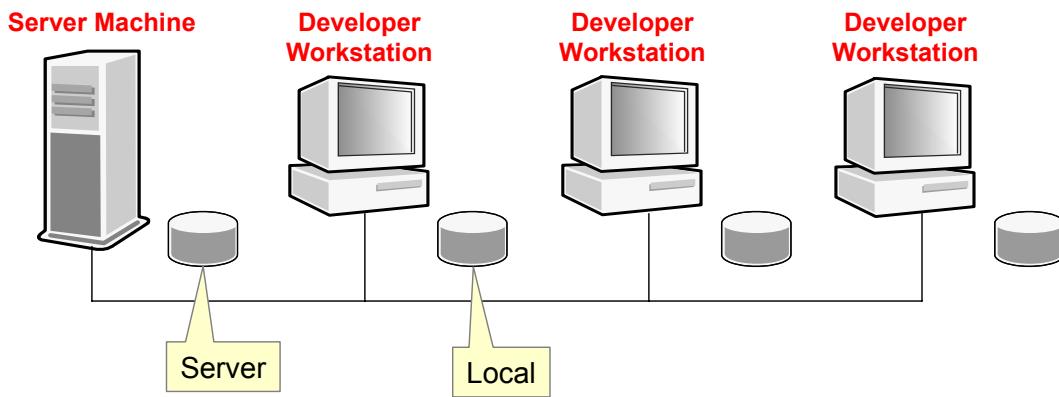
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Repositories

- Master copy of repository resides on server database
 - ▶ Stores tested object definitions for entire development team
- Each developer has repository copy on local developer (client) workstation
 - ▶ Developers perform all editing on their local repository



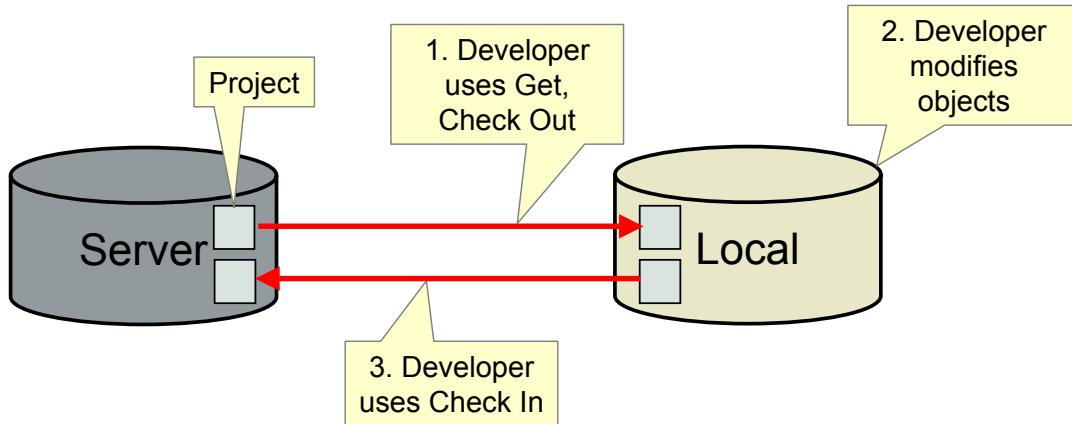
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Copying Projects

- Check In and Check Out safely manage concurrent use by multiple developers
- Object definitions in one or more projects can be copied:
 - ▶ From the server to the local developer repository (Use Get or Check Out to retrieve definitions)
 - ▶ From the local developer repository to the server (Check In)
- Overwrites the version in the destination repository



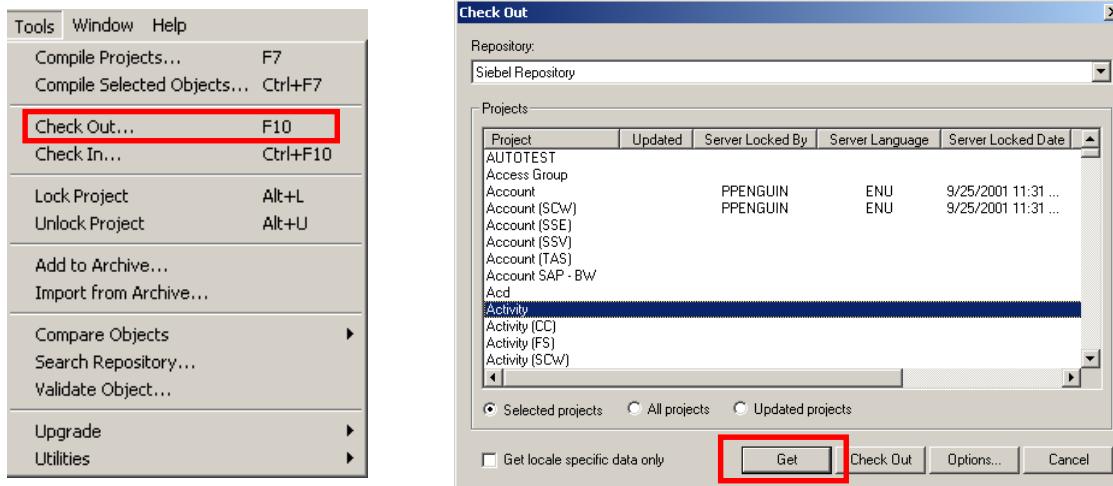
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Getting Projects

- Get populates a local database with a copy of projects from the server repository
- Use Get to bring object definitions modified by other developers to your local database
- Use Get with All Projects selected to populate a newly-initialized local database



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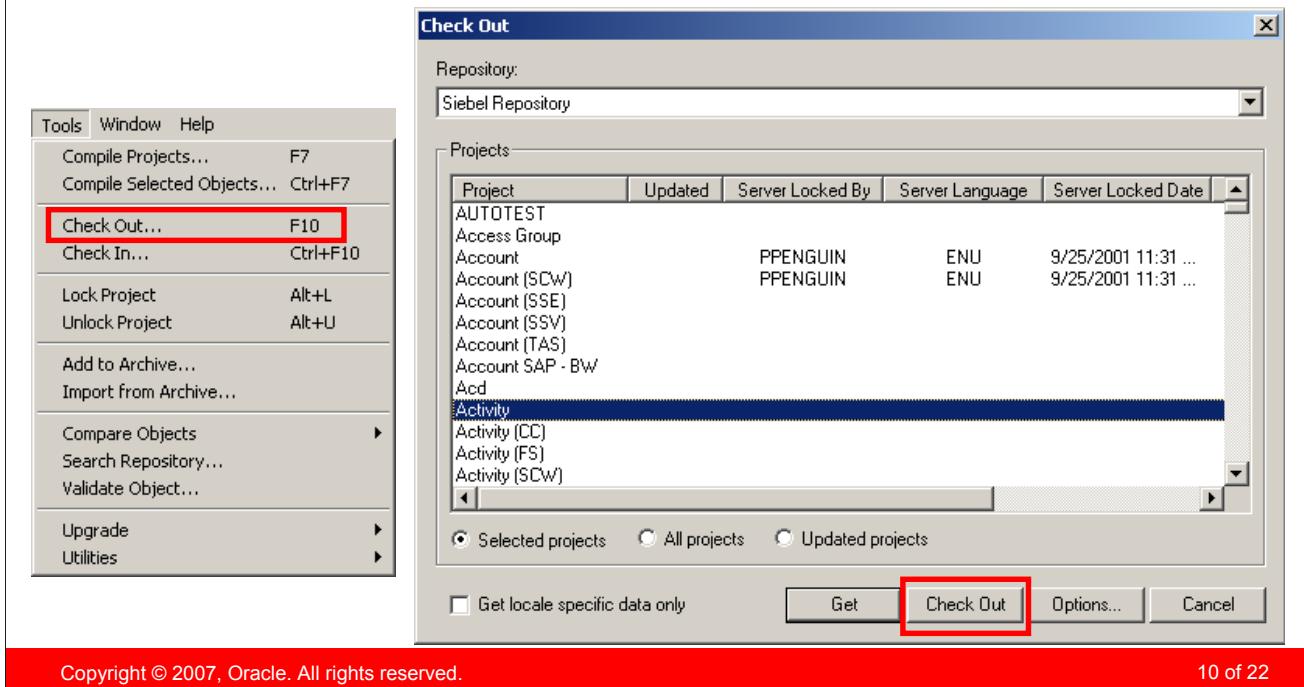
Note

First select Check Out from the Tools menu, and then click Get in the Check Out dialog box.



Check Out

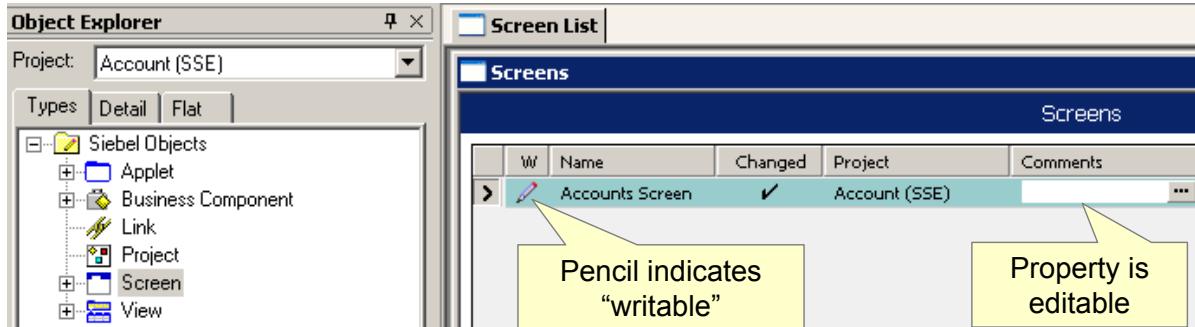
- Click Check Out to copy projects from the server repository to the local repository
 - ▶ The project's Allow Object Locking property must be disabled



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Check Out Continued

- Use Check Out in order to edit object definitions in a project
 - ▶ Copies all object definitions in project on server to local database
 - Local copy of project is overwritten by server version
 - ▶ Locks project on server repository
 - Prevents other developers from modifying that project
 - ▶ Locks the project in the local repository
 - Permits developer to make changes to object definitions in that project



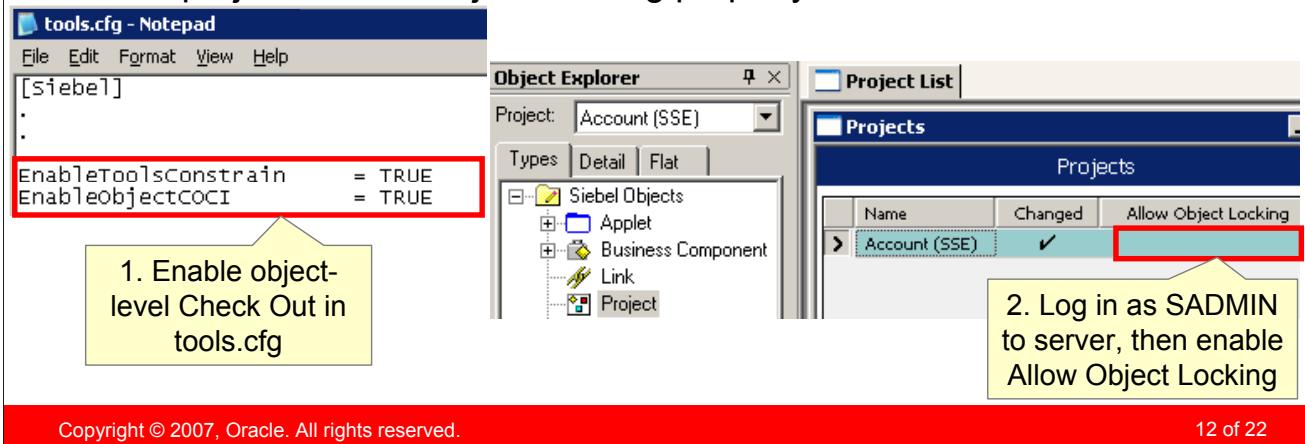
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Check Out Objects

- Allows for checking out individual objects
 - ▶ Quicker than checking out entire projects
- To enable object-level Check Out
 - ▶ Enable object-level Check Out in the [Siebel] section of tools.cfg
 - Ensure ToolsConstrain parameters = TRUE
 - Add EnableObjectCOCI=TRUE
 - ▶ Log in to Tools as SADMIN to the server database and enable the project's Allow Object Locking property



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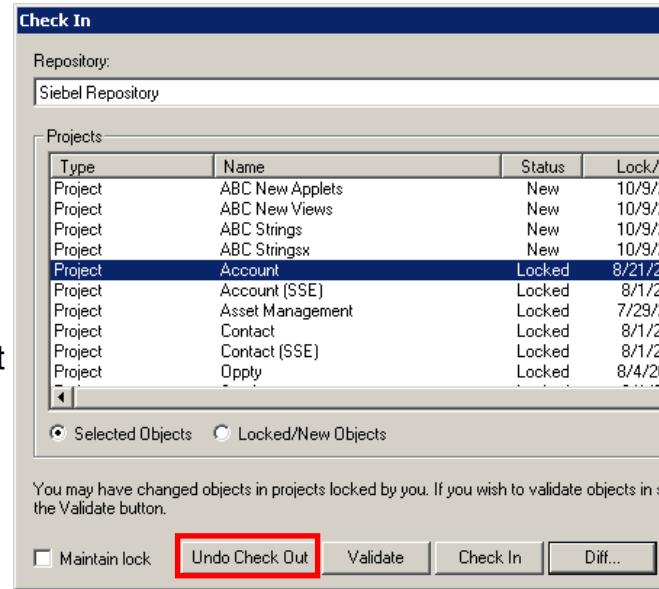
Canceling Check Out

- Discards changes made to checked-out project if:
 - ▶ Changes are no longer required
 - ▶ Local project has become corrupted
- To cancel a Check Out of a project:
 - ▶ Check out the project from the server again
 - Replaces modified object definitions in local repository with original version from server repository
 - Repeating Check Out is permitted for person who last checked out project
 - ▶ Then check in the project to unlock the project on both the local and server repositories

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Undo Check Out

- Use Undo Check Out to release lock on a project on the server without checking in edited object definitions
 - ▶ Makes the original project available to another developer
 - ▶ Can be followed by Get to restore original definitions in local DB
 - Alternate way to cancel Check Out
- Undo Check Out:
 - ▶ Releases lock on server
 - ▶ Retains lock on local database
 - Developer can continue to modify object definitions but will not be able to check them in to the server



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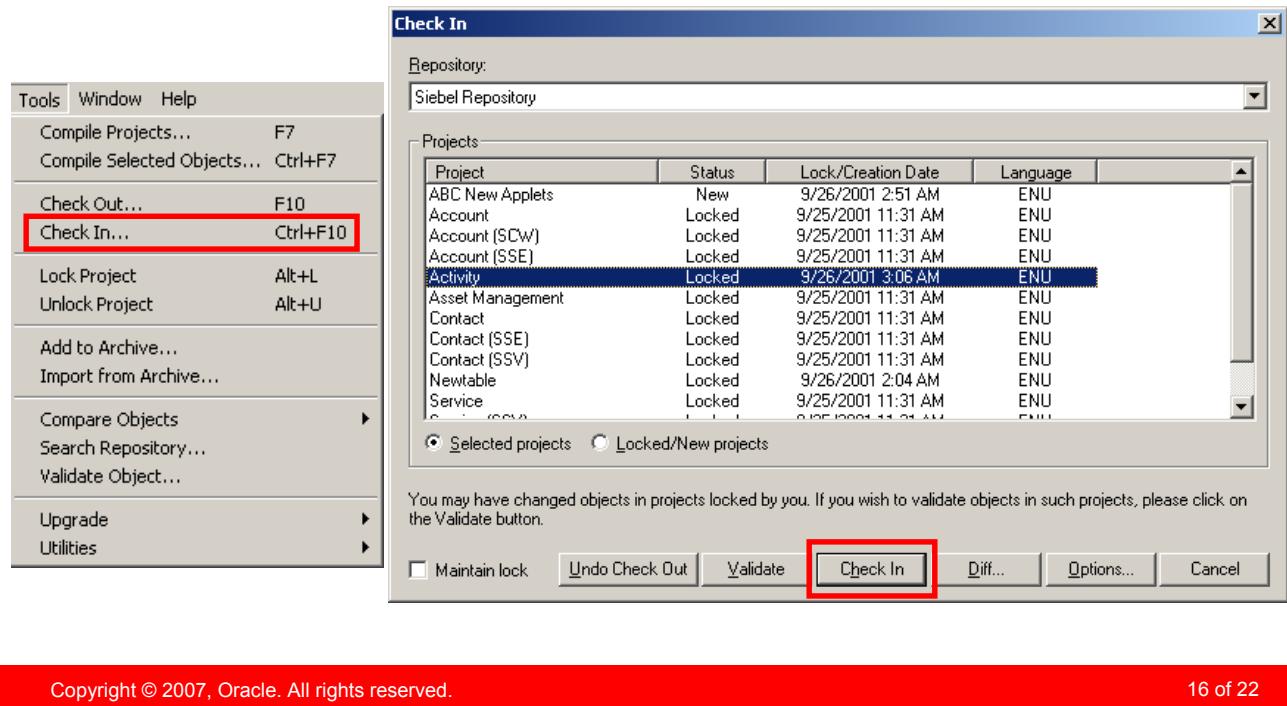
Check In

- Is used when object definitions in the project have been edited and tested
 - ▶ Copies object definitions from local repository to server repository
 - ▶ Replaces versions of checked out object definitions with new versions and unlocks projects
 - Can also check in object definitions in newly created projects
 - ▶ Releases locks on both server and local copies of project
 - Maintain Lock leaves project locked for further local modification by current developer

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Check In continued

- Click Check In to copy projects and objects from the local repository to the server repository



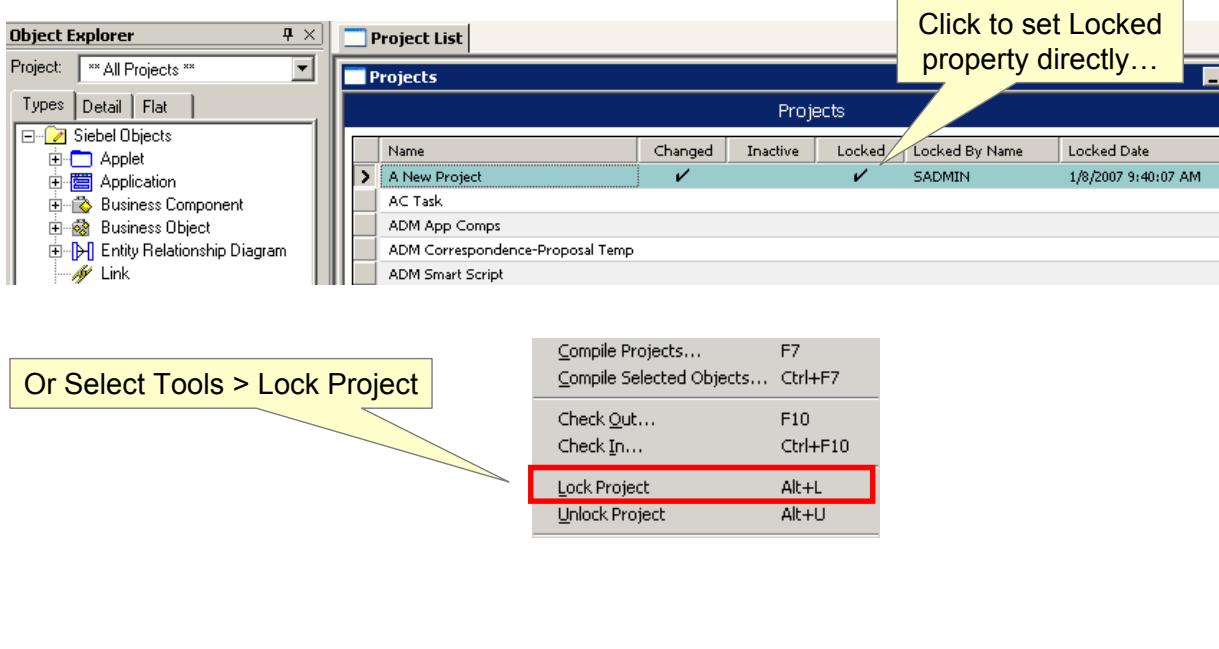
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Locking Projects

- You can directly lock and unlock projects in the current repository (local or server)



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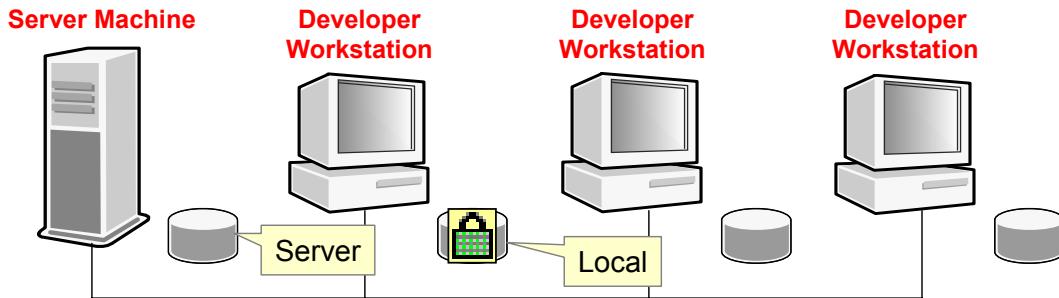
Project Drop-Down

You can select **My Locked Projects** in the Project drop-down list to display only those projects you have locked (either by checking them out or locking them directly).



Locking Projects Locally

- Allows developer to make and test modifications locally
- Prevents developer from checking changes into server repository
 - ▶ However, locking does not prevent other developers from checking out and modifying a project
- Consider when:
 - ▶ Prototyping your ideas without preventing other developers from checking out the project
 - ▶ Intending to discard (rather than save) your work



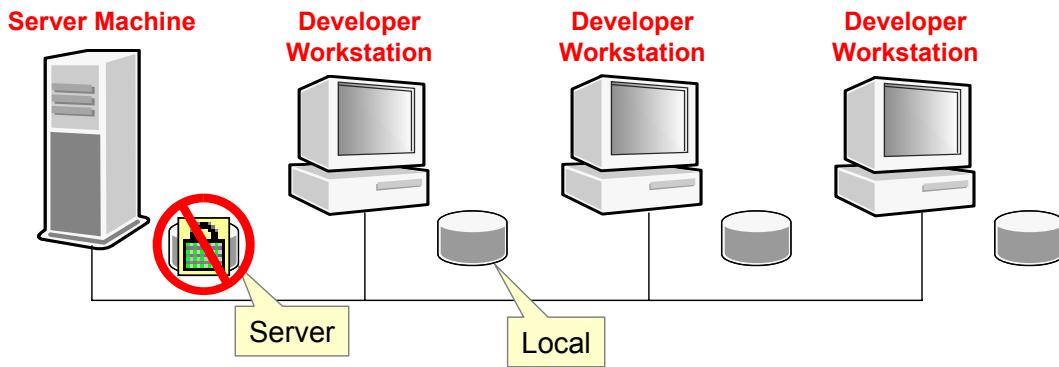
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Do Not Lock Projects on the Server

- Oracle recommends that developers never directly lock projects on the server
 - ▶ Prevents the developer from undoing changes and restoring original definitions
 - ▶ Allows other developers to get object definitions in an incomplete, inconsistent, and untested state
- Always use Check Out and modify the object definitions locally



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Module Highlights

- Projects organize object definitions so a developer can work on them exclusively
- The as-delivered application contains many projects
- Every object definition must belong to one, and only one, project
- Developer edits a copy of master repository residing on local client
- Check Out and Check In are used to modify object definitions
 - ▶ Project locking ensures only one developer can modify a given object



Lab

- In the lab you will:
 - ▶ Explore how projects work in Siebel Tools
 - ▶ Check out a project from the server

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Module 23: Editing and Compiling Object Definitions

23

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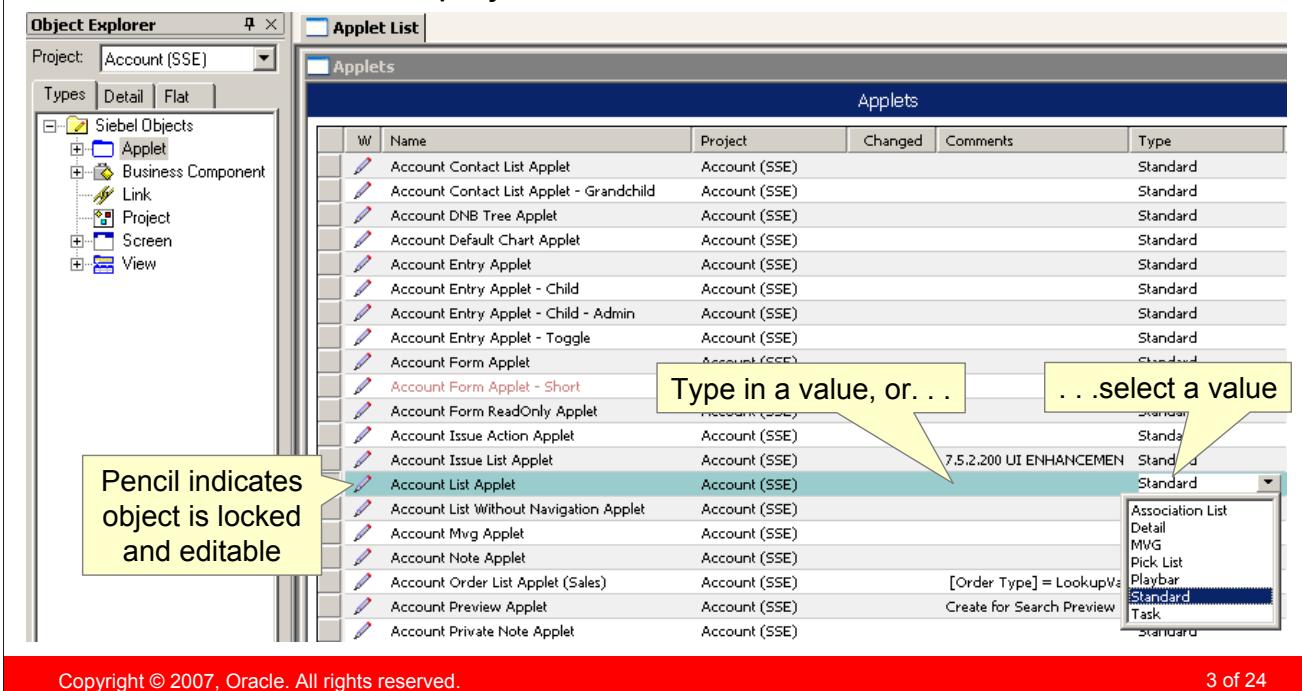
Module Objectives

- After completing this module you should be able to:
 - ▶ Create new and edit existing object definitions
 - ▶ Validate edited object definitions
 - ▶ Archive object definitions and projects
 - ▶ Back up the local database
 - ▶ Compile object definitions into a repository file
- Why you need to know:
 - ▶ These are fundamental activities that occur during all configuration efforts

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Editing Object Definitions

- Use the Object Explorer and Object List Editor to edit object definitions
 - ▶ Ensure that the project has been locked



Reference

Using Siebel Tools

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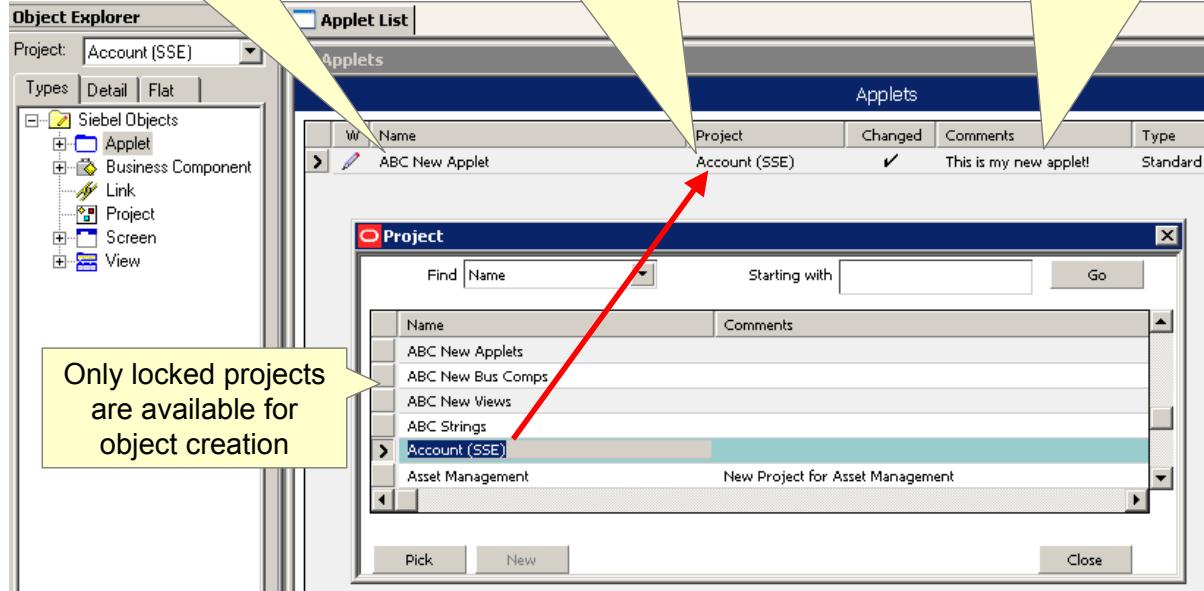
Creating a New Object Definition

- Select the desired object type in the Object Explorer
- Create a new record in the Object List Editor

1. Enter a unique name

2. Select a project from the picklist

3. Assign values to the remaining properties, as necessary



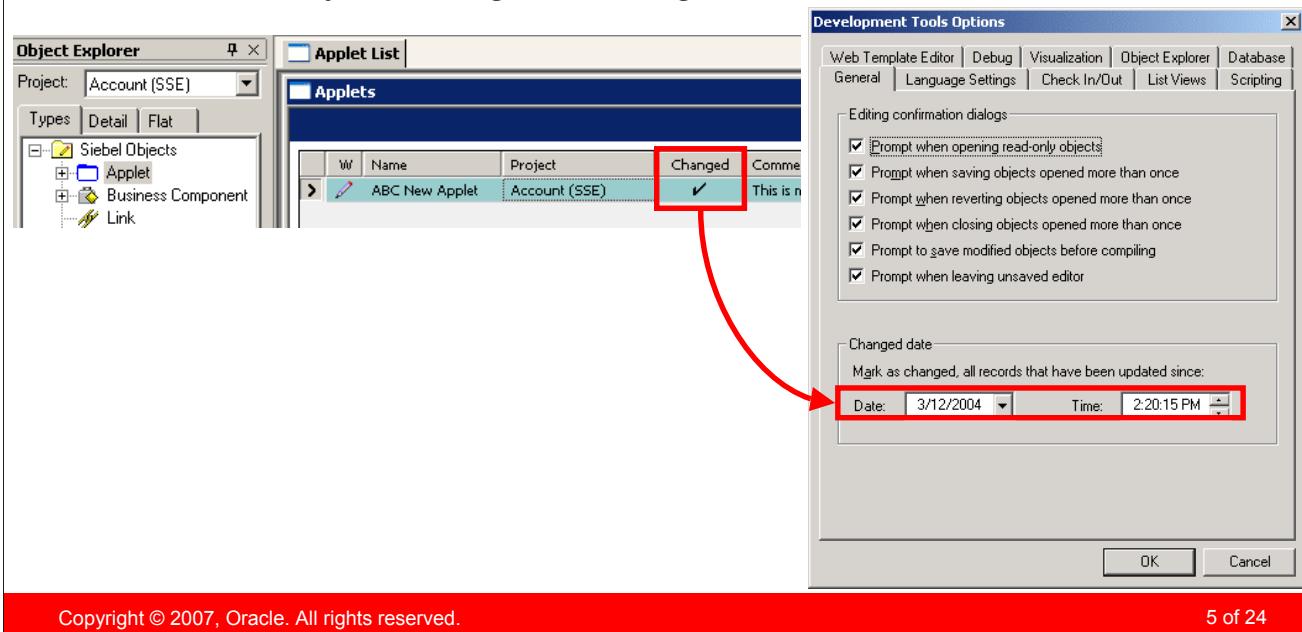
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Changed Flag

- Indicates records that have been modified since the changed date
- Is set whenever a record is edited
- Is cleared by resetting the changed date value



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Changed Flag

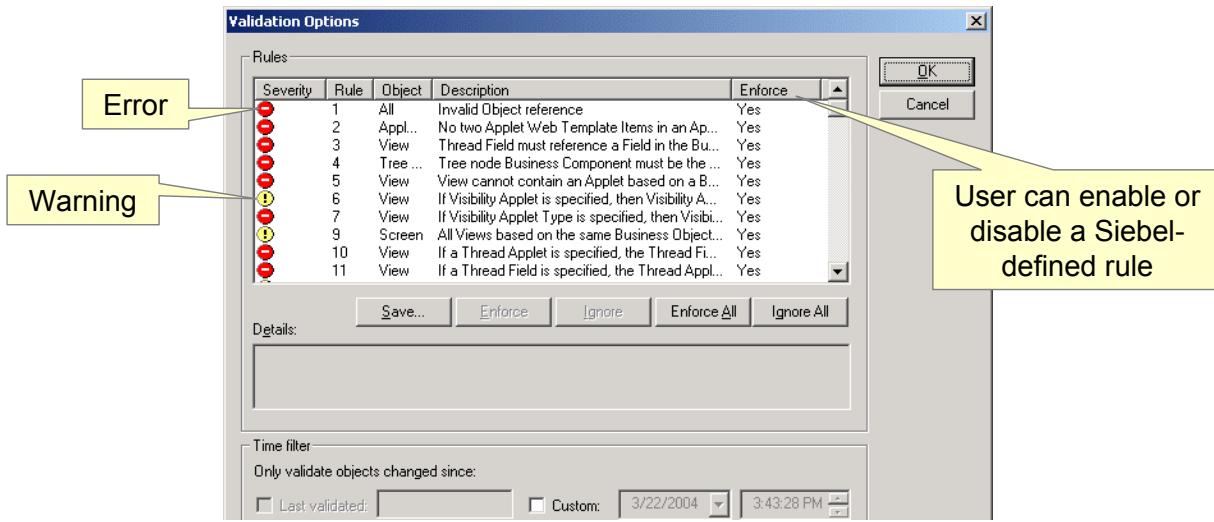
The Changed flag indicates only that the record has been touched. A developer may change the value of a property and then undo the change. The Changed flag will still be set.

Some developers will select an object type and then query for all object definitions with the Changed flag set. Only those definitions that have been edited will display in the OBLE.

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Validating Object Definitions

- Determines the correctness of selected object definitions in the repository
 - ▶ Includes all child object definitions for the selected parent definitions
- Is based on a set of Siebel-defined rules



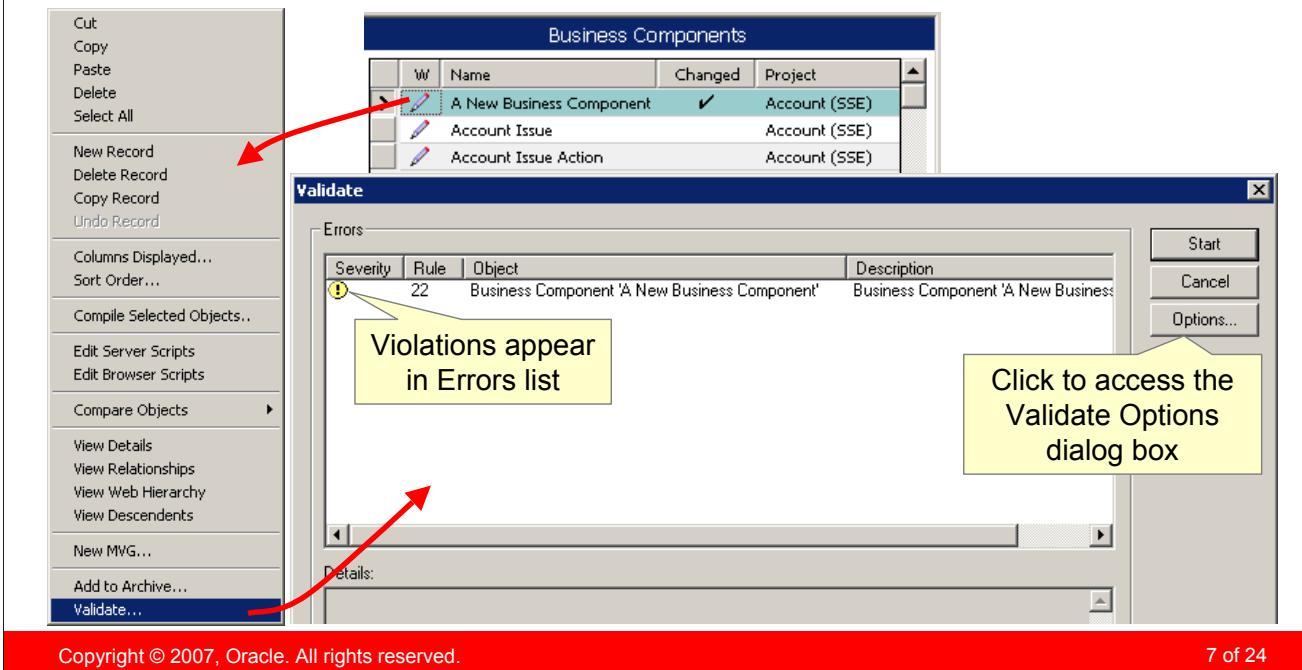
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Validating Object Definitions Continued

- Select the object definition to validate
- Right-click and select Validate
- Click Start in the Validate dialog box



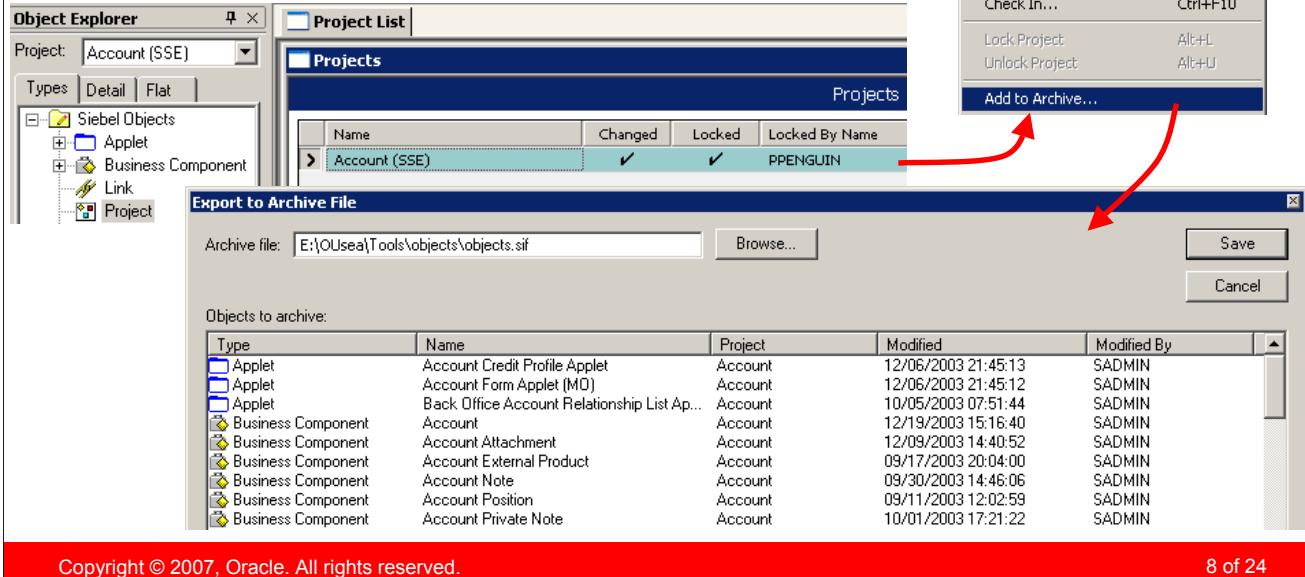
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Archiving Projects

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- Projects can be archived to .sif files
 - ▶ Select the project (or projects) to be archived
 - ▶ Select Tools > Add to Archive
 - ▶ Select an existing (or create a new) archive file
 - ▶ Click Save in the Export to Archive File dialog box



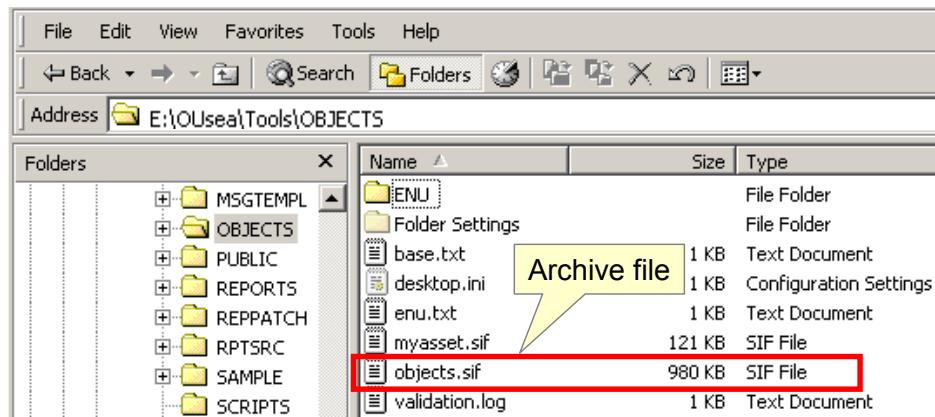
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Archive Files

- Contain projects exported from a repository
 - ▶ Available for importing into other repositories
- Have .sif extension by default
- Are used to share projects among developers
- Are used to back up projects
- Can be version-controlled using source code control systems





Archive Recommendations

- Archive the entire project
- Do not archive individual objects
 - ▶ Could result with inconsistent object definitions
 - ▶ Difficult to recover from a partial or incomplete archive
 - ▶ Will only save a few minutes per day compared to archiving the project
- Archive at appropriate intervals
 - ▶ Prior to implementing a large amount of work
 - ▶ After testing a section of work
 - ▶ Several times per day during heavy development

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Importing Object Definitions

- Object definitions in an archive file can be imported into the local repository on the developer workstation
 - ▶ Appear in the current active repository
- To import object definitions
 - ▶ Select Tools > Import from Archive
 - ▶ Select the archive file
 - ▶ Indicate how to resolve conflicting object definitions

Type	Name	Project	Modified	Modified By
Applet	ABC New Applet	Account	03/22/2004 07:03:00	SADMIN
Applet	Account Credit Profile Applet	Account	12/06/2003 21:45:13	SADMIN
Applet	Account Form Applet (MO)	Account	12/06/2003 21:45:12	SADMIN
Applet	Back Office Account Relationship List A...	Account	10/05/2003 07:51:44	SADMIN
Business Component	A New Business Component	Account	03/22/2004 07:47:24	SADMIN
Business Component	Account	Account	12/19/2003 15:16:40	SADMIN
Business Component	Account Attachment	Account	12/09/2003 14:40:52	SADMIN
Business Component	Account External Product	Account	09/17/2003 20:04:00	SADMIN

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Resolve Import Conflicts

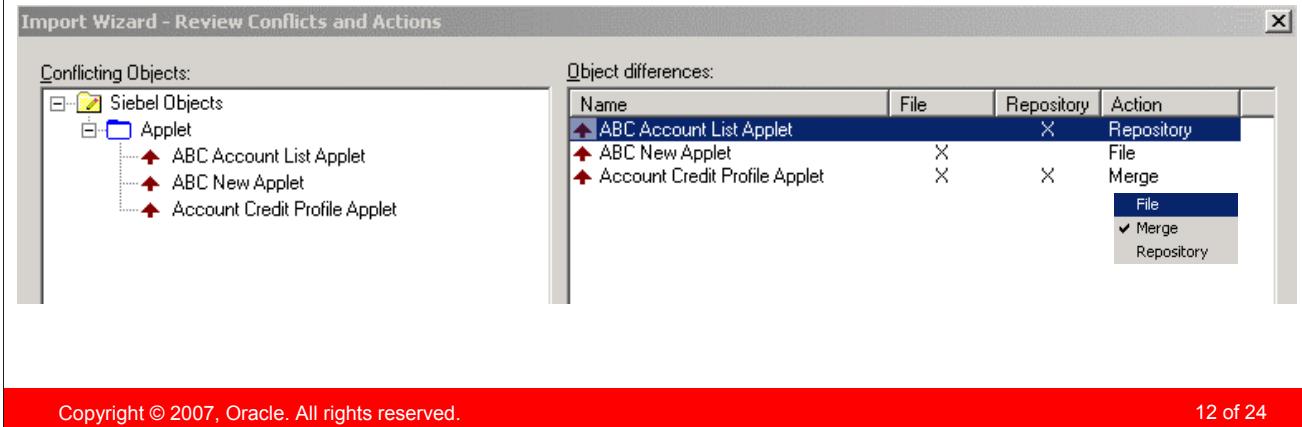
- Set the default conflict resolution

Conflict resolution

How would you like to resolve conflicts when an object definition exists in both the archive file and the repository?

Overwrite the object definition in the repository
 Merge the object definition from the archive file with the definition in the repository
 Do not import the object definition from the archive file

- Adjust individual resolutions by right-clicking them in the “Object differences” list



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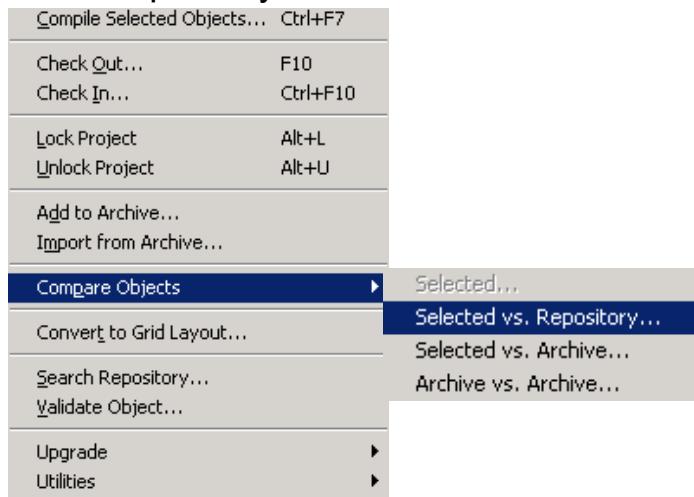
Compare Objects

- Displays differences between the selected object definition and another one:
 - ▶ In the current local repository
 - ▶ In an archive file
 - ▶ In the repository on the server
- Allows developers to identify differences while comparing objects
 - ▶ Delete individual child object definitions
 - ▶ Copy individual child object definitions in either direction



Compare Objects Continued

- To compare an object definition to one in an archive or repository:
 - ▶ Select the object definition to be compared
 - ▶ Select Tools > Compare Objects
 - ▶ Select type of comparison
 - ▶ Select the archive or repository



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Note

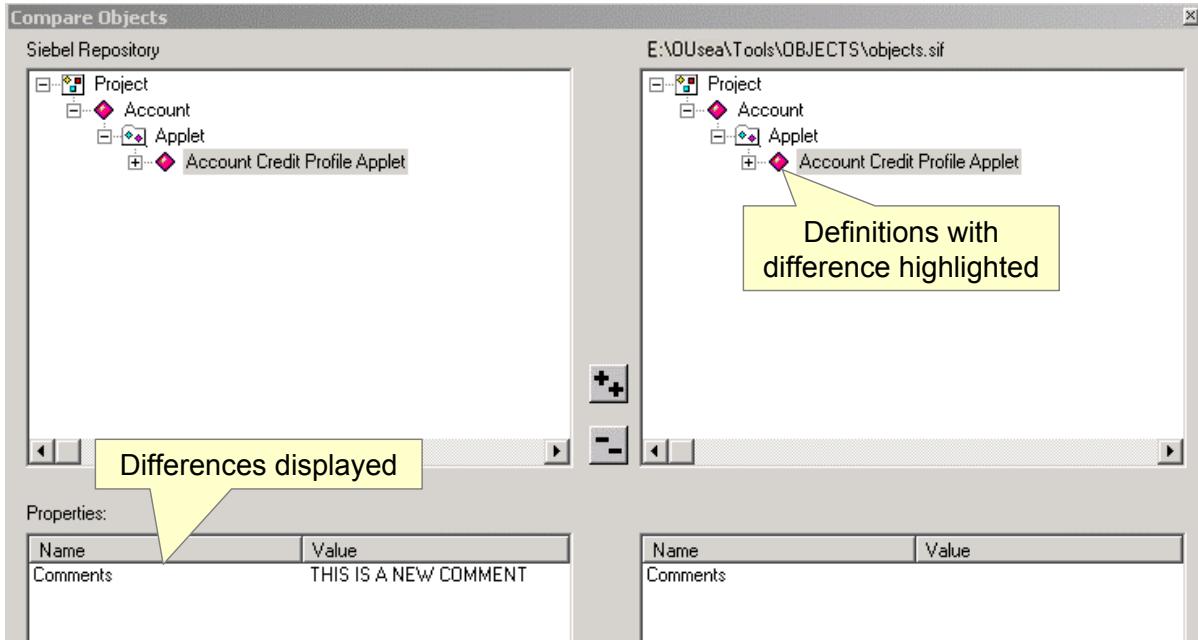
Typically there will only be one repository available, and this repository defines an application. This repository is the Siebel repository and it will be available on a local database and on a server database. However, there are circumstances when multiple repositories will be available: when a group is upgrading to a new version of Siebel Applications, or working with multiple applications.

There can not be multiple repositories in a production environment because some run-time components read repository objects directly from repository tables, not the SRF. There can be multiple SRF files, compiled from different repositories, provided that they do not compromise data integrity. Refer to *Bookshelf* for more information.

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Compare Objects Continued

- Examine the differences in the Compare Objects window



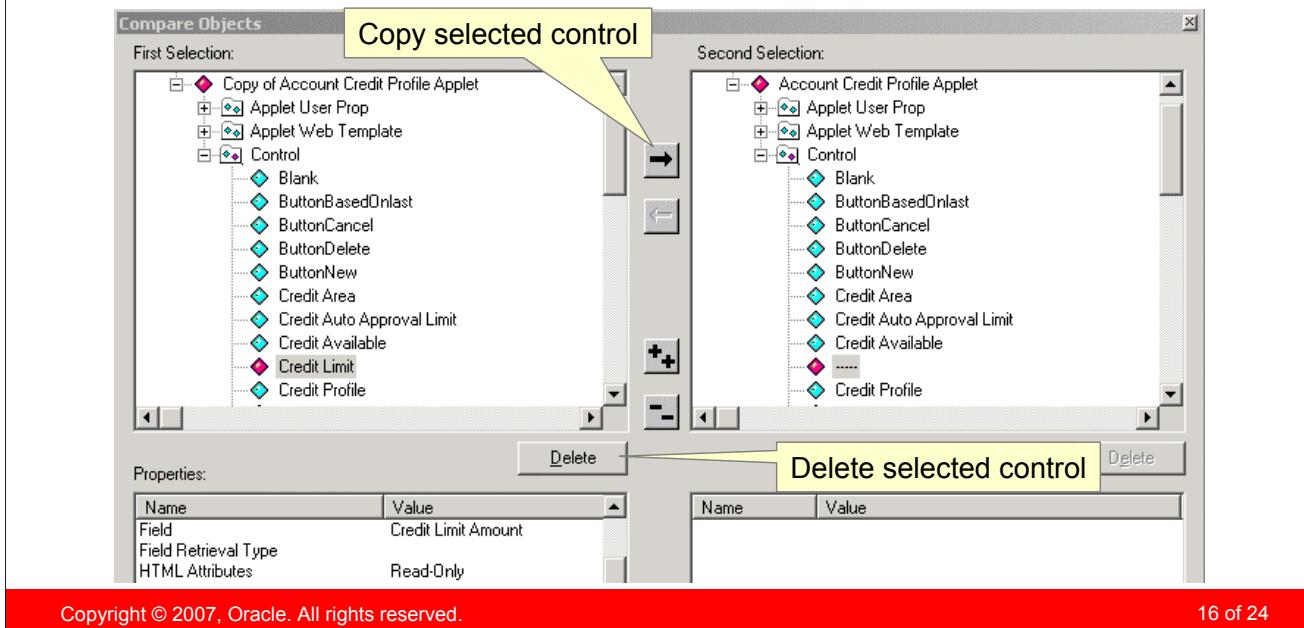
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Compare Objects Continued

- To compare two object definitions in the developer repository
 - ▶ Select two object definitions to be compared (by SHIFT-clicking)
 - ▶ Select Tools > Compare Objects > Selected
- Modifying definitions is supported



Modifying Definitions

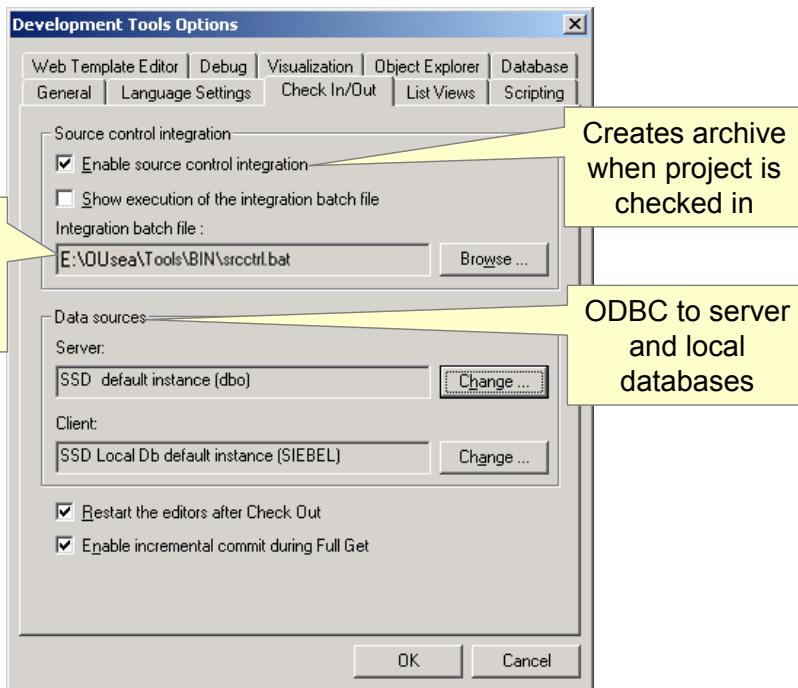
A child object definition in either parent object definition can be deleted or copied to the other definition.



Source Code Control Integration

- Automate integration with source code control for repository data

Check archive
into code
management
system



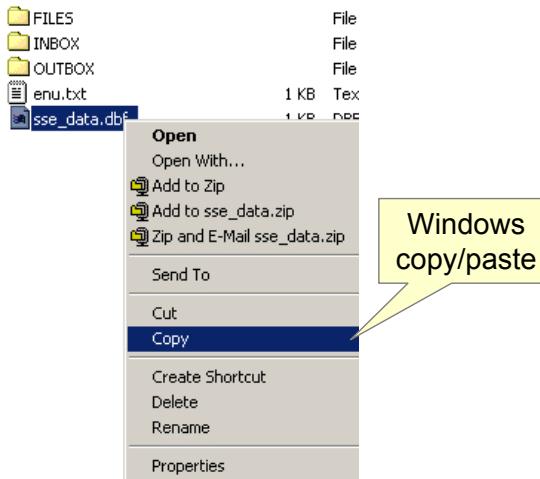
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Backing Up the Development Database

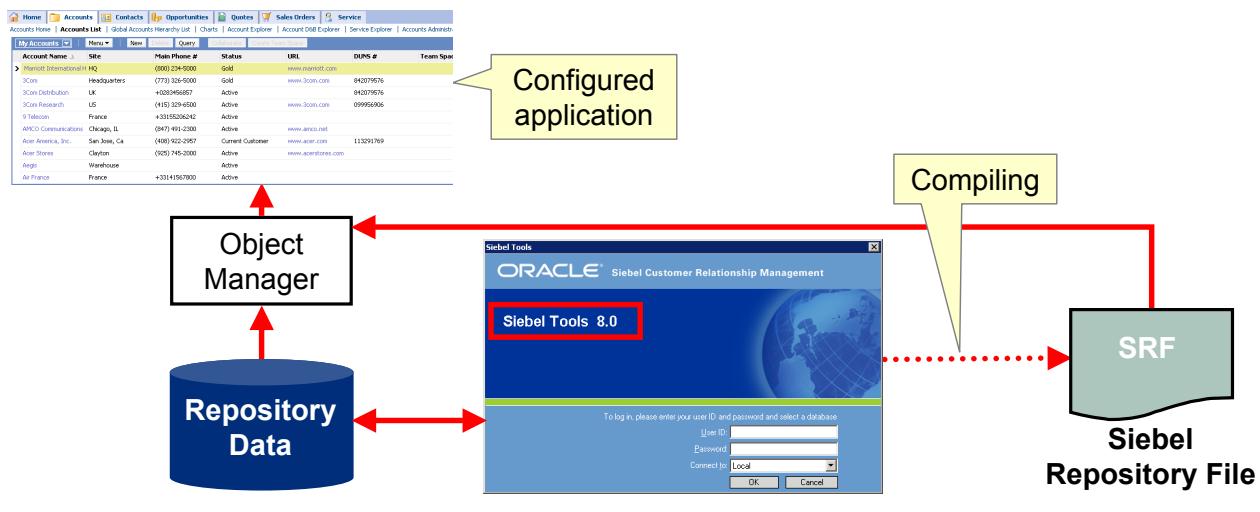
- Is achieved by copying the local database file (.dbf)
 - ▶ Backs up the entire database



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Compiling

- Compile to produce an .srf file to test the configuration
 - ▶ Reads object definitions from repository and creates a flat file representation to be accessed by siebel.exe at run time
- Compile into .srf file located in the objects directory of the client application



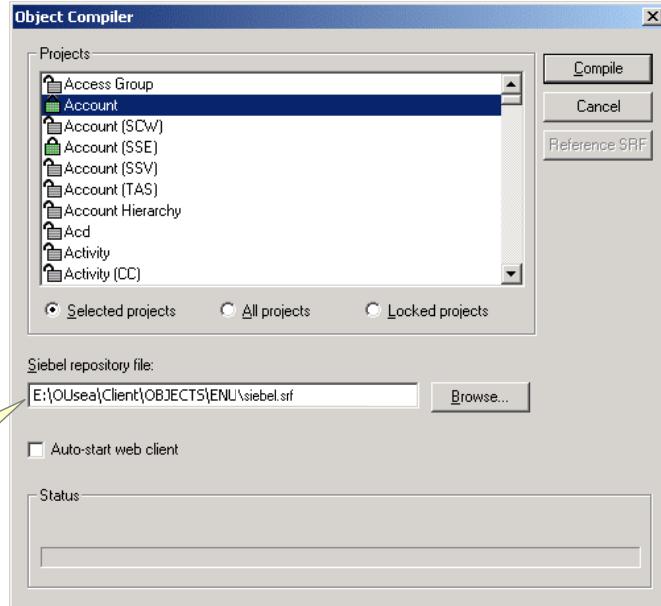
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Compile Projects

- When starting and at milestones
 - ▶ Use Compile All Projects to generate a new .srf file
- Compile only selected projects or locked projects for incremental compile
- Back up the .srf file prior to full compile
- To compile projects:
 - ▶ Select Tools > Compile Projects
 - ▶ Select project or projects



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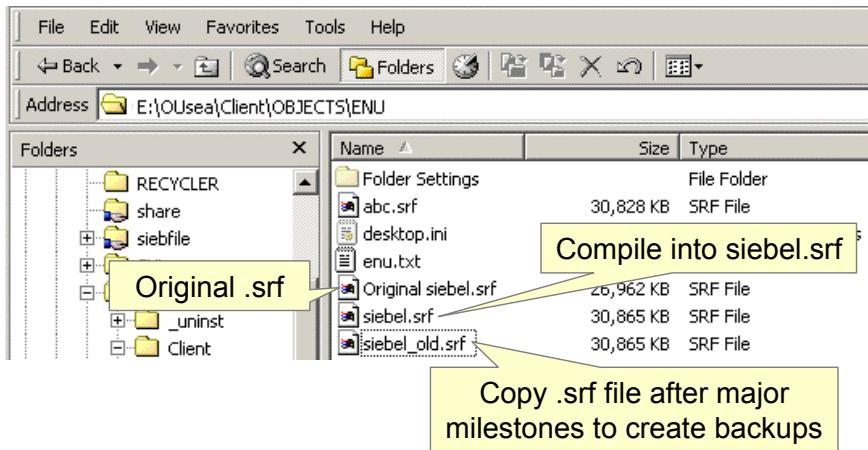
Get Projects

Remember to compile any projects after using Get; this ensures that the object definitions edited by your fellow developers are compiled into your .srf file.

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Backing Up the Configuration File

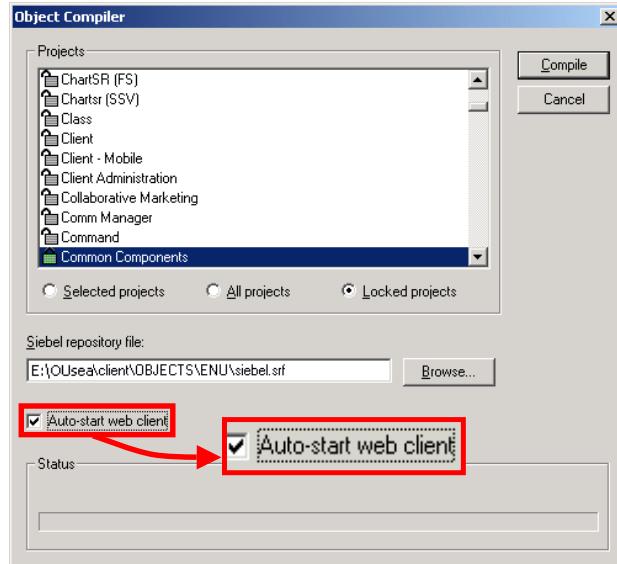
- Copy the .srf file to create backups
 - ▶ Create an initial backup copy before starting development
 - ▶ Create additional backups after major milestones
- Rename the copies and compile into siebel.srf
 - ▶ Using the original siebel.srf name for development eliminates the need to edit .cfg files to point to a renamed .srf





Rapid Unit Testing

- Allows developers to test changes in a local instance of the Developer Web Client
- Run-time behavior when user compiles SRF
 - ▶ If Web client is running:
 - At end of the compile, the browser window refreshes
 - The user is brought back to the view that was displayed before the compile
 - ▶ If Developer Web Client is not running:
 - If user checked auto-start, Web client is started using debug setting



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Module Highlights

- Object definitions can be created and edited once the project is locked
- Validation determines correctness of object definitions
- Developer can generate archives that contain exported projects
 - ▶ Share projects for back-up and version-control
 - ▶ Export projects to and import from archive
 - ▶ Highlight import conflicts and project differences
- Compile to produce the .srf used to test a configuration
- Compiling:
 - ▶ Reads object definitions from repository tables
 - ▶ Creates a flat file (.srf) accessed by the Siebel application at run time
- Rapid Unit Testing allows developers to test changes using the Developer Web Client

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Lab

- In the lab you will:
 - ▶ Practice editing and validating object definitions in Siebel Tools
 - ▶ Explore the use of diff and archive options in Siebel Tools
 - ▶ Compile an .srf file



24

Siebel 8.0 Essentials

Module 24: UI Layer Configuration: Web Templates

24

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Module Objectives

- After completing this module you will be able to:
 - ▶ Describe the role of Siebel Web template files
 - ▶ Describe the role of Siebel tags in template files
 - ▶ List the types of templates
 - ▶ Describe how to register, associate, and bind a template file
- Why you need to know
 - ▶ Understanding template structure and how to register, associate, and bind template files is necessary in order to customize the look and feel of your Siebel application

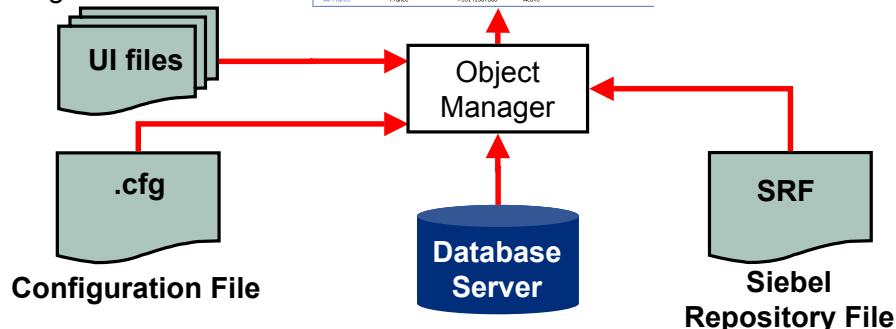
Tailoring the Physical User Interface (UI)

- Is performed by editing template files and cascading style sheets

Use an HTML or a text editor to modify layouts

Use a text editor to modify colors, fonts, etc.

- Siebel template files
- Cascading style sheets
- Image files



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Reference

Siebel Developer's Reference



Siebel Web Template Files

- Are HTML files that specify how to render the views for a Siebel application in the user's browser
- Specify the formatting and layout of:
 - ▶ Graphic and text elements
 - ▶ User data
- Consist of standard HTML tags and Siebel-specific swe: tags

```
<table width="100%" class="banner" cellpadding='0'  
       cellspacing='0' border='0'>  
  
    <tr>  
  
        <td></td>  
  
        <td><swe:menu type="Default" width="275" height="29"  
bgcolor="#ccccff" fgcolor="#000000" /></td>
```

Standard
HTML tag

Siebel tag

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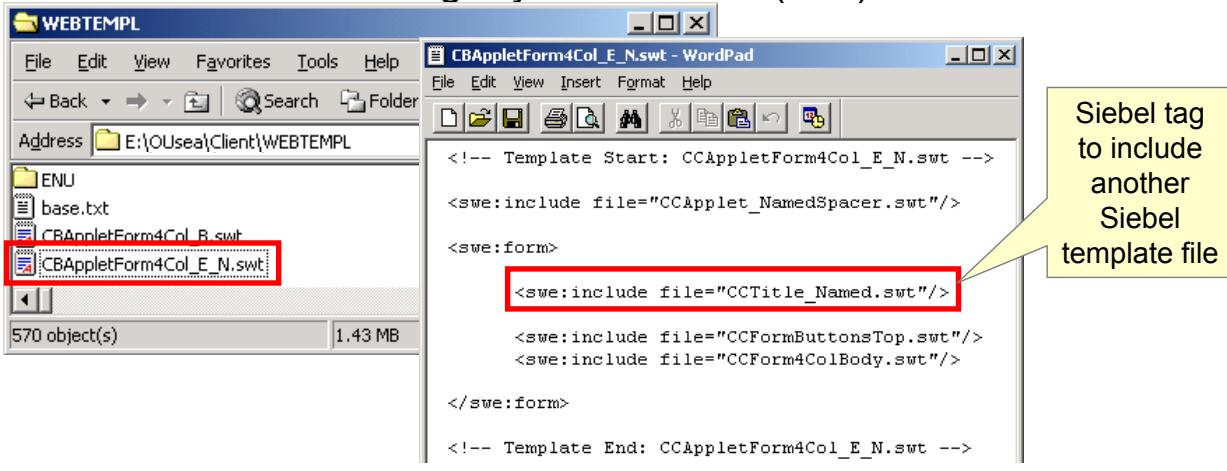
Sample HTML

The sample HTML tags shown in the slide are excerpted from the CCFrameBanner.swt template file.

Siebel Web Template Files Continued

24

- Are stored as separate files outside the Siebel repository
 - ▶ Located in the WEBTEMPL directory in a Siebel installation
 - ▶ Have an .swt extension
- Are edited using text or HTML editor of your choice
- Can include other template files via swe:include tag
- Reference Cascading Style Sheet files (.css)



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Siebel Tags

- Are special tags inserted into template files
 - ▶ They specify how objects defined in the repository should be laid out and formatted in HTML for display in the user's Web browser
- Control layout repetitively through iteration
- Serve as placeholders for Siebel-specific content

```
<swe:for-each-screen>           Siebel tag to iterate over all screens
    <swe:screenlink state="Active"><td id="swe:this.Id" .....
    
        <swe:this property= FormattedHtml>&nbsp;<swe:screenname/>
        &nbsp;</swe:this></td>
    </swe:screenlink>
...
</swe:for-each-screen>
```

Siebel tag to insert the name of the screen

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Sample HTML

The sample HTML tags shown in the slide are excerpted from the [CCScreenbar_Tabs.swt](#) template file.

Cascading Style Sheets

24

- Can be modified to define global parameters
 - ▶ Fonts, foreground and background colors, and so forth
- Style sheets:
 - ▶ Are located in PUBLIC\enu\FILES directory in a Siebel installation
 - ▶ Can be modified by customers
- Edit style sheet files to achieve the desired look and style for your implementation
 - ▶ Backup the current .css files
 - ▶ Edit .css files with your preferred HTML editor

From main.css

```
/*globalMenu Definitions*/
/*
TR.globalMenu, TD.globalMenu,
TD.globalMenu A,
TD.globalMenu A:visited,
TD.globalMenu A:hover
{
    font-size: 8pt;
    color:#000000;
    background-color: #ccccff;
    font-weight:normal;
}
```

Adjust fonts

Adjust colors

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File Locations

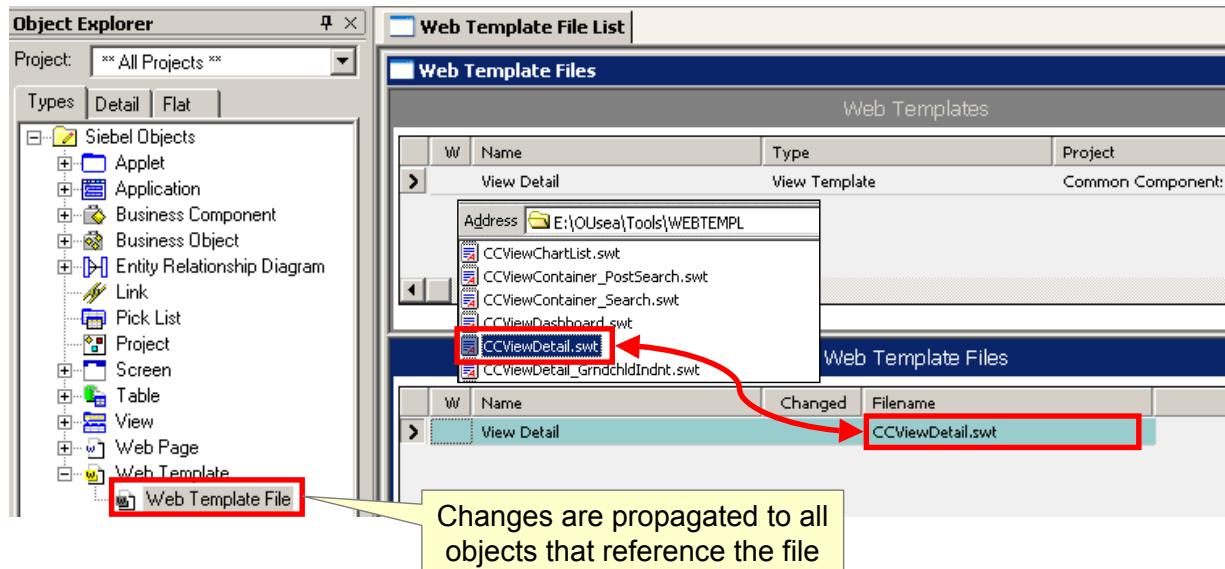
Cascading style sheet files (.css files) are located in:

- The Siebel Server installation directory
[siebsrvr_root]\WEBMASTER\files\[language_code]
- The Mobile or Dedicated Web Client installation directory
[client_root]\PUBLIC\[language_code]\FILES
- The Tools installation directory
[tools_root]\PUBLIC\[language_code]\FILES

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Web Template Object Definition

- Is a layer of abstraction between a UI object definition (View, Applet, or Web Page) and the file itself
- UI object definitions reference Web Template object definitions
- References an HTML Web template file



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Web Template Placeholders

- Contain placeholders for Siebel logical UI definitions
- Definitions map to Siebel Web templates

The screenshot shows the Siebel Object Explorer on the left and a Siebel Web Template interface on the right.

Object Explorer:

- Project: ** All Projects **
- Types: Siebel Objects (Applet, Application, Business Component, Business Object, Entity Relationship Diagram, Link, Pick List, Project, Screen, Table, View, View Report, View Web Template)

Web Template - Layout (Applet Form ...)

View (ABC New View) - View Web Template...

The interface is divided into three sections:

- Parent Applet**: A large empty grid area.
- Child Applet**: An empty grid area.
- Child Applet (HI Display Only)**: An empty grid area.

Two red arrows point from the "Child Applet" and "Child Applet (HI Display Only)" sections to a specific row in the Siebel Web template interface.

Siebel Web Template Interface (3Com View):

3Com			
Menu	New	Delete	Query
Account Name: * 3Com	Site: Headquarters		
Address: 7074 N Clark St	Address Line 2:		
City: Chicago	State: IL		
Zip Code: 60626	Country: USA		

Mr/Ms	First Name	Last Name	Job Title	Work Phone #
Mr.	Shashi	Aamot	IT Manager	(614) 343-8700
Mr.	Avram	Ahl	Vice President	(773) 555-9870
Mr.	Alan	Genever	Manager, Account Relat	(773) 555-6500
Ms.	Kristy	Helena	Supervisor, Logistics	(773) 555-2223
Ms.	Jill	Ishi	Account Manager	(773) 555-5312
Mr.	Bob	Kreisberg	Programmer	(650) 786-8767

A yellow callout box labeled "Placeholder" points to the first row of the table.

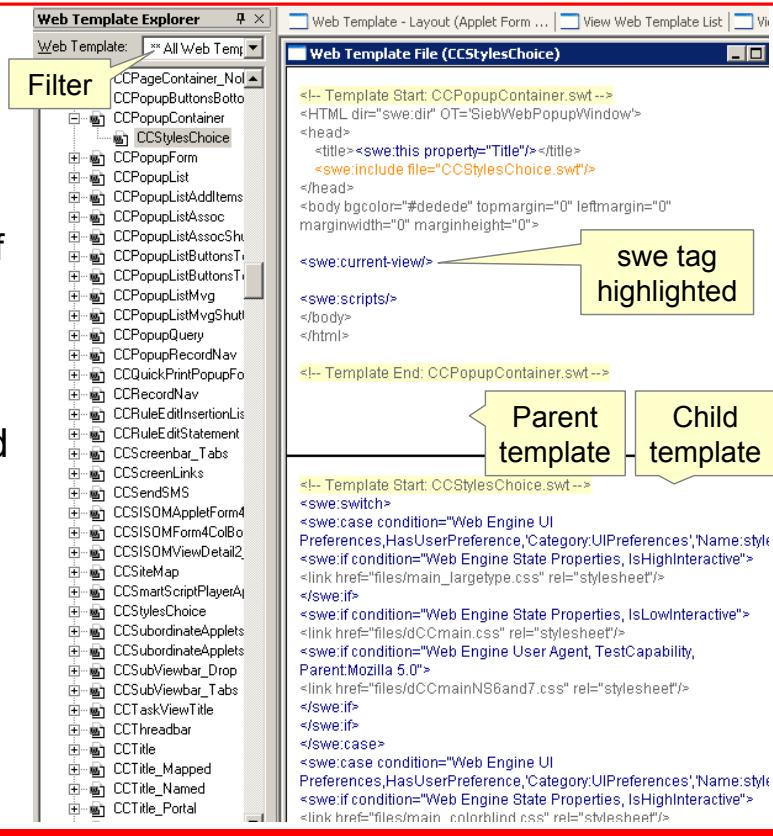
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Web Template Explorer

- Is used in Tools to:
 - ▶ Identify template files included in a template file
 - ▶ Examine the contents of a template file
 - ▶ Invoke an editor to modify the template file
- Highlights Siebel-supplied tags for easy viewing
- Navigate to View > Windows > Web Templates Window



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Types of Web Templates

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Form Applet Web Templates

List Applet Web Templates

View Web Templates

Web Page Web Templates

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Note

This list of Web Templates is not comprehensive; there are also Tree Applet Web Templates and Specialized Web Templates. Refer to Siebel Bookshelf for more information.

Form Applet Web Templates

- Define the layout of form applets
 - ▶ Placeholder provides starting point for building applet
 - ▶ Tools' Web Layout Editor assists you in setting template file parameters

The diagram illustrates the process of creating a form applet. It is divided into two main sections: **Tools** and **UI**.

Tools Section:

- Parent Applet:** A placeholder window labeled "Parent Applet".
- Web Layout Editor:** A window where the form layout is defined. It contains fields for Account Name, Address, City, Zip Code, Site, State, Country, Account Team, Main Phone #, Main Fax #, and URL.
- Annotation:** A callout box states: "Account Entry applet uses Applet Form Grid Layout".
- Red Arrow:** Points from the "Parent Applet" placeholder to the "Web Layout Editor" window.

UI Section:

- Object Manager:** A window titled "3Com" showing the final form applet. It includes fields for Account Name, Address, City, Zip Code, Site, State, Country, Account Team, Main Phone #, Main Fax #, and URL.
- Annotation:** A callout box states: "Object Manager uses template to build applet".
- Red Arrow:** Points from the "Object Manager" window back to the "Web Layout Editor" window.

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List Applet Web Templates

24

- Define the layout of a list applet
 - ▶ Standard Interactivity list applets use Base and Edit modes

Base Mode

My Service Requests			
New	Query		
SR #	Status	Created	Summary
1-18605	Open	3/22/2004 12:43:46 PM	Ethernet card malfunctioning
1-18601	Open	3/22/2004 12:41:42 PM	Trouble distributing packaged

A read-only list of data with buttons for editing

Edit Mode

My Service Requests	
SR #:	<input type="text"/>
Status:	<input type="button" value=""/>
Summary:	<input type="text"/>
Product:	<input type="text"/>
Serial #:	<input type="text"/>
Created:	<input type="text"/> 
<input type="button" value="Go"/> <input type="button" value="Cancel"/>	

An editable form for querying and data entry

List Applet Web Templates Continued

- High Interactivity clients use EditList mode

EditList Mode

The screenshot shows two views of the Siebel EditList Mode interface. The top view displays a list of accounts with columns for Account Name, Site, Parent Account Name, and Parent Account Site. A red box highlights the 'Query' button in the toolbar above the list. A callout bubble points to this area with the text 'An editable list of data'. The bottom view shows a query entry screen with fields for Account Name, Site, Parent Account Name, and Parent Account Site. A red arrow points from the 'Query' button in the top view to the 'Enter Query' button in the bottom view. A callout bubble points to the bottom view with the text 'EditList mode supports querying and data entry directly in the list'.

Account Name	Site	Parent Account Name	Parent Account Site
Marriott International H HQ			
AT&T	Edison, NJ		
Akamai Technologies, In	Cambridge, MA		
Art.net	Sterling, VA		
Broadband e2e	Las Angelas, CA		
Chase Manhattan Bank	Manhattan, Ny		
Digital River, Inc.	San Francisco, Ca		

Account Name	Site	Parent Account Name	Parent Account Site
>	<Case Required>	<Case Required>	<Case Required>

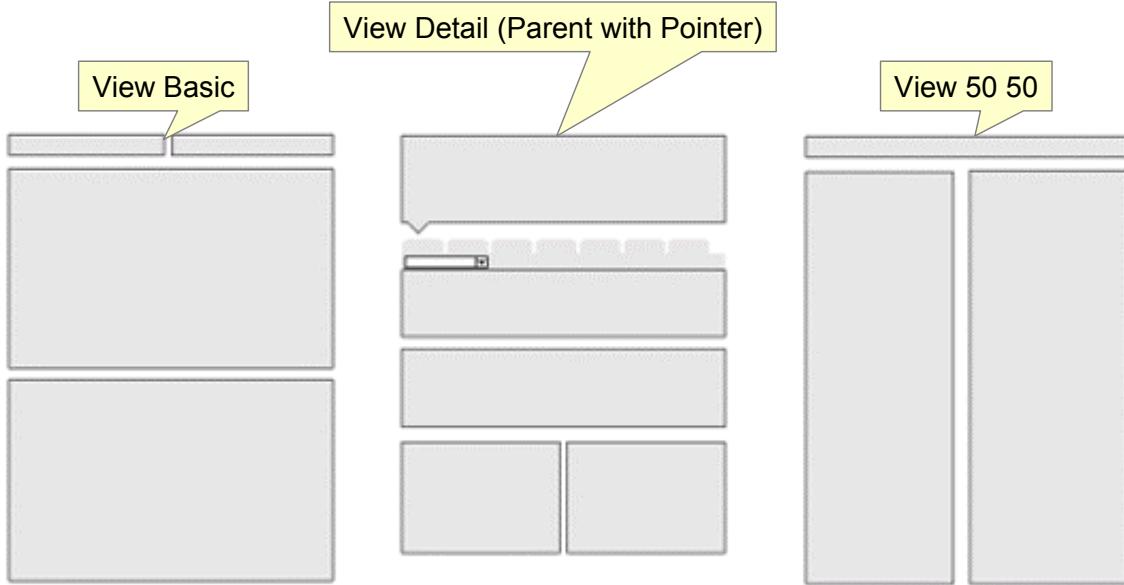
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View Web Templates

24

- Define the layout of a view
 - ▶ Common view templates include:



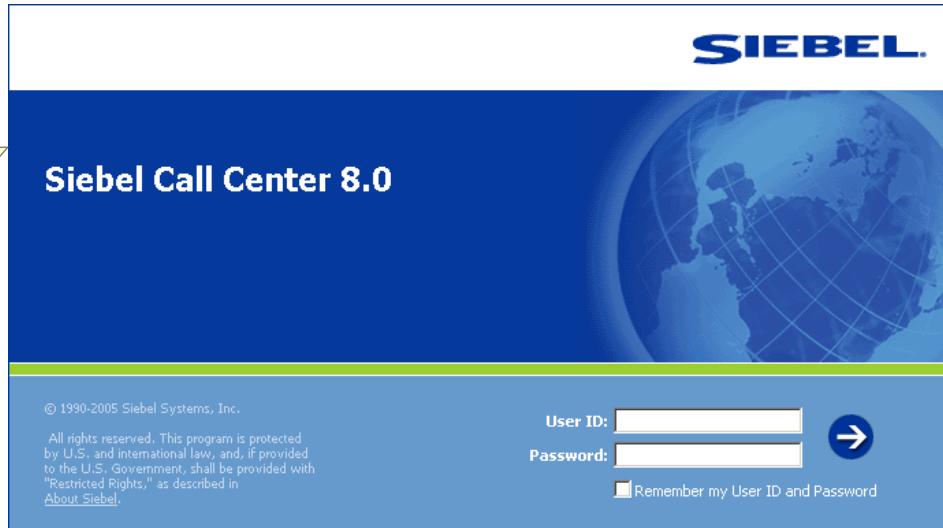
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Web Page Web Templates

- Define the layout of Web pages such as:
 - ▶ Login Page
 - ▶ Error Page
 - ▶ Container Page

The Login Web template defines the layout of the Login page

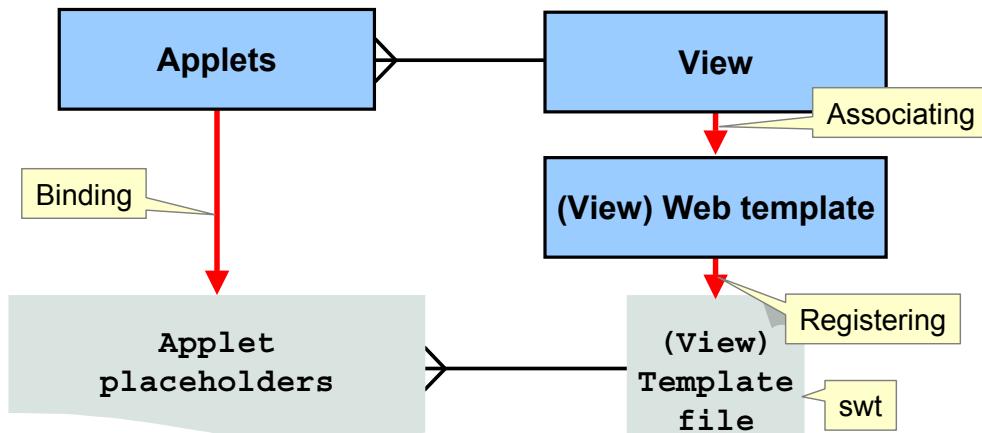


Using Template Files

24

- Requires three types of relationships:
 - ▶ Registering creates an object definition in the repository
 - ▶ Associating identifies the Web template used to render an applet or view
 - ▶ Binding fastens a control to a specific position on the page or an applet to a view

View Example



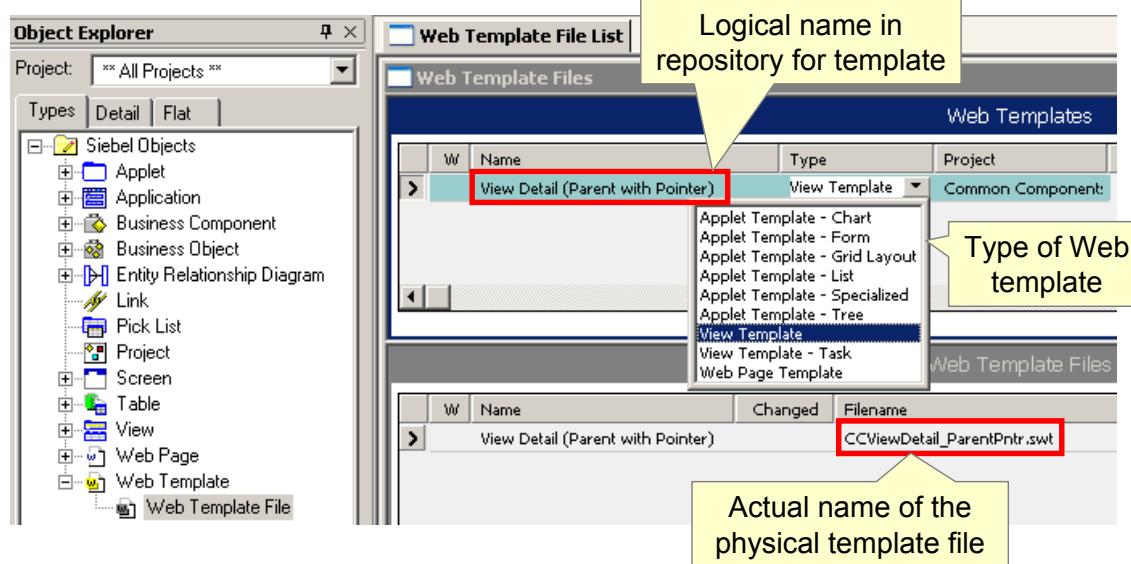
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Registering a Template File

- Creates a Web Template object definition to define the logical name for the template
- Creates a Web Template File object definition to reference the actual physical file



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Registering

Siebel applications are delivered with hundreds of template files, all of which are registered. You will only need to register a template file in the unlikely event that you need to create a new file.

Associating an Applet with Its Template

- Creates an Applet Web Template object definition to specify the associated Web template
 - Different applet modes can reference different Web templates

The screenshot shows the Siebel Object Explorer and the Applet Web Template List windows.

Object Explorer: Shows the project as "All Projects" and the types as "Types". Under Siebel Objects > Applet, the "Applet Web Template" object is selected. Other objects like Applet Method Menu, Control, Drilldown Object, List, and Tree are also listed.

Applet Web Template List: This window contains two tables:

- Applets:** A table with columns Name and Business Component. It shows one row for "Account List Applet" with "Account" in the Business Component column.
- Applet Web Templates:** A table with columns Name, Type, and Web Template. It shows three rows:
 - Base: Type Base, Web Template Applet List (Base/EditList)
 - Edit: Type Edit, Web Template Applet Form Grid Layout
 - Edit List: Type Edit List, Web Template Applet List (Base/EditList)

Annotations highlight specific areas:

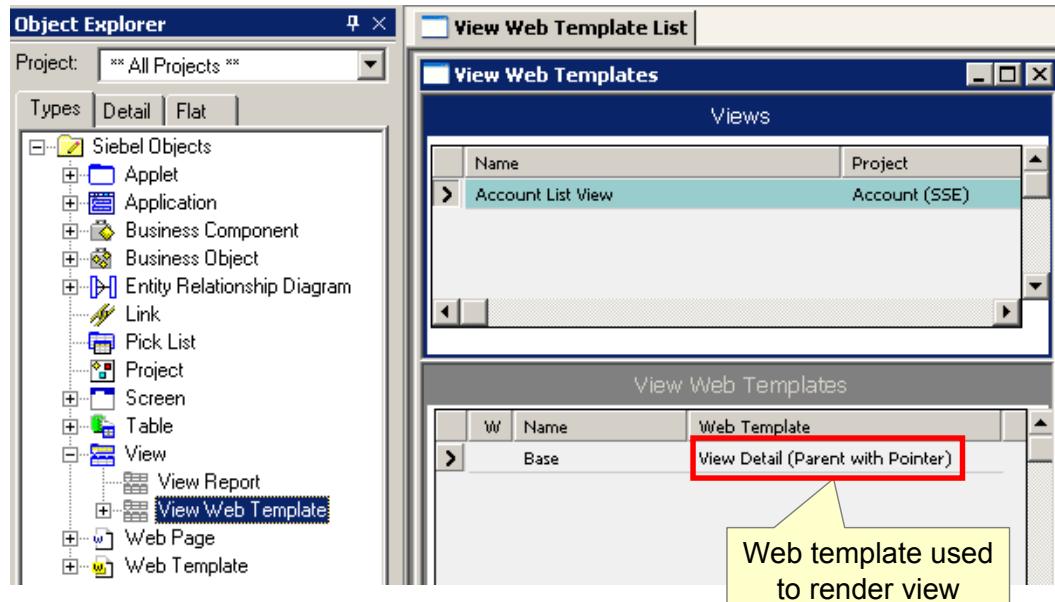
- A yellow callout points to the "Mode for the applet" in the Applet Web Templates table, with the text "Mode for the applet".
- A yellow callout points to the "Applet template used to render applet for mode" in the Applet Web Templates table, with the text "Applet template used to render applet for mode".
- Red boxes highlight the "Type" column in the Applet Web Templates table for the "Base", "Edit", and "Edit List" rows.
- Red boxes highlight the "Web Template" column in the Applet Web Templates table for the "Base", "Edit", and "Edit List" rows.

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Associating a View with Its Template

- Creates a View Web Template object definition to specify the associated Web template
 - ▶ Each view references a single view Web template



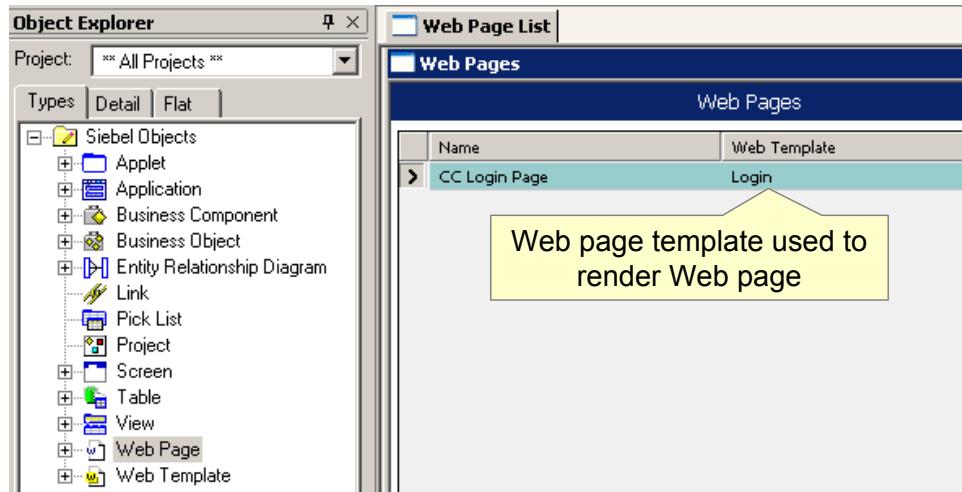
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Associating a Web Page with Its Template

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- Creates a Web Page object definition and sets the Web Template property



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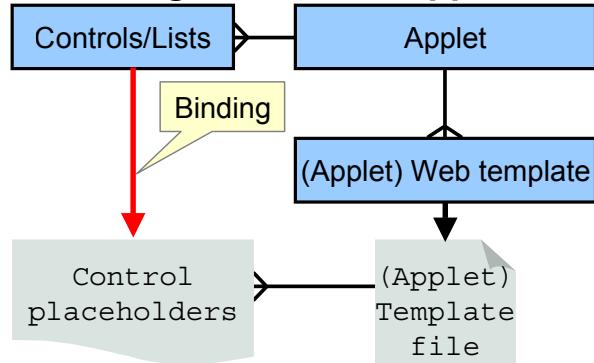
Web Page Template Web page templates are templates that are not view or applet Web templates. Examples of common Web page templates are login page, error page, and container page.

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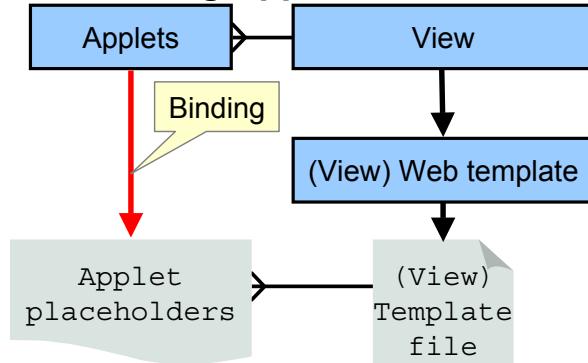
Binding

- Maps the components of an applet or view to placeholders in the corresponding template file
- Information is specified in the repository
 - ▶ View Web Template Item
 - ▶ Applet Web Template Item
 - ▶ Web Page Item
 - ▶ Results in the corresponding element being displayed at run time

Binding Controls to Applets



Binding Applets to Views



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Applet Web Template Items

- Are created by the binding process
 - ▶ Item Identifier is the “id” attribute value in the swe:control tag
- Are used at run time by the Siebel Web Engine to identify the controls that make up an applet

The screenshot shows the Siebel Object Explorer window on the left and the Applet Web Template Item List window on the right.

Object Explorer:

- Project: ** All Projects **
- Types: Siebel Objects
 - Applet
 - Applet Method MenuItem
 - Applet Web Template
 - Applet Web Template Item
 - Control
 - Drilldown Object
 - List
 - Tree
 - Application
 - Business Component
 - Business Object
 - Entity Relationship Diagram
 - Link

Applet Web Template Item List:

W	Name
>	Query

Applet Web Template Items:

W	Name	Control	Item Identifier
	SR Number	SR Number	1,300
	Status	Status	1,301
	SummaryLong	SummaryLong	1,302
	ProductText	ProductText	1,303
	Serial Number	Serial Number	1,304
	Created	Created	1,305

A red arrow points from the highlighted 'Item Identifier' column in the table above to the 'Item Identifier' attribute in the XML code below.

```
<swe:for-each count="6" startValue="1300" iteratorName="currentId">
  <swe:control id="swe:currentId" hintMapType="FormItem">
```

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swe:control Tag

The swe:control tag shown in the slide is in the dCCForm1Col.swt template file. This file is included in the dCCAppletForm1Col.swt template file which is registered as the Web Template File for the DotCom Applet Form 1-Column Web Template.

This tag illustrates the use of the swe:for-each tag. In this case the swe:control tag is executed repeatedly with values from 1300 to 1305.

View Web Template Items

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- Are created by the binding process
 - ▶ Item Identifier is the “id” attribute value in the swe:applet tag
- Are used at run time by the Siebel Web Engine to identify the applets that make up a view

The screenshot shows the Siebel Object Explorer on the left and the View Web Template Items window on the right.

Object Explorer:

- Project: ** All Projects **
- Types tab selected.
- Siebel Objects node expanded, showing sub-items: Applet, Application, Business Component, Business Object, Entity Relationship Diagram, Link, Pick List, Project, Screen, Table, View, View Report, View Web Template, and View Web Template Item.

View Web Template Items Window:

- Top pane: View Web Templates

Name	Web Template
Base	View Detail (Parent with Pointer)
- Bottom pane: View Web Template Items

Name	Item Identifier
Account Entry Applet	2
Account List Applet	1

A red arrow points from the 'Item Identifier' column of the bottom table to the 'id="1"' attribute in the XML code below.

```
<swe:applet hintMapType="Applet" id="1" hintText="Parent Applet">
```

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swe:applet Tag

The swe:applet tag shown in the slide is in the CCViewDetail_ParentPntr.swt template file. This file is registered as the Web Template File for the View Detail (Parent with Pointer) Web Template.

Web Page Items

- Identify the links and buttons appearing on a Siebel Web page
 - ▶ Item Identifier is the “id” attribute value in the swe:pageitem tag
- Are used at run time by the Siebel Web Engine to position the links and buttons

The screenshot shows two windows side-by-side. The left window is titled 'Web Pages' and contains a table with columns 'W', 'Name', 'Changed', and 'Project'. One row is visible: 'CC Container Page (eSales)' under 'Name' and 'eSales' under 'Project'. The right window is titled 'Web Page Items' and contains a table with columns 'W', 'Name', 'Item Identifier', and 'Type'. Several rows are listed:

W	Name	Item Identifier	Type
>	Shopping Cart	12	Link
	ProfileButton	13	Link
	HelpButton	14	Link
	ContactButton	15	Link
	LogoutButton	17	Link

 Red boxes highlight the 'Item Identifier' column in both tables, and a red arrow points from the highlighted 'Item Identifier' in the 'Web Page Items' table to the 'id' attribute values in the corresponding HTML code block on the left.

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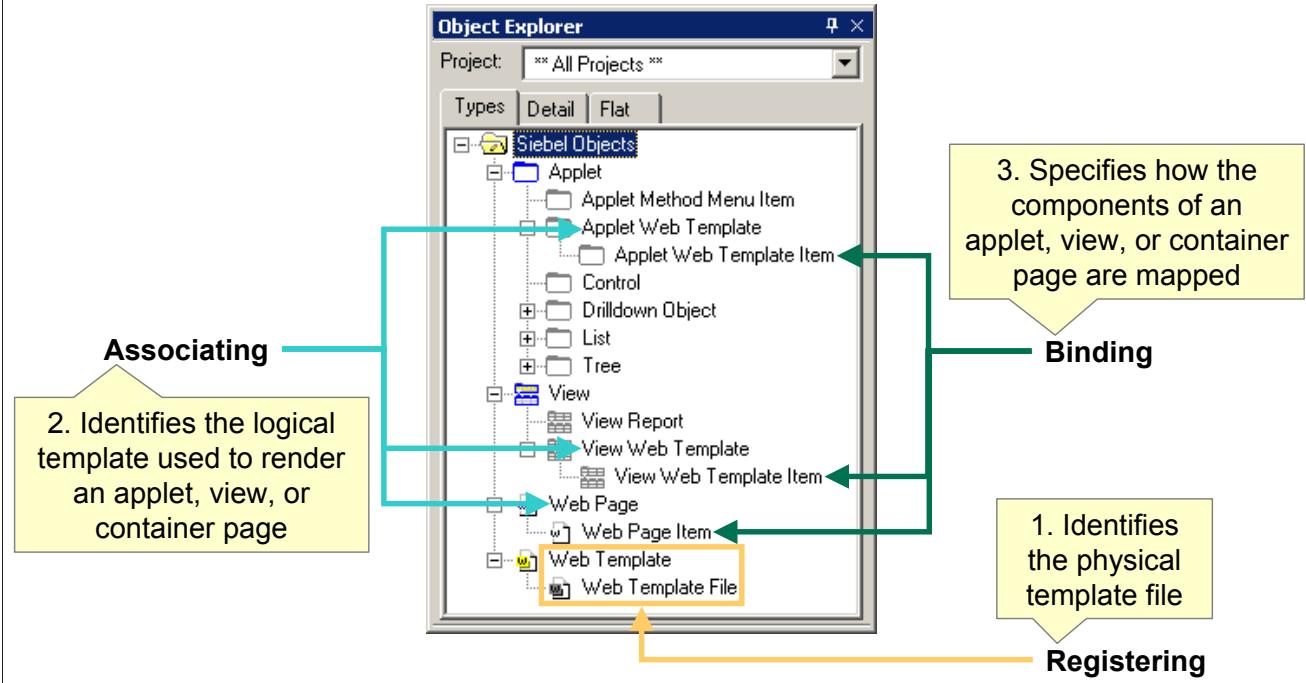
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swe:pageitem Tags The HTML and SWE tags shown in the slide are excerpted from the dCCFrameBanner.swt template file.

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Summary of Object Definitions

- Registering, associating, and binding adds object definitions to the repository



Module Highlights

- Siebel Web Template Files are HTML files that specify how to render views for a Siebel application in a user's browser
 - ▶ Can include other template files
 - ▶ Can reference CSS files
- Siebel Tags are a Siebel-developed library of tags in Web template files processed at run time
- CSSs can be modified to define global parameters such as fonts and colors
- The four Web Template types are Form Applet, List Applet, View, and Web Page
- Template files require three types of relationships: Associate, Register, and Bind



Lab

- In the lab you will:
 - ▶ Examine Web templates

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Siebel 8.0 Essentials

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Module 25: UI Layer Configuration: Applets

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Module Objectives

- After completing this module you should be able to:
 - ▶ Create and modify a list applet
 - ▶ Create and modify a form applet
- Why you need to know:
 - ▶ You may want to display new data in the UI

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Primary Applet Types: List Applet

- Displays one or more records simultaneously in a list
- Fields for one record are displayed in a single row
- Typically displays fewer fields than a form applet due to width of monitor
- Supports drilldown to other views through hyperlinked fields

Account Name	Site	Industries
Art.net	Sterling, VA	prepackaged software
Broadband e2e	Las Angelas, CA	communications equipment
Chase Manhattan Bank	Manhattan, Ny	bank holding companies
Digital River, Inc.	San Francisco, Ca	computer related services
First Record, Inc	HQ	
Honeywell Intl (Allied Signal Aero)	Hq-Morristown, NJ	aircraft engines & engine parts
IBM Corporation	Poughkeepsie, NY	computer peripheral equipment
Imperial Tobacco	Theobald Road, London, tobacco & tobacco products	
Lexis-Nexis	Dayton, OH	information retrieval services

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Reference

Configuring Siebel Business Applications: Configuring Applets

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Primary Applet Types: Form Applet

- Displays a single record
- Fields for the record are displayed in a grid or form
- Can show more fields at once than a list applet

The screenshot shows a Siebel Form Applet titled "Art.net". The top navigation bar includes "Menu", "New", "Delete", and "Query" buttons. The main area contains several input fields grouped into three columns:

Account Name: * Art.net	Site: Sterling, VA	Account Team: JRUBIN
Address: 22110 Pacific Blvd	Address Line 2:	Main Phone #: (703) 205-3500
City: Sterling	State: VA	Main Fax #:
Zip Code: 20166-6913	Country: USA	URL: http://www.artnet.com

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Additional Applet Types

The following are some additional applet types (see Siebel Bookshelf for a complete list):

- Catalog list
- Chart
- Explorer view
- Hierarchical list
- Message
- Multi-value group applet
- Pick applet
- Rich list
- Salutation

Creating a List Applet

- Follow these steps to create a new list applet ...

1. Create new applet object definition

2. Associate applet template with object definition

3. Bind controls and list columns to template

Highly recommended

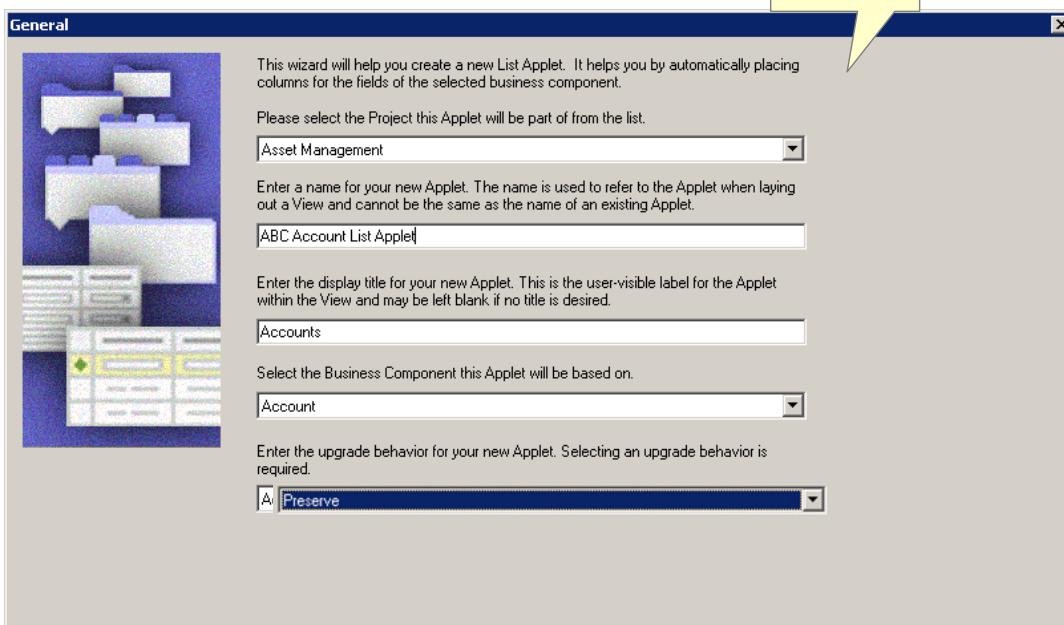
- ...Or use the List Applet Wizard

- Automates these steps
- Generally the preferred method
- Ensures that object definitions and properties are created
- Ensures that steps are not omitted
- Increases developer productivity
- Speeds project completion

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List Applet Wizard

- Use the List Applet Wizard to create a new applet
 - ▶ Select File > New Object, select the Applets tab, select List Applet, and then click OK



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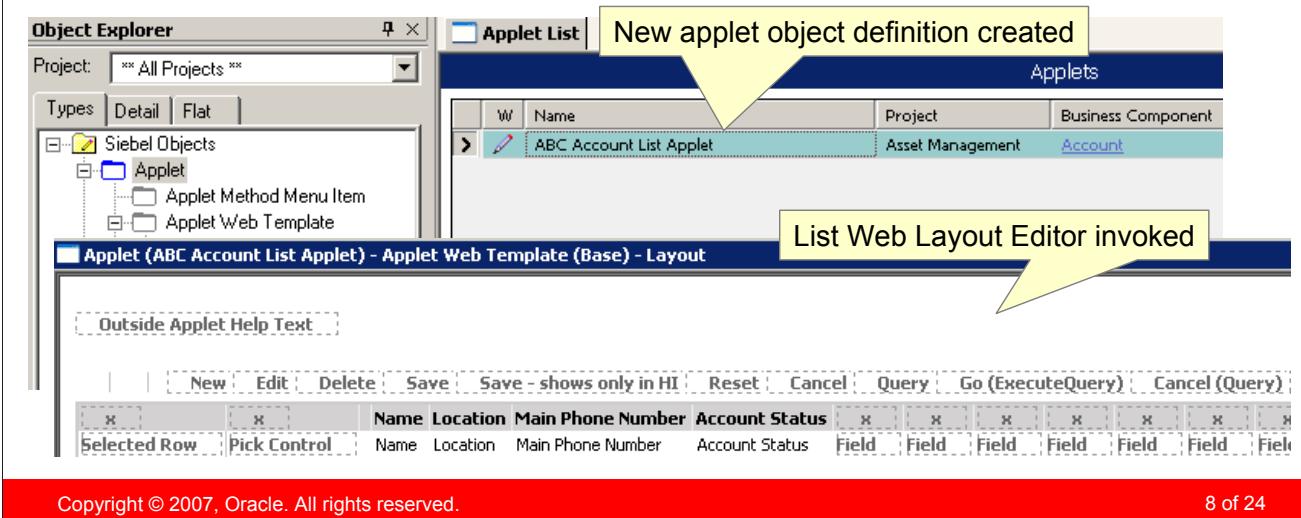
List Applet Wizard Inputs

- The List Applet Wizard requires the following inputs:
 - ▶ Project the new applet will be part of
 - ▶ Applet name and display title
 - ▶ Business component the applet will reference
 - ▶ The upgrade behavior
 - Admin, Non-preserved, Preserved
 - ▶ The Web templates that will be used for each mode
 - Base and EditList mode are commonly built using Applet List (Base/EditList)
 - Edit mode is commonly built using Applet List Edit (Edit/New/Query)
 - ▶ The business component fields that will appear in the Web layout
 - ▶ Additional controls that will be added to the applet
 - By default, all of the standard buttons are selected

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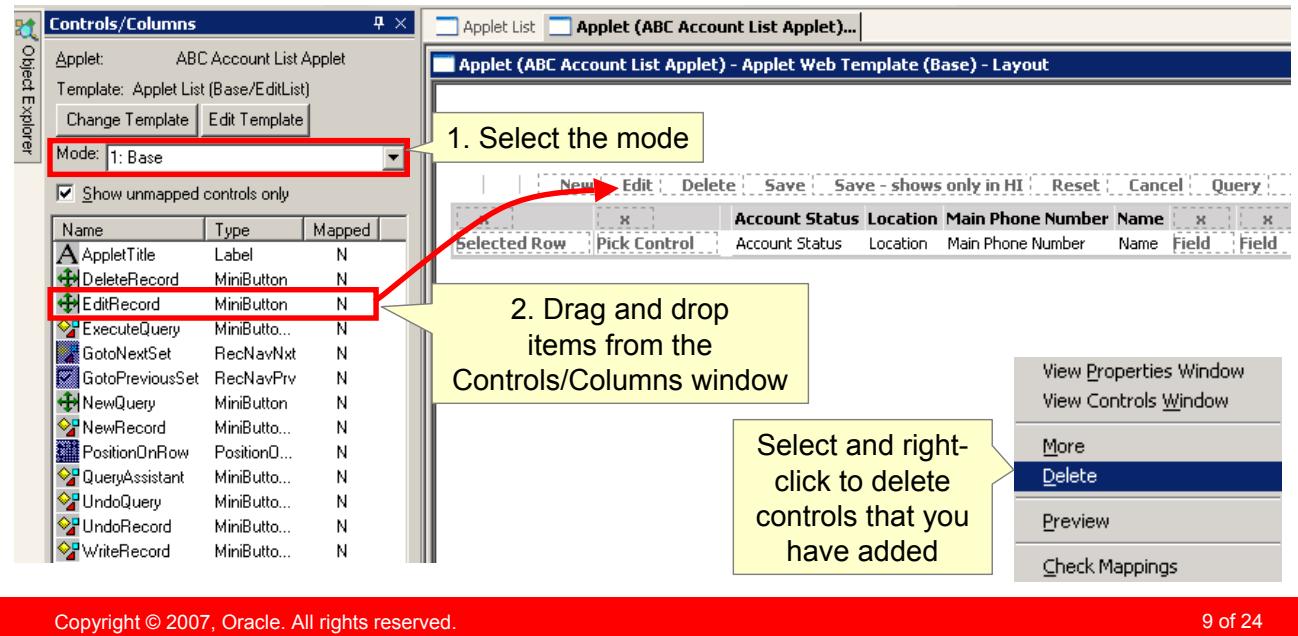
List Applet Wizard Outputs

- Creates required object definitions for controls, lists, and list columns
- Associates applet Web templates to the applet
- Binds list columns to templates
 - ▶ Appear as applet Web template items
- Invokes the Web Layout Editor



Web Layout Editor

- Is used to add, remove, and reorder applet Web template items
 - ▶ Placeholders correspond to item identifiers of applet Web template items
- Can be invoked from the right-click menu



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Applet Web Templates

- Specify which template is used when the applet is displayed in a given mode
- Contains Applet Web Template items
 - ▶ The controls or list columns that have been bound to the template
 - ▶ The item identifier that describes where in the applet the controls or list columns should appear

The screenshot shows the Siebel Object Explorer on the left and two windows on the right. The Object Explorer lists various Siebel objects like Applet, Application, and Business Component. The top-right window is titled 'Applet Web Template Item List' and contains a table with columns W, Name, and Web Template. The bottom-right window is titled 'Applet Web Template Items' and contains a table with columns W, Name, Control, Type, and Item Identifier.

Specifies which template to use

W	Name	Web Template
>	Base	Applet List (Base/EditList)
	Edit	Applet List Edit (Edit/New/Query)
	Edit List	Applet List (Base/EditList)

Specifies where list column will appear

W	Name	Control	Type	Item Identifier
>	Account Status	Account Status	List Item	501
	Location	Location	List Item	502
	Main Phone Number	Main Phone Number	List Item	503
	Name	Name	List Item	504

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List Column Definitions

- Specify:
 - ▶ The field that is displayed
 - ▶ The display name that appears at the top of the list column
 - May reference a symbolic string

The screenshot shows the Siebel Object Explorer on the left and the List Column List interface on the right.

Object Explorer: Shows a tree view of Siebel Objects under the Applet category, including Applet Method MenuItem, Applet Web Template, Control, Drilldown Object, List, and Tree.

List Column List: Shows the "List Columns" section with two tables:

- Lists:** A table with columns W, Name, and List. It contains one row: List.
- List Columns:** A table with columns W, Name, Field, and Display Name. It contains four rows:
 - Account Status (Field: Account Status, Display Name: Account Status)
 - Location (Field: Location, Display Name: Location)
 - Main Phone Number (Field: Main Phone Number, Display Name: Main Phone Number)
 - Name (Field: Name, Display Name: Name)

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Symbolic Strings

- Ensure that the same name appears exactly the same way throughout the application
- Define it once, reference it anywhere
- Provide a way to manage updates, globally
- Are used by user interface objects such as:
 - ▶ Labels
 - ▶ List columns
 - ▶ Applet titles
- Are stored in the repository containing words and phrases used in UI definitions
 - ▶ Global Dictionary contains many commonly used terms
 - ▶ Symbolic String Locale object type allows language translation

Using Symbolic Strings

- String reference:
 - ▶ Refers to symbolic string object definitions
 - ▶ Is selected from a picklist
 - ▶ Refers to the name of the symbolic string
- String override:
 - ▶ Used for exceptions when strings are infrequently displayed
 - ▶ Can be converted to symbolic strings using a Siebel-supplied string conversion utility

Object Explorer

Project: ** All Projects **

Types Detail Flat

Siebel Objects

- Applet
 - Applet Method Menu Item
 - Applet Web Template
 - Applet Web Template Item
 - Control
 - Drilldown Object
 - List
 - List Column
 - Tree
- Application
- Business Component
- Business Object

List Column List

List Columns

Name	Field	Display Name	Display Name - String Reference	Display Name - String Override
Account Status	Account Status	Account Status	SBL_ACCOUNT_STATUS-1004225945-05P	Account Status
Location	Location	Location	SBL_LOCATION-1004231258-3NO	

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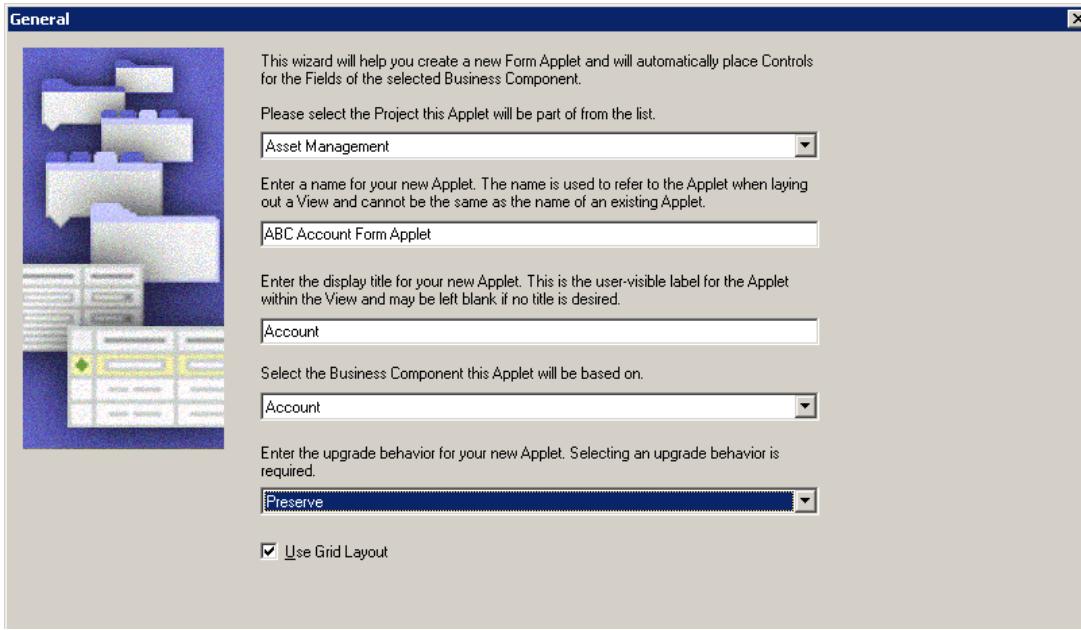
String Conversion Utility

A string conversion utility is available that exports from local tables and imports to the Symbolic String table. It allows symbolic strings to be exported to a file, translated in another application, then imported back to the Siebel application with translated values for the appropriate language. The utility also allows developers to export string overrides and re-import them as string references, and it consolidates redundant local definitions. The utility file is Strconv.bat and is located in the Tools\bin directory.

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Form Applet Wizard

- Use the Form Applet Wizard to create a new form applet
 - ▶ Select File > New Object, select the Applets tab, select Form Applet, and then click OK



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Form Applet Wizard Inputs

- The Form Applet Wizard requires the following inputs:
 - ▶ Project that the new applet will be part of
 - ▶ Applet name and display title
 - ▶ Business component that the applet will reference
 - ▶ Upgrade behavior
 - Admin, Non-preserved, Preserved
 - ▶ Modes to use
 - Edit mode is required for all clients
 - ▶ Uses the Applet Form Grid Layout template
 - Base mode is required for Standard Interactivity clients only
 - ▶ Business component fields to appear in Web layout
 - Creates controls and binds them to applet Web templates
 - ▶ Additional controls to be added to applet
 - By default, all standard buttons are selected

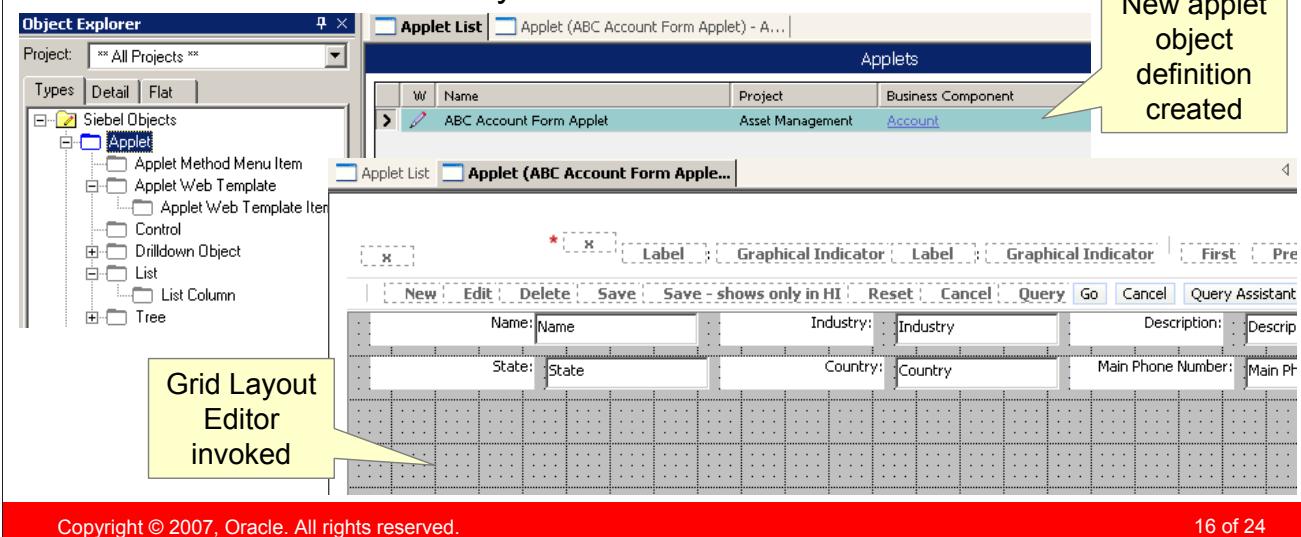
25

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Form Applet Wizard Outputs

■ The Form Applet Wizard

- ▶ Creates required object definitions for Controls
- ▶ Associates applet Web templates to the applet
- ▶ Binds columns to templates
 - Appear as applet Web template items
- ▶ Invokes the Grid Layout Editor



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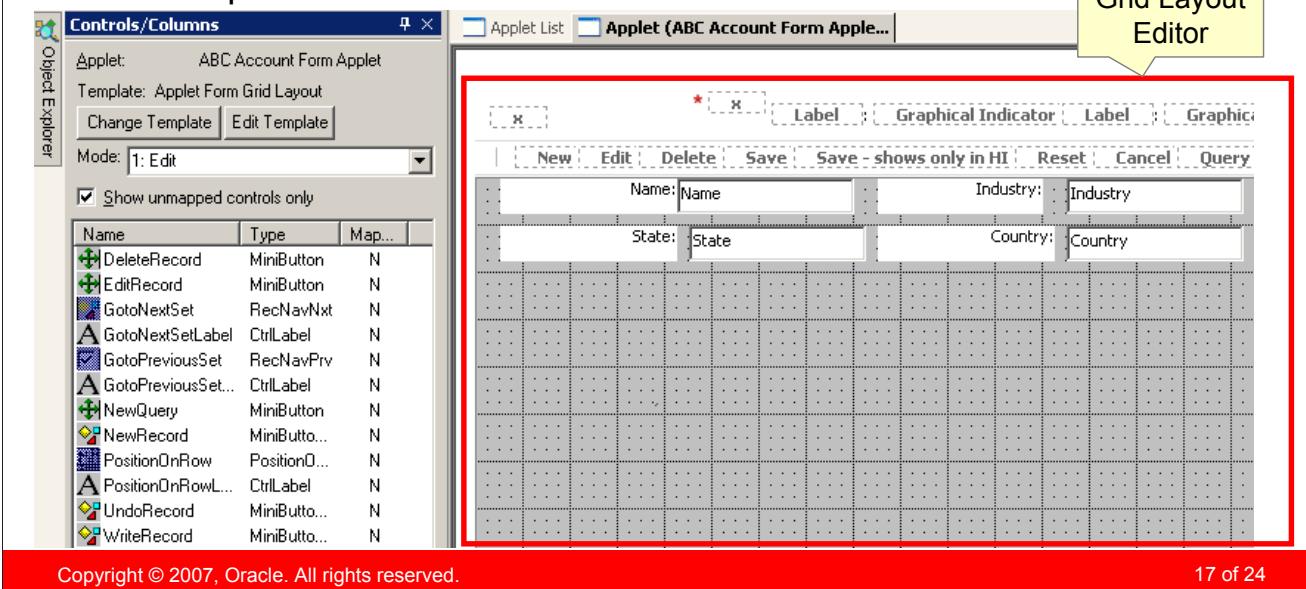
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Grid Layout Editor

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- Is used to:
 - ▶ Create new control object definitions
 - ▶ Bind controls to the Web template
 - ▶ Resize controls
 - ▶ Reposition controls



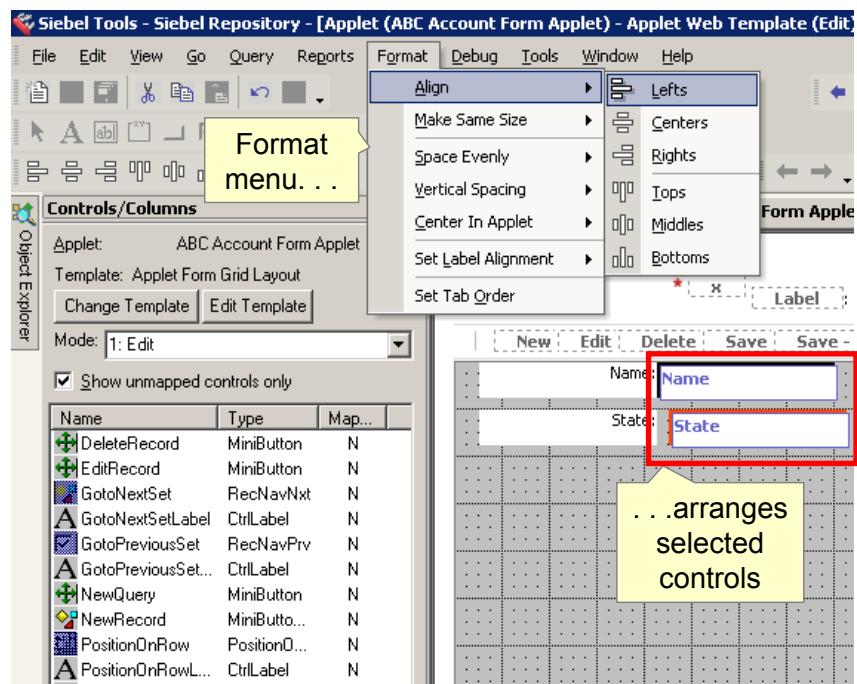
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Grid Layout Editor Continued

- Allows drag-and-drop layout editing
- Supports formatting options such as:
 - ▶ Align controls
 - ▶ Make same size
 - ▶ Horizontal spacing
 - ▶ Vertical spacing

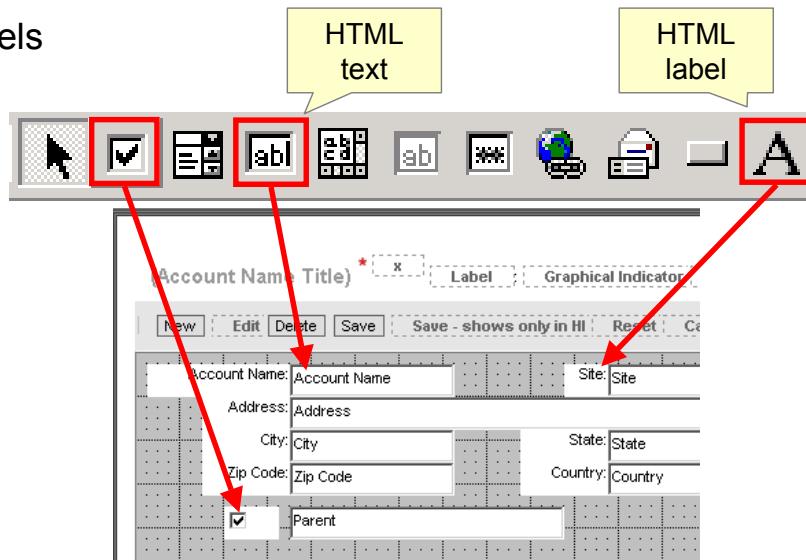


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Web Controls Toolbar

- Supports drag-and-drop creation of controls
- Contains icons for:
 - ▶ Text controls
 - ▶ Check boxes
 - ▶ Labels



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Properties for Editing

- No Delete, No Insert, No Merge, No Update are set to restrict the behavior of the applet
 - ▶ Can also be set at the business component level
 - ▶ Most restrictive settings are always used

Business Component

Properties	
Business Component [Contact[Personal]]	
	Alphabetic Categorized
Name	Contact[Personal]
No Delete	FALSE
No Insert	FALSE
No Merge	FALSE
No Update	FALSE

Affects all applets referencing this BC, or...

Applet

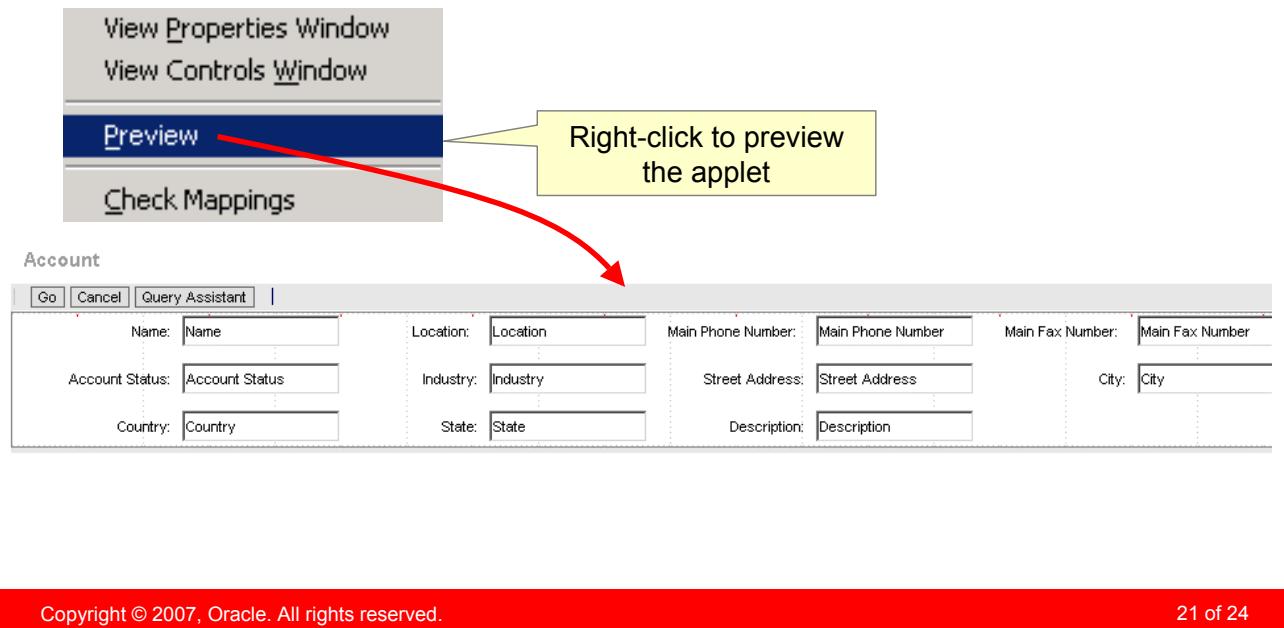
Properties	
Applet [Contact Form ReadOnly Applet]	
	Alphabetic Categorized
Name	Contact Form ReadOnly Applet
No Delete	TRUE
No Insert	TRUE
No Merge	TRUE
No Update	TRUE

...can be customized for each applet

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Preview the Applet

- Right-click and select Preview to see how the applet appears
 - ▶ When finished, right-click and deselect Preview to return to the Grid Layout Editor



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Module Highlights

- List applets:
 - ▶ Display records simultaneously in a list
 - ▶ Contain fields for one record displayed in a single row
- Form applets display a single record and contain fields for the record in a grid or form
- Applet wizards ensure object definitions are created and steps are not omitted
- Web Layout Editor is used to add, remove, and reorder Web template items
- List column definitions specify field displayed and display name
- Symbolic strings ensure that the same name appears exactly the same way throughout the application



Lab

- In the lab you will:
 - ▶ Modify a form applet using the Grid Layout Editor
 - ▶ Create a new list applet using the wizard

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Siebel 8.0 Essentials

Module 26: UI Layer Configuration: Applications, Screens, and Views

26

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Module Objectives

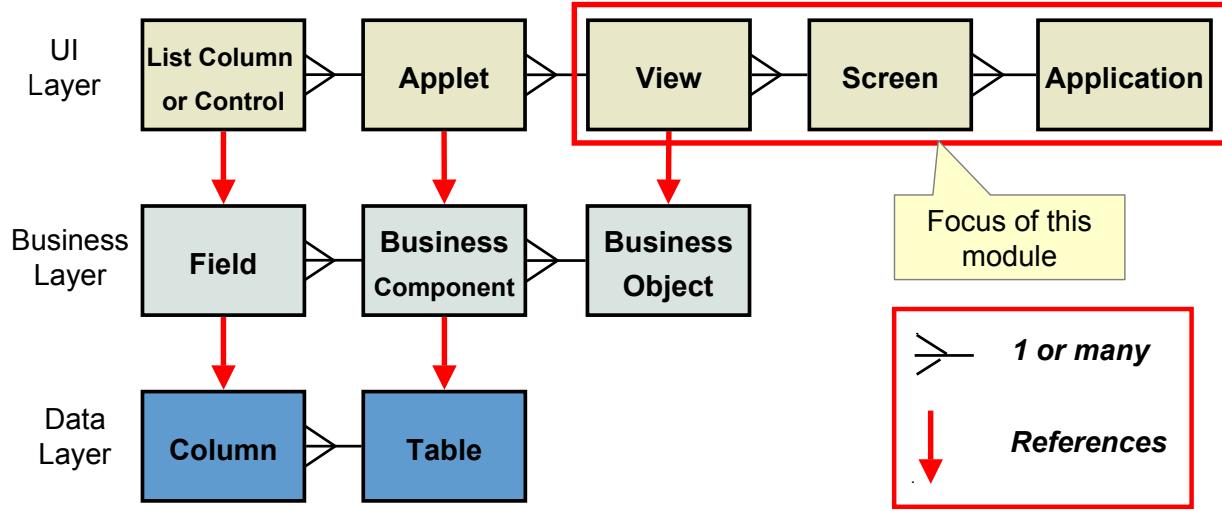
- After completing this module you should be able to:
 - ▶ Tailor applications
 - ▶ Configure how a view is accessed on a screen
 - ▶ Change the order of screen views for a screen
 - ▶ Create and administer a view
 - ▶ Associate a view with a template
- Why you need to know:
 - ▶ Enables you to modify the user interface

Logical User Interface

- Specifies the layout of the Siebel application
- Consists of:
 - ▶ Applications, screens, views, applets, controls/list columns
- This module focuses on views, screens, and applications

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Siebel Application Architecture



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Reference

[Configuring Siebel Business Applications: Configuring Screens and Views](#)
[Configuring Siebel Business Applications: Configuring Applications](#)

Applications

- Are collections of screens through which users can navigate
- Use a container page to display the Siebel Web page
- Specify the application-level menus

Siebel Call Center - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address: http://localhost:8083/start.swe

File Edit View Navigate Query Tools Help

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Account:

Home Accounts Contacts Opportunities Quotes Sales Orders Service

Accounts Home | Accounts List | Charts | Account Explorer | Service Explorer

My Accounts Menu New Delete Query Collaborate Create Team Space

Account Name	Site	Industries
Art.net	Sterling, VA	prepackaged software
Broadband e2e	Las Angeles, CA	communications equipment
Chase Manhattan Bank	Manhattan, Ny	bank holding companies
Digital River, Inc.	San Francisco, Ca	computer related services
First Record, Inc	HQ	
Honeywell Intl (Allied Signal Aero)	Hq-Morristown, NJ	aircraft engines & engine parts
IBM Corporation	Poughkeepsie, NY	computer peripheral equipment
Imperial Tobacco	Theobald Road, London, tobacco & tobacco products	
Lexis-Nexis	Dayton, OH	information retrieval services
Nestle USA	Glendale, Ca	

Art.net

Menu New Delete Query

Account Name: * Art.net	Site: Sterling, VA	Account Team: JRUBIN	Status: Active
Address: 22110 Pacific Blvd	Address Line 2:	Main Phone #: (703) 205-3500	Account Type: Commercial
City: Sterling	State: VA	Main Fax #:	Territory:
Zip Code: 20166-6913	Country: USA	URL: http://www.artnet.com	Industries: prepackaged softwa

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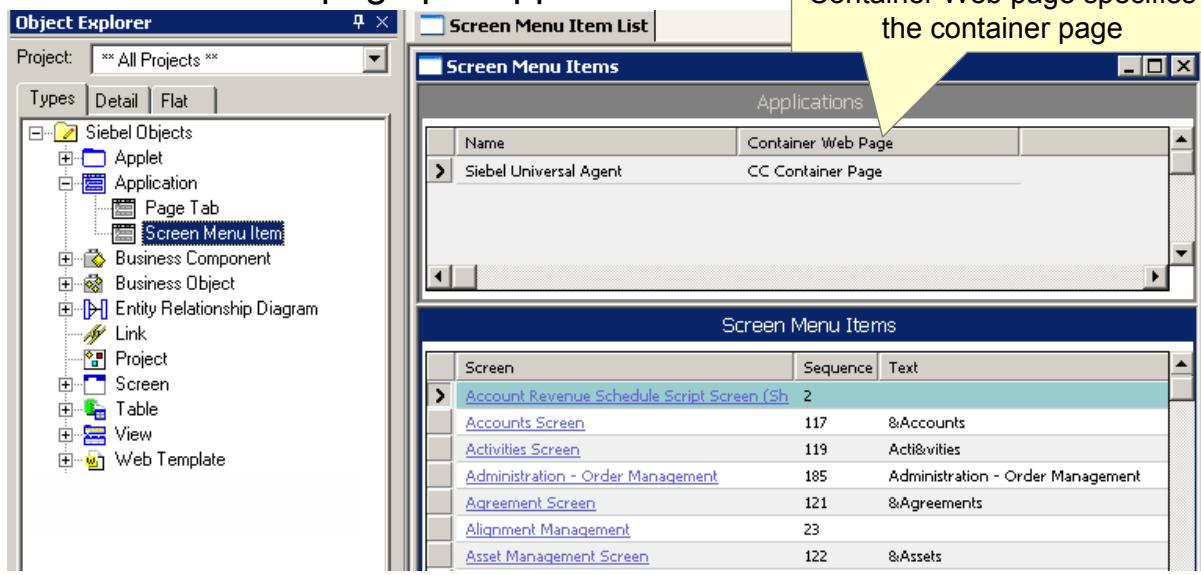
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The Container Page

- Is a Web page that displays the menus, toolbars, screen tabs, and views that appear in the application
- Is specified in the Application object definition
- One container page per application

Container Web page specifies the container page



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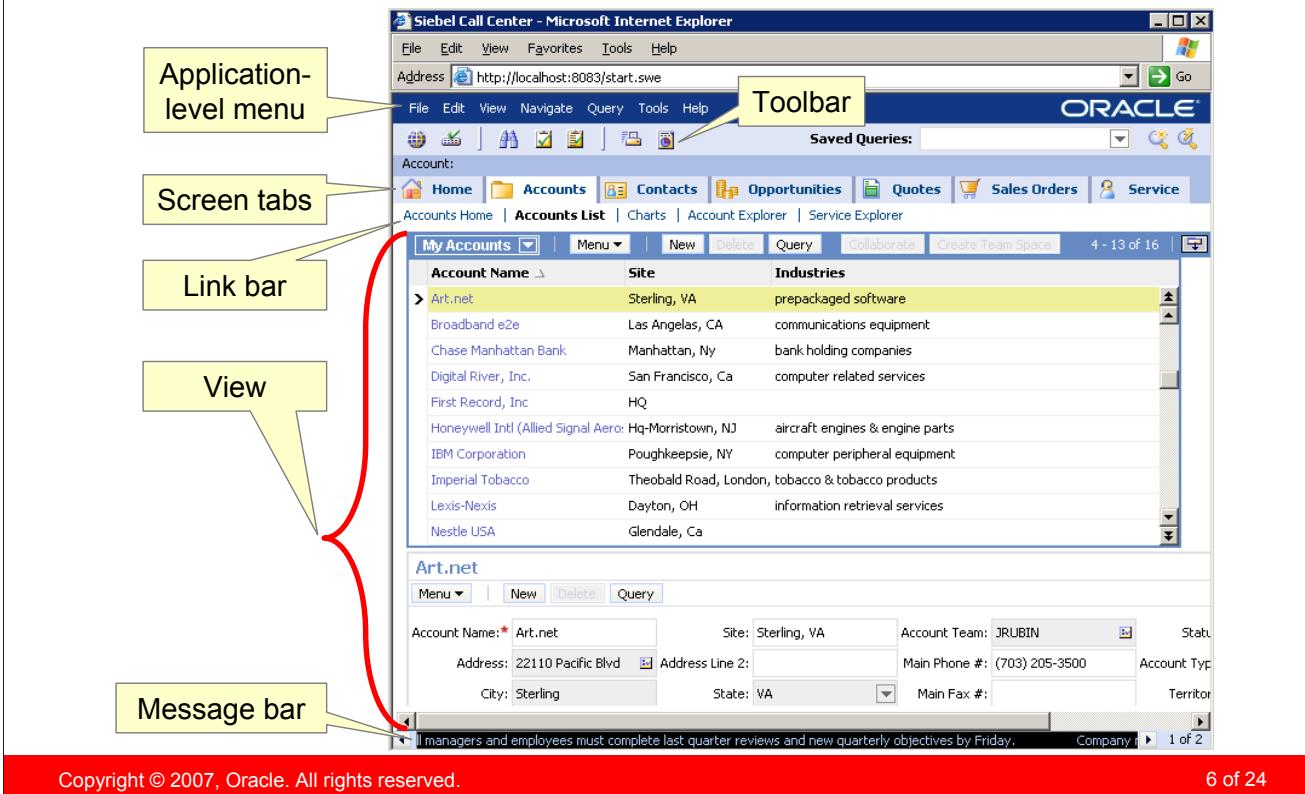
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Container Page Example: Employee Application

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- Container page specifies application layout



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Links

Links on the link bar and links used with business objects are two entirely different concepts. Links used with business objects are used to establish a relationship between parent and child business components in the business object.

Link bar links on the container page are used merely as a navigation device.

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Application-Level Menus

- Are specified in the Menu object type

The screenshot shows the Siebel Object Explorer interface. At the top, there's a menu bar with File, Edit, View, Navigate, Query, Tools, and Help. Below the menu bar, a yellow callout box points to the 'File' menu item with the text "Application uses Generic WEB menu...". To the right of the menu bar is the Object Explorer window, which displays a tree view of Siebel Objects under the 'Types' tab. The 'Siebel Objects' node has several children: Applet, Application, Business Component, Business Object, Link, Menu, MenuItem, Pick List, Project, Screen, Symbolic String, Table, View, Web Page, and Web Template. A red box highlights the 'Generic WEB' entry under the 'Menu' node. Another yellow callout box points to this entry with the text "...which contains...". To the right of the Object Explorer is the Application List window, showing a list of applications. One application, 'Siebel Universal Agent', is selected and highlighted with a red box. A yellow callout box points to this entry with the text "...a list of menu items". Below the Application List is the Menus window, which displays a table of menu items. The table has columns for Name, Caption, and Position. The data in the table is as follows:

Name	Caption	Position
File	&File	1
File - Connect	Connect	1.18
File - Create Bookmark	Create Bookmark...	1.2
File - Custom Print	Print...	1.11
File - Export Data	Export Data Map	1.14
File - Import Data	Import Data	1.13
File - Logout	Log Out	1.19

Yellow callouts with arrows point from specific table rows to annotations: one arrow points to the 'Caption' column with the text "Caption specifies text displayed", and another arrow points to the 'Position' column with the text "Position specifies order of appearance".

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Screen Tabs

- Contain links to screens
- Are defined as page tabs
 - ▶ Child object of the application

The screenshot shows the Siebel Object Explorer on the left and the Page Tab List window on the right.

Object Explorer:

- Project: ** All Projects **
- Types: Flat
- Siebel Objects:
 - Applet
 - Application
 - Page Tab
 - Screen Menu Item
 - Business Component
 - Business Object
 - Entity Relationship Diagram
 - Link
 - Menu
 - Project
 - Screen
 - Table
 - View
 - Web Template

Page Tab List:

Name	Menu	Container Web Page
Siebel Universal Agent	Generic WEB	CC Container Page

Page Tabs:

Specifies text that appears on the page bar

Specifies default page tab order appearance in screenbar

Screen	Text	Sequence
Accounts Screen	Accounts	2
Contacts Screen	Contacts	3
Opportunities Screen	Opportunities	6
Quotes Screen	Quotes	7
Sales Order Screen	Sales Orders	9
Service Request Screen	Service	12
Web Call Center Home Screen	Home	1

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Screens

- Have a child object type called Screen View that specifies the views and categories that appear in the screen
 - ▶ Sequence property specifies where the view appears in the screen
 - ▶ Menu Text property defines the text that appears in Site Map
 - ▶ Type property defines the type of view within the screen
 - Four types: Aggregate category, aggregate view, detail category, and detail view

The screenshot shows the Siebel Object Explorer interface. On the left is the Object Explorer window with a tree view of Siebel Objects, including Application, Business Component, Business Object, Entity Relationship Diagram, Link, Menu, Project, Screen, and Screen View. The 'Screen View' node is selected. To the right is the 'Screen View List' window, which contains a table titled 'Screens' with one row: 'Name' (Accounts Screen). Below it is another table titled 'Screen Views' with one row: 'Name' (Account Screen Homepage View), 'View' (Account Screen Homepage View), 'Sequence' (1,001,000), 'Type' (Aggregate View), and 'Menu Text' (Accounts Home). Two callout boxes point to the 'Type' column in the 'Screen Views' table. The first box says 'Specifies where the view appears in the screen'. The second box says 'Specifies the type of view for this definition'.

Name
Accounts Screen

Name	View	Sequence	Type	Menu Text
Account Screen Homepage View	Account Screen Homepage View	1,001,000	Aggregate View	Accounts Home

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Type Property for Screen View

- An aggregate category is a container for a set of views accessible via a link in the linkbar
 - ▶ May also contain subcategories
- An aggregate view is a container for a set of views accessible via the visibility filter drop-down list, a link in the link bar, or the Home Page

Aggregate category

Aggregate views

	Address Line 1	City	State
3Com Distribution	10400 Fernwood Road	Bethesda	MD
UK	7074 N Clark St	Chicago	IL
US	1500 Northgate	London	
France	1000 6th Avenue	New York	NY
	38 quai du point du jour	Boulogne Billancourt	

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Type Property for Screen View continued

- A detail category is a container for a set of detail views
 - ▶ Each view is represented as a tab on the view tab bar
 - ▶ Used to provide an additional layer of navigation
- A detail view is a single view that displays data in a list or form that can be queried and edited

The screenshot shows two Siebel screens. The top screen is titled 'Accounts List' under 'Cambrian Ventures'. It displays account details for 'Cambrian Ventures' with fields for Account Name, Address, City, Zip Code, Site, and Address Line 2. The bottom screen is titled 'Enterprise Selling Process' under 'BU/SU Overview'. It displays business unit information for 'Cambrian West' with columns for Business / Service Unit, Culture, and Strategy Type. A yellow callout labeled 'Aggregate category' points to the 'Accounts List' tab. Another yellow callout labeled 'Detail category... displays detail view tabs' points to the 'Enterprise Selling Process' tab. A yellow box labeled 'Detail view' points to the 'Cambrian West' row in the BU/SU Overview table.

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Sequence Editor

- Assists in defining where view appears in the application
 - ▶ Updates the sequence property of the screen view object definition
 - ▶ Lists four screen view types in hierarchy

The screenshot shows the Siebel Sequence Editor interface. On the left is a tree view of screen categories like 'Screen - Accounts Screen' and 'Detail Category - ESP'. To the right is a table titled 'Screen Views' with columns for Name, View, Sequence, and Type. A specific row for 'Account Screen Homepage View' is highlighted with a red box around its 'Sequence' value, which is '1,001,000,000'. An 'Aggregate View' type is also indicated. A context menu is open at the top right of the table, with the 'Edit Screen View Sequence' option highlighted with a red box. A yellow callout box points to this menu item with the text 'Right-click to invoke editor'. Below the table is a 'View Properties Window' with keyboard shortcuts for moving views up and down in sequence.

Name	View	Sequence	Type
Account Screen Homepage View	Account Screen Homepage View	1,001,000,000	Aggregate View
Aggregate Category - Account List			
Aggregate View - Account List View			
Aggregate View - Complex Product Runtime Instance View (JS) - Account			
Aggregate View - Account List View			
Aggregate View - Manager's Account List View			
Aggregate View - All Account List View			
Aggregate View - All Accounts across Organizations			
Detail View - Account Detail View			
Detail View - Account Detail - Activities View			
Detail View - Account Asset Mgmt - Asset View			
Detail View - Account Attachment View			
Detail View - Account Detail - Contacts View			
Detail Category - ESP			
Detail View - ESP Business Service Unit Overview View			
Detail View - ESP Business Service Unit Offerings View			
Detail View - ESP Business Service Unit Contacts View			
Detail View - ESP Business Service Unit Partners View			
Detail View - ESP Sub Account Offerings View			

View Properties Window

- Move to Next Higher Position Ctrl+Up
- Move to Next Lower Position Ctrl+Down
- Move to Highest Position Alt+Up
- Move to Lowest Position Alt+Down

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View

- Consists of one or more applets
- References a business object that defines the relationships between data in the view
- Is associated with a Web template that defines its layout

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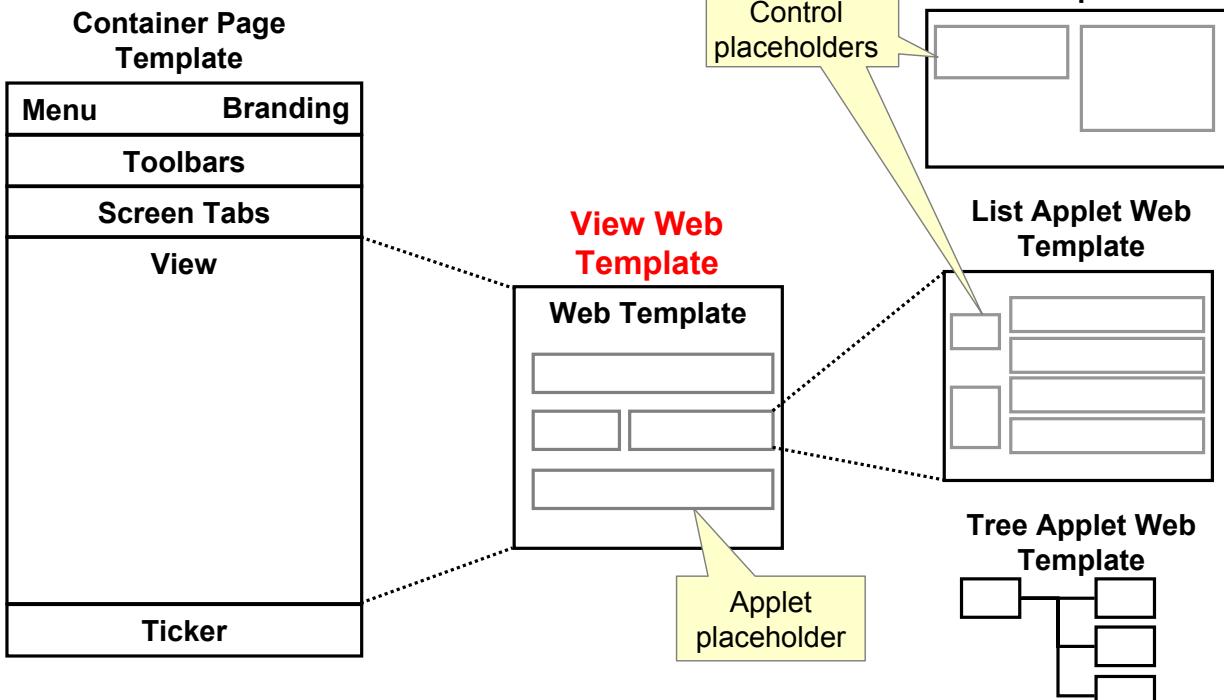
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View and Templates

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- Views use templates to organize data layout



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Selecting a View Template

- Find an existing view that has desired layout
- Examine the View Web Template object definition to determine the view template to use

The Account list view...

The screenshot illustrates the process of selecting a view template. On the left, the 'My Accounts' list view displays a table of accounts with columns for 'Account Name' and 'Site'. One row, 'Art.net', is highlighted. A yellow callout points from this row to the text 'The Account list view...'. On the right, two windows are shown. The top window, titled 'Views', lists 'Account List View' as the current view, which 'uses the View Detail (Parent with Pointer) template'. The bottom window, titled 'View Web Templates', shows a table with a single entry for 'Base', which is identified as having the 'View Detail (Parent with Pointer)' web template.

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Best Practice

Siebel best practice is to modify an existing template.

Steps to create and register a view template:

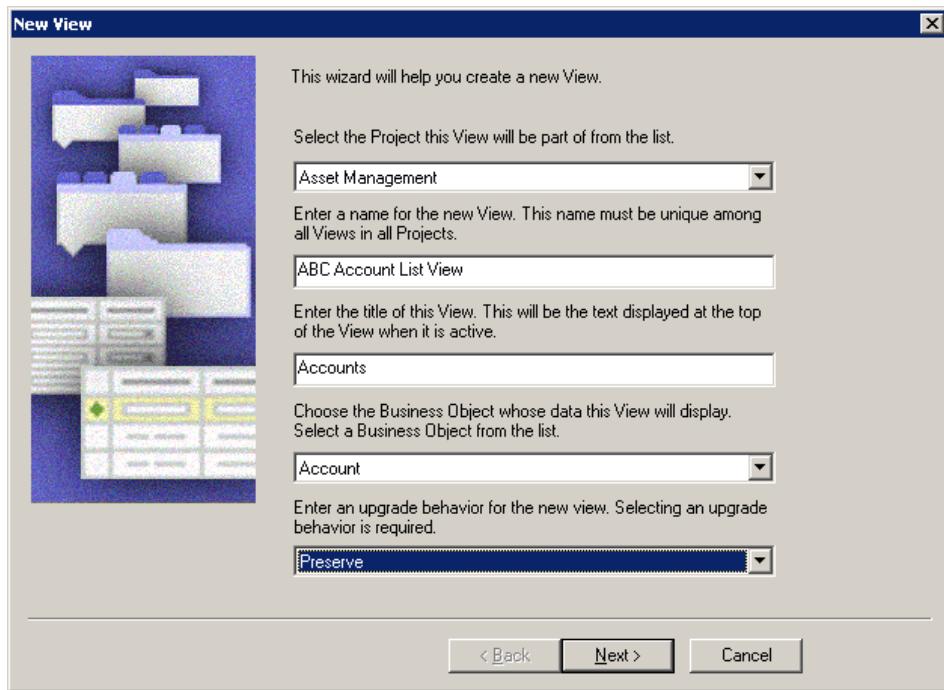
- Create a Web Template object.
- Create a Web Template file.
- Point to the view template file in the webtempl directory.
- Give a logical name to the template file so that it can be referenced by other objects.

Registering the template creates a logical reference in the repository. It tells the repository that the template file exists.

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View Wizard

- Use the View Wizard to create a new view
 - ▶ Select File > New Object, select View, and then click OK



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View Wizard Inputs

- The View Wizard requires the following inputs:
 - ▶ Project that the new view will be part of
 - ▶ View name and display title
 - ▶ Business object that the view will reference
 - ▶ The upgrade behavior
 - Admin, Non-preserved, Preserved
 - ▶ The Web templates that will be used
 - ▶ The applets that make up the view
 - These applets will appear in the Web layout

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View Wizard Outputs

- The View Wizard:
 - ▶ Creates a view object
 - ▶ References view to a business object
 - ▶ Associates Web templates to the view
 - ▶ Invokes the Web Layout Editor

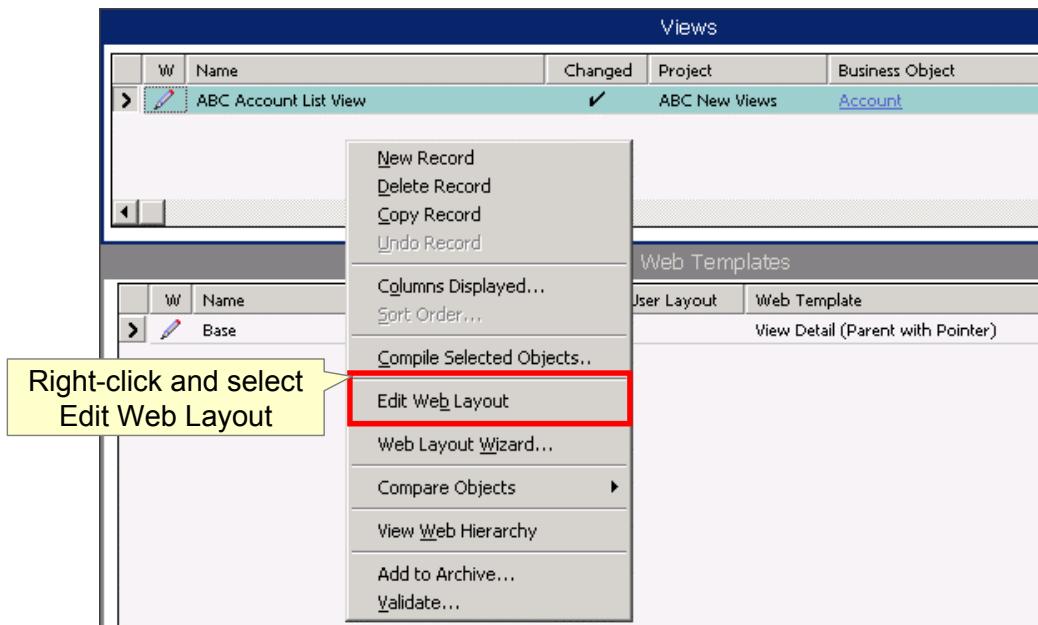
The screenshot shows the Siebel Object Explorer and the View List window. In the Object Explorer, under Siebel Objects > View, a new view named 'ABC Account List View' is being created. The View List window shows this view has been created and is associated with the 'Asset Management' project and the 'Account' business object. Annotations point to these areas with yellow callouts: 'Creates view' points to the creation of the view object, 'References business object' points to the association with the account business object, and 'Invokes Web Layout Editor' points to the layout editor interface below.

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Web Layout Editor

- Is launched by the View Wizard
- Can be launched by right-clicking a view definition in the OBLE



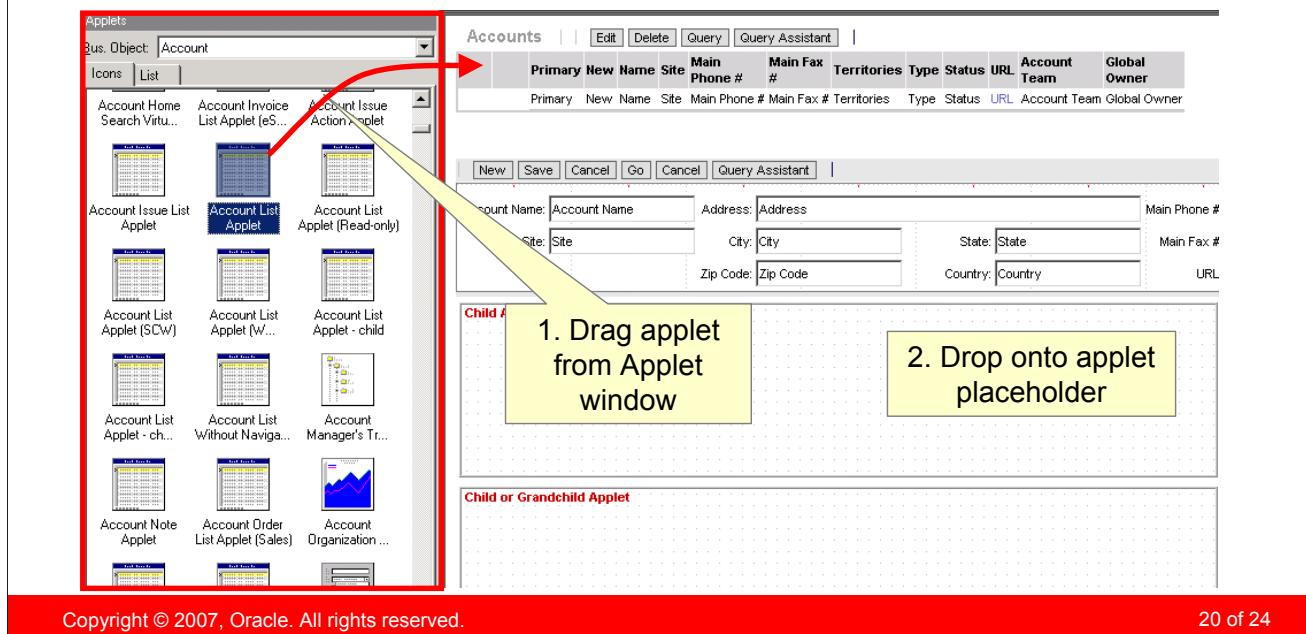
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Web Layout Editor Continued

- Displays the current layout of the view
- Applet window shows the applets available for display within the view
 - ▶ Constrained by the view's business object property



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View Web Template Items

- Are applets that have been bound to a view
 - ▶ Item identifier specifies where they are to appear
 - Used in the markup language tag that specifies corresponding control in a template

The screenshot shows the Siebel Object Explorer on the left and two windows from the 'View Web Template Item List' application on the right.

Object Explorer: Shows a tree structure of Siebel Objects under 'Project: ** All Projects **'. The 'View' node is expanded, showing 'View Report' and 'View Web Template' as children, with 'View Web Template Item' selected.

View Web Template Item List: This window has two tabs: 'View Web Template Items' (selected) and 'View Web Templates'. The 'View Web Template Items' tab displays a table with one row:

Name	Web Template
Base	View Detail

The 'View Web Templates' tab is also visible.

View Web Template Items: This window displays a table with two rows:

Name	Item Identifier	Applet Mode
ABC Asset Supply Plan List Applet	2	Edit List
Asset Mgmt - Asset Detail Applet	1	Edit

A yellow callout box points to the 'Item Identifier' column of the second row, containing the value '2'. The text inside the callout box is: "Binds a control to specific position on Web page".

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Register and Assign View

- Views must be administered in the client to make them available to users
 - ▶ Navigate to Administration - Application > Views in the client application to register the view
 - Copy and paste the view name from the object definition in Tools to the view record
 - ▶ Navigate to Administration - Application > Responsibilities to assign the view to one or more responsibilities
 - Assign the view to developers for unit testing and to users for system testing and production

The screenshot shows the Siebel user interface with the following components:

- Top Navigation Bar:** Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, Administ.
- Sub-navigation:** Branch Locator, Contact Us, Alerts Online, License Keys, Predefined Queries, Reports Server Administrator Profile, Responsibilities.
- Views Screen:**
 - Header: Views | Menu ▾ | New | Delete | Query | Query Results
 - Table: View Name | Description | Default Local Access
 | | | |
| --- | --- | --- |
| ABC Account List View | My New View | |
- Responsibilities Screen:**
 - Header: Responsibilities | Menu ▾ | New | Delete | Query | Clear Cache
 - Table: Responsibility | Description | Organization | Web Access
 | | | | |
| --- | --- | --- | --- |
| ABC Developer | | Default Organization | Yes |

Annotations on the screenshot:

- 1. Register the view:** Points to the 'ABC Account List View' row in the Views screen.
- 2. Assign the view:** Points to the 'ABC Developer' row in the Responsibilities screen.
- 3. Clear the cache:** Points to the 'Clear Cache' button in the Responsibilities screen.

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Module Highlights

- Applications are groups of screens through which users navigate
- Screens are containers for views
 - ▶ Screen views come in four types: aggregate view, aggregate category, detail category, and detail view
- Views:
 - ▶ Consist of one or more applets
 - ▶ Reference a BO that defines the relationships between data in the view
 - ▶ Are associated with a Web template that defines their layout



Lab

- In the lab you will:
 - ▶ Create a view
 - ▶ Add the view to a screen using a specified view navigation mechanism
 - ▶ Administer the new view

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Siebel 8.0 Essentials

Module 27: UI Layer Configuration: Drilldowns

27

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Module Objectives

- After completing this module you should be able to:
 - ▶ Configure drilldown to a related view
 - ▶ Enable the thread bar
- Why you need to know:
 - ▶ Enables you to add drilldowns to assist users with navigation
 - ▶ Enables you to activate the thread bar to assist users



Navigation Using Drilldown

- You can configure list columns or controls for drilldown
 - ▶ When the user clicks the hyperlinked value, the application navigates to another view
- You can configure drilldown as static or dynamic
 - ▶ Static: Clicking the hyperlink always navigates to the same target view
 - ▶ Dynamic: Clicking the hyperlink navigates to a target view determined by values shown in the current view

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Reference

[Configuring Siebel Business Applications: Configuring Screens and Views](#)
[Configuring Siebel Business Applications: Configuring Applications](#)

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Static Drilldown: Same Business Component

- Drill down to another view, keeping the business component (BC) context

The screenshot illustrates a static drilldown within the same business component (BC) context. It shows two views for a contact record named Dorothy Bates.

List View (Left):

- Header: My Contacts ▾ | Menu ▾ | New | Delete | Query
- Columns: Last Name, First Name, Mr/Ms, Work Phone #
- Data row: Bates, Dorothy, Mrs., Dorothy Bates
- A yellow callout box points to the "Dorothy Bates" entry with the text: "Contact record in Visible Contacts list view".

Detail View (Right):

- Header: Menu ▾ | New | Delete | Query
- Form fields:
 - Last Name: * Bates
 - First Name: * Dorothy
 - Middle Initial:
 - Mr/Ms: Mrs. (dropdown menu)
 - Job Title:
 - Work Phone #:
 - Work Fax #:
 - Mobile Phone #:
 - Home Phone #:
 - Email:
- Buttons: More Info | Activities | Notes | Opportunities | Service Requests | Agreements | Attachments
- Header: New Description Type Start ▾ End Due
- Content area: A browser window titled "About View - Microsoft Internet Explorer" showing the contact details. A red box highlights the status bar with the text: "Screen: Contacts Screen" and "View: Contact Detail View". Below it, it lists: "Business Object: Contact", "Applets: Applet[0]: Contact Form Applet; Applet[1]: Contact Activity List Applet;", and "Business Components: BusComp[0]: Contact; BusComp[1]: Action;".

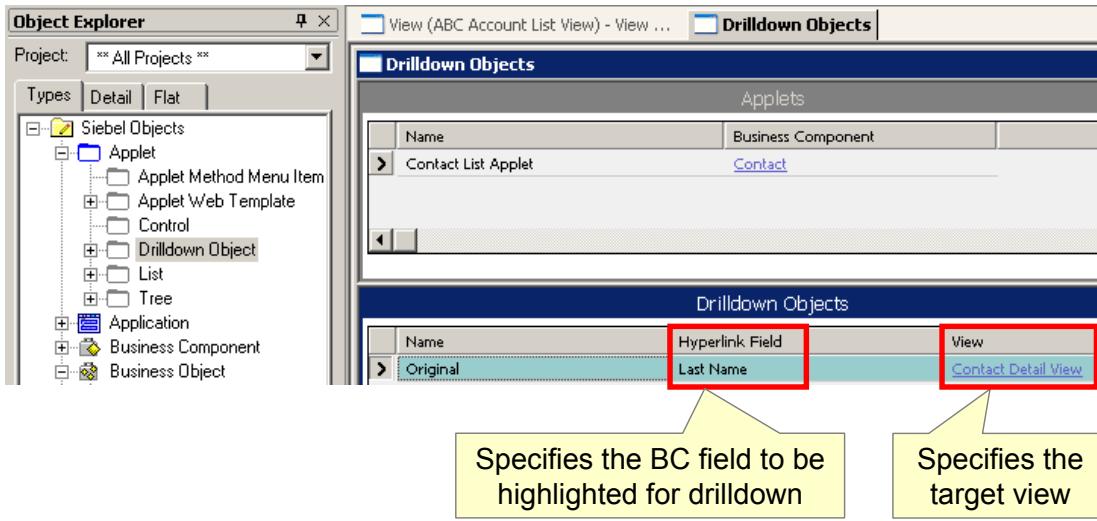
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Configuring Drilldown Within Same Business Component

- Create a new drilldown object
 - ▶ Set the Hyperlink Field and View properties to enable static drilldown
 - ▶ Drilldown object is child of an applet object



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Static Drilldown: Different Business Component

- Drill down to another view, changing the business component context

The screenshot illustrates a static drilldown between two Siebel views:

- Contacts List View:** Shows a grid with columns: Last Name, First Name, and Account. A row for "Aamot, Shashi" has its "Account" field set to "AEP Communications". A callout box points to this field with the text: "The account field of the contact record in the Contacts list view".
- Account Detail - Contacts View:** A modal window showing details for "AEP Communications". It includes fields for Account Name, Site, Address, City, Zip Code, and various account-related settings.
- Relationship:** A callout box from the "AEP Communications" account in the contacts view points to the same account record in the detail view, labeled "Related account record in the Account Detail - Contacts view".
- Information Bar:** At the bottom of the detail view, there is an "About View" section with the following details:
 - Screen:** Accounts Screen
 - View:** Account Detail - Contacts View
 - Business Object:** Account
 - Applets:** Applet[0]: Account Entry Applet; Applet[1]: Account Contact List Applet;
 - Business Components:** BusComp[0]: Account; BusComp[1]: Contact;

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Configuring Drilldown to Different Business Component

- Create a new drilldown object for the applet
 - ▶ Set Hyperlink field and View properties as before
 - ▶ Set Business Component, Source Field, and Destination Field properties to enable drilldown to a view based on a different parent record

Object Explorer

Project: ** All Projects **

Types Detail Flat

Siebel Objects

- Applet
 - Applet Method Menu Item
 - Applet Web Template
 - Control
 - Drilldown Object
 - List
 - Tree
- Application
- Business Component
- Business Object

Drilldown Objects

Applets

Name	Business Component
Contact List Applet	Contact

Drilldown Objects

Name	Hyperlink Field	View	Source Field	Business Component	Destination Field
Account	Account	Account Detail - Contacts View	Account Id	Account	

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Reference

Configuring Siebel Business Applications: Configuring Screens and Views:
About Drilldowns

Siebel Security Guide: Configuring Drilldown Visibility

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Dynamic Drilldown

- Enables drilldown to multiple views from the same hyperlink field, depending on value of a field in the active record of the list

For business contacts, go to the Contact Detail view

For personal contacts, go to the Personal Contact List view

Contact Detail View (Top Right):

Last Name	First Name	Mr/Ms
Abboline	Glen	Mr.
Adams	Jamie	
Adams	Max	Mr.
Adamson	Mike	

Personal Contact List View (Bottom Right):

Last Name	First Name	Mr/Ms	Work Phone #
Adams	Max	Mr.	(650) 295-5000

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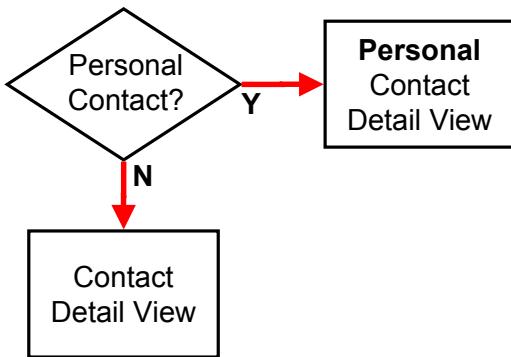
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Note

The single value field that controls which view the dynamic drilldown navigates the user to is configured when the business component is created. In the example here, the business component is "Contact" and the single valued field is "Personal Contact." For Adams, "Personal Contact" = Y (yes), while for Abboline "Personal Contact" = N (no).

Matching Conditions

- Identify one or more matching conditions to trigger drilling down to a specific target view
 - ▶ For example:



- Determine the order to check the matching conditions
 - ▶ Conditions can involve different fields
 - ▶ Multiple matches could occur for a given record

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Configuring Dynamic Drilldown

- Create the drilldown objects for each view
 - ▶ Multiple drilldown objects with same hyperlink but different views
- Set sequence number to determine where to look for dynamic drilldown destinations
 - ▶ The drilldown object with the lowest sequence number is checked for dynamic drilldown destination child object definitions

The Original and Personal drilldown objects have the same Hyperlink field but different views

The Original drilldown object has the lower sequence number, so it is checked for dynamic drilldown destinations

W	Name	Hyperlink Field	View	Sequence
	Account	Account	Account Detail - Contacts View	2
	Original	Last Name	Contact Detail View	1
	Personal	Last Name	Personal Contact List View	3

W	Name	Field	Value	Destination Drilldown Object	Sequence
	Contact	Personal Contact	N	Original	2
	Personal	Personal Contact	Y	Personal	1

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Configuring Dynamic Drilldown Continued

- Create a dynamic drilldown destination definition for each condition
 - ▶ Each condition specifies a destination drilldown object to use
 - ▶ Recommended practice: Create a default dynamic drilldown destination to specify a desired view if there are no matches
 - If no default is configured, navigates to the view specified by the parent drilldown object

Dynamic Drilldown Destinations

W	Name	Hyperlink Field	View
>	Account	Account	Account Detail - Contacts View
	Original	Last Name	Contact Detail View
	Personal	Last Name	Personal Contact List View

Dynamic Drilldown Destinations

W	Name	Field	Value	Destination Drilldown Object	Sequence
>	Contact	Personal Contact	N	Original	2
	Personal	Personal Contact	Y	Personal	1

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Thread Bar

- Tracks previous business object (view) and active record
- Updates whenever the user navigates to a different business object
- Provides hyperlinks to previous views
 - ▶ Allows user to backtrack easily

Hyperlink to prior active record in the thread

Contact:Aamot > Account:

AEP Communications

Mr/Ms	First Name	Last Name	Middle Name	Job Title	Work Phone #	Mobile Phone #
> Mr.	Shashi	Aamot	T.	IT Manager	(614) 343-8700	(650) 235-9845

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Note

The thread bar allows the user to navigate to a specific view or record previously visited, by selecting the item of interest in the thread bar. Drilldowns implement the user's business logic; they are always parts of business processes. When a part of a business process is completed, the user will usually return to an earlier view or record, and the thread bar facilitates this navigation.

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Thread Properties

- Specifies the text that appears in the thread bar

The screenshot shows the Siebel User Interface. At the top is a toolbar with various icons. Below it is a breadcrumb trail showing 'Contact:Aamot > Account:'. Two yellow callout boxes point to specific parts of the interface:

- A box labeled 'Thread title' points to the first item in the breadcrumb trail ('Contact:Aamot').
- A box labeled 'Thread field' points to the second item in the breadcrumb trail ('Account:').

A large yellow callout box contains the text: "Specifies the record to ‘remember’ in the hyperlink". Another yellow callout box contains the text: "Thread Title property specifies prior business object in hyperlink; if not entered, application uses Title property".

To the right is a 'Properties' window titled 'View [Contact List View]'. It has tabs for 'Alphabetic' and 'Categorized'. Under the 'Basic' section, there is a table of properties:

Add To History	TRUE
Admin Mode Flag	FALSE
Business Object	Contact
Comments	
Inactive	FALSE
Module	
Name	Contact List View
Object Language Locked	
Object Locked	FALSE
Object Locked By Name	
Object Locked Date	
Thread Applet	Contact List Applet
Thread Field	Last Name
Thread Title	Contact

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Module Highlights

- List columns or controls can be configured for drilldown
- Drilldowns can be static or dynamic
 - ▶ Static drilldowns always navigate the user to the same target view
 - ▶ Dynamic drilldowns navigate the user to a target view determined by the values shown in the current view
 - ▶ Static drilldowns can be configured to drill down to the same business component or to a different business component
- Thread bar allows user to easily backtrack
 - ▶ Configured in Tools



Lab

- In the lab you will:
 - ▶ Create and configure dynamic drilldowns
 - ▶ Enable and configure thread support

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Siebel 8.0 Essentials

Module 28: Business Layer Configuration: Joins

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Module Objectives

- After completing this module you should be able to:
 - ▶ Create a join that brings data from a standard table into a standard business component
 - ▶ Create a join that brings data from a party table into a standard business component
 - ▶ Create a join that brings data from a party table into another party business component
- Why you need to know:
 - ▶ Enables you to configure your company's business logic

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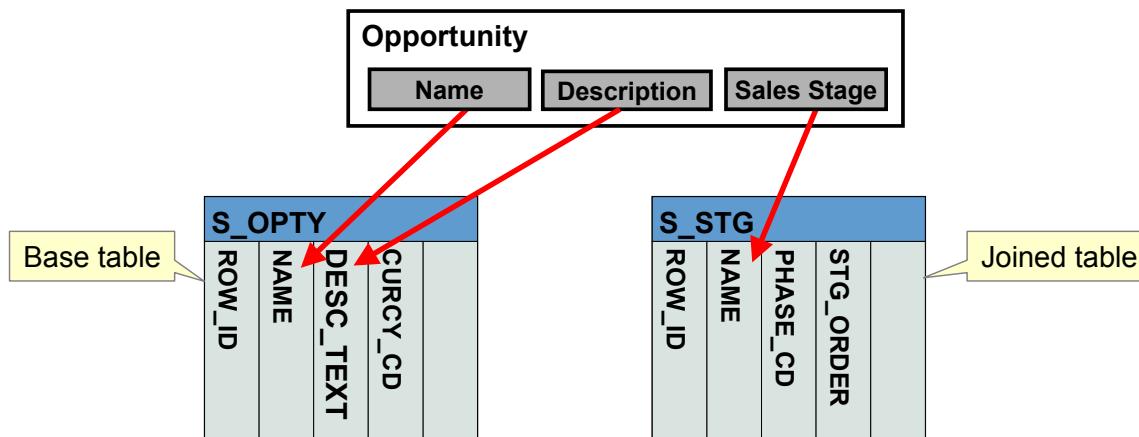
Reference

Configuring Siebel Business Applications: Configuring Joins

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Joined Tables Review

- Business components can include data from related joined tables
 - ▶ Brings in data as needed to meet the business component's data requirements
 - For display in applets
 - For use in processing by the business component



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Three Definitions Are Used to Implement a Join Review

- Join definition specifies the joined table
- Join specification specifies the FK and PK used to relate the base and joined tables
- Single-value field (SVF) references the join object definition

The screenshot illustrates the Siebel Business Components interface with three highlighted components:

- 1. Join definition:** A red box highlights the "Join Specifications" table under the "Joins" section, specifically the row where the table "S_STG" is aliased as "Sales Stage".
- 2. Join specification:** A red box highlights the "Join Specifications" table under the "Join" section, specifically the row where "Sales Stage Id" is mapped to "ROW_ID" via the "Source Field" "Sales Stage Id".
- 3. Single-value field:** A red box highlights the "Single Value Fields" table, specifically the row where the "Name" is "Sales Stage" and the "Column" is "NAME".

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Join Example

- Will bring Sales Stage data from S_STG into the Opportunity BC
 - ▶ S_OPTY is the base table, S_STG is the joined table

The screenshot shows the Siebel Opportunities List screen. At the top, there's a navigation bar with links for Home, Accounts, Contacts, Opportunities, and Quotas. Below that is a toolbar with buttons for My Opportunities, Menu, New, Delete, and Query. The main area is a grid titled 'Opportunities List' with columns: Opportunity Name, Account, and Sales Stage. Three rows of data are shown:

Opportunity Name	Account	Sales Stage
200 PCS CS Laptop units	AT&T	J1 - Prospecting
200 PCS Puma Laptop EB units	Imperial Tobacco	J2 - Qualification
200 PCS Puma Laptop EB units	Broadband e2e	

Annotations with arrows point from the 'Opportunity Name' column to the text 'From S_OPTY' and from the 'Sales Stage' column to the text 'From S_STG'. The first two rows have their entire row boxes highlighted with red borders, while the third row does not.

From S_OPTY

From S_STG

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Building a Join

1. Locate the Data Source
2. Examine Existing Joins
3. Diagram the Join
4. Create the Join Definition
5. Create the Join Specification
6. Map the Single Value Field(s)

1. Locate the Data Source

- Identify potential data sources
 - ▶ Peruse application for data that you seek
 - The required data could exist in another business component
- Once you find the data in the UI, identify the specific table and column where the data resides
 - ▶ Trace down from the UI element to the table column
 - For assistance, use the job aid from the Business Component lab

Identify table and column that contains data you seek

Layer	Step	Object You're looking For	Source Where Information About The Object Can Be Found
User Interface Objects 	1	Display Name	Look for the text label: • In a list applet, the column heading above the field in question • In a form applet, the control label next to the field
	2	Applet Name	In UI: Help > About View
Business Objects 	3	Business Component	In UI: Help > About View
	4	Business Component Field	a. In Tools: <applet name> List :: List List Column. b. Query Display Name for <display name> (from step 1). c. Value you need is the Field property.
Data Objects 	5	Table Name Join Table? (if yes: <input checked="" type="checkbox"/>) 	In Tools: Business Component :: <business component name> Field :: <field name> IF value under Join = empty Enter base table name ELSE Enter value under Join Note: if query fails, value in "Field" is calculated. Try this: query Calculated Value for "<field name>"
	6	Table Column Name	In Tools: Business Component :: <business component name> Field :: <field name>. Value under Column

2. Examine Existing Joins

- Determine if a join already exists
 - ▶ Peruse existing joins for joins that might be candidates
 - ▶ Oracle has already provided many commonly-used joins
- If a join exists that meets data display requirements, use it
- Otherwise, create a new join

The screenshot shows the Siebel Object Explorer interface. On the left, the Object Explorer tree is expanded to show 'Siebel Objects' under 'Types'. Under 'Siebel Objects', 'Business Component' is selected, revealing sub-options like 'BusComp View Mode', 'Business Component User Prop', 'Join', and 'Field'. The 'Join' node is highlighted. On the right, the 'Join List' view is displayed, showing a table titled 'Joins'. The table has columns for 'Table', 'Alias', and 'Outer Join Flag'. A yellow callout box with the text 'Examine alias for candidates' points to the 'Alias' column. The data in the table is as follows:

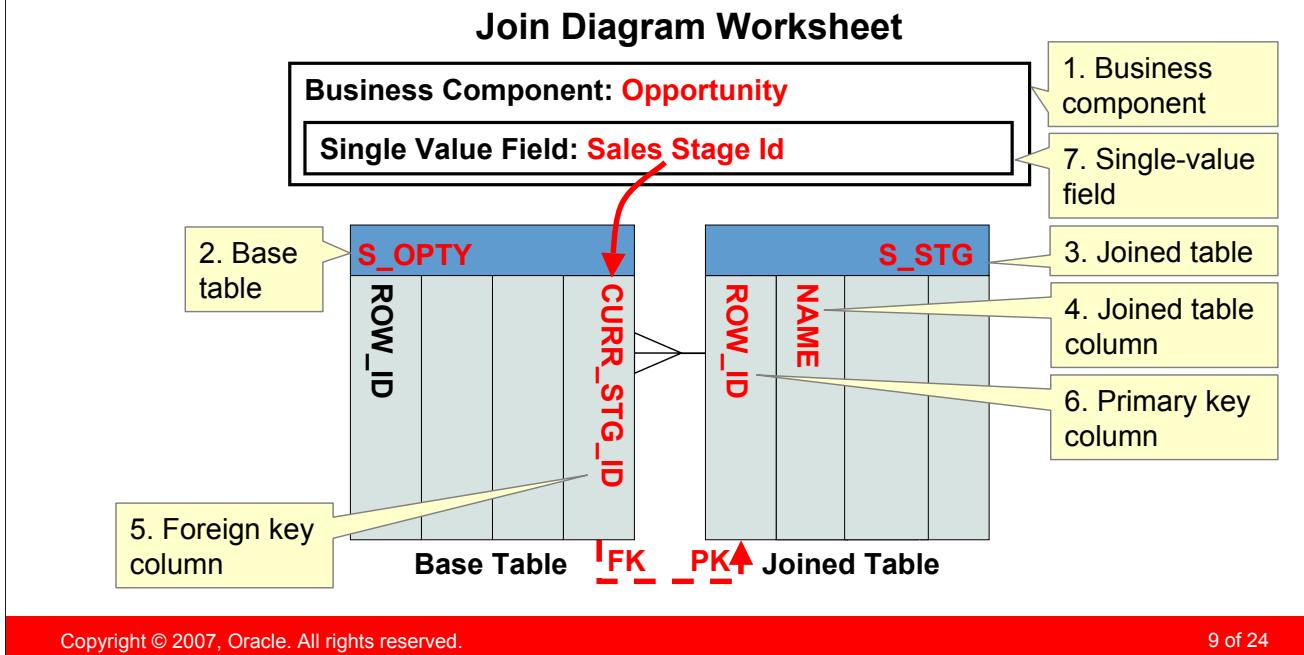
Table	Alias	Outer Join Flag
S_USER	CREATED_BY	✓
S_SRC	Campaign Name	✓
S_SYS_KEYMAP	Inbound Opportunity	✓
S_DMND_CRTN_PRG	Offer Name	✓
S_SYS_KEYMAP	Outbound Opportunity	✓
S_OPTY	Parent Opportunity	✓
S_BLU	Partner	✓

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3. Diagram the Join

- The Join Diagram template simplifies join creation
 - ▶ Gather information first, then create the join
- Indicate each of the numbered items



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Procedure Quick Start

1. Enter business component name.
2. Enter base table name: value of Table property for BC.
3. Enter joined table name.
4. Enter joined table column name that contains data to be brought into this BC.
5. Enter foreign key column name. Select Table :: [base table] | Column. Query Foreign Key Table property for [joined table name]. For example, Table :: S_OPTY | Column. Foreign Key Table = S_STG.
6. Enter primary key column name. Select Table :: [joined table] | Column. Query Primary Key property for TRUE. For example, Table :: S_STG | Column. Primary Key = TRUE.
7. Enter SVF name. Select [business component] :: Single Value Field. Query Column property for [FK column]. For example, Opportunity :: Single Value Field. Column = CURR_STG_ID.

4. Create the Join Definition

- Table property specifies joined table
- Alias property is the name of join definition
 - ▶ Alias always defaults to the joined table's name
 - Displayed in ALL CAPS
 - ▶ Additional aliases for self-joins or multiple joins to the same table are specified by the developer
 - Recommended practice is to use Initial Caps

The screenshot shows the Siebel Object Explorer interface. On the left, the Object Explorer tree is visible with various object types like Applet, Application, Business Component, and Join. The 'Join' node under Business Component is selected. On the right, the 'Join List' view displays a table of joins. The table has columns for Name, Table, Alias, and Outer Join Flag. The 'Name' column contains the name of the join, 'Opportunity'. The 'Table' column lists the joined tables: S_USER, S_USER, S_USER, S_TEAMSPACESEARCH, S_SYS_KEYMAP, and S_STG. The 'Alias' column shows the default alias values: CREATED_BY, S_USER, Updated By Login, S_TEAMSPACESEARCH, Outbound Opportunity, and Sales Stage. The 'Outer Join Flag' column contains checkmarks. A yellow callout points to the 'Name' column with the text 'Name of join'. Another yellow callout points to the 'Alias' column with the text 'Default alias value: joined table name'. A third yellow callout points to the 'Table' column with the text 'Joined table'.

Name	Table	Alias	Outer Join Flag
Opportunity	S_USER	CREATED_BY	✓
	S_USER	S_USER	✓
	S_USER	Updated By Login	✓
	S_TEAMSPACESEARCH	S_TEAMSPACESEARCH	✓
	S_SYS_KEYMAP	Outbound Opportunity	✓
	S_STG	Inbound Opportunity	✓
		Sales Stage	✓

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5. Create the Join Specification

- Specify foreign key field of the base business component in the Source Field property
- Specify primary key column of the joined table in the Destination Column property

The screenshot shows the Siebel Project Explorer interface with the 'Join' tab selected. In the 'Join Specifications' section, a join named 'Sales Stage' is defined between the 'S_OPTY' base table and the 'S_STG' joined table. The 'ROW_ID' column in 'S_OPTY' is designated as the 'Source Field' for the join, while the 'CURR_STG_ID' column in 'S_STG' is designated as the 'Destination Column'. A red box highlights this row in the join specification table.

Base Table

S_OPTY		
ROW_ID		CURR_STG_ID

Joined Table

S_STG		
ROW_ID	NAME	

A diagram to the right illustrates the relationship. It shows two tables: 'Base Table' (S_OPTY) and 'Joined Table' (S_STG). The 'ROW_ID' column from the Base Table is connected via a red arrow labeled 'FK' (Foreign Key) to the 'CURR_STG_ID' column in the Joined Table. The 'CURR_STG_ID' column in the Joined Table is connected via a red arrow labeled 'PK' (Primary Key) back to the 'ROW_ID' column in the Base Table.

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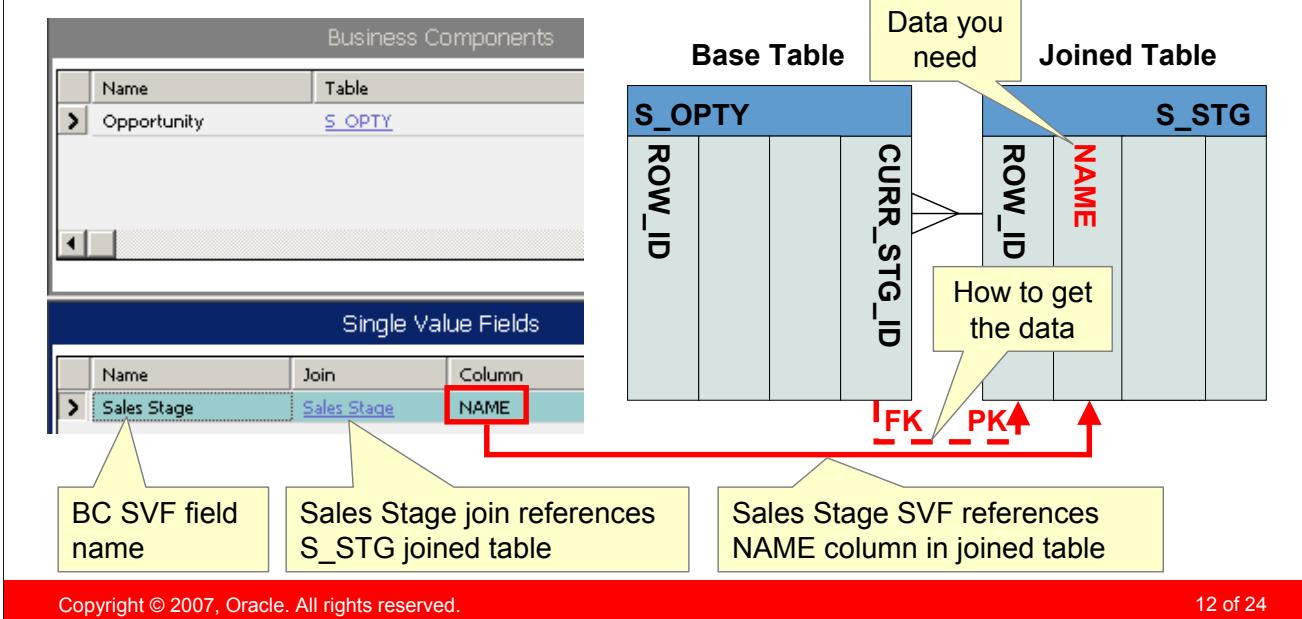
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6. Map the Single Value Field(s)

- Specify business component field name, the joined table, and column name of the joined table
 - ▶ SVF specifies the data you seek
 - ▶ The join determines how you access that data



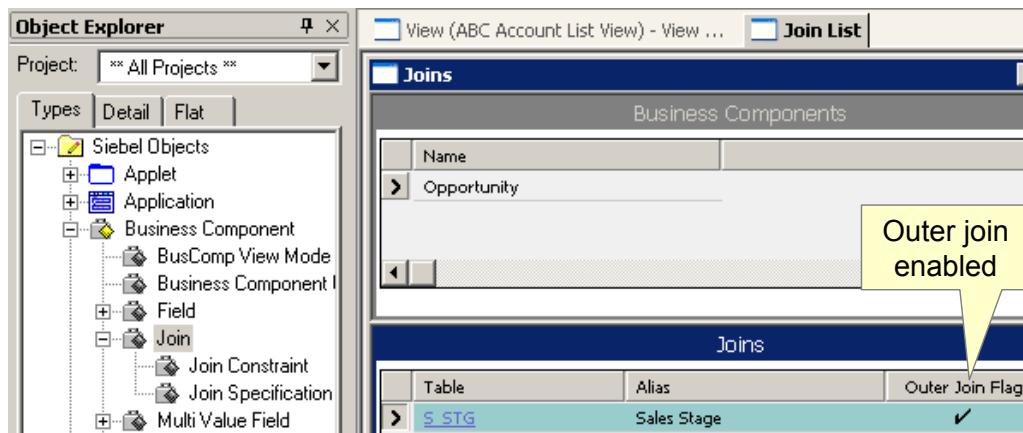
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Outer Join Flag

- An option in the join definition
- Set Outer Join Flag to TRUE to return all records from the base table, even when there is no related row in the joined table
- Outer joins will affect performance
 - ▶ Do not enable outer join if there is always a related row in the joined table



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Outer Join Flag Continued

- When Outer Join Flag is TRUE (checked), a *left outer join* is used
 - ▶ All records in source table are displayed
 - Even if there is no related record in the target table
 - ▶ Records with no related record in target table display target values as null

S_OPTY			
ROW_ID	NAME	DESC_TEXT	CURR_STG_ID
001	200 PCS CS Laptop units	AT&T	105
002	200 PCS Puma Laptop EB	Imperial Tobacco	106
003	200 PCS Puma Laptop EB	Broadband e2e	NULL

All records displayed from source

FK!

S_STG		
ROW_ID	NAME	PHASE_CD
101	03 - Closing	9/7/2001
102	05 - Won	9/18/2001
103	07 - Selected	2/20/2004
104	06 - Short List	9/18/2001
105	01 - Prospecting	9/18/2001
106	02 - Qualification	9/7/2001

No corresponding record for Broadband e2e

APK

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Joins and Party Business Data

Joins and Party Business Components

Bringing Party Data into a Standard Business Component

Bringing Party Data into a Party Business Component

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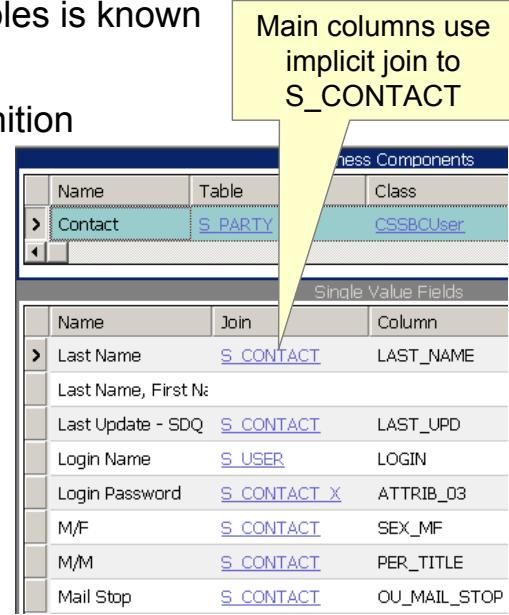
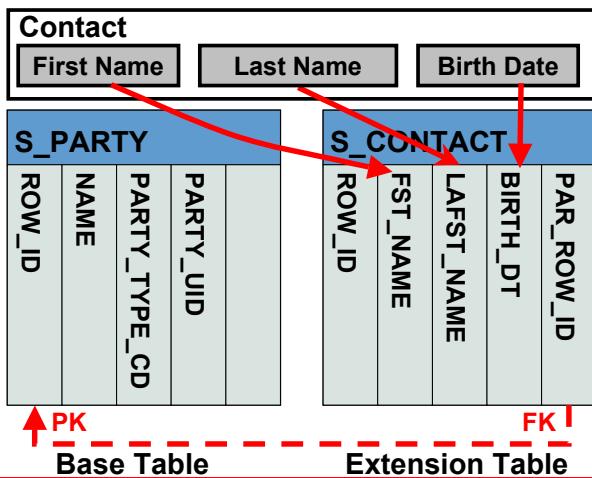
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Joins and Party Business Components Review

- Party Business Components have S_PARTY as the base table, but store main data in S_PARTY extension tables
- An implicit join is used to reference fields from extension tables
 - ▶ Used when relationship between tables is known
 - ▶ Appears in Join property on SFV
 - ▶ Does not appear as Join object definition



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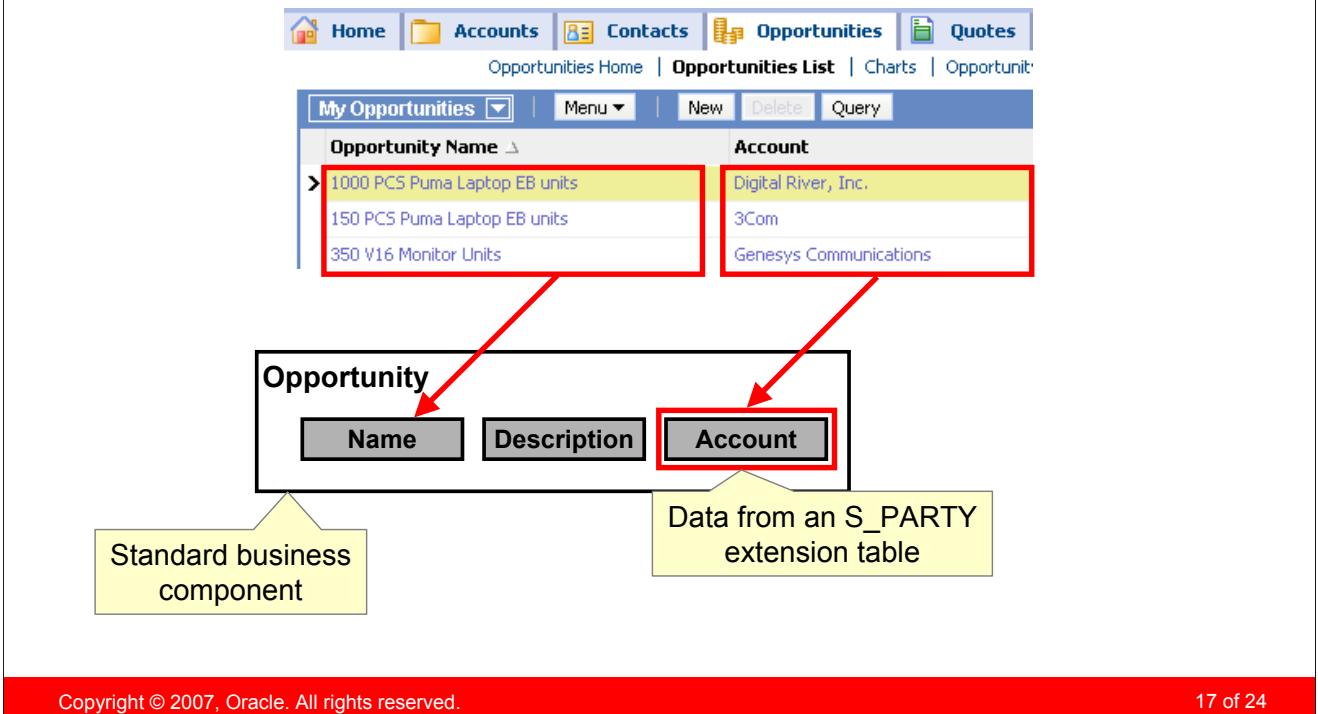
S_PARTY Extension The following tables are some of the extension tables for S_PARTY:

Tables

S_BU
S_CONTACT
S_ORG_EXT
S_POSTN
S_USER

Bringing Party Data into a Standard Business Component

- Example: Bringing account data into the Opportunity business component for display in an Opportunity applet



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Three Definitions Bring Party Data into a Standard BC

- The Join definition specifies which S_PARTY extension table to use
- The Join specification specifies to use PAR_ROW_ID
- The SVF is the desired column from the joined extension table

The screenshot shows the Siebel Object Explorer interface with three highlighted components:

- 1. Join definition:** A red box highlights the "Join Specifications" table in the "Joins" section, specifically the row where the Alias is "S_ORG_EXT" and the Table is "S_ORG_EXT".
- 2. Join specification:** A yellow box highlights the "Join Specifications" table in the "Join Specifications" section, specifically the row where the Name is "Account Id", the Destination Column is "PAR_ROW_ID", and the Source Field is "Account Id".
- 3. Single-value field:** A yellow box highlights the "Single Value Fields" table in the "Single Value Fields" section, specifically the row where the Name is "Opportunity" and the Table is "S_OPTY".

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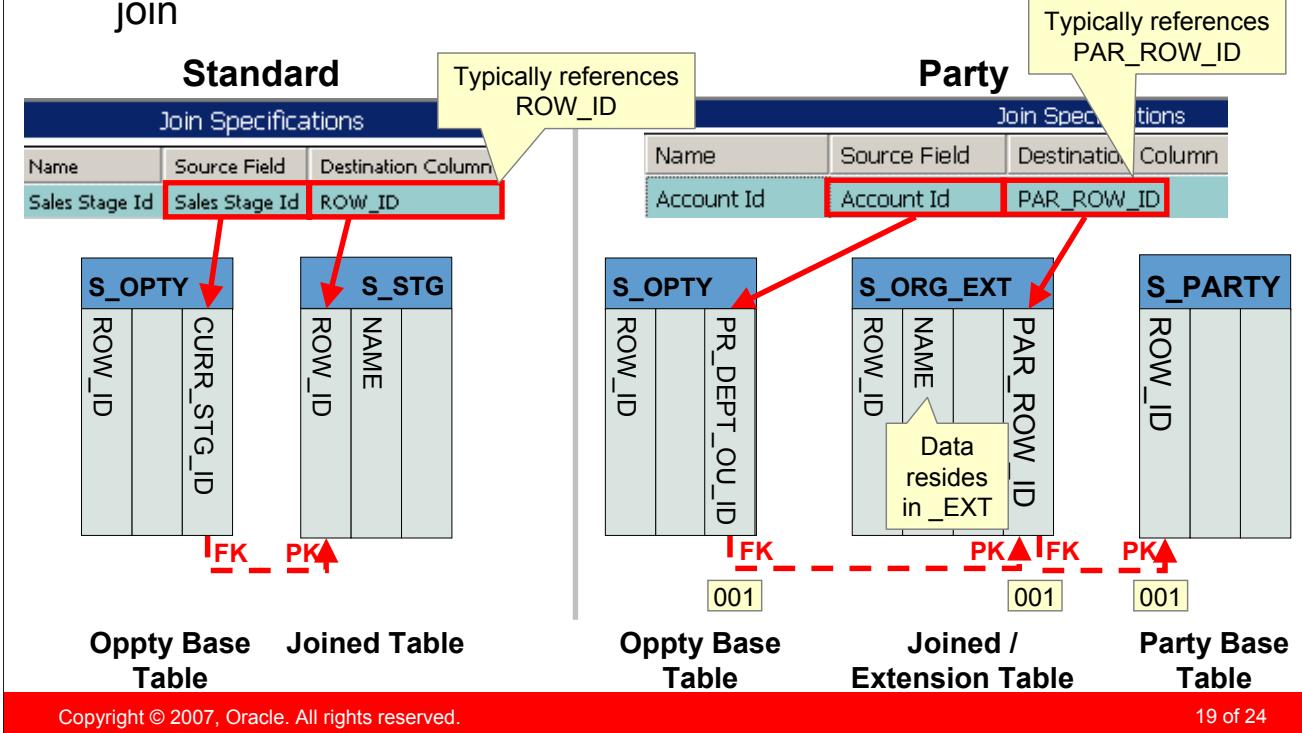
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PAR_ROW_ID

PAR_ROW_ID is referenced in the join specification and identifies the primary key of the related account record.

Join Specification with Party: Similar to Standard But

- Destination references PAR_ROW_ID, not ROW_ID
- Keys reference base to extension to join, rather than base to join



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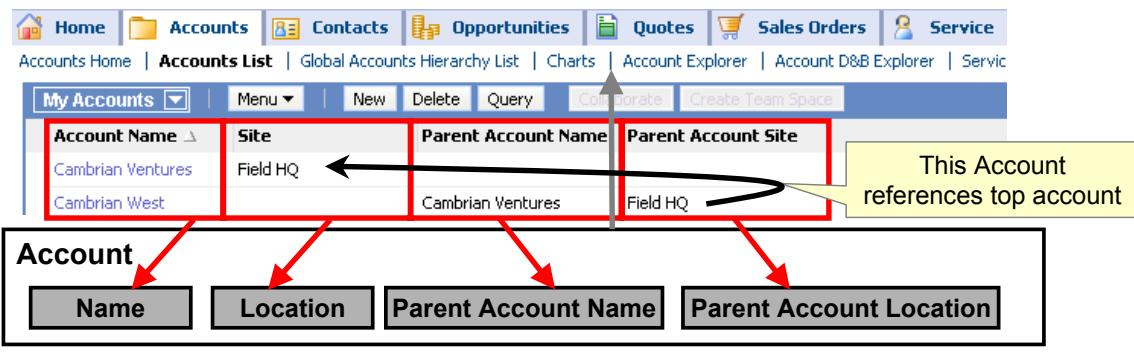
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PAR_ROW_ID

PAR_ROW_ID is referenced in the join specification and identifies the primary key of the related account record.

Bringing Party Data into a Party Business Component

- Example: Bringing parent account data into the Account BC for display in an Account applet
 - ▶ A join in a BC that refers back to data in that same BC



Join Definition, Bringing Party Data into a Party BC

- Must use an explicit join to an extension table based on the appropriate foreign keys
 - ▶ The alias must be different from those used by implicit joins in this BC
- Must not use an existing implicit join to that extension table

Object Explorer

Project: ** All Projects **

Types Detail Flat

Siebel Objects

- Applet
- Application
- Business Component**
 - BusComp View Mode
 - Business Component I
 - Field
 - Join**
 - Join Constraint
 - Join Specification
 - Multi Value Field
 - Multi Value Link
 - Single Value Field
- Business Object
- Entity Relationship Diagram

View (ABC Account List View) - View ... Join List

Joins

Name	
Account	

Business Components

Since an implicit join to S_ORG_EXT already exists...

...an explicit join must be used, and it must have an alias

Alias	Table	Outer Join Flag
Parent Account	S_ORG_EXT	✓
Primary Account Address	S_ADDR_ORG	✓
Primary Account Position	S_ACCT_POSTN	✓
Primary Bill To Address	S_ADDR_ORG	✓
Primary Bill To Person	S_CONTACT	✓

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Implicit Joins

Remember that there is an implicit join available for each extension table for a base table. S_PARTY has many extension tables, including S_ORG_EXT, S_CONTACT, S_POSTN, and S_USER. These implicit joins are used in other party business components to map their main data.

Map Field to Column in Party Table

- Select the appropriate explicit join
 - ▶ Do not use an implicit join to the table
- Select the desired column in the joined table
- Set the appropriate type (DTYPE_TEXT, etc.)

The screenshot shows the Siebel Object Explorer interface. On the left, the Object Explorer tree is visible under the 'Siebel Objects' category, with 'Single Value Field' selected. In the center, the 'Single Value Field List' window is open, showing a table named 'S_PARTY'. Below it, the 'Single Value Fields' window lists a field named 'A New Joined Field'. A red arrow points from the 'Contact - S_ORG_EXT' entry in the 'Join' list of the 'Single Value Fields' window to a yellow callout box containing the text: 'Select the explicit join instead of S_ORG_EXT'.

Name	Table
Account	S_PARTY

Name	Join	Column
A New Joined Field		

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Module Highlights

- BCs can include data from related joined tables
- Join definitions and join specifications define how to access joined table data
- Single-value fields reference the join definition and define the field to access in the joined table
- To create a join:
 - ▶ Locate the data source, examine existing joins, diagram the join, create the join definition, create the join specification, and define the SVF
- Joins that involve party data are similar to standard data; however, when bringing party data into:
 - A non-party BC, create a join specification based on PAR_ROW_ID
 - A party BC, use the appropriate explicit join



Lab

- In the lab you will:
 - ▶ Examine references when a join is not present as well as when a join is present
 - ▶ Create a join that brings in data from joined table and display it in the UI

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Siebel 8.0 Essentials

Module 29: Business Layer Configuration: Existing Business Components and Fields

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Module Objectives

- After completing this module you should be able to:
 - ▶ Edit business component properties to capture business logic
 - ▶ Describe business component view modes
 - ▶ Edit field properties to capture business logic
 - ▶ Specify business component and field user properties
- Why you need to know:
 - ▶ Editing the properties of business components and fields helps you to more accurately and fully capture your business logic

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Business Component Properties

- Capture business logic
- Include:
 - ▶ Properties for editing
 - No Delete
 - No Insert
 - No Merge
 - No Update
 - ▶ Owner Delete
 - ▶ Search Specification
 - ▶ Sort Specification

Properties	
Business Component [Contact(Personal)]	
Name	Contact(Personal)
No Delete	FALSE
No Insert	FALSE
No Merge	FALSE
No Update	FALSE
Owner Delete	TRUE
Placeholder	
Popup Visibility Auto All	
Popup Visibility Type	
PreFetch Size	
Recipient Id Field	Id
Reverse Fill Threshold	
Scripted	FALSE
Search Specification	[Personal Contact] = 'Y'
Sort Specification	Last Name, First Name
Status Field	Row Status

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Reference

Configuring Siebel Business Applications: Configuring Business Components

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Business Component Properties

Properties for Editing

Owner Delete Property

Search Specification Property

Sort Specification Property

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Properties for Editing

- Set editing properties at the business component level to prevent deleting, inserting, merging, and updating records in all applets
- Example: To maintain record continuity, users cannot delete or change price lists once they have been created

Name	Price List
No Delete	TRUE
No Insert	FALSE
No Merge	TRUE
No Update	TRUE

All Price Lists			
Name	Currency	Effective From	Effective To
Americas Price List	USD	1/1/1998 11:59:59 AM	12/30/2008 4:00:00 PM
Interactive Selling for Horiz	USD	1/15/2001 7:59:59 AM	12/30/2008 4:00:00 PM
Master Price List	USD	11/5/1999 11:59:59 PM	12/30/2008 4:00:00 PM
PCS	USD	8/6/2003 5:00:00 PM	

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No Delete	If TRUE, once a record is created and committed, users cannot delete it.
No Insert	If TRUE, users cannot add new records.
No Merge	If TRUE, users cannot merge records.
No Update	If TRUE, users cannot change existing records.

Properties for Editing Continued

- These properties also appear on applets
 - ▶ Most restrictive settings are always used
 - ▶ Set these properties to FALSE at the business component level so you can make exceptions at the applet level

Business Component

Properties	
Business Component [Contact[Personal]]	
	Alphabetic Categorized
Name	Contact[Personal]
No Delete	FALSE
No Insert	FALSE
No Merge	FALSE
No Update	FALSE

Affects all applets referencing
this BC, or . . .

Applet

Properties	
Applet [Contact Form ReadOnly Applet]	
	Alphabetic Categorized
Name	Contact Form ReadOnly Applet
No Delete	TRUE
No Insert	TRUE
No Merge	TRUE
No Update	TRUE

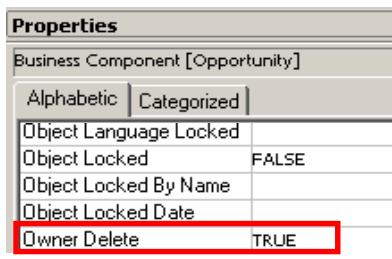
. . . can be customized for
each applet

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Owner Delete Property

- Set the Owner Delete property to TRUE to enable only the owner of a record to delete it
 - ▶ The primary on a team-based business component is the owner of the record



The screenshot shows the Siebel Properties window for a Business Component [Opportunity]. The 'Properties' tab is selected. In the list, the 'Owner Delete' field is highlighted with a red border and contains the value 'TRUE'. Other fields shown include 'Object Language Locked' (Alphabetic), 'Object Locked' (FALSE), 'Object Locked By Name', and 'Object Locked Date'.



The screenshot shows the Siebel Opportunities List view. A yellow callout box points to the 'Primary' column of a row for an opportunity named 'Laptops For Kaboom'. The 'Primary' column shows 'JRUBIN'. A yellow box highlights this row. The list includes columns for Opportunity Name, Primary, Revenue, and Sales Stage. The Revenue for this record is '\$25,000.00'.

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Search Specification Property

- Specifies records to be retrieved by the business component
 - ▶ Typically used when there are multiple business components based on the same table

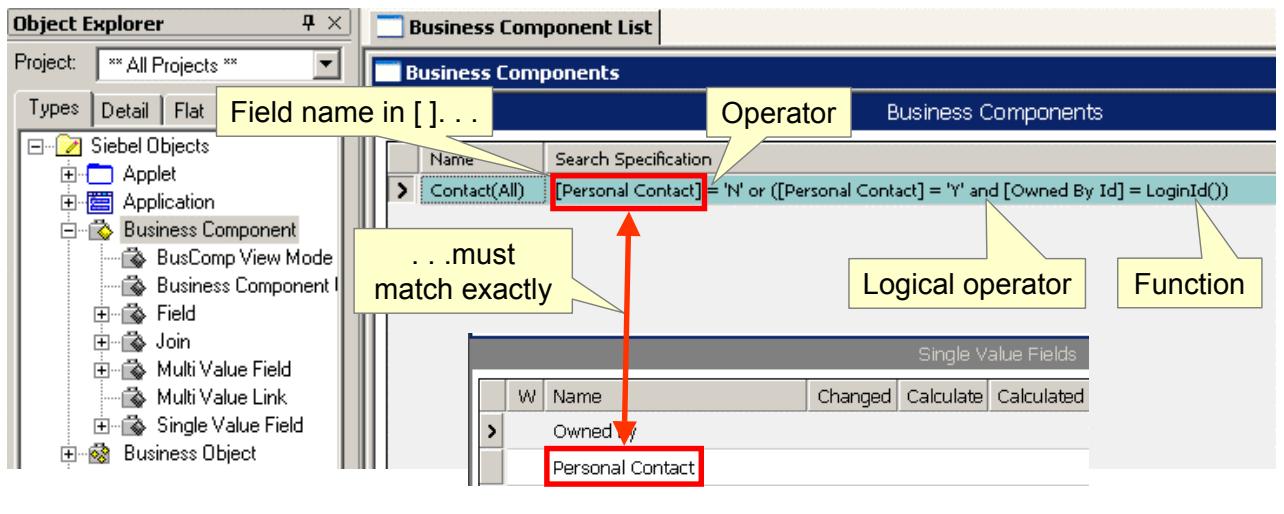
The screenshot shows the Siebel Object Explorer on the left and the Business Component List on the right.

Object Explorer: Shows a tree structure under Siebel Objects > Business Component. Nodes include BusComp View Mode, Business Component!, Field, Join, Multi Value Field, Multi Value Link, Single Value Field, and Business Object.

Business Component List: Shows a table titled "Business Components". A single row is selected for "Contact(All)". The "Search Specification" column contains the expression: "[Personal Contact] = 'N' or ([Personal Contact] = 'Y' and [Owned By Id] = LoginId())". Two callout boxes point to this expression: one labeled "BC field" pointing to the "[Personal Contact]" part, and another labeled "Conditional statement" pointing to the "or" operator.

Search Specification Expression

- Consists of field names, constants, functions, logical operators, and comparison operators
- Example: For a given user, Contact(All) retrieves:
 - ▶ All contacts where the Personal Contact flag is "N"
 - ▶ All personal contacts belonging to the user

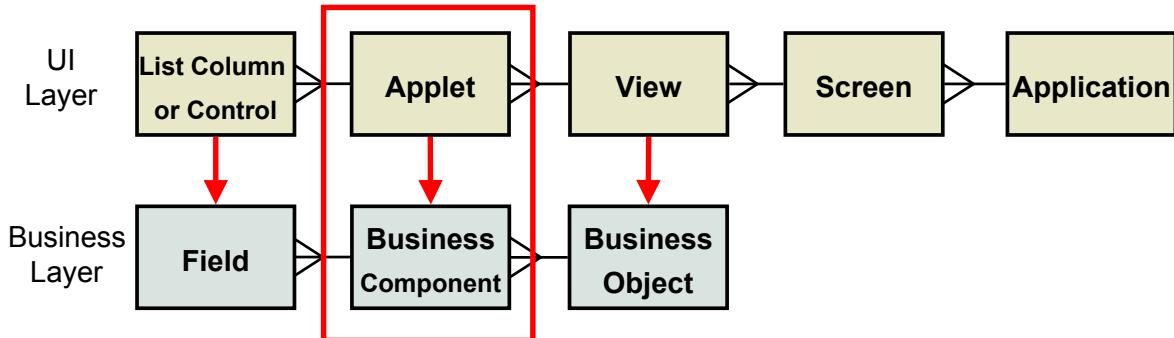


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Search Specification Considerations

- Appear on business component properties and applet properties
 - ▶ Search specifications are part of the WHERE clause for all applets that display this business component
 - Predefined queries may also contribute to the WHERE clause
 - ▶ Search specifications on the applet are combined with search specifications on the business component with an AND in the resulting SQL statement
- Avoid mutually exclusive search specifications
 - ▶ Avoid competing search specifications that preclude record display



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Sort Specification Property

- Determines the sort order of the retrieved records
 - ▶ Use (DESC) or (DESCENDING) to sort that field in reverse order
 - ▶ Cannot be set at the applet level

The screenshot shows two parts of the Siebel interface. On the left is the 'Contacts List' applet showing a grid of contacts with columns for Last Name, First Name, and Mr./Ms. On the right is the 'Business Components' interface under 'Sort Specification'. A yellow callout box points from the contacts grid to the 'Sort Specification' table, containing the text: 'To sort by last name, then first name...'. Another yellow callout box points from the 'Sort Specification' table to the 'Name' column in the 'Index Columns' table, containing the text: '...configure a sort specification'. A red box highlights the 'Name' column in the 'Index Columns' table. A third yellow callout box points from the 'Index Columns' table to the 'Name' column in the 'Sort Specification' table, containing the text: 'Must match exactly'.

Name	Sort Specification
Contact>All)	Last Name, First Name

Name	W	Name	Changed	Calculated
		First Name		
		Last Name		

The screenshot shows the 'Object Navigator' on the left and the 'Indexes' configuration on the right. The 'Object Navigator' tree shows 'Siebel Objects' expanded, with 'Table' selected. The 'Indexes' window shows an index named 'S_CONTACT_F6' with three index columns: 'FST_NAME' (Sequence 3, Sort Order Asc), 'LAST_NAME' (Sequence 2, Sort Order Asc), and 'OWNER_PER_ID' (Sequence 1, Sort Order Asc). A yellow callout box points from the 'Index Columns' table to the 'Sort Order' column of the 'LAST_NAME' row, containing the text: 'Ensure that an index exists to support the sort specification'.

Name
S_CONTACT_F6

Column Name	Sequence	Sort Order
FST_NAME	3	Asc
LAST_NAME	2	Asc
OWNER_PER_ID	1	Asc
PRIV_FLG	4	Asc

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BusComp View Mode

- Specifies that the BC is subject to Access Control
 - ▶ Owner Type property identifies the Access Control mechanism that limits records a user can access
- BCs may have multiple access mechanisms
 - ▶ Allows records to be associated with different owner types
 - ▶ Supports multiple view modes

Name	Owner Type	Visibility Field	Visibility MvField
Organization	Organization	Organization	
Sales Rep	Position		Sales Rep

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Reference

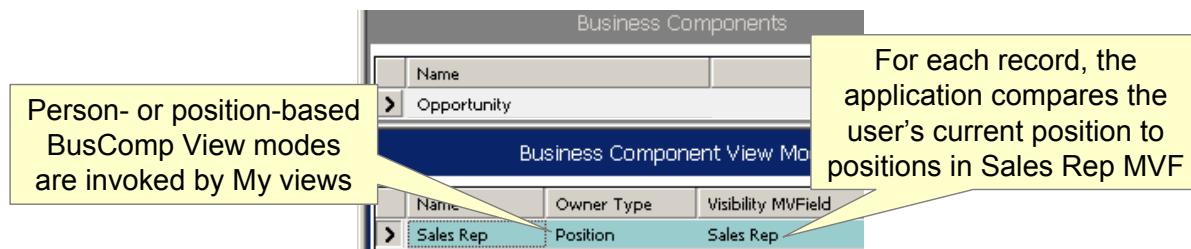
[Object Types Reference](#)

[Security Guide for eBusiness Applications](#)

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BusComp View Mode, Example

- The Opportunity business component has a position-based BusComp View mode
 - ▶ Invoked when user navigates to the My Opportunities or My Team's Opportunities view
- Visibility MVField property is set to Sales Rep, so application reads list of positions from Sales Rep MVF to determine record visibility
 - ▶ The My Opportunities view shows records with the user's current position listed in the Sales Rep MVF
 - ▶ The My Team's Opportunities view shows records where user's direct or indirect reports are primaries on the Sales Rep MVF



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Field Properties

- Customize fields by editing property values
- Setting field properties at the business component level sets them across all applets that reference the business component
 - ▶ Each applet references one, and only one, business component

The screenshot shows the 'Business Components' screen with a list of fields. The 'Name' field is selected, and its properties are displayed in a detailed view below. A red box highlights the 'Required', 'Read Only', 'Validation', 'Pre Default Value', and 'Post Default Value' columns. A callout box points to this highlighted area with the text: 'Properties set at the business component level affect all applets that reference the business component'.

Name	Sort Specification	Search Specification			
Contact(All)	Last Name, First Name	[Personal Contact] = 'N' or ([Personal Contact] = 'Y' and [Owned Entity] = 'C')			
Single Value Fields					
Name	Required	Read Only	Validation	Pre Default Value	Post Default Value
Person UID	<input checked="" type="checkbox"/>			Field: 'Id'	
Personal Contact				N	

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Business Component Field Properties

Required and Read Only

Validation

Default Values

Calculated Fields

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Required and Read Only Properties

- Setting Required to TRUE prevents user from leaving field blank
- Setting Read Only to TRUE prevents user from editing the value

The screenshot illustrates the configuration of business components and the resulting behavior in a Siebel application.

Business Components Configuration: On the left, the 'Business Components' screen shows a 'Single Value Fields' section. A row for 'Last Name' has a red border around its input field, and a tooltip '1. Contacts require last names' points to it. Another row for 'Name' has a red border around its input field, and a tooltip 'Required' points to it.

Siebel Application Screen: On the right, a 'Contact' edit screen is shown. It includes fields for 'Last Name*', 'First Name*', 'Middle Initial', 'Mr/Ms', and 'Job Title'. The 'Last Name*' field is highlighted with a red border, and a tooltip '2. Required field marked with asterisk' points to it. A modal dialog box titled 'Siebel' displays an error message: "'Last Name' is a required field. Please enter a value for the field. (SBL-DAT-00498)". A tooltip '3. Attempting to save without last name causes error message' points to this dialog.

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Note

To display custom error messages, you must use Data Validation Manager.

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Validation Property

- Checks the rule when a record is saved to ensure that the field data is valid
- Message is customizable
- Can refer only to business component fields in the same record

Business Components

Name	Project	Table
Contact	Contact	S_PARTY

Single Value Fields

Name	Validation	Validation Message	Validation Message - String Ref	Validation Message - String Override	Message Display Mode
Birth Date	<code><=Today()</code>	Enter today's date or a date prior to today		Enter today's date or a date prior to	User Msg with Error Code

Birth date must be prior to the current date

Text displayed when validation fails

Specify existing string in SRF...

...or enter a custom message

Option to include system error message

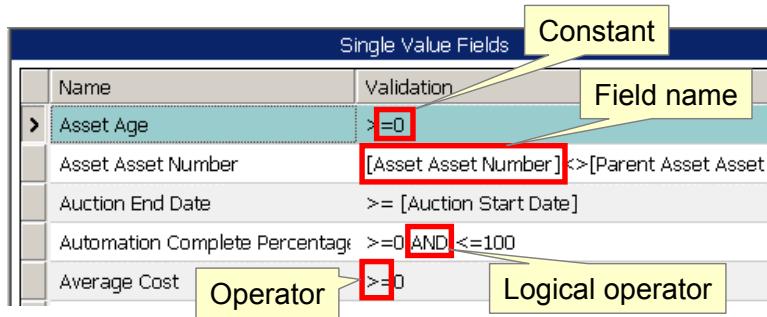
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Reference
[Object Types Reference](#)
[Siebel Developer's Reference](#)

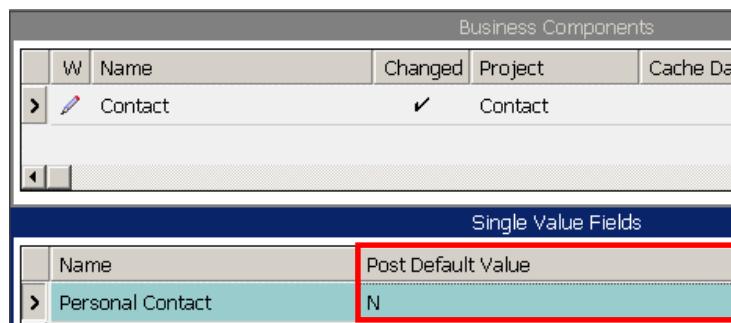
Validation Property continued

- Rules are expressed as a combination of logical operators, constants, field names, and predefined functions



Default Values for Fields

- Pre Default Value
 - ▶ Automatically assigns a value to a field for a new record
- Post Default Value
 - ▶ Assigns a value to a field, if not entered by the user, before the record is inserted into the database
- Example: If the user does not designate a contact as personal, the system assumes it is not personal, and sets it to N



Calculated Fields

- Derive their value from values in other fields in the same record of the business component in which the calculated field resides
- Cannot be stored in the database; therefore, there is no associated column
- To enable, set Calculated property to TRUE (checked)

The screenshot shows the Siebel Business Components interface. At the top, it says "Business Components" and "Contact". Below that, there's a toolbar with icons for New, Edit, Name, Changed, Project, Cache Data, and Class. The "Class" dropdown is set to "CSSBCU". A yellow callout box points to the "Column" column in the table below, stating: "Column property is empty because calculated fields are not stored in the database".

Name	Calculated	Calculated Value	Column
Last Name	<input checked="" type="checkbox"/>	IIF (Language () = "JPN" OR Language = "DEU", [Last Name] + ", " + [First Name], [Last Name])	LAST_NAME
Last Name, First Name	<input checked="" type="checkbox"/>	[Last Name] + ", " + [First Name]	
Last Name, First Name ENU	<input checked="" type="checkbox"/>	[Last Name] + [First Name]	
Last Name, First Name JPN	<input checked="" type="checkbox"/>	[Last Name] + [First Name]	

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Restrictions on Calculated Fields

- Calculated fields are read-only
- System does not validate values of calculated fields
- Sorting on calculated fields is not supported
- Querying on calculated fields is supported
 - ▶ Performance depends upon whether functions in the query expression can be incorporated into the SQL statement

Calculated Value Property

- Is an expression built from:
 - ▶ Field names in the same business component
 - ▶ Field names from the parent business component
 - Current BC must have the child in a detail view
 - ▶ Standard functions
 - ▶ String, numeric, and logical operators

Single Value Fields				
Name	Calculate	Calculated Value	Condition	Comments
Name and Location	✓	[Name] + ": " + [Location]		
Row Status Asterisk	✓	IIF ([Row Status] = "Y", "***", "")		
Timestamp	✓	Timestamp ()		
Today	✓	Today ()		

A yellow callout box labeled "System functions" points to the "Timestamp ()" and "Today ()" entries in the "Calculated Value" column.

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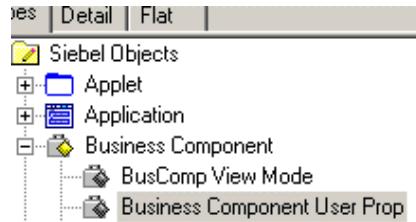
Reference

[Object Types Reference](#)
[Siebel Developer's Reference](#)

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User Properties

- Are object definitions added as children to an applet, business component, control, field, or list column
- Used to configure specialized behavior beyond what is configured in the parent object definition's properties
- Each user property contains its own conditional logic
 - ▶ Can implement specific, custom IF/THEN logic
 - ▶ Many use their own unique syntax
- Can be used as a declarative alternative to scripting
- A wide variety of user properties exist, such as:
 - ▶ BC Read Only Field, Field Read Only Field, and On Field Update Set



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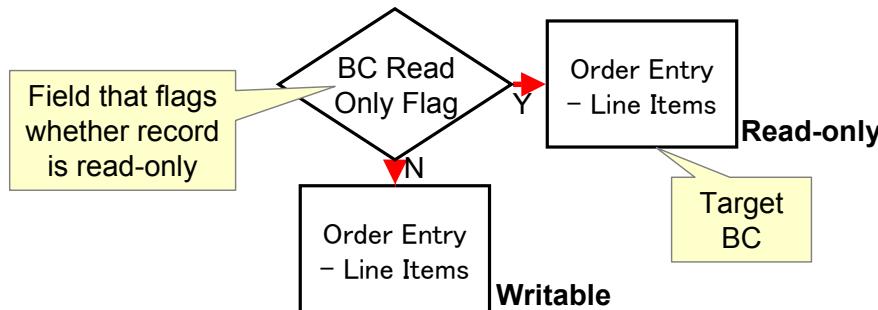
User Properties

There are a large number of user properties, each with its own specialized behavior. For additional information, refer to Siebel Developer's Reference.

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BC User Property Scenario

- Business challenge
 - ▶ Based on values the end user enters at run time, dynamically disallow updates to record
- Business solution
 - ▶ Use the BC Read Only Field user property
 - Allows you to specify a field on the business component that determines whether individual records are read-only
 - ▶ Example: Shipped orders cannot accept changes to order entry line item records in an existing order
 - Order has shipped, and it is too late to add more line items to the order



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User Property, BC Read Only Field Example

- Create a calculated field on the Order Entry – Line Items business component whose value is either Y or N
 - ▶ BC Read Only Field user property requires an input value of Y or N, so create a calculated field whose values are limited to those two values
- For this example, create a calculated field named BC Read Only Flag with the expression: IF([Status] = "Shipped", "Y", "N")
 - ▶ This sets the value of the calculated field to Y if the status is shipped, N otherwise

Single Value Fields		
Business Components		
Name	Table	
Order Entry - Line Items	S_ORDER_ITEM	
Single Value Fields		
Name	Calculated	Calculated Value
BC Read Only Flag	✓	IF([Status] = "Shipped", "Y", "N")

BC Read Only Flag SVF has a value of Y if the status of the item is shipped, N otherwise

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User Property, BC Read Only Field Example Continued

- Add the BC Read Only Field user property
 - ▶ Set the Value property to BC Read Only Flag
 - Value is the name of the calculated field on the BC
 - ▶ When the value of this field is “Y”, the current record is read-only

Create User Property which references the calculated field

The screenshot shows the Siebel Business Component User Properties interface. A yellow callout box points to the 'Business Component User Properties' tab at the top right. Below it, a red arrow points from the 'Name' column of the 'Single Value Fields' table to the 'Value' column of the same row. The 'Value' column contains the formula 'IF([Status] = "Shipped", "Y", "N")'. A red box highlights the 'Value' column of the row for 'BC Read Only Flag'.

Name	Table	Order Entry - Line Items	S ORDER ITEM	Business Component User Properties
Single Value Fields				
Name	Table	Order Entry - Line Items	S ORDER ITEM	
Order Entry - Line Items	S ORDER ITEM			
BC Read Only Flag	✓	IF([Status] = "Shipped", "Y", "N")	BC Read Only Flag	Make BC read-only if order already shipped

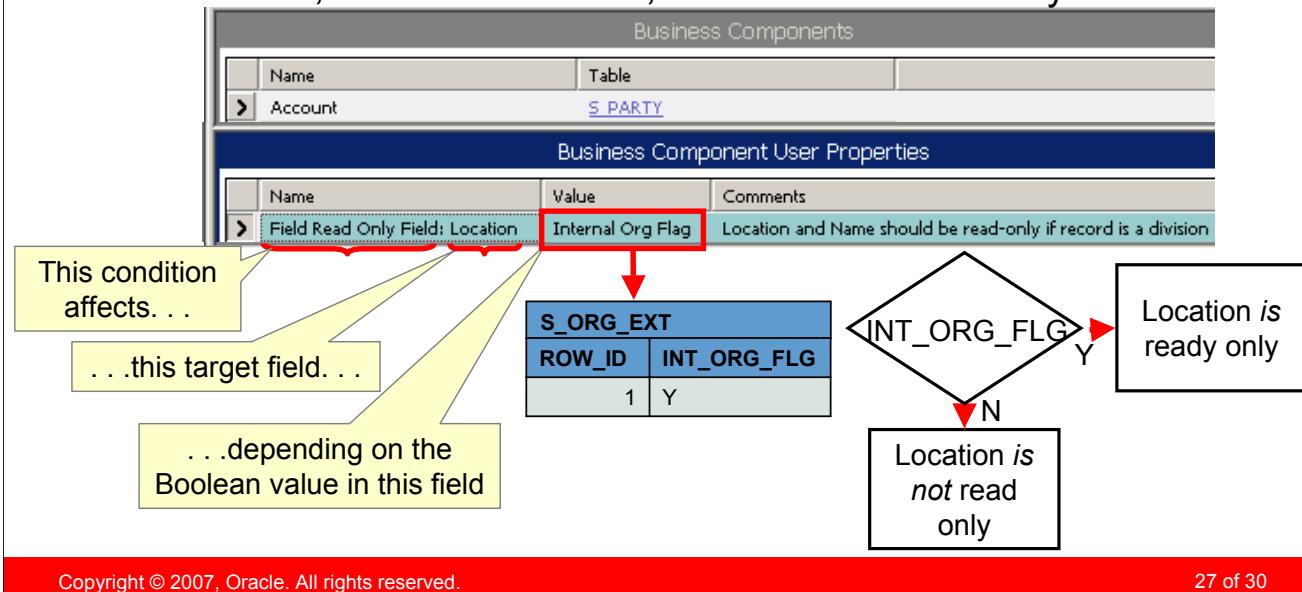
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User Property, Field Read Only Field

- Sets a specific field in a business component to be read-only
 - ▶ Field Read Only Field: Location sets Location field as the target of a conditional statement
 - ▶ Value is the name of a field that contains a Boolean value
- At run-time, if condition is met, field is set to read only



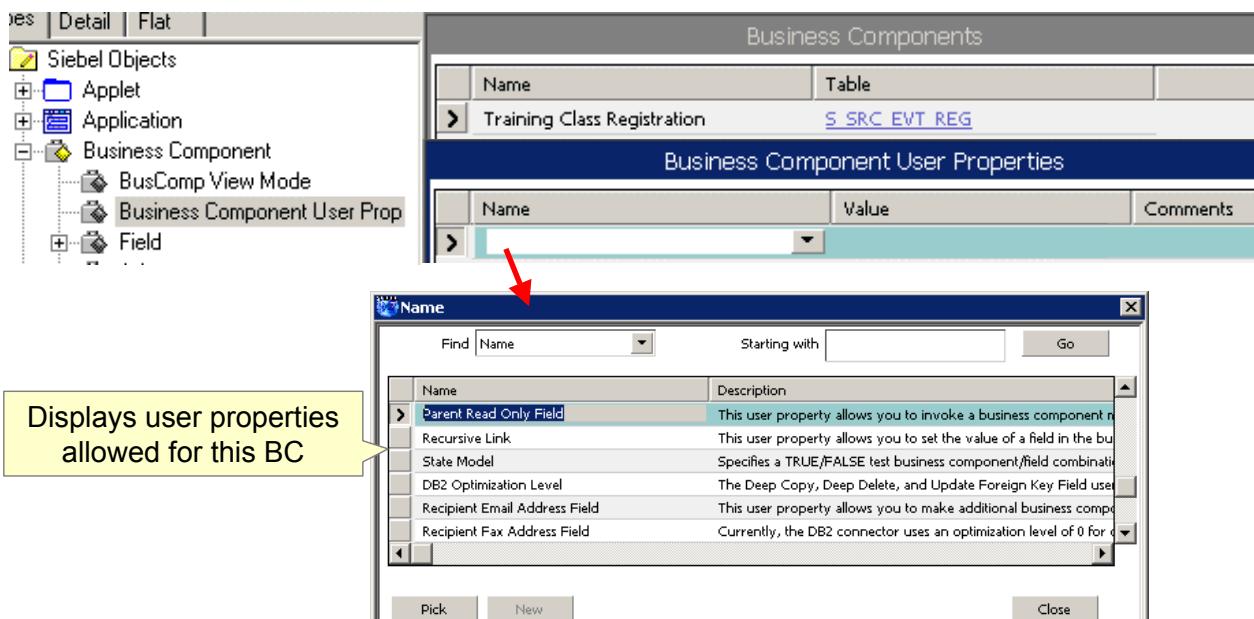
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Adding a User Property

- Is done via a picklist in the Name property in the Business Component User Properties window
 - ▶ Only those user properties allowed for parent BC are displayed



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Module Highlights

- BC properties are set to control behavior:
 - ▶ Editing properties, Owner Delete, Search Specification, and Sort Specification
- BC field properties are set to control behavior:
 - ▶ Required, Read Only, Validation, Pre and Post Default, and Force Case
- BusComp View Mode specifies BC is subject to access control
- Calculated fields derive their value from other fields in the same record of the BC in which the calculated field resides
- User Properties have their own specialized logic that can be added to a BC
 - ▶ Declarative alternative to scripting



Lab

- In the lab you will:
 - ▶ Incorporate business logic into the application by configuring properties of business components and fields

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Siebel 8.0 Essentials

Module 30: Business Layer Configuration: New Business Components and Fields

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Module Objectives

- After completing this module you should be able to:
 - ▶ Create a new business component (BC)
 - ▶ Add a business component to a business object
- Why you need to know:
 - ▶ Enables you to incorporate additional business entities that do not correspond to business components in a standard Siebel application
 - ▶ Enables you to tailor your business logic



Business Challenge

- Siebel-provided business components capture most commonly-used business entities, but they do not cover every possibility
- Example: Sales organizations might record personal data about contacts, such as:
 - ▶ What colleges the contact attended
 - Name of college, years attended, major field of study, sports played, honors received, and so on
 - ▶ The contact's favorite restaurants
 - Name and location, price range, type of cuisine, and so on
- To capture this kind of information may require:
 - ▶ Multiple fields to capture the details
 - ▶ 1:M or M:M relationship to the parent

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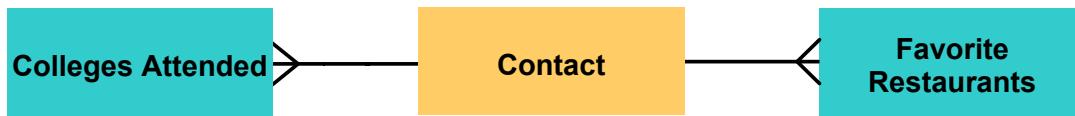
Business Solution: Create New Business Components

- To capture this sort of information, create new business components
 - ▶ For example, create college and restaurant child BCs of the Contact parent BC
- Used to add entities specific to your organization that are not in the Siebel repository
- You can base these business components on tables supplied by Oracle
 - ▶ Standard
 - ▶ Extension
 - ▶ 1:M
 - ▶ M:M

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Scenario: 1:M Relationship With Existing Table

- Example: Create Colleges Attended and Favorite Restaurants business components for sales organization
- Colleges Attended and Favorite Restaurants have a 1:M relationship with Contact
 - ▶ Requires two business components, Colleges Attended and Favorite Restaurants
 - One for Contact : Colleges Attended
 - One for Contact : Favorite Restaurants
- When creating a BC with a 1:M relationship with the parent business component, consider using a 1:M extension table



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Review: Standard 1:M Extension Tables

- Predefined in the repository for many business components
- Have name of parent table appended with _XM

Contains many predefined ATTRIB columns of varying type

NAME column stores the name of the child entity

PAR_ROW_ID column stores foreign key to ROW_ID in main table

TYPE column identifies the child business component

Name	Physical Type	Length	Type
ATTRIB_46	Varchar	100	Data (Public)
ATTRIB_47	Varchar	255	Data (Public)
CONFLICT_ID	Varchar	15	System
CREATED	UTC Date Time	7	System
CREATED_BY	Varchar	15	System
LAST_UPD	UTC Date Time	7	System
LAST_UPD_BY	Varchar	15	System
MODIFICATION_NUM	Number	22	System
NAME	Varchar	100	Data (Public)
PAR_ROW_ID	Varchar	15	System
ROW_ID	Varchar	15	System
TYPE	Varchar	30	Data (Public)

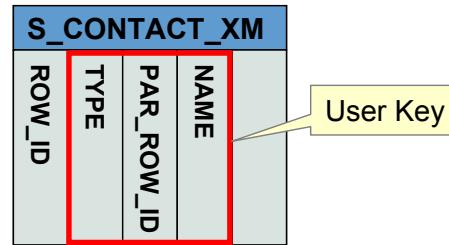
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User Key

- TYPE, PAR_ROW_ID, and NAME serve as a user key for the table
 - ▶ These three columns are required
 - Must provide values for all three columns when creating a new record
 - ▶ Combined value of the three columns must be unique



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Ensuring that NAME Is Unique For BCs with data that cannot be stored in a Varchar 100 column, you must still provide a unique value for NAME

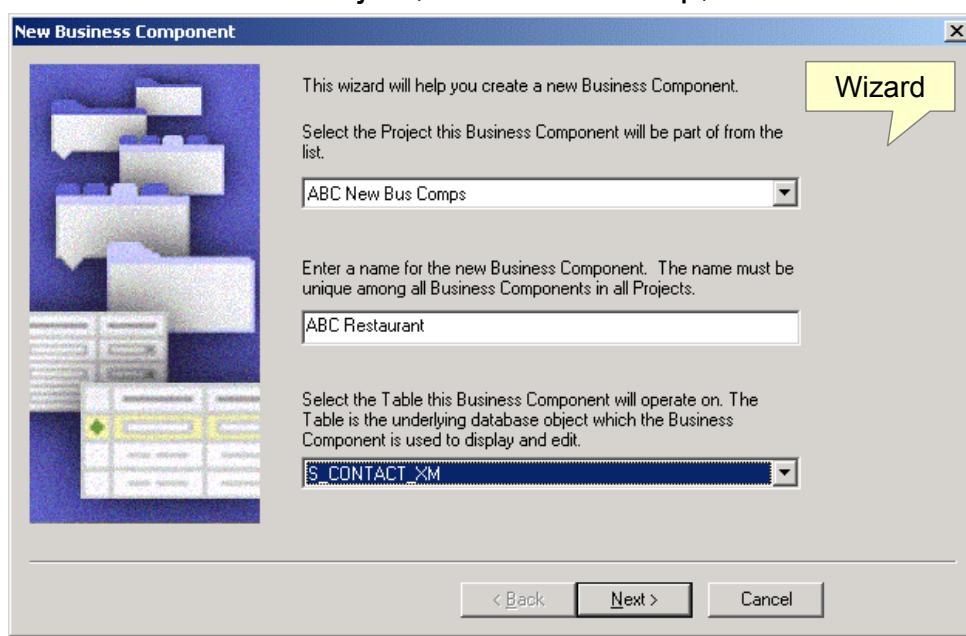
- NAME has physical type varchar 100
- If two rows in table share same TYPE & PAR_ROW_ID, then NAME must be unique
- Workaround is to store value of ROW_ID in NAME

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Business Component Wizard

- Use the Business Component Wizard to create a new business component
 - ▶ Select File > New Object, select BusComp, and then click OK



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Business Component Wizard Inputs

- The Business Component Wizard requires the following inputs:
 - ▶ Project new business component will be part of
 - ▶ Business component name
 - Must be unique among all business components in all projects
 - ▶ The business component's table name
 - ▶ Fields that will be part of this BC
 - Selected in the wizard by specifying Table Column, then entering a field name
 - ▶ Specify TYPE column and relate it to Type field
 - ▶ Specify PAR_ROW_ID column and relate it to Id field
 - ▶ Specify NAME column and relate it to Name field
 - ▶ Use ATTRIB_ columns for additional data
 - Columns are limited to the table you select in wizard
 - Use a separate column for each field

Establishes
User Key

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Business Component Wizard Outputs

- The Business Component Wizard:
 - ▶ Creates a business component object and its child object definitions
 - ▶ Creates fields and relates them to table columns
 - Aside from what you specify in the wizard, uses default field and table values; for example, Owner Delete is set to FALSE

The screenshot shows the Siebel Object Explorer interface. On the left, under the 'Siebel Objects' category, the 'Business Component' node is expanded, showing sub-items like BusComp View Mode, Field, Join, Multi Value Field, Multi Value Link, and Single Value Field. The 'Single Value Field List' tab is selected in the top navigation bar. In the main pane, there are two tables: 'Business Components' and 'Single Value Fields'. The 'Business Components' table has one row for 'ABC Restaurant' with columns Name, Table, Project, and Search Specification. The 'Single Value Fields' table has three rows: 'Contact Id' (Column: PAR_ROW_ID, Type: DTTYPE_ID), 'Restaurant Name' (Column: NAME, Type: DTTYPE_TEXT), and 'Type' (Column: TYPE, Type: DTTYPE_TEXT). A callout box points to the 'Business Components' table with the text 'Creates new fields and relates them to columns'. Another callout box points to the 'Single Value Fields' table with the text 'Creates the business component object definition'.

Name	Table	Project	Search Specification
ABC Restaurant	S_CONTACT_XM	Asset Management	

Name	Column	Type
Contact Id	PAR_ROW_ID	DTTYPE_ID
Restaurant Name	NAME	DTTYPE_TEXT
Type	TYPE	DTTYPE_TEXT

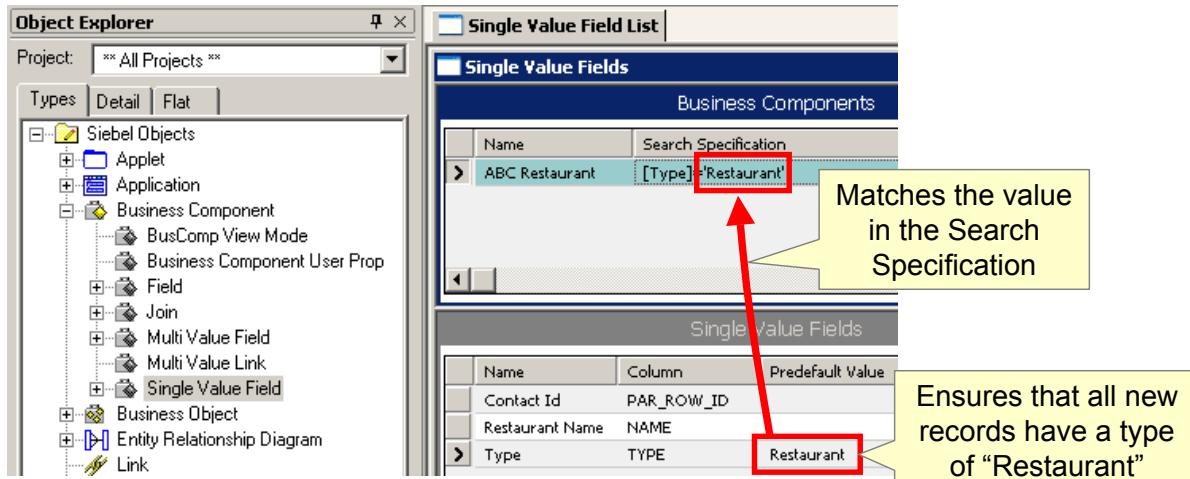
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Set the Pre-Default Value

- Automatically assigns a value to a field for a new record
 - ▶ For extension tables, set Predefault Value property of the Type field to the value used in the BC search specification
 - ▶ Can be used to ensure that the user key is populated



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Set Search Specification

- Manually set the search specification to match the unique TYPE value for the business component
 - ▶ Specifies the records to be retrieved by the business component
- Typically used with extension tables
 - ▶ Supports the case where multiple BCs are based on the same extension table

The screenshot shows the Siebel Object Explorer and the Single Value Field List windows.

Object Explorer:

- Project: ** All Projects **
- Types tab selected.
- Siebel Objects tree:
 - Applet
 - Application
 - Business Component** (selected)
 - BusComp View Mode
 - Business Component User Prop
 - Field
 - Join
 - Multi Value Field
 - Multi Value Link
 - Single Value Field
- Business Object
- Entity Relationship Diagram
- Link

Single Value Field List:

Single Value Fields table (Business Components row):

Name	Search Specification
ABC Restaurant	[Type] = 'Restaurant'

A callout box points to the search specification cell for 'ABC Restaurant' with the text: "Search retrieves only records with a Type of 'Restaurant'".

Single Value Fields table:

Name	Column	Predefault Value
Contact Id	PAR_ROW_ID	
Restaurant Name	NAME	
Type	TYPE	Restaurant

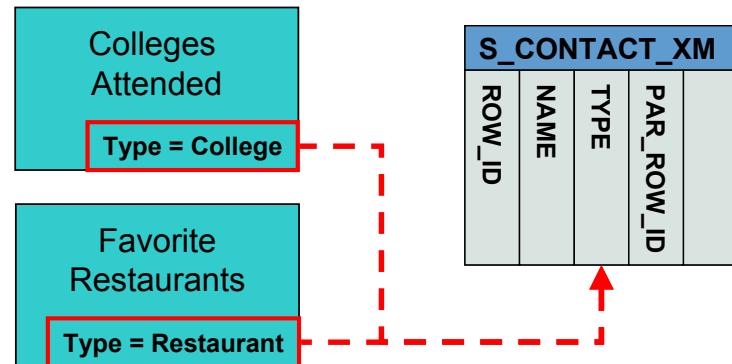
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Multiple Business Components

- You can use one table to map multiple user-defined child business components
- Each BC has a unique TYPE value
 - ▶ Stored in the TYPE column of the table
- Each BC retrieves only those rows with its TYPE value
- Specify properties on business components and fields
 - ▶ Search Specification
 - ▶ Pre Default Value



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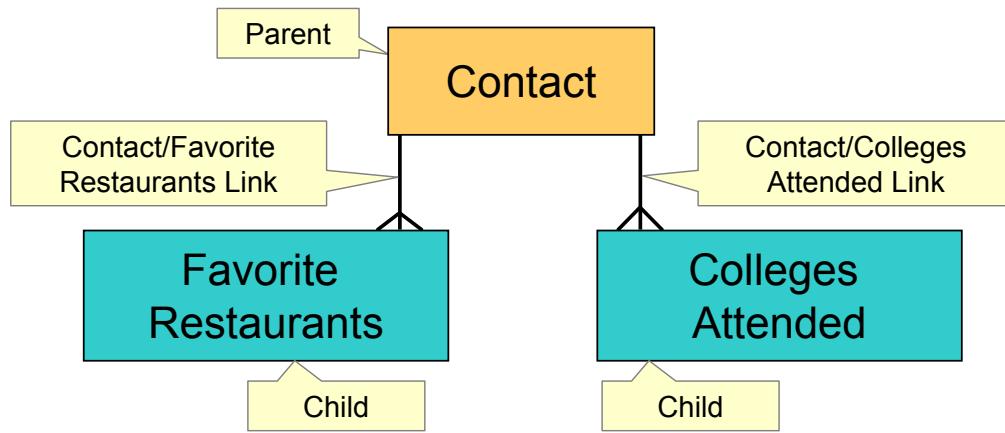


Post-Creation Tasks

1. Relate Child and Parent BCs
2. Reference Business Component in Business Object
3. Enable Display Data in UI

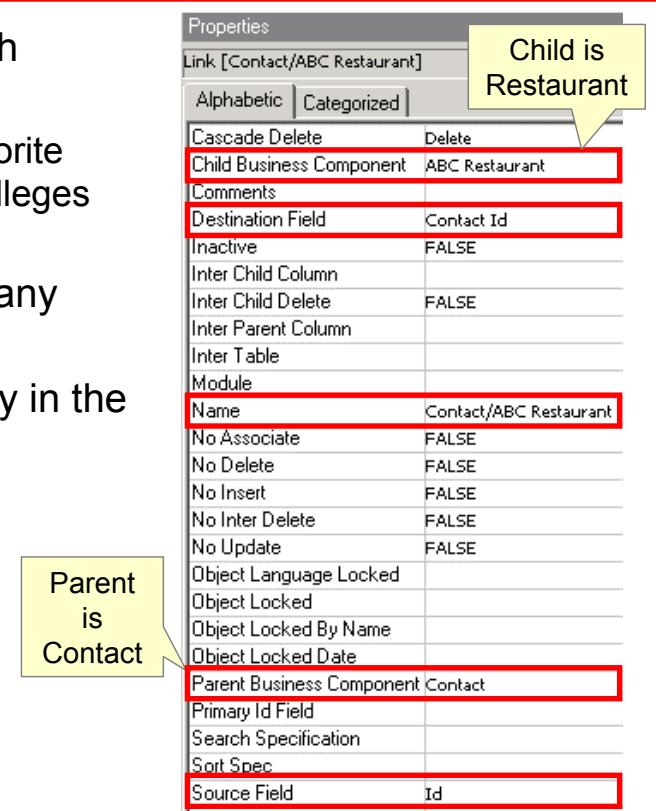
Relate Child and Parent BCs

- For each child/parent relationship, associate the newly configured child business component to the parent:
 - ▶ Create a link definition to relate child and parent records



Relate Child and Parent BCs Continued

- Create a separate link for each child/parent relationship
 - ▶ In our scenario, Contact/Favorite Restaurants and Contact/Colleges Attended
- Link creation is same as with any standard BC
- This will be the link you specify in the business object



Properties	
Link [Contact/ABC Restaurant]	Delete
Alphabetic Categorized	
Cascade Delete	Delete
Child Business Component	ABC Restaurant
Comments	
Destination Field	Contact Id
Inactive	FALSE
Inter Child Column	
Inter Child Delete	FALSE
Inter Parent Column	
Inter Table	
Module	
Name	Contact/ABC Restaurant
No Associate	FALSE
No Delete	FALSE
No Insert	FALSE
No Inter Delete	FALSE
No Update	FALSE
Object Language Locked	
Object Locked	
Object Locked By Name	
Object Locked Date	
Parent Business Component	Contact
Primary Id Field	
Search Specification	
Sort Spec	
Source Field	Id

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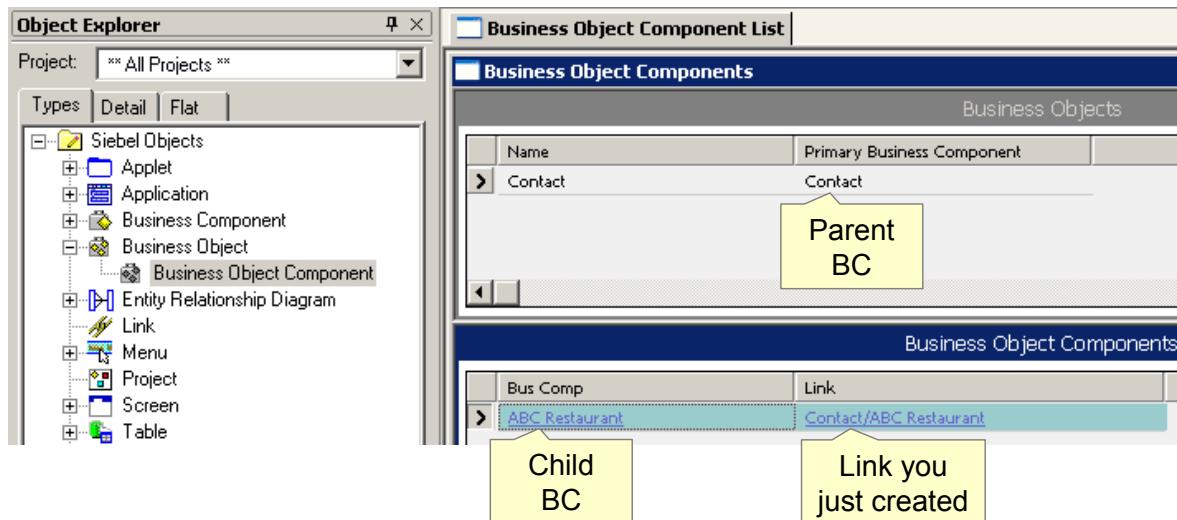
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Reference Business Component in Business Object

- Create a Business Object Component definition for each new business component
 - ▶ The business object defined for the parent is the one to use
 - ▶ The business component is the child you just created
 - ▶ Set the Link property



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New Parent BCs and Business Objects If you create a *parent* business component you must also create an entirely new business object.

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Enable Display Data in UI

- Build applets and views as required to display data from the business component
 - ▶ To prevent users from changing the value, do not display the Type field



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Creating a Standalone Business Component

- May be necessary when your company's business logic requires a new table be added to the database
 - ▶ In most cases, Siebel's extensive database should meet most of your needs. There could be exceptions.
- To create a standalone BC:
 - ▶ Create a new table to hold BC data
 - ▶ Add appropriate columns to this table
 - ▶ Create a new BC and add BC fields
 - ▶ Create a new Business Object and reference the BC in this BO
 - ▶ Enable data display in the UI
 - ▶ Standalone BCs are based on standalone tables and have no relationships to other BCs or tables

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Creating a Table

The new steps of creating a table and adding columns is covered in a later module.

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Module Highlights

- Create a new BC as child of an existing BC to capture new information
- When possible, use predefined _XM tables to store data
- Use the BC Wizard to create a new BC
- When using extension tables, use one extension table to map to multiple child BCs
 - ▶ Each BC has a unique TYPE value
 - ▶ Specify properties on BC and fields
 - Include required fields, such as Type and NAME
- Create a link definition to associate new child BCs with parent
- Add new BC to a BO, then create applets and views to display data
- Create a standalone BC, when necessary



Lab

- In the lab you will:
 - ▶ Create and display a new business component based on a 1:M extension table

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Siebel 8.0 Essentials

Module 31: Business Layer Configuration: Picklists

31

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Module Objectives

- After completing this module you should be able to:
 - ▶ Describe the differences between dynamic and static picklists
 - ▶ Administer a list of values
 - ▶ Configure a static or dynamic picklist
- Why you need to know:
 - ▶ Enables you to add picklists to your Siebel application



Picklists

- Allow users to populate one or more single-value fields by selecting a value from a list
 - ▶ Enforces business rules and policies
 - ▶ Makes data entry faster
 - ▶ Reduces errors
- Can be either static or dynamic

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References

Configuring Siebel Business Applications: Configuring Picklists and Pick Applets

Configuring Siebel Business Applications: Creating and Administering Lists of Values

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Static Picklist

- Displays values in a drop-down list for user selection
- Copies the selected value into destination field
 - ▶ No link to the original picklist data
- Can be bounded or unbounded
 - ▶ Bounded picklist forces users to enter only a value in the picklist
 - ▶ Unbounded picklist permits users to enter any value into the field
- Draws values from picklist data managed by an administrator
 - ▶ Values displayed in static picklists do not change during run time



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Static Picklist Values

- Are stored for *all* static picklists in the S_LST_OF_VAL table
- Appear in List of Values or LOV Explorer administrative views
 - ▶ Administration – Data > List of Values (or LOV Explorer)
- Each have a type, which indicates which static picklist the value belongs to

The screenshot shows the Siebel List of Values (LOV) interface. At the top, there's a navigation bar with links like Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, and Administration - Data. The 'Administration - Data' link is highlighted. Below the navigation bar, there's a toolbar with New, Delete, Query, and Clear Cache buttons. The main area is titled 'List of Values' and displays a table of static picklist values. The columns are Type, Display Value, Language-Independent Language Name, Parent LIC, Order, and Active. A red box highlights the 'Type' column for the 'MR_MS' entries. A callout bubble points to the first 'MR_MS' entry with the text 'Values for the MR_MS static picklist'. The table data is as follows:

Type	Display Value	Language-Independent Language Name	Parent LIC	Order	Active
MR_MS	Miss	English-American		1	✓
MR_MS	Mr.	English-American		1	✓
MR_MS	Ms.	English-American		2	✓
MR_MS	Mrs.	English-American		3	✓
MR_MS	Dr.	English-American		4	✓
MSG_BOARD_MSG_TYPE	Info	English-American		1	✓
MSG_BOARD_MSG_TYPE	Summary	English-American		2	✓

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Administering a Static Picklist

- Use Administration – Data > List of Values Explorer view
- Select an existing picklist or create a new picklist type in the List of Values - Types applet
- Expand the type and select the child Values folder
- Edit the picklist values in the List of Values (LOV) applet

The screenshot shows the Siebel List of Values Explorer interface. At the top, there's a navigation bar with links like Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, and Administration - Data. The Administration - Data link is highlighted with a red box. Below the navigation bar is a toolbar with buttons for New and Query. The main area is titled "List of Values" and shows a table of data with columns: Code, Display Value, Language Name, Active, Translate, and Multiling. The data rows are: Miss., Miss, English-American, checked, checked; Mr., Mr., English-American, checked, checked (highlighted with a yellow background); Ms., Ms., English-American, checked, checked; Mrs., Mrs., English-American, checked, checked; Dr., Dr., English-American, checked, checked. To the left of the table is a tree view showing a folder structure under "Types": MRG_CONFLICT_RESOLL, MRG.Docking.TIMESTA, MRG_Inter_TBL_Confl, MRG_Inter_TBL_Merge, MRGUSR_FRIENDLY_NC, MR_MS (highlighted with a red box), and MSG_BOARD_MSG_TYPE. A red arrow points from the "MR_MS" node in the tree to the "Values" node under it. Another red arrow points from the "Values" node to the "List of Values" table.

Code	Display Value	Language Name	Active	Translate	Multiling
Miss.	Miss	English-American	✓	✓	
Mr.	Mr.	English-American	✓	✓	
Ms.	Ms.	English-American	✓	✓	
Mrs.	Mrs.	English-American	✓	✓	
Dr.	Dr.	English-American	✓	✓	

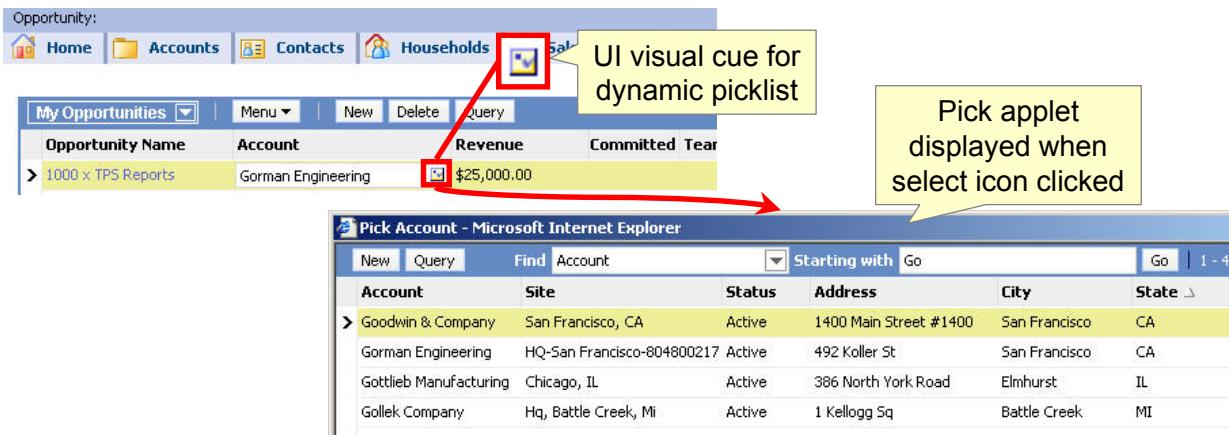
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Dynamic Picklist

- Displays values in a pick applet
- Draws values from a business component (BC) with records edited by users
 - ▶ Values are dynamic and depend on current BC records
- Is used to update joined fields
 - ▶ Copies foreign key reference to the selected value into destination field



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Picklist Terms

- Siebel picklists:
 - ▶ Are associated with a field in the *originating* business component
 - ▶ Draw values from a *pick* business component

Opportunity:

Opportunity Name	Account	Revenue	Committed	Team
> 1000 x TPS Reports	Gorman Engineering	\$25,000.00		

Opportunity: originating business component

Pick Account - Microsoft Internet Explorer

Account	Site	Status	Address	City	State
Goodwin & Company	San Francisco, CA	Active	1400 Main Street #1400	San Francisco	CA
Gorman Engineering	HQ-San Francisco-804800217	Active	492 Koller St	San Francisco	CA
Gottlieb Manufacturing	Chicago, IL	Active	386 North York Road	Elmhurst	IL
Gollek Company	Hq, Battle Creek, Mi	Active	1 Kellogg Sq	Battle Creek	MI

Account: pick business component

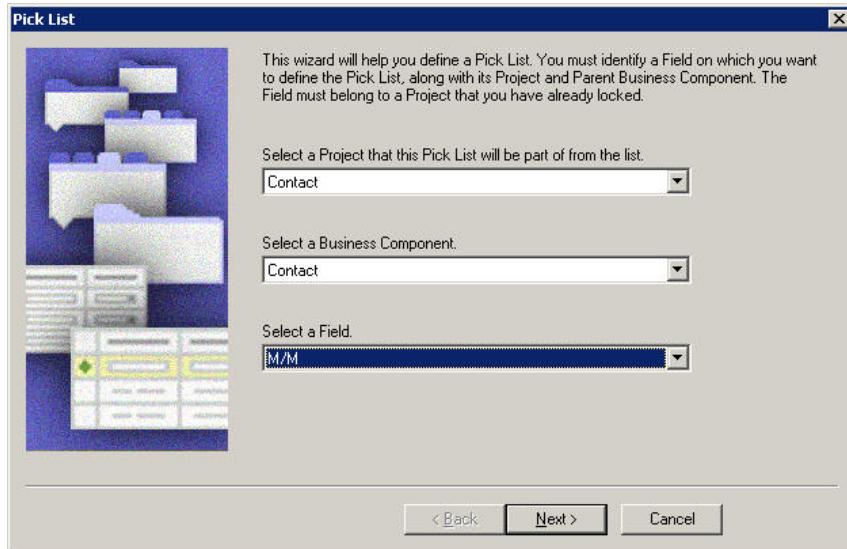
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Create a New Picklist

- Use the Pick List Wizard to create a new static or dynamic picklist
 - ▶ Select File > New Object > Pick List



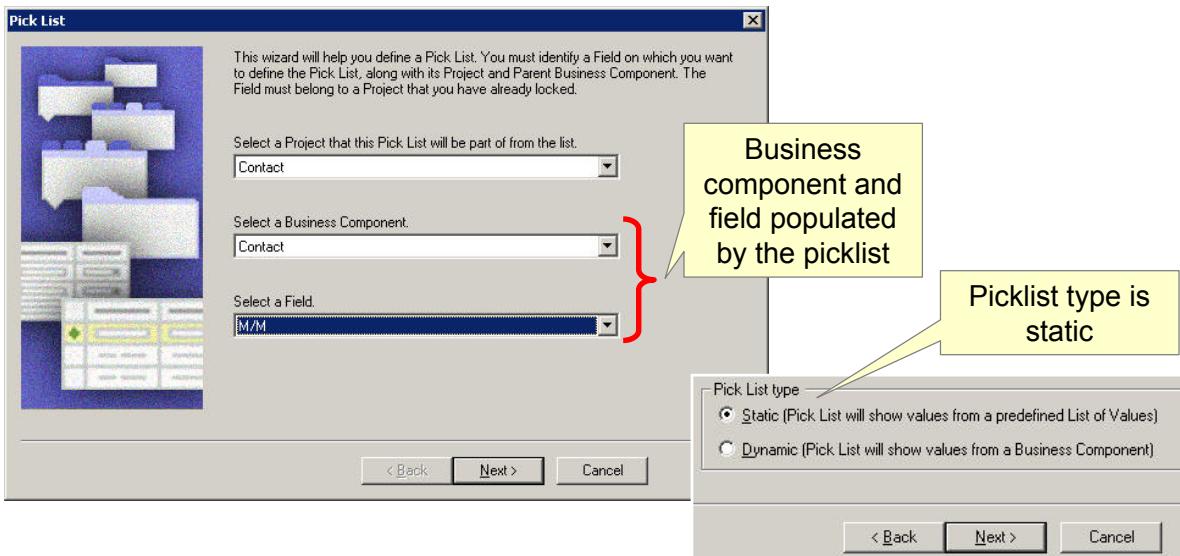
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Wizard Inputs for a Static Picklist

- The Pick List Wizard requires the following inputs:
 - ▶ Project the created picklist object will be part of
 - ▶ Business component and field populated by the picklist
 - ▶ Picklist name and type (Static)



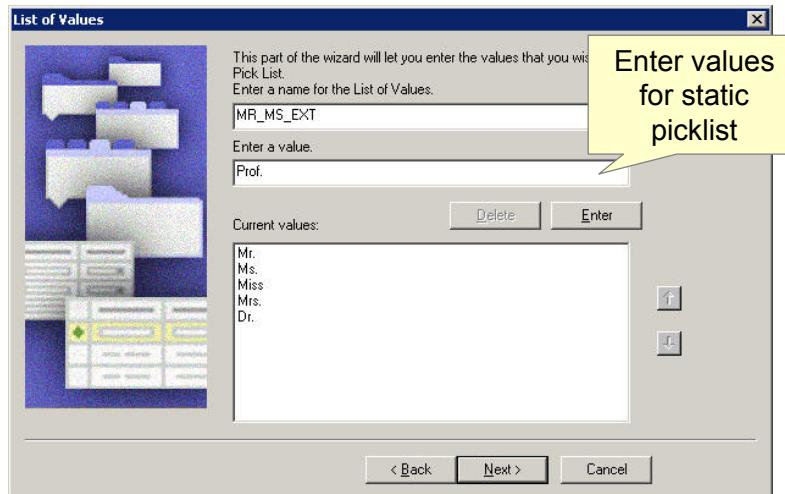
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Wizard Inputs for a Static Picklist Continued

- The Pick List Wizard requires the following inputs (continued):
 - ▶ Bounded or unbounded picklist
 - ▶ Type value (example: MR_MS)
 - ▶ Pick list values
 - May use existing type and/or values in S_LST_OF_VAL

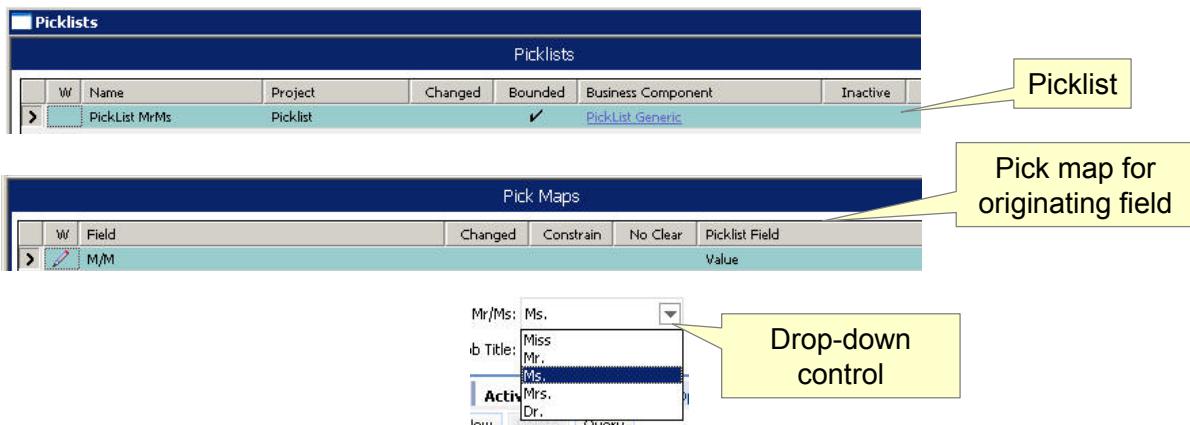


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Pick List Wizard Outputs for a Static Picklist

- The Pick List Wizard creates:
 - ▶ A picklist object
 - ▶ A pick map that specifies values copied to the S_LST_OF_VAL table
 - ▶ Values in S_LST_OF_VAL for the picklist
 - ▶ Activated drop-down list column or control in applets containing the originating field



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PickList Generic

Static picklists all share a common pick business component, PickList Generic. This very simple, Siebel-provided business component provides a connection between the originating business component and field and the values that appear in S_LST_OF_VAL. PickList Generic contains fields corresponding to each of this table's columns, such as Type and Value.

Notice in the middle picture above that the pick map is mapping the originating field M/M to the PickList Generic field Value, which links the MR_MS entries in S_LST_OF_VAL with the M/M field of Contact.

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Activating a Drop-Down List Column or Control

- The Pick List Wizard may activate drop-down control for picklist field
 - ▶ The wizard displays all applets displaying the originating field
 - ▶ Only the applets locked by developer will be activated
- Wizard sets list column or control Runtime property to TRUE
 - ▶ A drop-down arrow appears as a cue

Applets			
	Name	Business Component	
>	Contact Form Applet	Contact	
<input type="button" value="New"/>			
<input type="button" value="Delete"/>			
<input type="button" value="Query"/>			

	Name	Runtime	Caption
>	M/M	✓	Mr/Ms
	MailStop		Mail Stop
	ManagerFirstName		Manager First Name
	ManagerLastName	✓	Manager Last Name
	MiddleName		Middle Initial

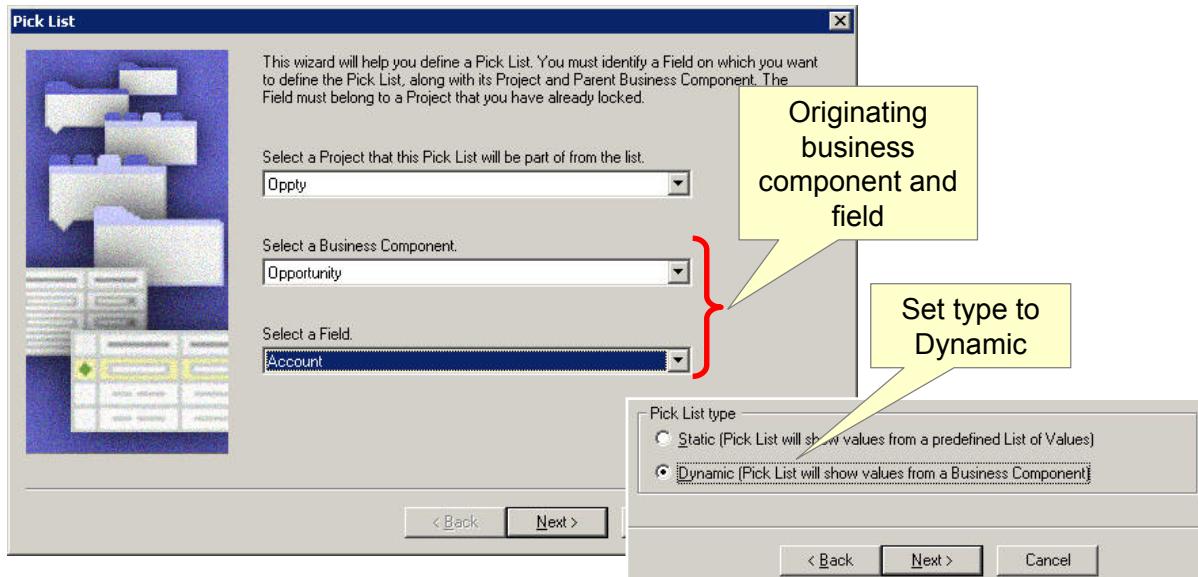
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Wizard Inputs for Dynamic Picklists

- The Pick List Wizard requires the following inputs:
 - ▶ Project the created picklist object will be part of
 - ▶ Originating business component and field for the picklist
 - ▶ Picklist name and type (Dynamic)



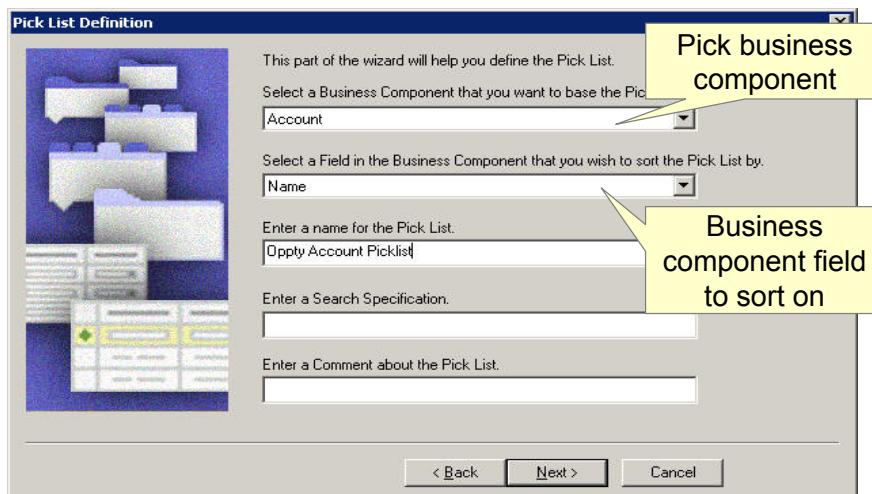
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Wizard Inputs for Dynamic Picklists continued

- The Pick List Wizard requires the following inputs (continued):
 - ▶ A pick business component
 - ▶ A field in the pick business component to sort on
 - ▶ A picklist name
 - ▶ A search specification



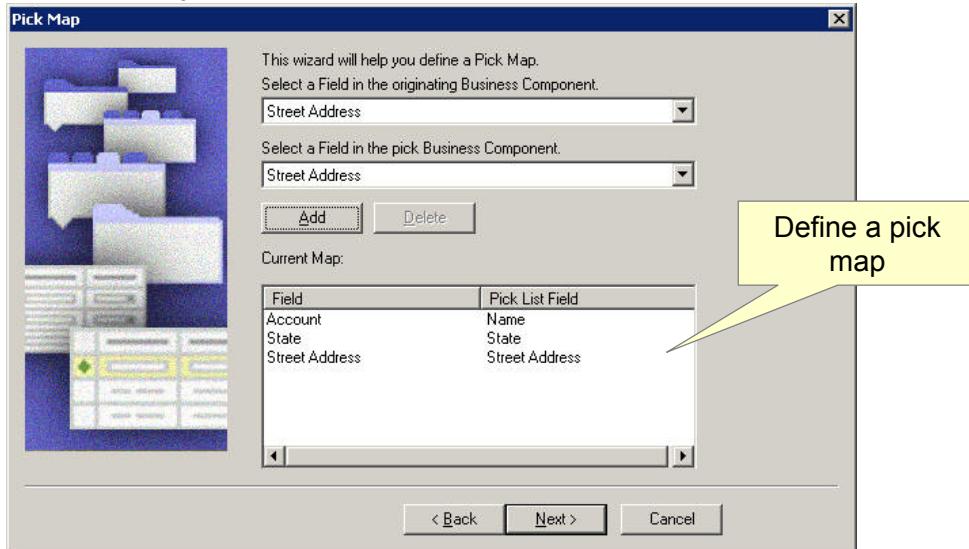
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Wizard Inputs for Dynamic Picklists Continued

- The Pick List Wizard requires the following inputs (continued):
 - ▶ Pick applet properties (No Delete, No Insert, No Update, No Merge)
 - ▶ Values for a pick map, mapping fields between originating and pick business components



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Pick List Wizard Outputs for a Dynamic Picklist

- The Pick List Wizard creates:
 - ▶ A picklist object
 - ▶ A pick map constructed in the wizard
 - ▶ A new pick applet, if needed
 - ▶ Activated list column or control in applets containing the originating field
 - List column or control for originating field must have Runtime property set to TRUE

The screenshot shows two tables from the Siebel Business Layer Configuration interface:

Picklists:

Name	Project	Changed	Bounded	Business Component	Icon
Oppty Account Picklist	Oppty	✓		Account	

A yellow callout labeled "Picklist" points to the "Account" icon in the last column.

Pick Maps:

Field	Changed	Constrain	No Clear	Picklist Field
Account	✓			Name
State	✓			State
Street Address	✓			Street Address

A yellow callout labeled "Pick map for originating field" points to the "Name" entry under the "Picklist Field" column.

Below the table, there is a form field labeled "Account:" with a red box around it and a small blue square icon to its right. A yellow callout labeled "Field with select icon" points to this field.

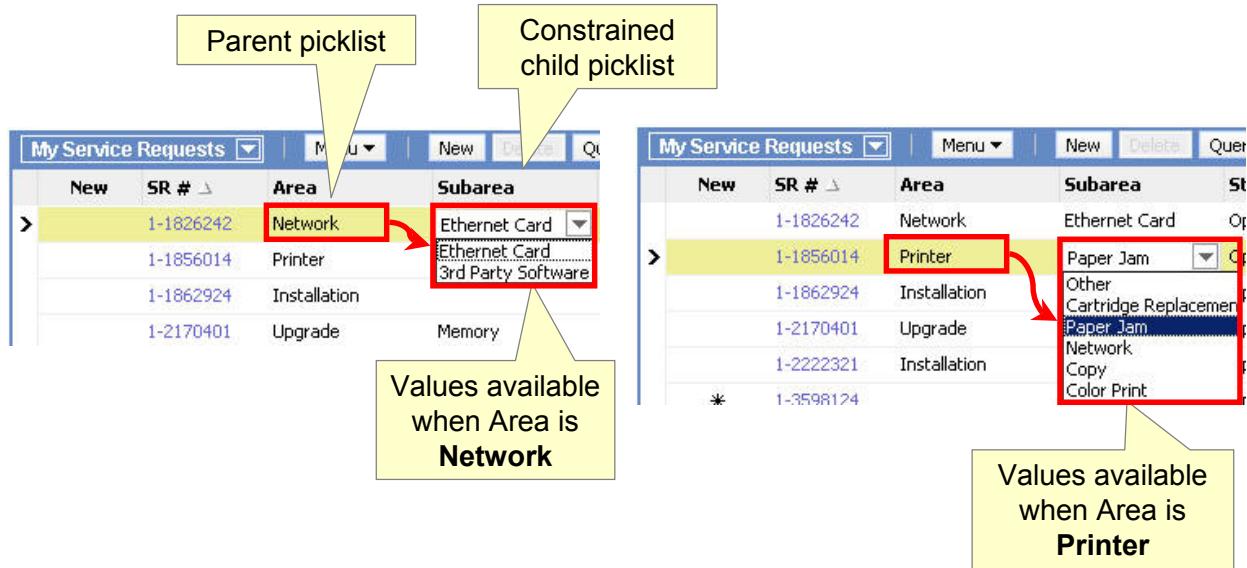
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Constrained Picklist

- Filters values dynamically based on value in parent picklist



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Constraining a Picklist

- Create a pick map definition for each field that must match
- Set the Constrain property to TRUE for each of the matching fields
 - ▶ Filters the pick business component records for matches
 - ▶ Does not copy values for the field

Single Value Fields			
W	Name	Column	
	Sub-Area	SR_SUB_AREA	

SVF Pick Maps			
W	Field	Constrain	Picklist Field
>	CurrentArea	✓	Parent
	Sub-Area		Value

Constrained to
return only Sub-
Areas whose
Parent is equal to
the Current Area



Module Highlights

- Picklists allow selection of values from a list for one or more single-value fields in an originating business component
- Static picklists:
 - ▶ Display values in a drop-down list
 - ▶ Contain static values, which are managed through List of Values administrative views
 - ▶ Store values in S_LST_OF_VAL table
- Dynamic picklists:
 - ▶ Display values in a pick applet
 - ▶ Contain dynamic data, which is typically the result of user transactions
 - ▶ Access data in pick business component using a foreign key
- Picklists are created using Siebel Tools' Pick List Wizard



Lab

- In the lab you will:
 - ▶ Create a new static picklist
 - ▶ Create a new dynamic picklist

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Siebel 8.0 Essentials

Module 32: Configuring Multi-Value Groups

32

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Module Objectives

- After completing this module you should be able to:
 - ▶ Describe multi-value groups and their benefits
 - ▶ Use Siebel Tools to configure a multi-value group
- Why you need to know:
 - ▶ Enables you to incorporate child data directly in an applet
 - More child data can be available within a view
 - More effective use of screen space

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Multi-Value Group

- A multi-value group (MVG) is a set of detail (child) records associated with a parent record
 - ▶ The Parent applet displays only one of the child records
 - ▶ The MVG applet opens on demand to display all child records

The screenshot shows the Siebel interface with the 'Accounts' module selected. A specific account record for 'Knoll Pharmaceutical Co.' is displayed, showing its site as 'Edison, NJ' and main phone number as '(973) 426-2600'. An 'Industries' field contains the value 'drugs, proprietaries & sundries'. A red box highlights this field, and a red arrow points from it to a callout box labeled 'MVG applet'. Below the main window, a separate 'Industries - Microsoft Internet Explorer' window is open, showing a list of industries. The 'Available' list includes: U.S. Postal Service (4311), X-ray apparatus & tubes (3844), abrasive products (3291), accident & health insurance (6321), accounting, auditing & bookkeepir (8721), adhesives & sealants (2891), adjustment & collection services (7322), administration of educational prog (9411), and administration of general ergonomi (9611). The 'Selected' list contains three items: medical & hospital equipment, chemicals & allied products, and drugs, proprietaries & sundries (which is checked). Buttons for 'Add >', '< Remove', and '<< Remove All' are visible between the two lists.

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Reference

Configuring Siebel Business Applications: Configuring Multi-Value Group and Association Applets

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Multi-Value Group Continued

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

Knoll Pharmaceutical Co

Menu New Delete Query

Account Name: * Knoll Pharmaceutical Co Site: Edison, NJ Account Team: CCHENG Status: Current Customer

Address: 3000 Continental Dr. Address Line 2: Main Phone #: (973) 426-2100 Account Type: Commercial

City: Budd Lake State: NJ Main Fax #: Country: USA URL: www.knolph.

Territory: Industries: drugs, proprietaries

Business Address MVG

Account Team MVG

Industries MVG

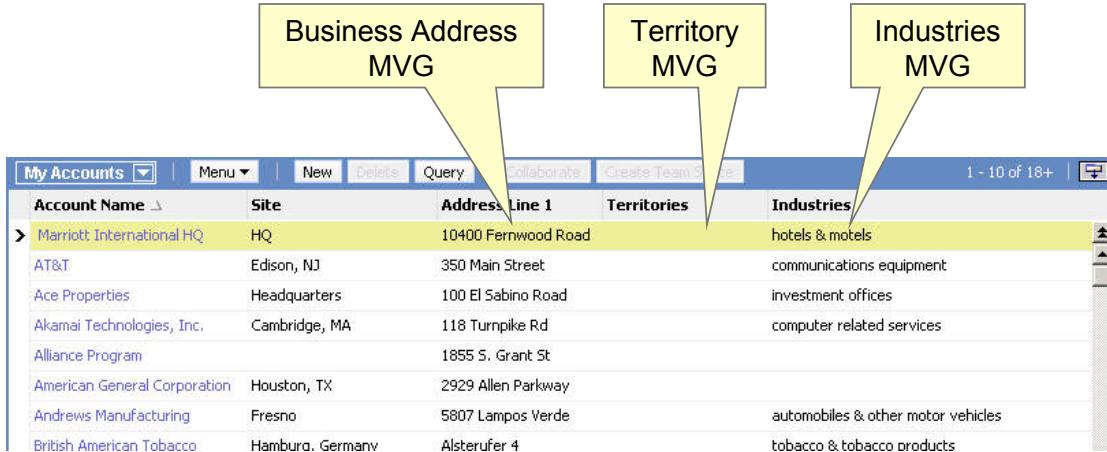
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Multi-Value Group Continued

- Allows users to access child records for multiple parent records in a single list view



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Multi-Value Group Continued

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

The screenshot shows the 'Enter Query' dialog box from the Siebel interface. It displays various query parameters grouped into sections:

- Parent:** Account Type: <Case Required>
- Parent Site:** <Case Required>
- Partner:**
- Competitor:**
- DUNS #:** <Case Required>
- Domestic Ultimate DUNS:** <Case Required>
- Parent/HQ DUNS:** <Case Required>
- Global Ultimate DUNS:** <Case Required>
- Assignment Area Code:** <Case Required>
- Assignment Country Code:** <Case Required>
- Organization:** <Case Required>
- Industries:** <Case Required>
- Synonyms:** <Case Required>
- Region:** <Case Required>
- Territory:** <Case Required>
- Status:** <Case Required>
- Stage:** <Case Required>
- Expertise:** <Case Required>

Yellow callout boxes highlight three specific fields:

- Query on Organization**: Points to the Organization field.
- Query on Industries**: Points to the Industries field.
- Query on Territory**: Points to the Territory field.

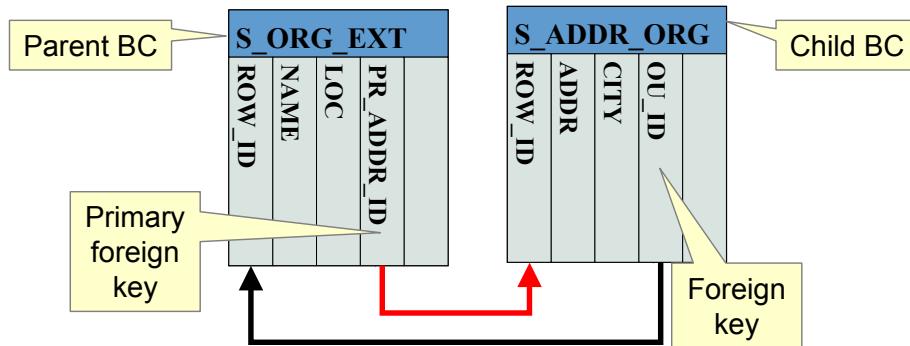
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Primaries

- Primary key allows fast retrieval of the primary child record for display in the parent applet
 - ▶ A primary refers to a designated child record
 - ▶ Designating a primary allows one child record to be retrieved quickly for display
- Supported by a primary foreign key field in the parent business component to reference the child's primary key (ROW_ID)
 - ▶ Siebel Data Model includes many primary foreign keys



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Primaries Performance Example

- Three MVGs on a list applet displaying 10 parent records requires 31 queries to populate without primaries
 - ▶ One query to populate parent fields in list applet
 - ▶ 30 queries (three per parent record) to populate the MVGs

Multi-value groups

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	Fresno	CA	CCHENG	automobiles & other motor vehicles
British American Tobacco	Alsterufer 4	Hamburg		CCHENG	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
Country Companies Services	1711 G E Rd	Bloomington	IL	CCHENG	insurance carriers
Cymer Inc.	3457 South Van Ness Avenue San Francisco	CA	CCHENG	computer peripheral equipment	
Danney K. Foundation	100 Beecham Dr	Pittsburgh	PA	CCHENG	administration of general economic programs
FleetBoston Financial	205 Newbury St	Framingham	MA	CCHENG	commercial banks

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Primaries Performance Example Continued

- Using primaries, one query will populate all the fields on the list applet
 - ▶ A query using SQL joins populates each MVG with its primary child record

Multi-value groups

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	Fresno	CA	CCHENG	automobiles & other motor vehicles
British American Tobacco	Alsterufer 4	Hamburg		CCHENG	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
Country Companies Services	1711 G E Rd	Bloomington	IL	CCHENG	insurance carriers
Cymer Inc.	3457 South Van Ness Avenue	San Francisco	CA	CCHENG	computer peripheral equipment
Danney K. Foundation	100 Beecham Dr	Pittsburgh	PA	CCHENG	administration of general economic programs
FleetBoston Financial	205 Newbury St	Framingham	MA	CCHENG	commercial banks

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Object Types Supporting MVGs

- MVGs are implemented in Siebel applications using the following object types:

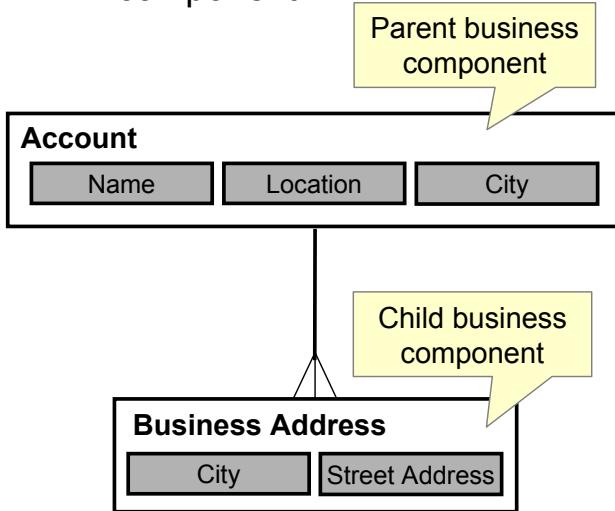
Link

Multi-Value Field (MVF)

MVG Applet

Link

- Must exist between parent and child business components in the MVG
 - ▶ Specifies how to get data from child business component



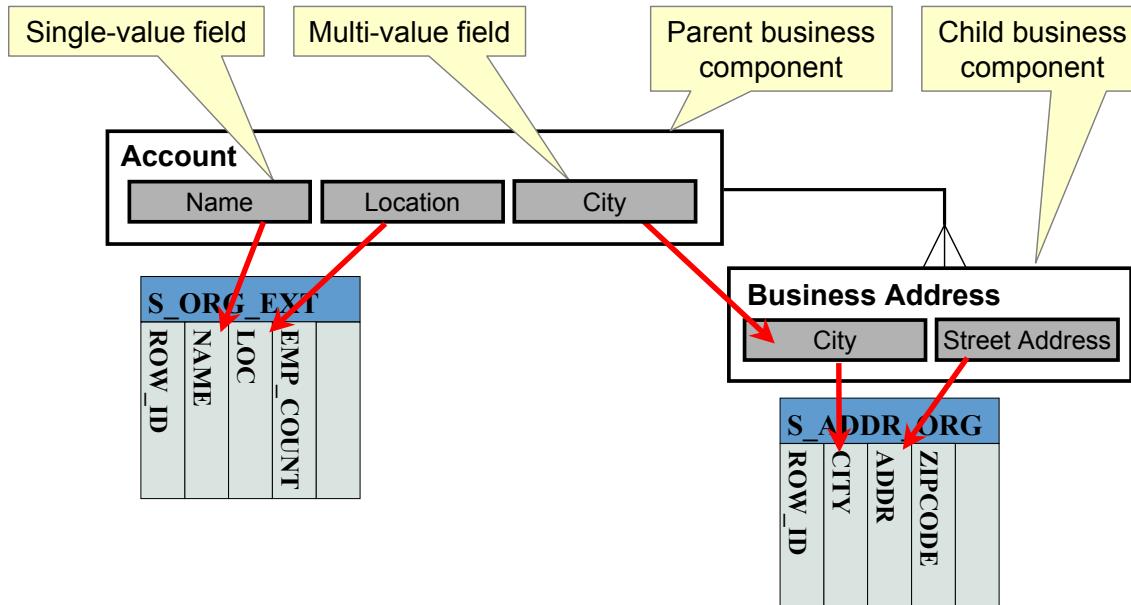
Properties	
Link [Account/Business Address]	
Alphabetic Categorized	
Cascade Delete	Delete
Child Business Component	Business Address
Comments	
Destination Field	Account Id
Inactive	FALSE
Inter Child Column	
Inter Child Delete	FALSE
Inter Parent Column	
Inter Table	
Module	
Name	Account/Business Address
No Associate	FALSE
No Delete	FALSE
No Insert	FALSE
No Inter Delete	FALSE
No Update	FALSE
Object Language Locked	
Object Locked	FALSE
Object Locked By Name	
Object Locked Date	
Parent Business Component	Account
Primary Id Field	Primary Address Id
Search Specification	

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Multi-Value Field (MVF)

- Is a field in the parent business component that references a field in the child business component
- Is required for an MVG



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MVG Applet

- Displays child business component records
 - ▶ Displays list columns that allow the user to distinguish the desired record
- MVG applets' type is MVG

W	Name	Changed	Type	Project	Business Component
	Account - Oracle 10.7 Credit Profile MVG Appl		MVG	Oracle Account 10.7	Account Credit Profile
	Account - Oracle 11i Credit Profile MVG Apple		MVG	Oracle Account 11i	Account Credit Profile
>	Account Address Mvg Applet		MVG	Account (SSE)	Business Address
	Account Credit Profile MVG Applet		MVG	Oracle Account 10.7	Account Credit Profile
	Account Mvg Applet		MVG	Account (SSE)	Account
	Account Mvg Applet (Delegated Admin)		MVG	Admin	Account (Delegated Admin)
	Account Mvg Applet - No Primary		MVG	Admin (SCW)	Account

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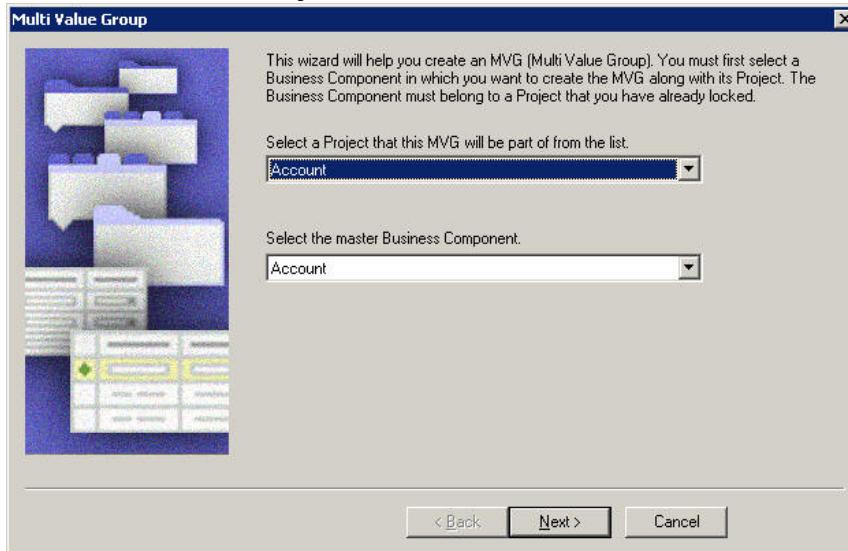
MVG Applet

There is no requirement that the MVG applet display only those multi-value fields that are displayed on the parent applet. This allows an MVG applet to be used in other MVGs throughout the application.

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Creating a Multi-Value Group

- Use the MVG Wizard in Siebel Tools to create a multi-value group
 - ▶ Verify that a link between the parent and child business components exists
 - ▶ Select File > New Object > MVG



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Inputs to the MVG Wizard

- Provide the following information to the MVG Wizard:
 - ▶ The project that the MVG will belong to
 - ▶ The master (parent) and detail (child) business components
 - ▶ The name of the multi-value link
 - ▶ The Auto Primary property (discussed later)
 - ▶ The link properties

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Link Properties

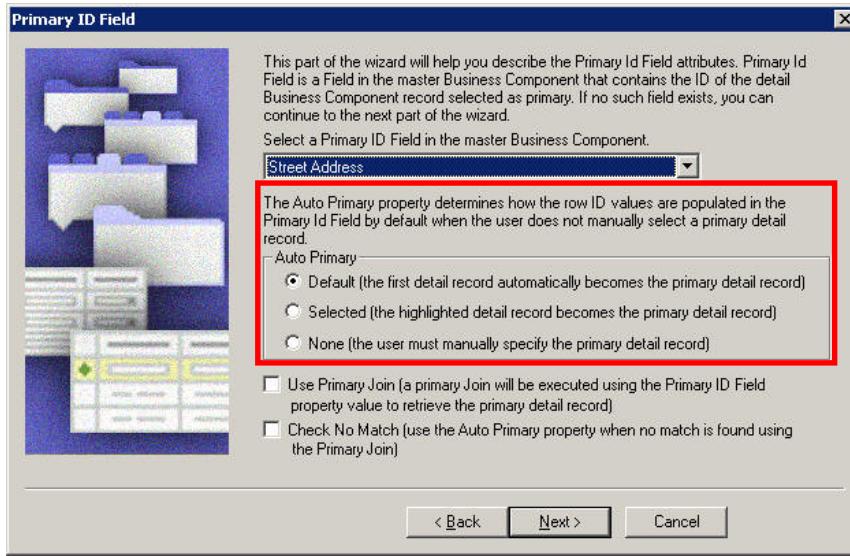
The following properties can be set to TRUE or FALSE for a link: No Associate, No Copy, No Delete, No Insert, No Update. No Associate equals TRUE specifies that no new associations can be created through the link. New child records may be added.

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Setting Auto Primary Property in the MVG Wizard

- Set the Auto Primary property to either:
 - ▶ Default (the first child record becomes the primary)
 - ▶ Selected (the highlighted record becomes the primary)
 - ▶ None (the user must specify the primary)



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MVG Wizard Output

- The MVG Wizard creates an MVG
- If no suitable MVG applet exists suitable for the choice of parent and child business components and MVFs, the wizard will open the MVG Applet Wizard

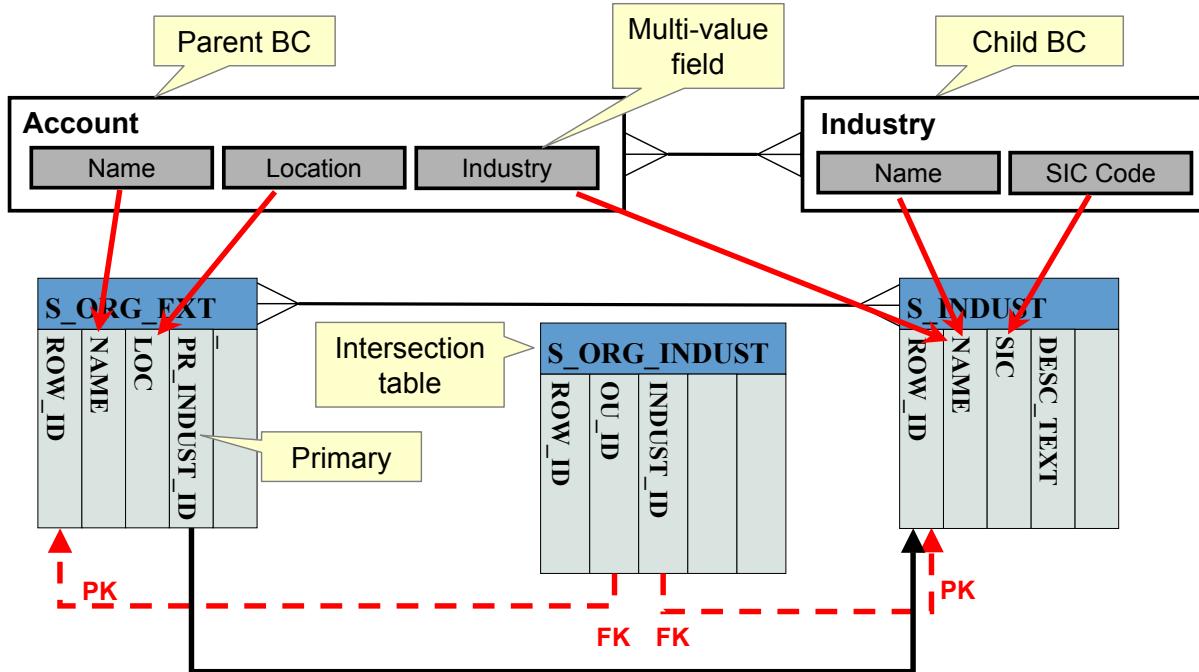
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Multi-Value Groups for M:M Relationships

- MVGs can be built on M:M relationships as well
 - Link must specify the Inter Table property



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Configuring MVGs for M:M Relationships

- Create object definitions required for 1:M MVGs
- Specify an association applet for the MVG applet
 - ▶ Allows users to select other child records to add to the MVG

The screenshot illustrates the configuration of an Association applet for a Multi-Value Group (MVG). At the top, a table titled "Applets" shows the "Industry Mvg Applet" entry, which is identified as an "MVG" and associated with the "Industry" Business Component. The "Associate Applet" field contains the value "Industry Assoc Applet", which is highlighted with a red box and has a red arrow pointing from it to the "Industry Assoc Applet" section in the main window below.

The main window is titled "Industries - Microsoft Internet Explorer". It displays two lists: "Available" and "Selected".

Available List:

Industry Name	Type	SIC Code
U.S. Postal Service	4-digit SIC	4311
X-ray apparatus & related equipment	4-digit SIC	3844
abrasive products	4-digit SIC	3291
accident & health insurance	4-digit SIC	6321
accounting, auditing	4-digit SIC	8721

Selected List:

Primary	Industry Name	SIC Code
	computer peripheral	3577
	electrical equipment	3699
> ✓	manufacturing industry	3999

Buttons between the lists include "Add >" and "< Remove".

At the bottom left, a yellow callout box labeled "Association applet" points to the "Industry Assoc Applet" entry in the "Associate Applet" field of the "Applets" table. A copyright notice at the bottom left reads "Copyright © 2007, Oracle. All rights reserved." and the page number "19 of 22" is at the bottom right.



Module 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
 - ▶ Speeds retrieval of parent record with primary child record for display in UI
 - ▶ Supported by a primary foreign key
- Objects needed to support an MVG are:
 - ▶ Multi-value fields (MVF)
 - ▶ A multi-value link
 - ▶ A MVG applet
- Use the MVG Wizard to create an MVG in Siebel Tools



Lab

- In the lab you will:
 - ▶ Create a new MVG
 - ▶ Create an MVG applet to display the MVG

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Siebel 8.0 Essentials

Module 33: Data Layer Configuration

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Module Objectives

- After completing this module you should be able to:
 - ▶ Create extension columns in a table
 - ▶ Create custom tables
 - Standalone table
 - 1:1 extension table
 - 1:M extension table
 - Intersection table
- Why you need to know:
 - ▶ Enables you to incorporate additional attributes and business entities into a Siebel application



Incorporating Additional Data

- Your business requirements may include:
 - ▶ Adding new fields to capture additional data
 - ▶ Creating new business components to capture additional business entities
- Extending the Siebel database can satisfy these requirements
 - ▶ Adding one or more columns to an existing table
 - ▶ Creating new database tables to support new business components

0/2



Evaluate the Existing Database Tables

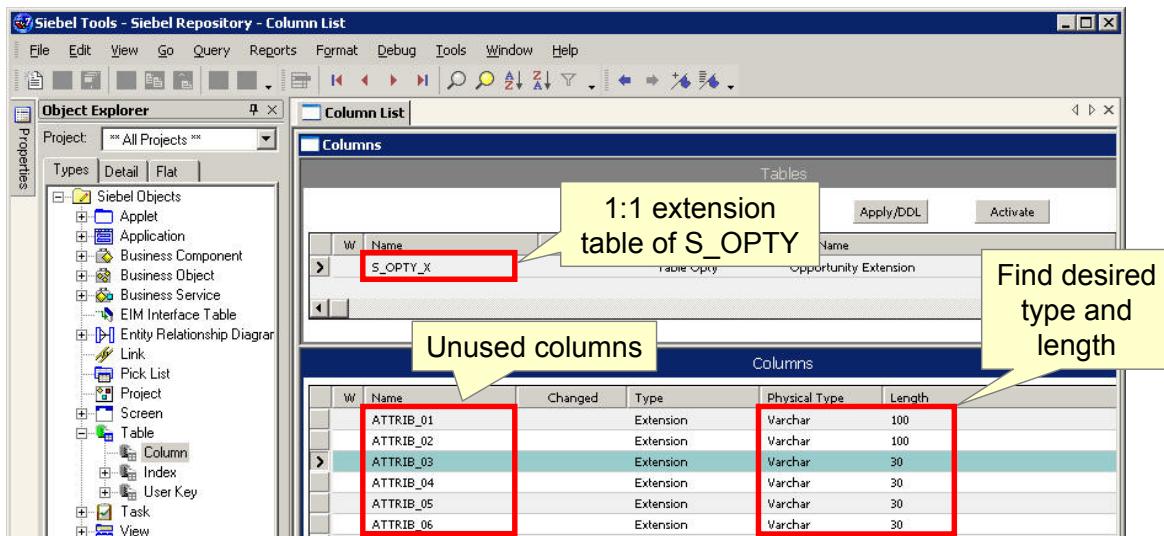
- Prior to extending the Siebel database, consider using:

Unused Columns in an Existing Table

Existing 1:M Extension Table

Unused Columns in an Existing Table

- Consider mapping new fields to unused columns in an existing base or 1:1 extension table
 - ▶ Verify that the candidate column has the desired type
 - ▶ Consider possible upgrade conflicts in future releases
 - ▶ Consider performance impact of a join to the 1:1 extension table

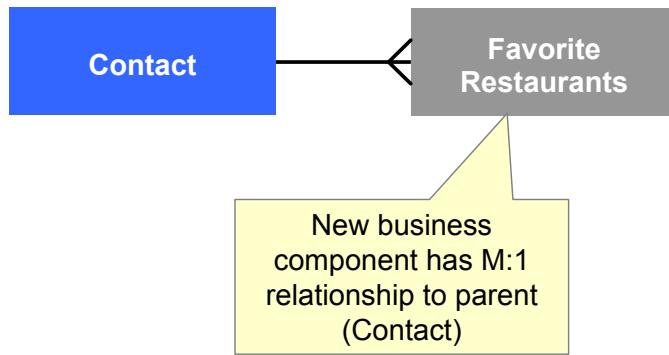


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Existing 1:M Extension Tables

- Consider mapping the new business component to an appropriate 1:M extension table (as discussed in an earlier module)
 - ▶ Verify that the business component has the correct M:1 relationship to the candidate parent business component





Extending the Database

- Changes the database schema and requires propagating the changes to:
 - ▶ Other developers during development
 - ▶ Mobile users after development for applications in production
 - ▶ Production enterprise at completion of development and testing
- Requires creating additional object definitions to:
 - ▶ Map columns in the EIM tables needed to import and export data to the extension columns and tables
 - ▶ Specify how data for these extension columns and tables are to be routed to remote users (Dock Objects)



Using Siebel Tools to Extend the Database

- Supports creating new:
 - ▶ Extension columns on tables
 - ▶ Standalone tables
 - ▶ 1:1 extension tables
 - ▶ 1:M extension tables
 - ▶ Intersection tables
- Creates new object definitions for the database extension
 - ▶ Invokes a wizard to build new tables
- Makes the corresponding physical database changes
 - ▶ Developers do not create, use, or maintain SQL scripts



Best Practices for Extending the Siebel Database

- General suggestions:

- ▶ When adding a new column:
 - If column is not often populated, use an existing column in an extension table if available
 - If field often populated, avoid join overhead by using adding an extension column to base table
- ▶ If data for column appears in:
 - A form applet, prefer an existing column in an extension table
 - A list applet, prefer an extension column in the base table
 - ▶ Join overhead can be significant when displaying many records

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Reference

Siebel Bookshelf, Configuring Siebel Business Applications, "Configuring Tables and Columns"

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Creating a Custom Extension Column

- Make logical changes to the Data layer
 - ▶ Check out the appropriate project
 - ▶ Select the table to be extended
 - ▶ Create a new column record with the desired properties
 - Name automatically prefixed with X_

The screenshot shows the Siebel Data Layer Configuration interface. In the 'Tables' section, a table named 'S_PROD_INT' is selected. In the 'Columns' section, a new column 'X_A_NEW_COLUMN' is being created. A yellow callout points to this column with the text 'Extension column'. Another yellow callout points to the 'Physical Type' dropdown menu, which is open and shows various options like CLOB, Character, Date, etc., with 'Varchar' selected. The 'Select data type and length' text is also associated with this callout.

W	Name	Changed	Type	Physical Type	Length
>	X_A_NEW_COLUMN	✓	Extension	Varchar	15
	ACCRUAL_RATE		Data (Public)	CLOB	22
	ACTIVE_FLG		Data (Public)	Character	1
	ALC_BELOW_SFTY_FLG		Data (Public)	Date	1
	ALIAS_NAME		Data (Public)	Date Time	1
	ALOC_ASSETS_FLG		Data (Public)	Long	100
	APPLY_EC_RULE_FLG		Data (Public)	Number	1
	AUTO_ALLOCATE_FLG		Data (Public)	Time	1
	AUTO_SUBST_FLG		Data (Public)	UTC Date Time	1
	AUTO_UNGROUP_FLG		Data (Public)	Varchar	1
	BUILD		Data (Public)	Character	1
				Character	1
				Character	1
				Varchar	30

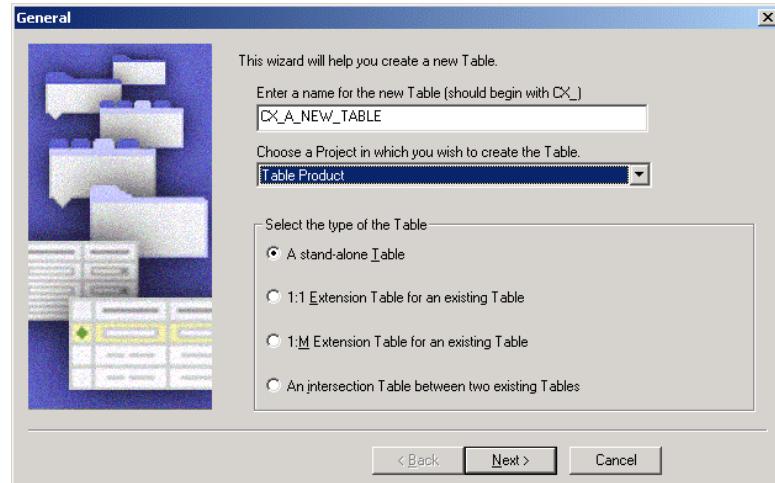
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Creating a New Table

- Use the Table Wizard to create a new table
 - ▶ Select File > New Object > Table
- Four types of table can be created:
 - ▶ Standalone table
 - ▶ 1:1 extension table
 - ▶ 1:M extension table
 - ▶ Intersection table



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Table Name

A table name must start with CX_ and cannot exceed 15 characters.

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Creating a Standalone Table

- Table wizard creates a standalone table with:
 - ▶ Data (Public) as its type
 - ▶ Nine system columns
 - ▶ One index P1 on ROW_ID

Tables

	W	Name	Changed	Project	User Name	Alias
>	<input type="text" value="CX_NEW_SA_TABLE"/>	✓	Table Product	CX_NEW_SA_TABLE		
<input type="button" value="Extend"/> <input type="button" value="Apply/DDL"/> <input type="button" value="Activate"/>						

Columns

	W	Name	Changed	User Name	Alias	Type	Primary Key
>	<input type="text" value="CONFLICT_ID"/>	✓	Conflict Id			System	
	<input type="text" value="CREATED"/>	✓	Created			System	
	<input type="text" value="CREATED_BY"/>	✓	Created By			System	
	<input type="text" value="DB_LAST_UPD"/>	✓	DB Last Updated			System	
	<input type="text" value="DB_LAST_UPD_SRC"/>	✓	DB Last Updated By			System	
	<input type="text" value="LAST_UPD"/>	✓	Last Updated			System	
	<input type="text" value="LAST_UPD_BY"/>	✓	Last Updated By			System	
	<input type="text" value="MODIFICATION_NUM"/>	✓	Modification Number			System	
	<input type="text" value="ROW_ID"/>	✓	Row Id			System	✓

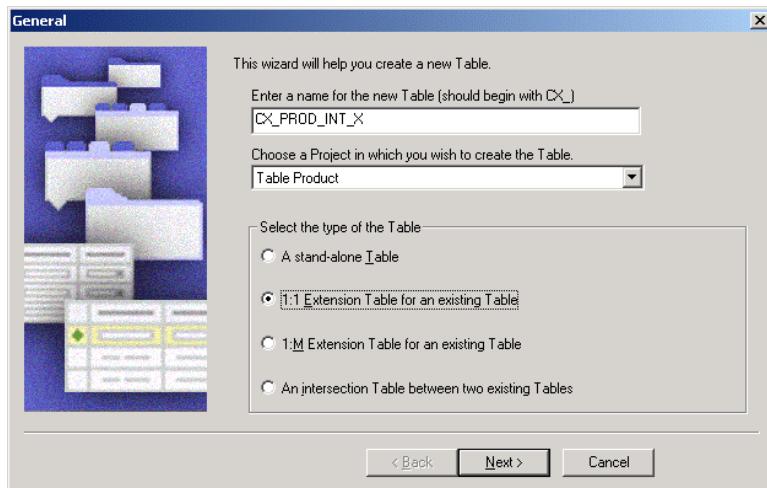
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Creating a 1:1 Extension Table

- Provide a base table as input to the Table Wizard
 - ▶ Choice restricted to the Data (Public) type
 - ▶ Multiple extension tables relate directly to the base table, and not to each other



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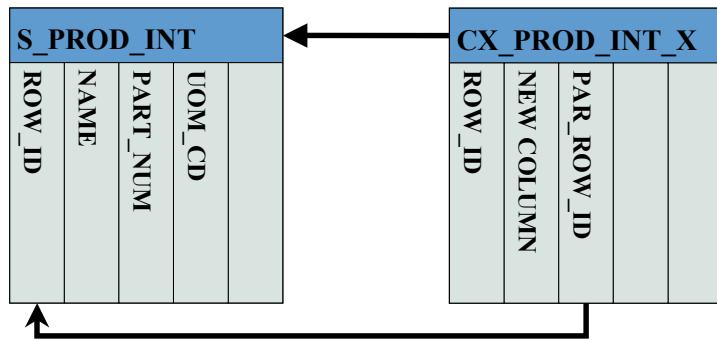
Extension Tables

1:1 extension tables cannot be created for tables such as S_ORG_EXT and S_CONTACT, which are already extension tables of S_PARTY. Rather, create the new table as an extension table of S_PARTY.

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Creating a 1:1 Extension Table Continued

- The Table Wizard creates an extension table with:
 - ▶ Ten system columns
 - Required nine system columns
 - PAR_ROW_ID column as the foreign key column to the base table
 - ▶ Two indexes:
 - P1 index on ROW_ID
 - U1 index on PAR_ROW_ID and CONFLICT_ID



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Indexes

Indexes allow fast retrieval and sorting of records using one or more designated columns. Inserts and updates on indexed columns are costlier than on un-indexed ones.

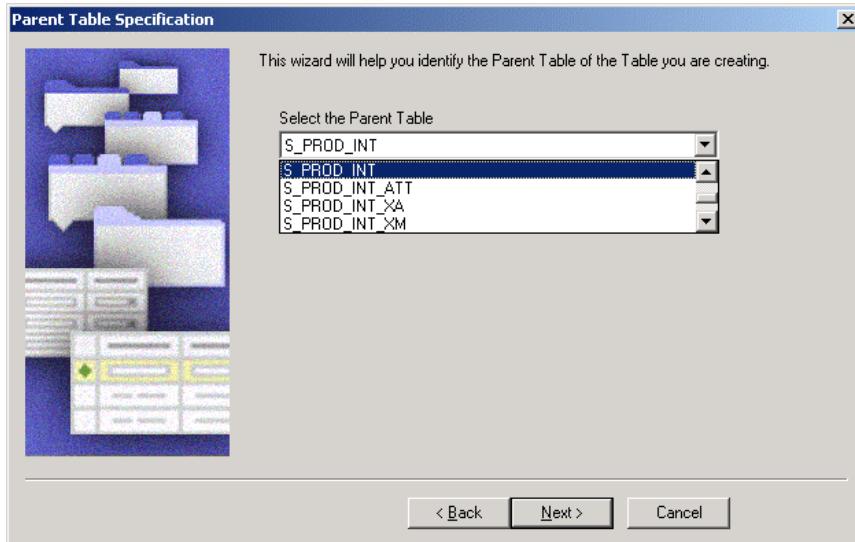
CONFLICT_ID

Is used by Siebel Remote to resolve synchronization conflicts between remote clients. See Siebel Bookshelf, Remote and Replication Manager Administration Guide for further details.

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Creating a 1:M Extension Table

- Create if the parent table does not have an existing 1:M table
- Provide a parent table as input to the Table Wizard
 - ▶ Choice restricted to the Data (Public) type



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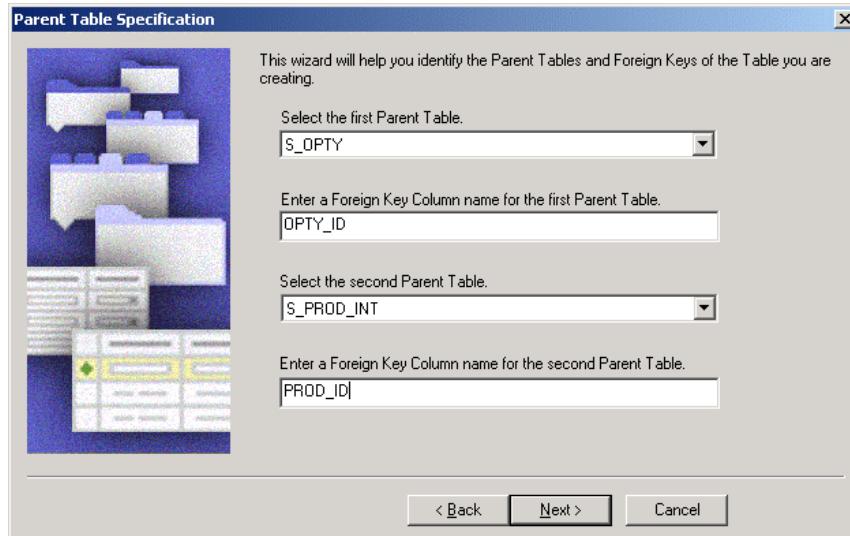
Creating a 1:M Extension Table Continued

- Table wizard creates an 1:M extension table with:
 - ▶ Data (Public) as its type
 - ▶ Ten system columns
 - Nine required columns
 - PAR_ROW_ID column as the foreign key column to the base table
 - ▶ TYPE and NAME columns
 - ▶ Three indexes:
 - P1 index on ROW_ID
 - U1 index on PAR_ROW_ID, TYPE, NAME, and CONFLICT_ID
 - M1 index on TYPE and NAME

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Creating an Intersection Table

- Select both parent tables
 - ▶ Choices restricted to the Data (Public) type
- Specify the foreign key column name for each parent table



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Creating an Intersection Table continued

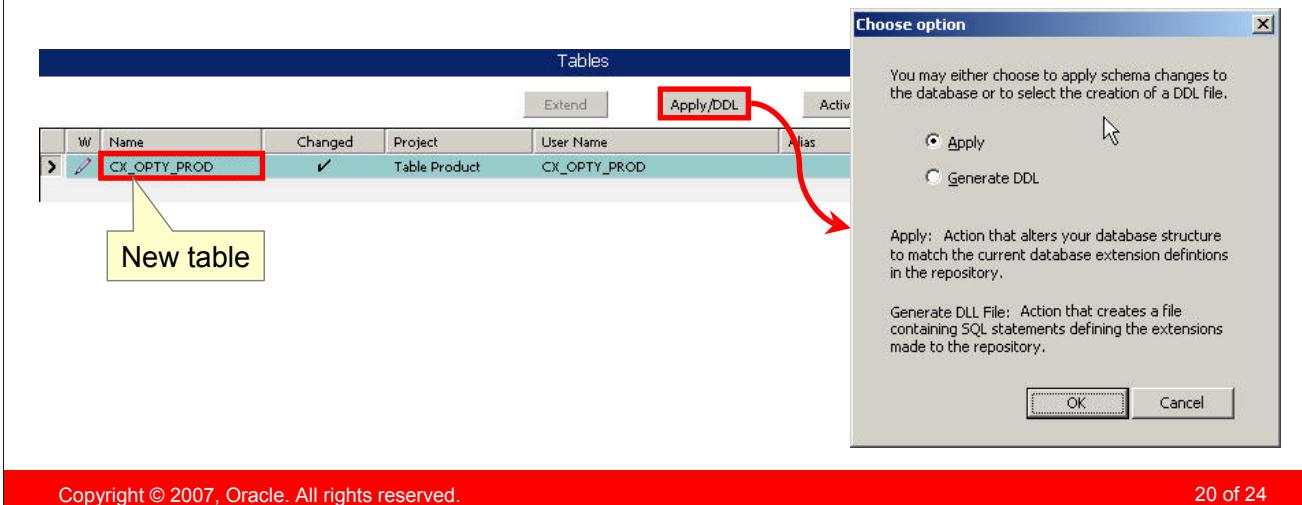
- Table Wizard creates an intersection table with:
 - ▶ Data (Intersection) as its type
 - ▶ Nine system columns
 - ▶ Two foreign key columns as specified
 - ▶ Three indexes:
 - P1 index on ROW_ID
 - U1 index on two foreign key columns, TYPE, and CONFLICT_ID
 - F1 index on foreign key to second parent table

Applying and Propagating Database Changes

- Test changes locally before applying them to the server database
 - ▶ Reduces the likelihood of undesired changes to the server schema
- Best practices for changing the schema:
 1. Apply Changes to the Local Database
 2. Propagate Changes to the Server Database
 3. Propagate Changes to Other Developers

1. Apply Changes to Local Database

- Click Apply/DDL to make the physical database changes
 - ▶ Choice to apply schema changes or generate DDL script
 - ▶ Changes are preserved across Siebel application upgrades
- Compile relevant objects and projects
- Test changes locally before checking in to the server
 - ▶ Query tables/columns using a database SQL utility

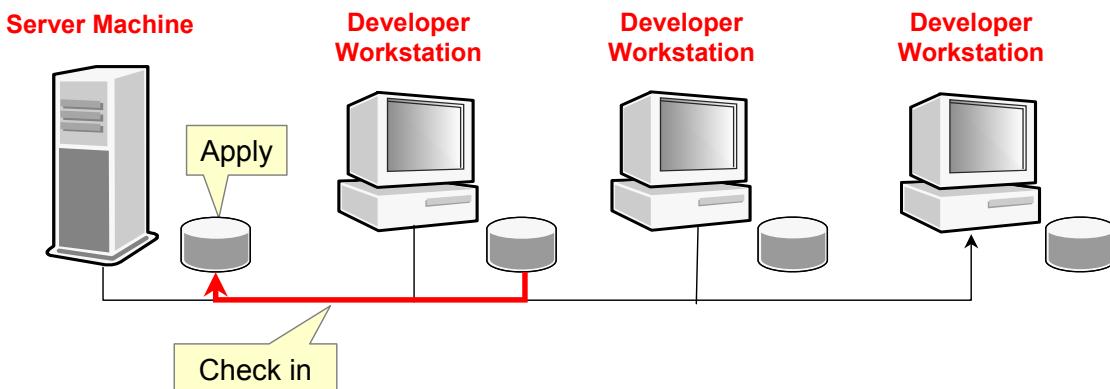


DDL

Stands for Data Definition Language, the subset of SQL statements used to define and manipulate database objects. Typical SQL commands used in DDL are CREATE, DELETE, ALTER, and so on.

2. Propagate Changes to Server Database

- Check project into the server
 - ▶ Copies the table and column object definitions
 - ▶ Does not apply those changes to the server database schema
- Apply changes to the server database
 - ▶ To make changes visible, press the Activate button on the Table object on the server machine
- Compile and test against the server database

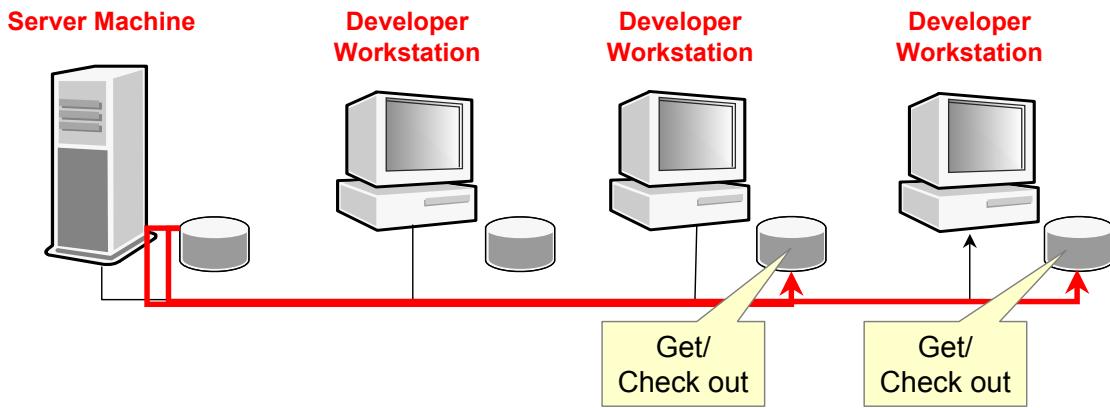


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3. Propagate Changes to Other Developers

- Other developers need to apply changes to their local databases
 - ▶ Have other developers Get or check out the project and apply changes locally
 - ▶ Alternatively re-extract developers and have them get all projects





Module Highlights

- Alternatives to extending Siebel database schema:
 - ▶ Utilize unused columns in an existing table
 - ▶ Use an existing 1:M extension table if appropriate
- Extend the Siebel database in Siebel Tools:
 - ▶ Add an extension column to an existing table
 - ▶ Use the Table wizard to create a new table:
 - Standalone
 - 1:1 extension table
 - 1:M extension table
 - Intersection table
- Best practices to modify Siebel database schema:
 - ▶ Apply changes locally and test
 - ▶ Propagate changes to the server database
 - ▶ Propagate changes to other developers

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Lab

- In the lab you will:
 - ▶ Create a custom extension column on a table
 - ▶ Check in configuration and apply to the server database



Siebel 8.0 Essentials

Module 34: Siebel Business Services

34

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Module Objectives

- After completing this module you should be able to:
 - ▶ Describe a business service
 - ▶ Describe the structure and role of property sets
 - ▶ Use the business service simulator to test a business service
- Why you need to know:
 - ▶ Business services are an important building block for Siebel workflow



Automating Business Processes

- A business process is a series of activities executed to achieve a specific business objective
 - ▶ Example: the Quote to Cash business process (how an enterprise creates a quote and converts it to an order for submission)
- Automation options within the Siebel application can address such challenges as:
 - ▶ Maintaining and standardizing consistent business processes across all business units
 - ▶ Routing and assigning tasks accurately and efficiently
 - ▶ Responding in a timely, effective manner to customer inquiries and service requests
 - ▶ Assisting users with the implementation of best practices
 - ▶ Offering consistent and personalized service to customers



Siebel Workflow

- Is a set of capabilities to extend the functionality of Siebel applications by automating business processes
- Includes capabilities such as:
 - ▶ Workflow Processes
 - Automates steps in a business process
 - ▶ Workflow Policies
 - Invokes workflow process under specified conditions
 - ▶ Tasks
 - Guides users through a series of views to complete a step in business process
 - ▶ Assignment Manager
 - Automates assignment of data (such as opportunities and service requests) to the desired people
 - ▶ State Model
 - Enforces a limited life cycle for select business entities



Business Service

- Is a unit of functionality that is reusable and globally accessible
 - ▶ Example: The ISS Shipping Cost Service computes shipping charges corresponding to a company's shipping policies
- Enables business logic to be executed repeatedly in multiple different contexts
 - ▶ Business logic is not restricted to a specific object (business component, applet, and so forth)
- Can be invoked in a Siebel workflow process or a Siebel task

W	Name	Changed	Project	Cache	Class
>	ISS Credit Card Transaction Service		ISS Order Management		CSSISSCreditCardTransactionService
	ISS Credit Check Service		ISS Order Management		CSSISSCreditCheckService
	ISS Shipping Calculation Service		ISS Order Management		CSSISSShippingCalculationService
	ISS Shipping Cost Service		ISS Order Management		CSSISSShippingCostService
	ISS Shipping Validation Service		ISS Order Management		CSSISSCheckShippingMethod

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Reference

Integration Platform Technologies: Siebel EAI : Business Services



Prebuilt Business Services

- Siebel repository contains many prebuilt business services to support processing in areas such as
 - ▶ Customer order management
 - ISS Credit Check Service
 - ISS Shipping Cost Service
 - ISS Tax Calculation Service
 - ▶ Enterprise application integration
 - EAI Siebel Adapter
 - EAI HTTP Transport
 - ▶ XML document processing
 - XML Hierarchy Converter
 - XML Converter
 - ▶ Enforcing customer business rules
 - Business Rule Service



Repository-Stored Business Services

- Some business services are stored in the Siebel repository
 - ▶ Siebel-developed business services
 - Are written in C++
 - Cannot be modified by customers
 - ▶ Custom business services developed by users
 - Are written in Siebel Visual Basic or eScript
 - Are created and modified by customers using Siebel Tools

Business Services					
	Name	Changed	Project	Cache	Class
>	String Consolidation		Siebel Tools	CSSStringConsolidationService	
	String Conversion		Siebel Tools	CSSStringConversionService	
✎	StringManipulation	✓	Scripting Test	CSSService	

Custom business service



Client-Stored Business Services

- Some business services are stored in the client database
 - ▶ Siebel-developed business services
 - ▶ Custom business services developed by users
- Client-stored business services
 - ▶ Are written in Siebel Visual Basic or eScript
 - ▶ Are created and modified by customers using the Administration - Business Services screen
 - ▶ Are never executed if there is a repository-stored business service of the same name

The screenshot shows the Siebel Administration - Business Service interface. The top navigation bar includes Home, Accounts, Contacts, Opportunities, Quotes, Administration - Business Service, Details, Methods, Scripts, Simulator, and User Properties. The main content area displays a table titled 'Details' with columns for Name, Cache, and Comments. The table lists four entries:

Name	Cache	Comments
Auto Invoice Service		Will automatically create invoices for Time and Expenses projects - PSA demo workflow
CC Prod		Will get the current products the customer owns and look at related products to recom
CXInstanceServiceSuppliment		
Call Center		Will return a score for agent customer satisfaction surveys on SR's

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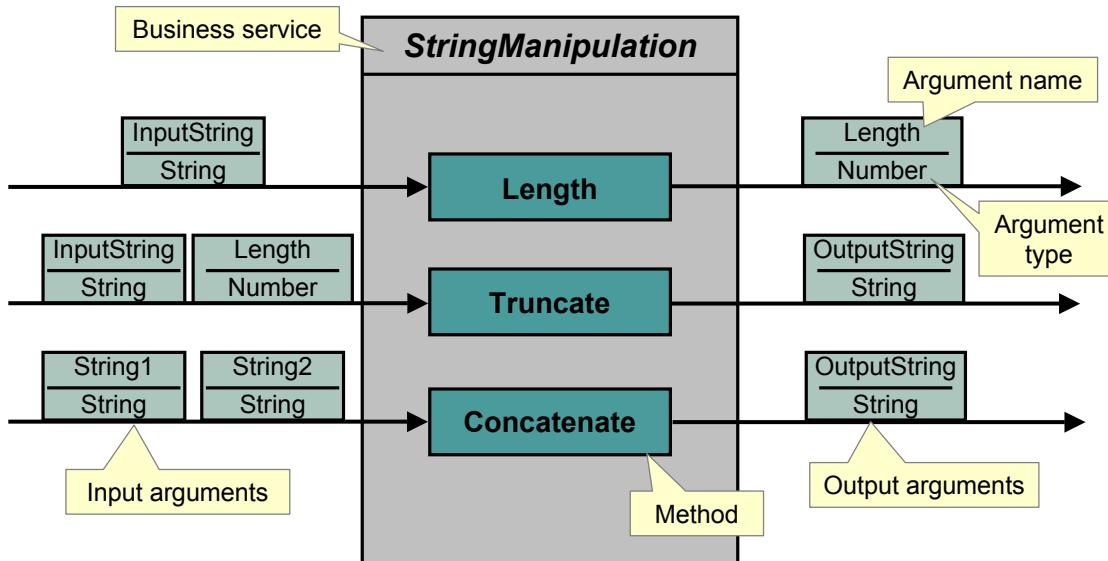
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Client Database

The term “client database” refers to tables in the Siebel database that store user data.

Methods

- A business service consists of one or more operations called methods
 - ▶ Each method has a set of input and output arguments, each with a specified type



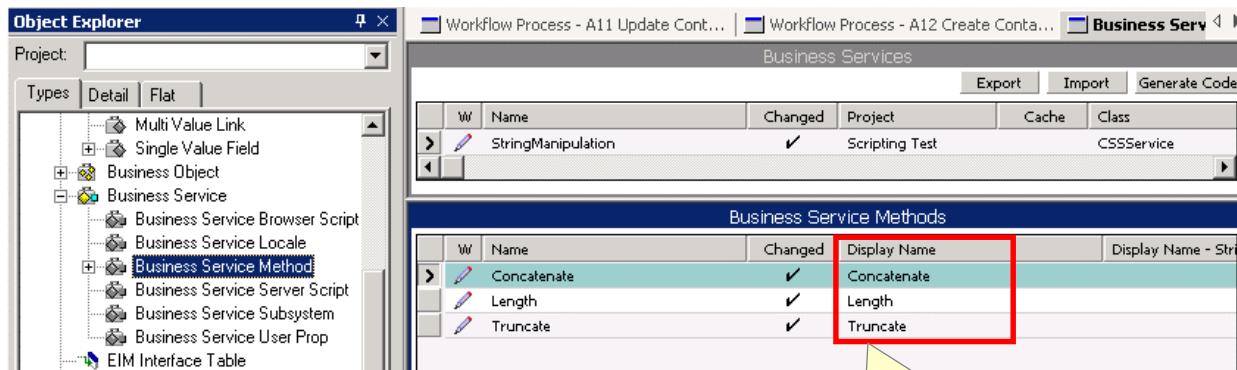
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Identifying Methods for a Business Service

- In Siebel Tools, navigate to Business Service | Business Service Method



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Identifying Arguments and Types for a Method

- In Siebel Tools, navigate to Business Service | Business Service Method | Business Service Method Arg

The screenshot shows the Siebel Tools interface for managing business service methods. The top window is titled "Business Service Method Arg..." and displays a list of methods under the heading "Business Service Methods". The "Truncate" method is selected and highlighted with a blue selection bar. The bottom window is titled "Business Service Method Arguments" and displays a list of arguments for the selected method, with columns for Name, Data Type, Type, and Optional status.

W	Name	Changed	Display Name	Display Name - String Referer
	Concatenate		Concatenate	
	Length		Length	
>	Truncate		Truncate	
<				

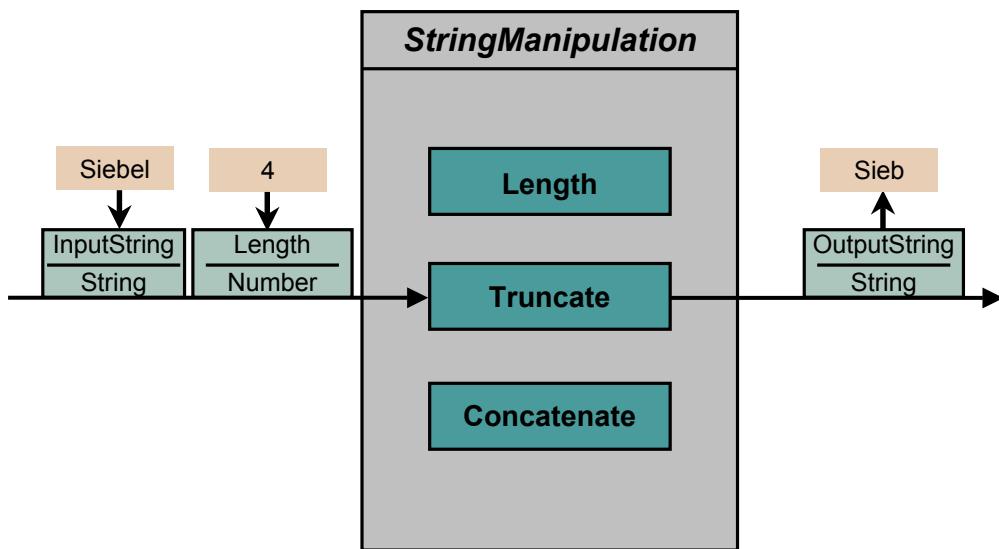
W	Name	Data Type	Type	Optional
>	InputString	String	Input	
	Length	Number	Input	
	OutputString	String	Output	

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Invoking a Method

- Involves:
 - ▶ Assigning values to the input parameters
 - Not all input parameters are required to have values
 - ▶ Retrieving the values assigned to the output parameters

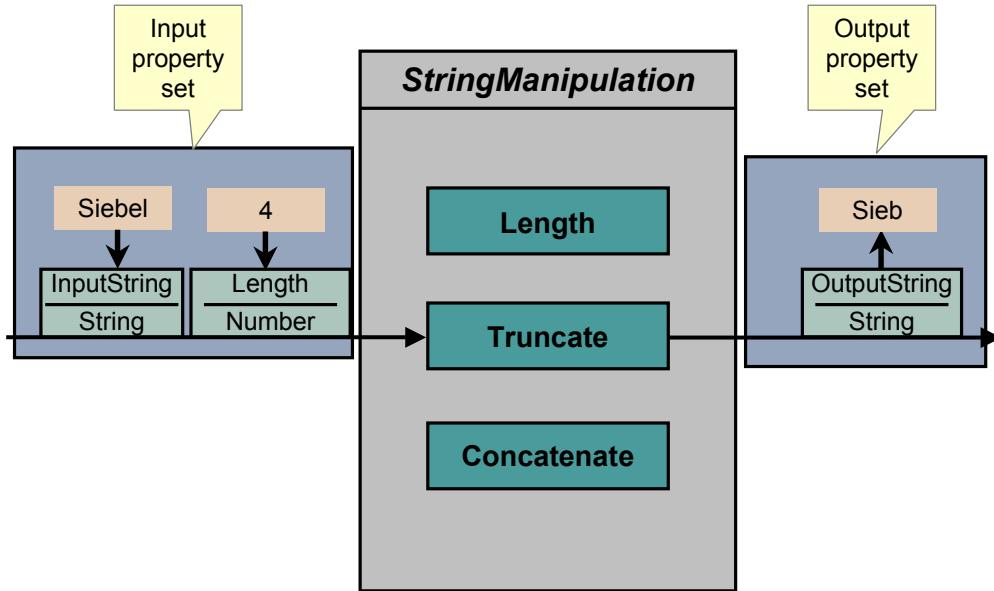


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Property Set

- Is the in-memory data structure used to:
 - ▶ Pass a set of input arguments into a method
 - ▶ Receive a set of output arguments from a method

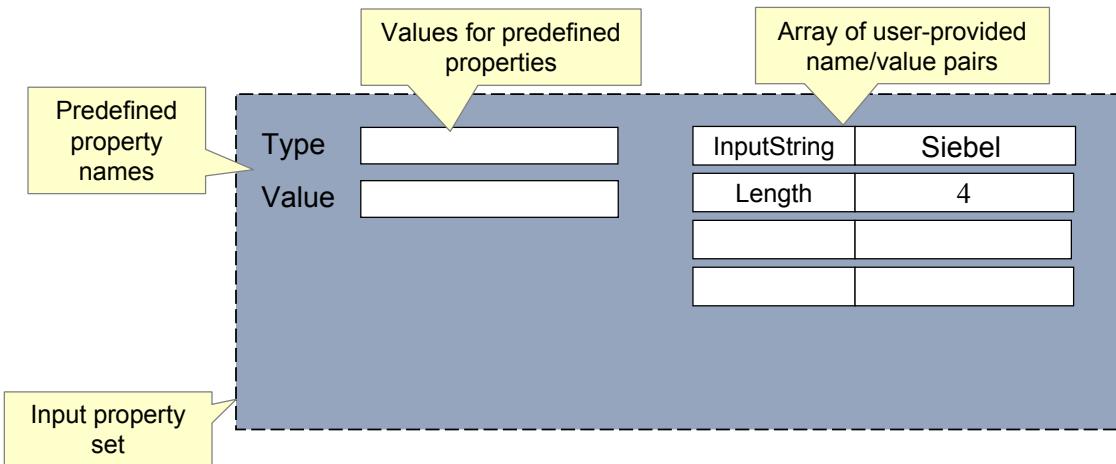


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Property Set Continued

- Represents data using name/value pairs
- Has two predefined properties: Type and Value
- Has an array for storing user-provided name/value pairs
- Is automatically created and populated when invoking most business services from a Siebel workflow or task



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Testing a Business Service

- Use the business service simulator in the Siebel Client
 - ▶ Navigate to Administration - Business Service > Simulator
 - ▶ Select the business service and method
 - ▶ Create the property set name/value pairs
 - Optionally load data from an input file

The screenshot shows the Siebel Business Service Simulator interface. At the top, there's a navigation bar with tabs like Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Administration - Business Service. Below the navigation bar is a toolbar with buttons for Simulator, Menu, New, Delete, Query, Run, Load From File..., Save To File..., and Run on One Input. A status bar at the bottom indicates "1 - 1 of 1".

The main area has two tables. The first table, titled "Input Arguments", has columns: Test Case #, Type, Value, Child Type, Child Value, Property Name, and Property Value. It contains one row with "Length" as the value for "Value" and "4" as the value for "Property Value".

The second table, titled "Property Set Prop...", has columns: Property Name and Value. It contains two rows: "Length" with value "4" and "InputString" with value "Siebel". The "Length" row is highlighted with a red border.

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Testing a Business Service Continued

- Use the business service simulator in the Siebel client
 - ▶ Click Run on One Input
 - ▶ Examine the output property set name/value pairs
 - ▶ Optionally save the output to a file

The screenshot shows the Siebel Business Service Simulator interface. It consists of three main tabs:

- Simulator**: Shows a table with columns: Service Name, Method Name, and Iterations. A single row is visible: StringManipulation, Truncate, 1. The "Run on One Input" button is highlighted with a red box.
- Input Arguments**: Shows a table with columns: Test Case #, Type, Value, Child Type, Child Value, Property Name, and Property Value. A single row is visible: Length, 4.
- Output Arguments**: Shows a table with columns: Test Case, Iteration, Type, Value, Child Type, Child Value, Property Name, and Property Value. A single row is visible: 1, OutputString, Sieb.

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Module Highlights

- A business service is a unit of functionality that is reusable and globally accessible
 - ▶ Can be stored in the repository or in user database tables
 - ▶ Consist of one or more methods
 - Each method is specified by a set of input and output arguments
- A property set is an in-memory data structure consisting of name value pairs
- A business service
 - ▶ Is invoked by passing in the input arguments in a property set
 - ▶ Returns the output arguments in a property set
- Use the business service simulator to test a business service

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Lab

- In the lab you will:
 - ▶ Import a custom business service into the repository
 - ▶ Examine the methods and arguments for a business service
 - ▶ Use the business service simulator to test a business service and examine the output property sets



Siebel 8.0 Essentials

Module 35: Building Siebel Workflow Processes

35

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35



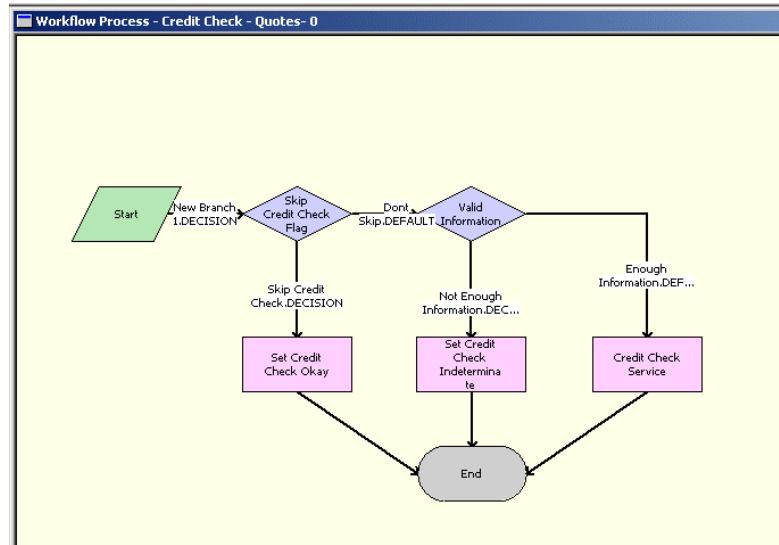
Module Objectives

- After completing this module you should be able to:
 - ▶ List the types of workflow processes and workflow steps
 - ▶ Create a new workflow process and configure business service, Siebel operation, and decision steps
- Why you need to know:
 - ▶ Siebel workflow processes are one of several declarative techniques to automate business logic

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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 processes in a Siebel application



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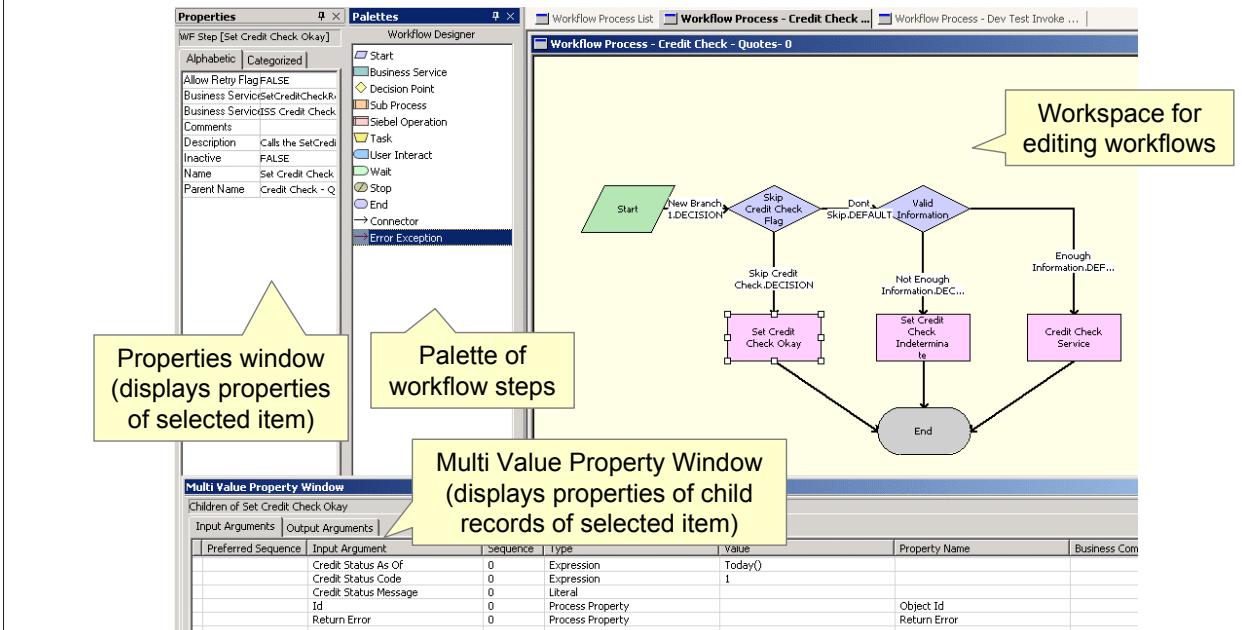
Reference

Siebel Business Process Framework Workflow Guide: Introduction to Workflow Processes

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Workflow Designer

- Siebel Tools includes a Workflow Designer used to create, examine, and modify Siebel workflow processes
 - ▶ Contains a palette, workspace, and associated property windows



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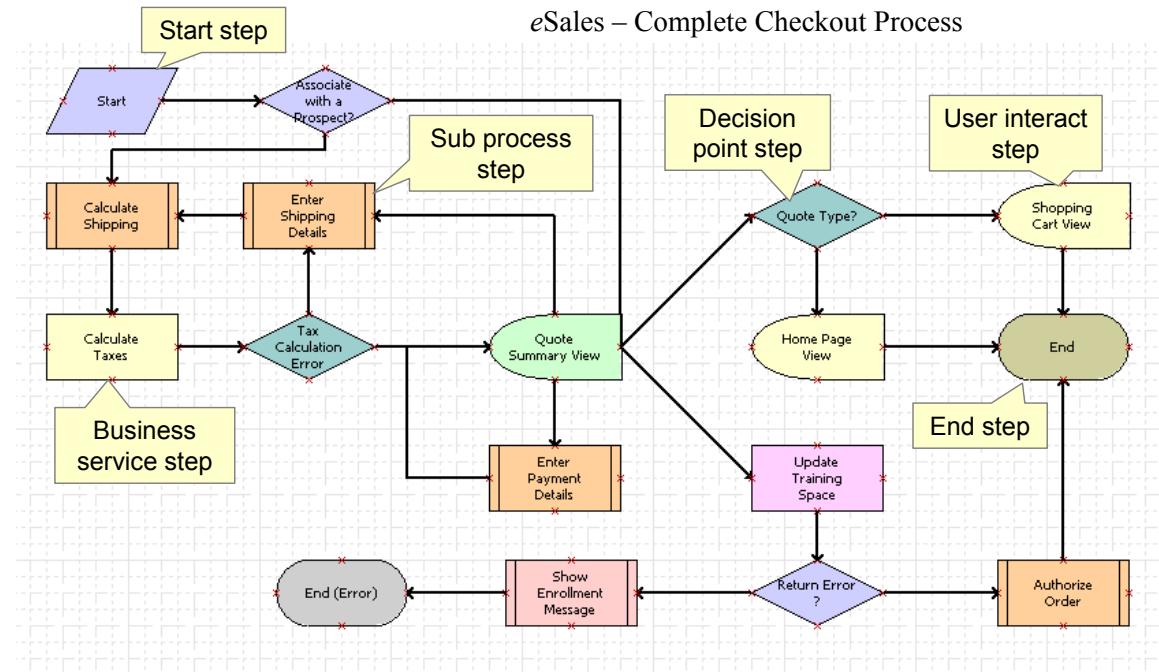
4 of 26

Reference

Siebel Business Process Framework Workflow Guide: For Developers:
Basics of Building Workflow Processes

Workflow Process Steps

- Siebel workflow processes consist of different types of steps



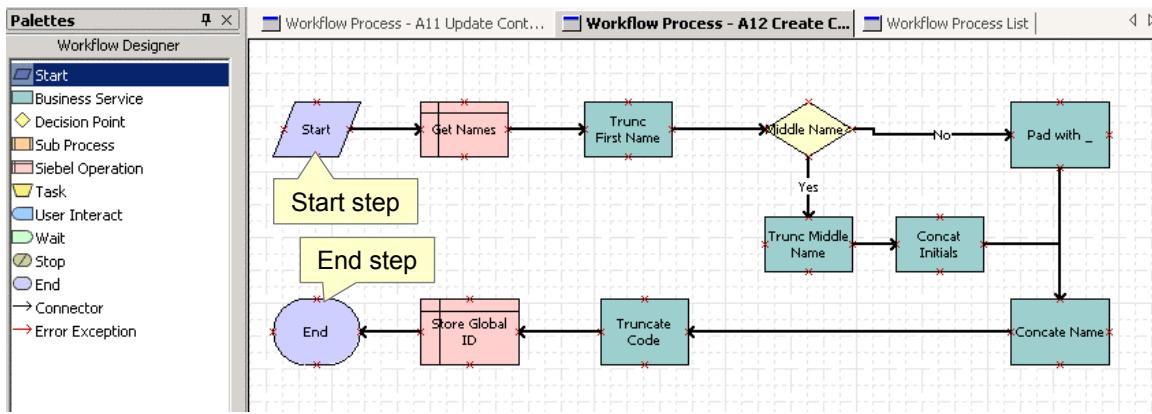
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Workflow Process Steps Continued

- All workflow processes have a:
 - ▶ Start step
 - ▶ End step
- Workflow processes often include the following common steps:
 - ▶ Business service step
 - ▶ Siebel operation step
 - ▶ Decision point step



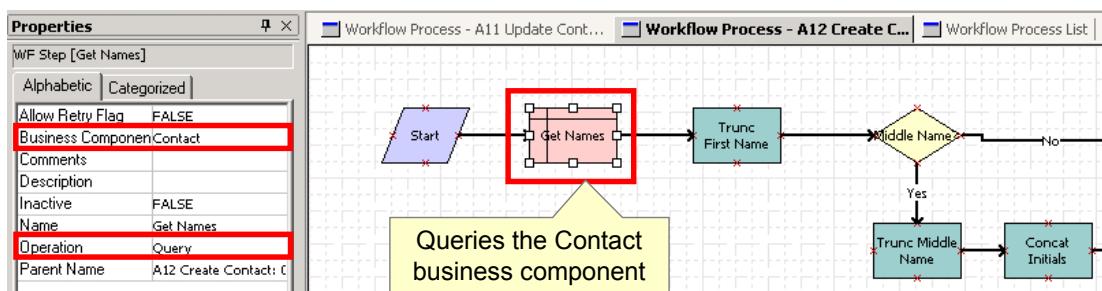
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Siebel Operation Step

- Performs the following operations on a business component
 - ▶ Insert
 - ▶ Update
 - ▶ Delete
 - ▶ Query
 - Next record and previous record operations supported for iteration over multiple records returned by a query



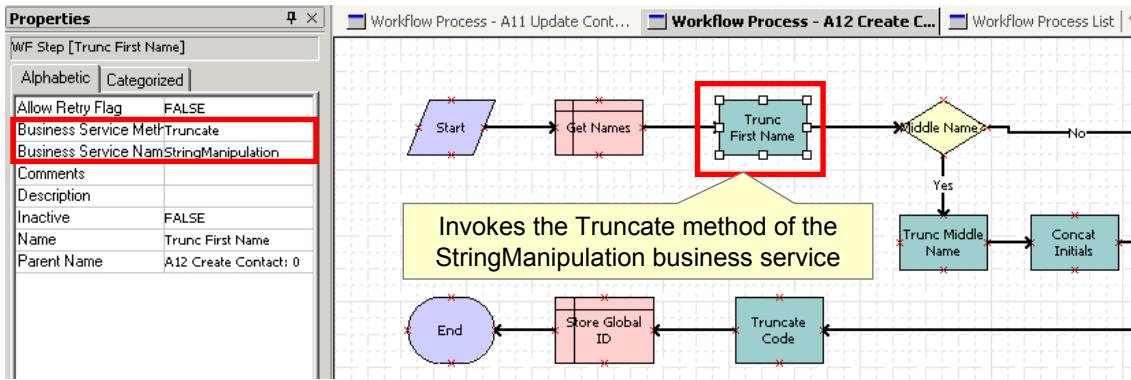
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Business Service Step

- Invokes a method of a business service



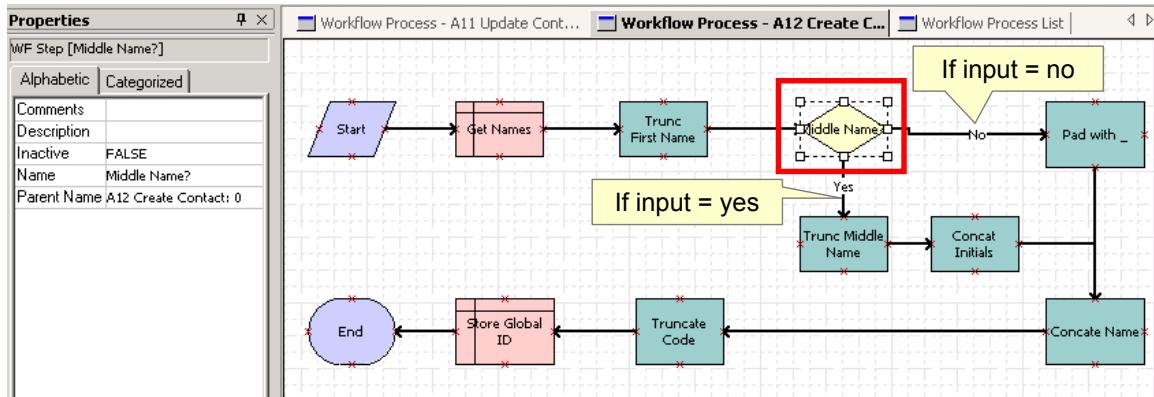
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Decision Point Step

- Allows a workflow to branch to one of multiple steps based on the value of inputs



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Process Properties

- Process properties are variables that store inputs used by and outputs produced by workflow steps
- Each workflow process has a set of process properties that persist while the workflow process is executing
 - ▶ Some are populated when the workflow process is invoked
 - ▶ Some return data to invoking workflow process or business service upon completion

The screenshot shows a table titled "Multi Value Property Window" with the sub-tab "Process Properties" selected. The table lists various properties with their names, display names, in/out status, business objects, and data types. A red box highlights several properties: FirstName, LastName, MiddleInit, MiddleName, Object Id, Process Instance Id, and Siebel Operation Object Id. A callout bubble points to these highlighted rows with the text "Specific to this workflow". Another callout bubble points to the bottom of the table with the text "Some of default properties that appear in all workflows".

Name	Display Name	In/Out	Business Object	Data Type
FirstName		In/Out	..Contact	String
LastName		In/Out	..Contact	String
MiddleInit		In/Out	..Contact	String
MiddleName		In/Out	..Contact	String
Object Id		In/Out	..Contact	String
Process Instance Id		In/Out	..Contact	String
Siebel Operation Object Id		In/Out	..Contact	String

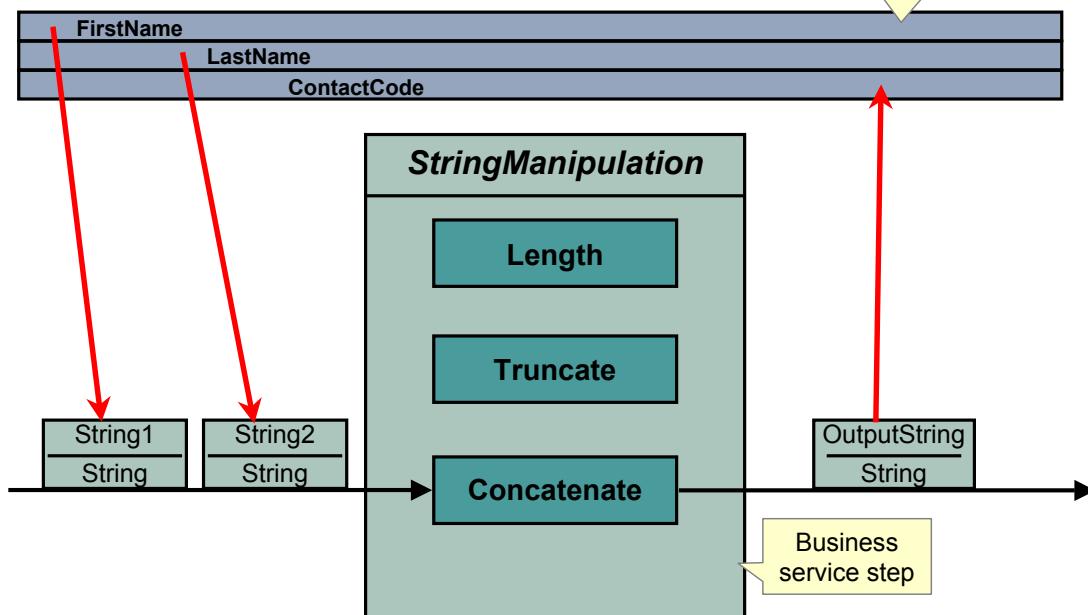
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Process Properties continued

- Provide inputs to workflow steps
- Receive outputs from workflow steps
 - ▶ Can be used as inputs for following steps



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Configuring a Siebel Workflow

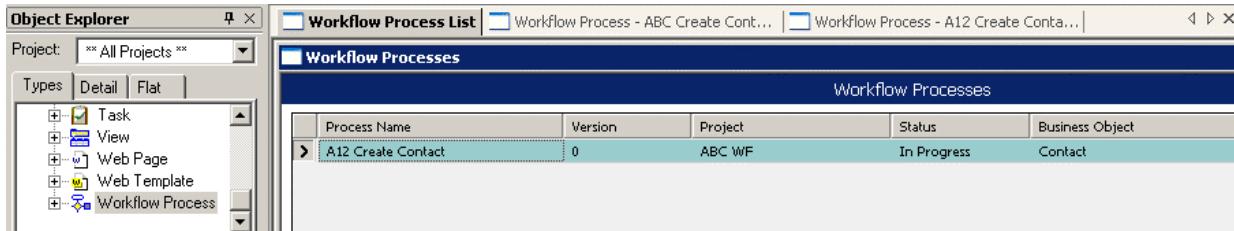
1. Create a New Workflow Process
2. Specify the Process Properties
3. Add Workflow Steps
4. Configure the Steps
5. Validate the Workflow Process

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1. Create a New Workflow Process

- In Siebel Tools, select the Workflow Process object type
- Create a new workflow process definition
 - ▶ Enter the process name
 - ▶ Assign the process to a locked project
 - ▶ Assign a business object
 - Provides context for references to business components and fields
- Right-click and select Edit Workflow Process to invoke the Workflow Designer



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Business Object

A business object must be specified whenever you use a workflow step (such as a Siebel Operation step) that references a business component. In addition if a workflow references a business object, then the workflow must be executed in the context of that business object.

2. Specify the Process Properties

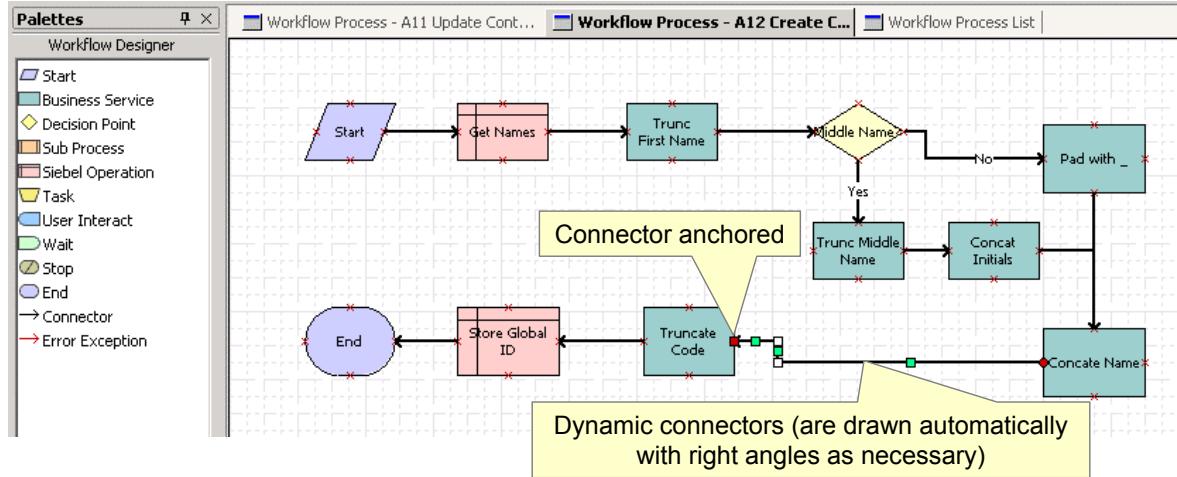
- Select the Process Properties tab in the Multi Value Property Window (MVPW) to display the default process properties
- Edit the default set of process properties
 - ▶ Add new process properties to store additional values created and used by the workflow steps
 - ▶ Leave the default process properties as is

Process Properties		Process Metrics			
Name	Display Name	In/Out	Changed	Business Object	Data Type
FirstName		In/Out	TRUE	Contact	String
ContactCode		In/Out	TRUE	Contact	String
Error Code		In/Out	TRUE	Contact	String
Error Message		In/Out	TRUE	Contact	String
Object Id		In/Out	TRUE	Contact	String
Process Instance Id		In/Out	TRUE	Contact	String
Siebel Operation Object Id		In/Out	TRUE	Contact	String

Default process properties
for all workflows

3. Add Workflow Steps

- Add a start and end step to the designer
 - ▶ Drag steps from the palette to the workspace
- Add other steps as required
- Add connectors to sequence the steps
 - ▶ Make sure that connector ends are anchored (red box appears)

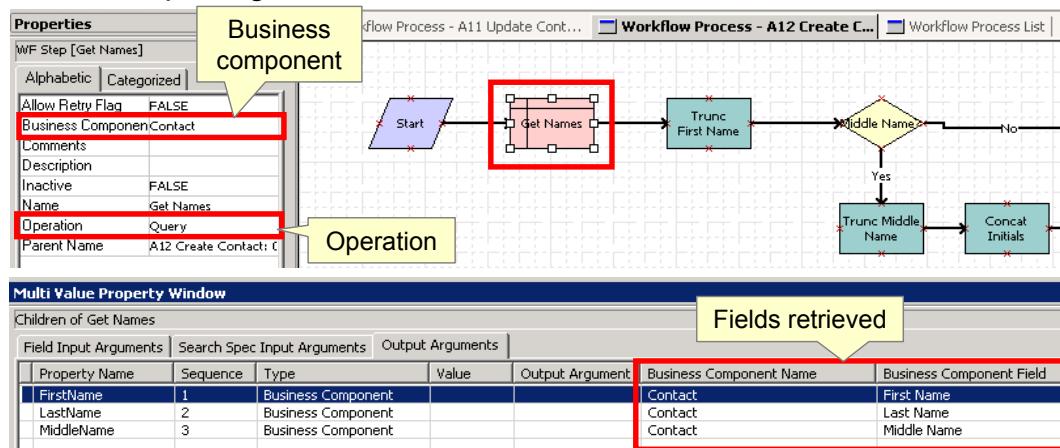


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4. Configure the Steps (Siebel Operation)

- For each Siebel operation step
 - ▶ Specify the business component and operation
 - Use the properties window
 - ▶ Specify additional child arguments as required in the MVPW
 - Field names
 - Search spec input arguments
 - Output arguments

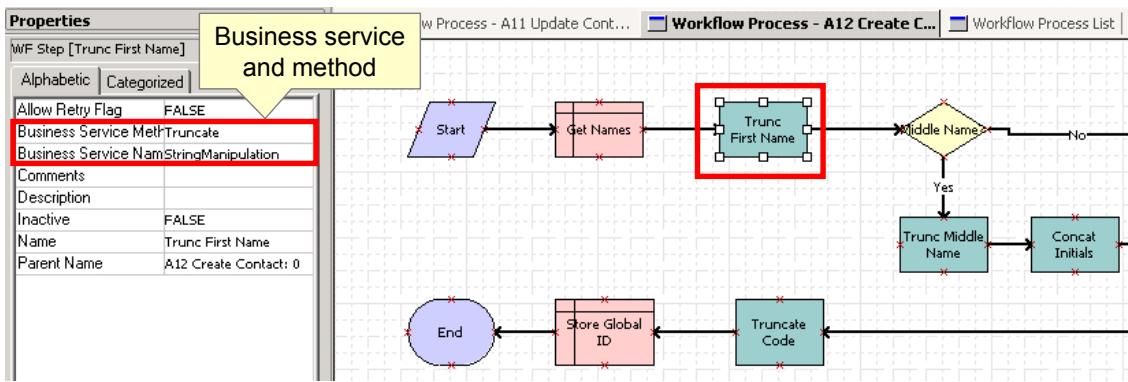


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4. Configure the Steps (Business Service)

- For each business service step
 - ▶ Specify the business service name and business service method
 - Use the Properties window



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4. Configure the Steps (Business Service) Continued

- For each business service step
 - ▶ Specify inputs to use in the workflow
 - Select the Input Arguments tab in the MVPW
 - Assign a literal value or a process property to each input
 - ▶ Specify outputs of the business service step
 - Select the Output arguments tab in the MVPW
 - Assign each output to a process property

Multi Value Property Window

Children of Trunc First Name

Input Arguments					
Preferred Sequence	Input Argument	Sequence	Type	Value	Property Name
	InputString	0	Process Property		FirstName
	Length	0	Literal	1	

Input arguments defined for method

Constant value assigned as input

Value of process property assigned as input

Multi Value Property Window

Children of Trunc First Name

Output Arguments					
Preferred S...	Property Name	Sequence	Type	Output Argument	Value
	ContactCode	1	Output Argument	OutputString	

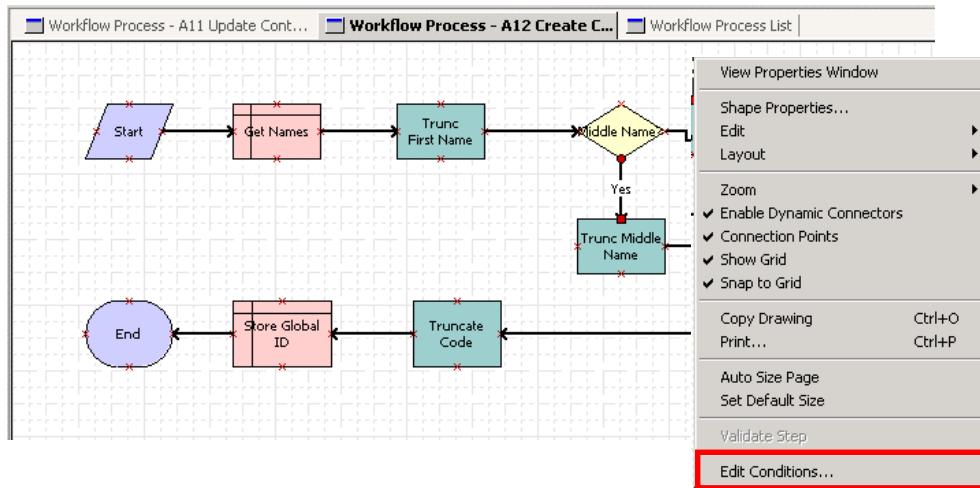
Value of output argument assigned to process property

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4. Configure the Steps (Decision Point Step) Continued

- For each decision point step, set conditions on each branch (connector) originating at the step
 - ▶ Select connector
 - ▶ Right-click and select Edit Conditions

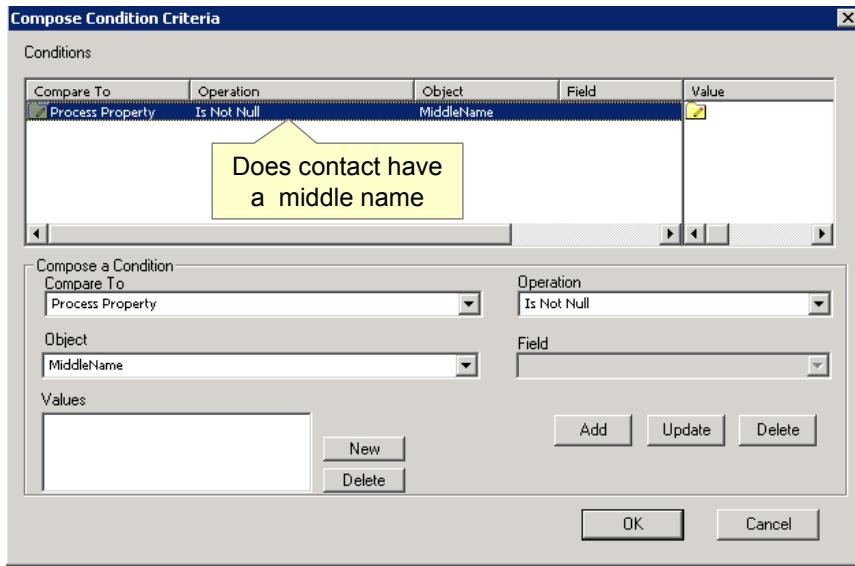


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4. Configure the Steps (Decision Point Step)

- Enter the condition criteria for each branch in the Compose Condition Criteria dialog box
- Do not create a condition criteria for the default branch
 - ▶ Execution path taken if no other branches are satisfied

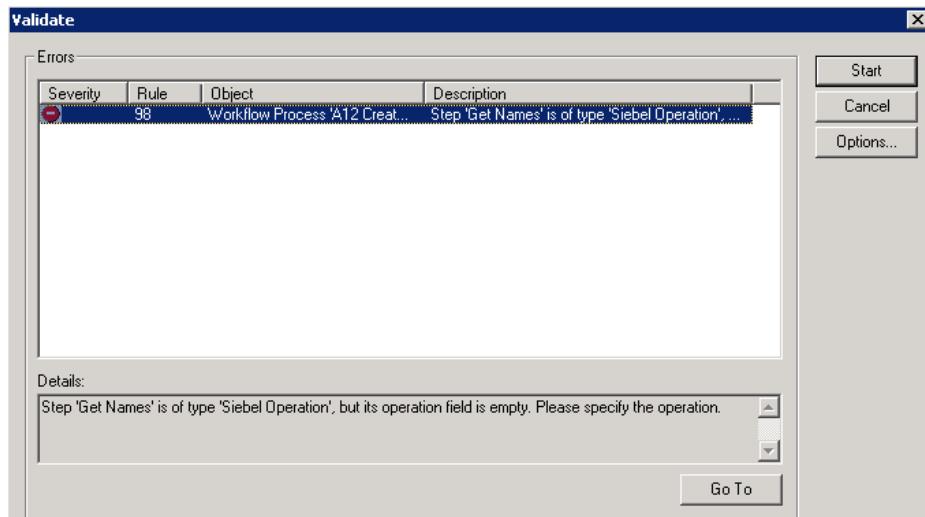


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5. Validate the Workflow Process

- Save all the configuration performed in the Workflow Designer
- Return to the Workflow Process List
- Right-click the workflow and select Validate
- Click Start to perform the validation checks
 - ▶ Syntactic errors are displayed in the Errors window



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Additional Workflow Steps

- Siebel workflows may contain additional types of steps
 - ▶ Sub process
 - Invokes another workflow process as a sub process
 - ▶ User interact
 - Navigates the user a view and waits for user activity
 - ▶ Wait
 - Pauses the workflow for a specified period of time before proceeding
 - ▶ Stop
 - Stops the workflow process instance if a predefined exception occurs
 - ▶ Task
 - Invokes a Siebel task (subject of a subsequent module)



Workflow Modes

- Workflows are characterized by modes that describe their runtime behavior
 - ▶ Service Flow
 - Executes a discrete set of steps and completes
 - Is the default mode for a new workflow
 - Cannot include wait or user interact steps
 - ▶ Interactive flow
 - Designed to navigate users through a set of views
 - Is being replaced by Siebel tasks
 - ▶ Long running flow
 - Is a workflow that is intended to persist for some indeterminate period of time
 - Can be paused and resumed as an inbox item
 - Cannot include a wait step
 - ▶ 7.0 flows
 - Provided for backward compatibility of workflows defined prior to Siebel 7.5 release
 - Should not be used for any new workflows

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Interactive Flows

Siebel Task UI provides significantly enhanced capabilities to guide users through a series of views. However interactive flows may still be used if all you wish is to navigate a user from one regular Siebel view to another. In addition, Task UI is applicable in only the High Interactivity client. Interactive flows must be used for the Standard interactivity client.



Module Highlights

- A 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 processes in a Siebel application
- Siebel workflow processes consist of different types of steps (Business service, Siebel operation, decision point, etc.)
- Process properties are variables that store inputs used by and outputs produced by workflow steps
- Build a workflow process by:
 - ▶ Creating a new workflow process
 - ▶ Specifying the process properties
 - ▶ Adding workflow steps
 - ▶ Configuring each step
 - ▶ Validating the workflow process



Lab

- In the lab you will:
 - ▶ Configure a workflow process that includes business service steps
 - ▶ Configure a workflow process that includes a decision point step

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Siebel 8.0 Essentials

Module 36: Testing and Deploying Workflow Processes

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Module Objectives

- After completing this module you should be able to:
 - ▶ Test a Siebel workflow process using the simulator
 - ▶ Deploy a Siebel workflow process
- Why you need to know:
 - ▶ Workflow processes should be tested to verify that they behave as desired prior to deployment
 - ▶ Deployment is a critical step in making a new workflow process available for use

Managing Siebel Workflow Processes

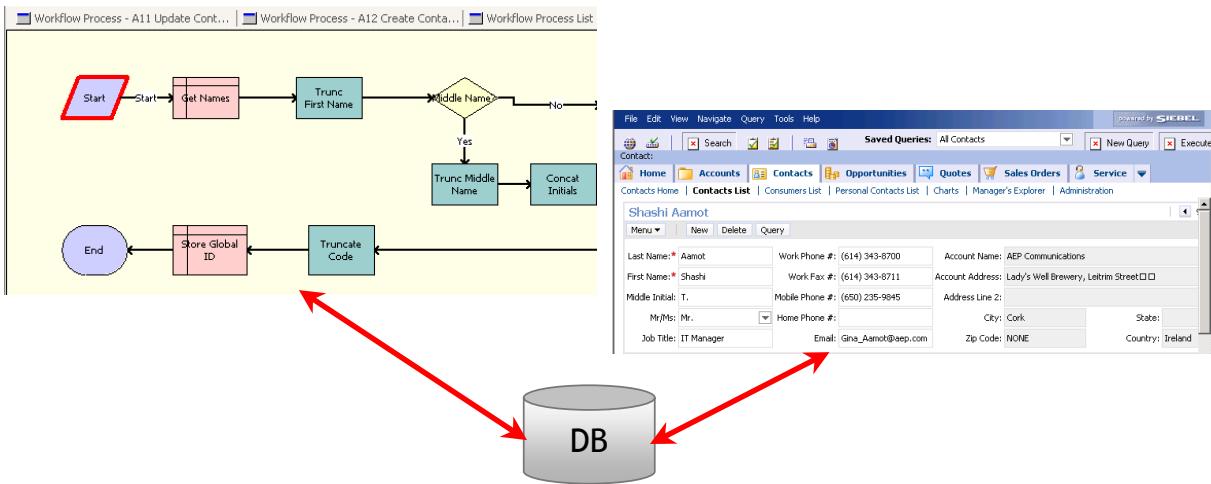
36

- Workflow process differ from most other object definitions
 - ▶ Are not compiled into an .srf file
 - ▶ Cannot be archived into .sif files
 - ▶ Can be exported to and imported from XML files
- After a workflow process has been configured in Siebel Tools
 - ▶ Simulate the workflow
 - ▶ Deploy the workflow

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Workflow Simulator

- Use the workflow simulator to verify that the workflow performs as desired
 - ▶ Workflow simulation is controlled in Siebel Tools
 - ▶ Workflow is actually executed in an instance of a Siebel client
 - Tools and the Siebel client must be connected to a common database



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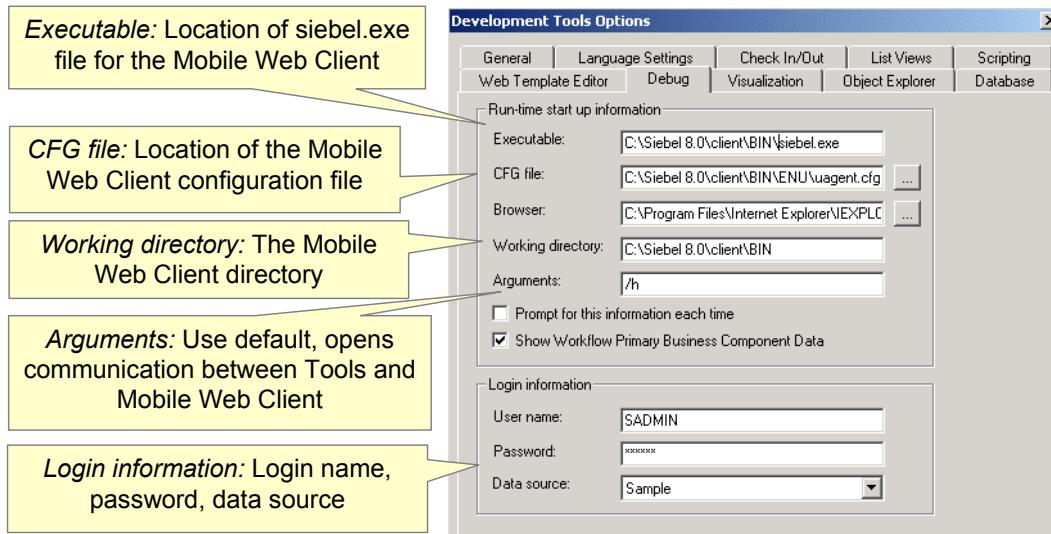
Reference

Siebel Business Process Framework Workflow Guide: For Developers:
Testing Workflow Processes

Enabling Workflow Simulation

36

- Configure the connection to the Siebel run-time instance
 - ▶ In Siebel Tools, select View > Options > Debug
 - Simulator shares the connection parameters used by Tools Debugger
 - ▶ Specify the run-time Siebel instance
 - ▶ Provide a valid login



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Test a Workflow Using the Workflow Simulator

1. Specify the Test Record
2. Start the Simulator
3. Start the Simulation
4. Execute the Workflow

1. Specify the Test Records

- In the Siebel client, create test records to support the simulation
 - ▶ Use About Record to determine the row ID
- In Siebel Tools, enter the row ID of the test record as the default string for the Object ID process property
 - ▶ When the workflow is invoked in production, row ID of the record is passed in as an input argument

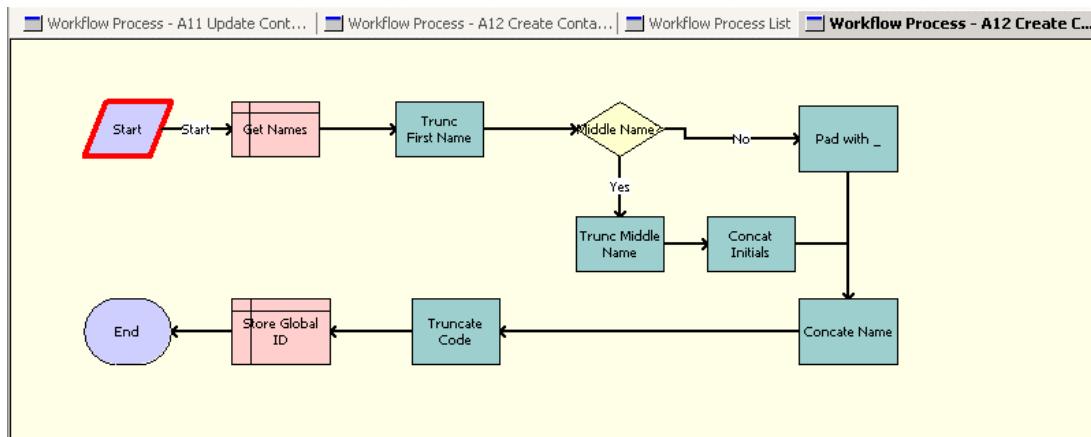
Multi Value Property Window								
Children of A12 Create Contact: 0								
Process Properties		Process Metrics						
Name	Display Name	In/Out	Changed	Business Object	Business Component	Virtual Field	Default String	Default Date
FirstName		In/Out	TRUE	Contact				
LastName		In/Out	TRUE	Contact				
MiddleInit		In/Out	TRUE	Contact				
MiddleName		In/Out	TRUE	Contact				
Object Id		In/Out	TRUE	Contact			12-WFJ4D	
Process Instance Id		In/Out	TRUE	Contact				
Siebel Operation O...		In/Out	TRUE	Contact				

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2. Start the Simulator

- Make sure that all instances of the Siebel client application are closed
- Right-click the Workflow Designer workspace and select Simulate
 - ▶ Workflow Designer displays the workflow in the simulator window

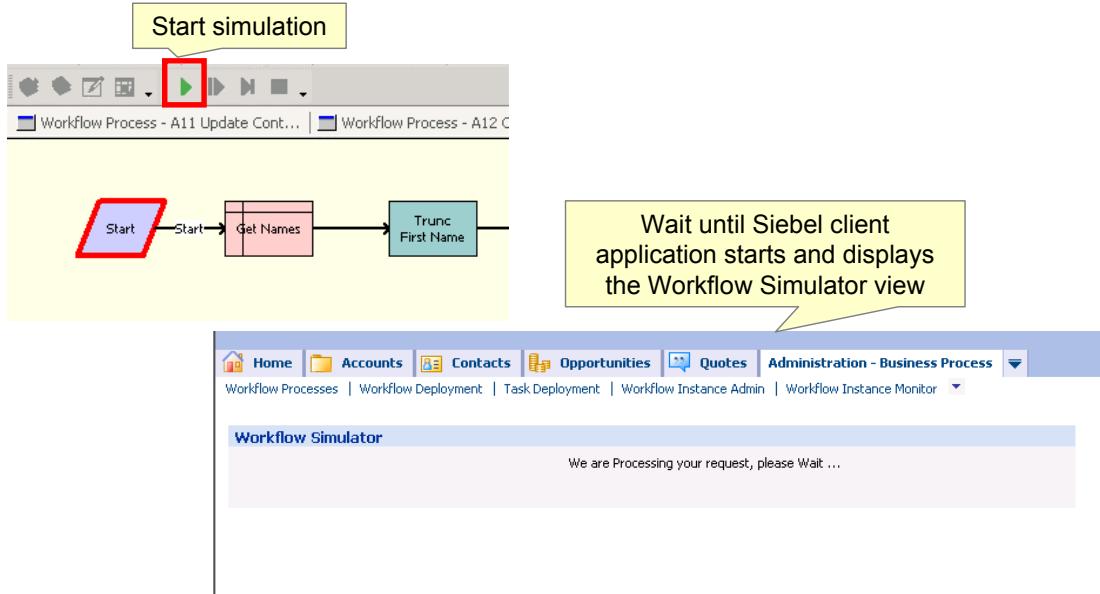


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3. Start the Simulation

- Click the Start Simulation button in the simulation toolbar
 - ▶ Use View > Toolbars > Simulation to display the simulation toolbar
- A new instance of the Siebel client is launched

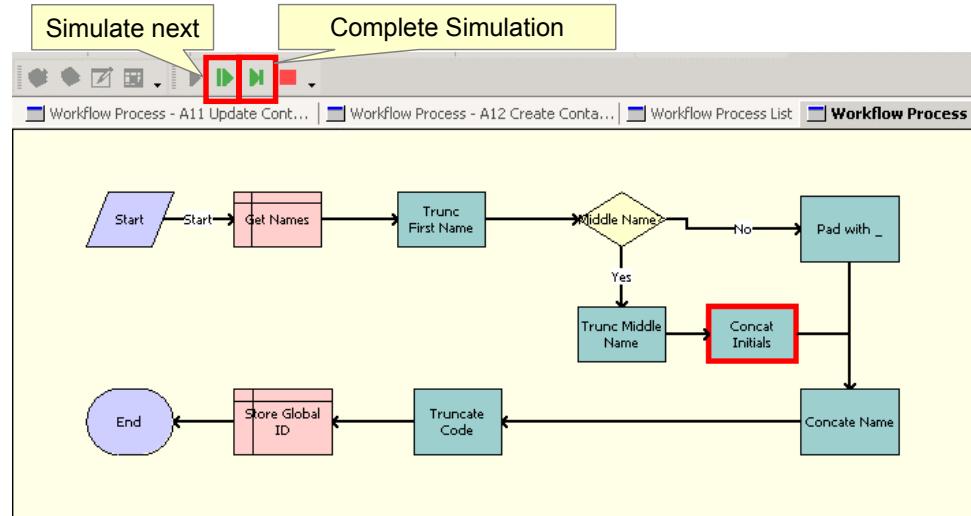


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4. Execute the Workflow

- Execute the workflow in either
 - ▶ Single step mode using the Simulate Next button
 - ▶ Continuous mode using the Complete Simulation button
- Verify that the workflow branches correctly at decision steps

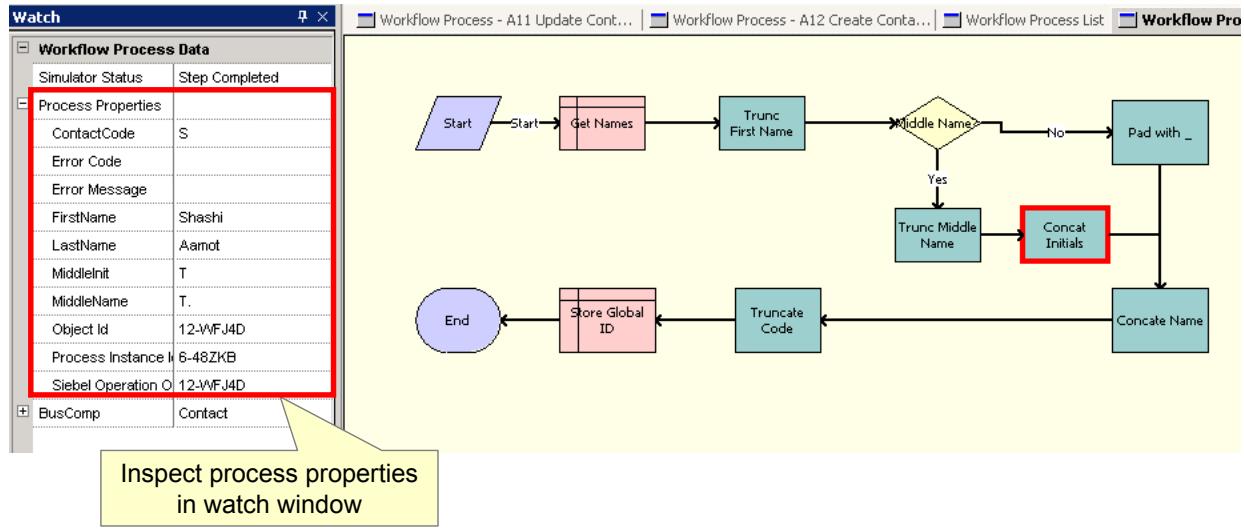


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4. Execute the Workflow Continued

- Inspect the watch window to verify that process properties have the expected values
 - ▶ Values of user added process properties can be edited during a simulation

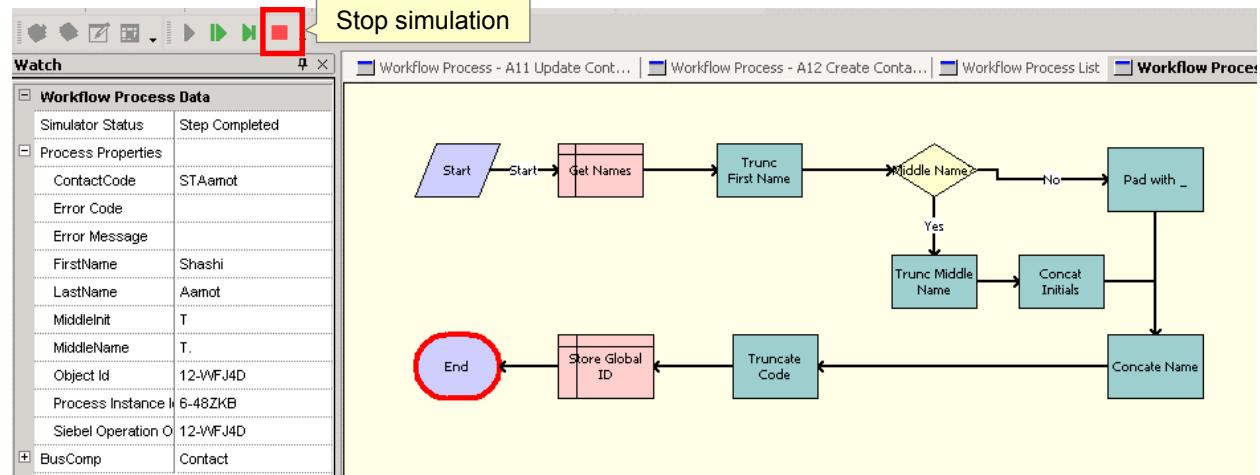


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4. Execute the Workflow Continued

- Complete the simulation
 - ▶ Use either Simulate Next or Complete Simulation buttons
- Verify that the final values of process properties are correct
- Click the Stop Simulation button
- Inspect the client and verify that the desired changes occurred



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Workflow Simulator Considerations

- Cannot simulate workflow processes that invoke server components
 - ▶ Must test these workflows directly on the Siebel Web Client
- Cannot simulate workflows with run-time events on start steps (discussed in a subsequent module)
- Can simulate workflows with user interact steps
 - ▶ Requires the developer to perform the activity in the client application to allow the simulation to proceed



Managing Siebel Workflow Processes

- After a workflow process has been configured in Siebel Tools
 - ▶ Simulate the workflow
 - ▶ Deploy the workflow

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Deploying Workflow Processes

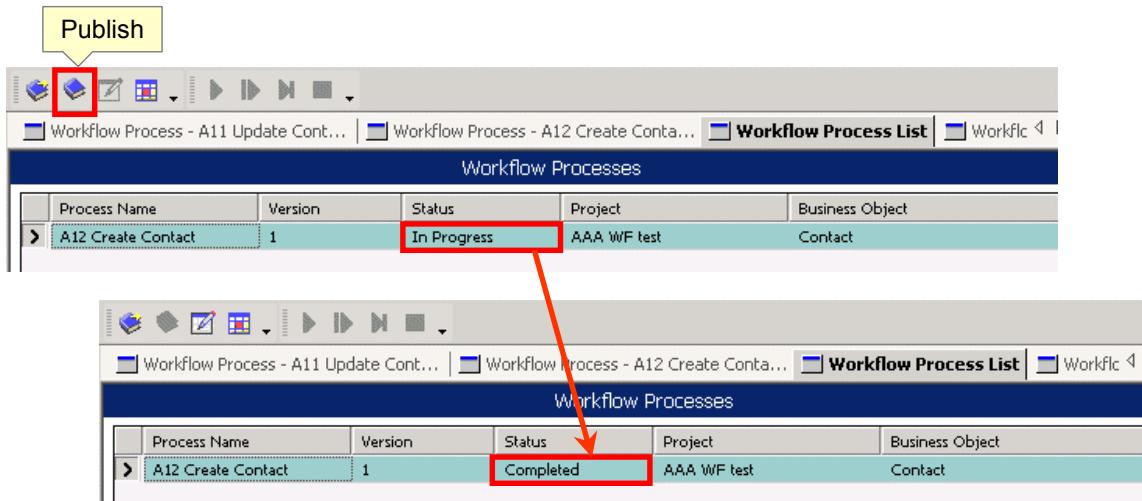
36

- Transfers the workflow from the repository to run-time tables to make it available for use
- Consists of:
 - ▶ Developer setting the workflow complete in Siebel Tools
 - ▶ Administrator activating the workflow in the run-time client

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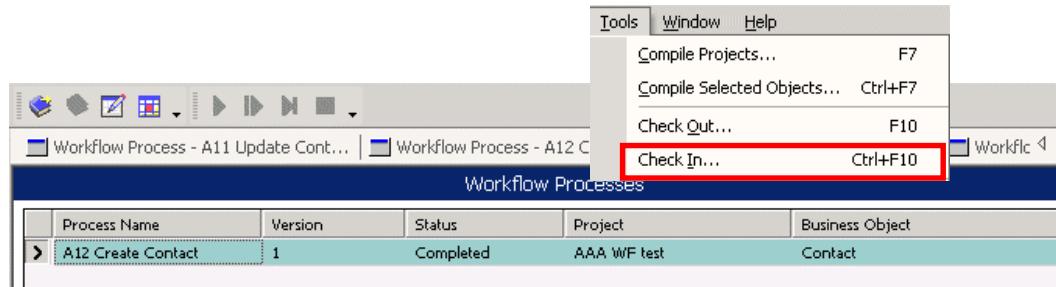
Publish the Workflow

- In Siebel Tools, click the Publish button in the Workflow toolbar
 - ▶ Sets the status to Completed
 - Prevents any further editing of the workflow process
 - ▶ Makes the workflow available for activation



Checking in the Workflow Process

- In Siebel Tools, check in the completed workflow process to the server repository
 - ▶ Siebel Web Client can now access the workflow



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Activating the Workflow

- In the Siebel Web Client, activate the workflow
 - ▶ Navigate to Business Process - Administration > Workflow Deployment
 - ▶ Select the newly deployed workflow and click Activate
 - Transfers the workflow definitions in the repository tables into corresponding run-time tables

The screenshot shows the Siebel Web Client interface for 'Workflow Deployment'. The top navigation bar includes links for Home, Accounts, Contacts, Opportunities, Quotes, and Administration - Business Process. The current page is 'Workflow Deployment'.

The main content area displays two tables:

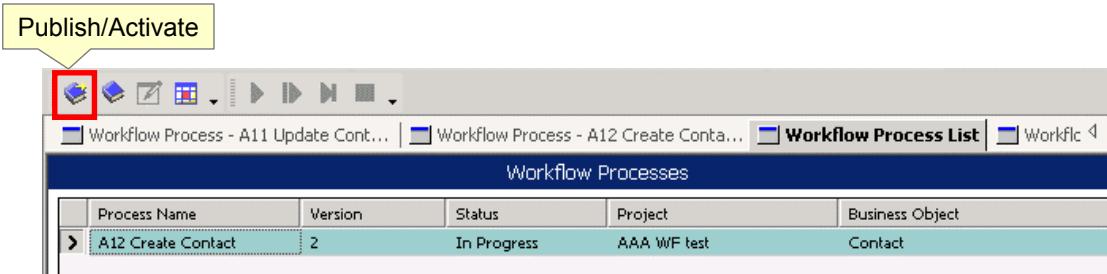
- Repository Workflow Processes:** Shows a list of workflows with columns: Name, Version, Business Object, Status, Group, and Mode. One row is selected, and the 'Activate' button is highlighted with a red box.
- Active Workflow Processes:** Shows a list of active workflows with columns: Name, Version, Repository Versic, Business Object, Group, Deployment Stat, and Activation. One row is selected, showing 'Active' status.

At the bottom of the page, there is a red footer bar with the text "Copyright © 2007, Oracle. All rights reserved." and "18 of 26".

Publishing/Activating a Workflow Process

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- Developers can deploy and activate a workflow process from Siebel Tools to expedite testing of the deployed workflow
- In Siebel Tools, click the Publish/Activate button in the Workflow toolbar
 - ▶ Sets the status to Completed
 - ▶ Transfers the workflow definitions in the repository tables into corresponding run-time tables
 - Siebel client (for testing) must use the same database as Siebel Tools



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Workflow Monitoring

- Navigate to Business Process - Administration > Workflow Deployment
 - ▶ Select the active workflow process
 - ▶ Set the monitoring level in the active workflow process as required
 - The value assigned is used whenever the workflow process is invoked or resumed

Name	Version	Deployment Status	Monitoring Level	Business Object
A12 Create Contact 1		Active	1 - Status	Contact
A12 Create Contact 0		Outdated	0 - None	Contact
AAA WF	2	Active	1 - Status	Contact
AAA WF	0	Inactive	2 - Progress 3 - Detail 4 - Debug	Contact
AAA WF	1	Outdated	0 - None	

Monitoring Level

- Monitoring levels can be set as follows to record differing degrees of detail
 - ▶ Performance can degrade as level of detail recorded increases

Levels	Record Process Instance	Record Step Instance	Record Process Properties
0-None	N	None	None
1-Status	Y	None	None
2-Progress	Y	All Steps	None
3-Detail*	Y	All Steps	All steps
4-Debug**	Y	All Steps	All Steps

* In Detail, data is written at the end of the workflow

** In Debug mode, data is written to disk after every step



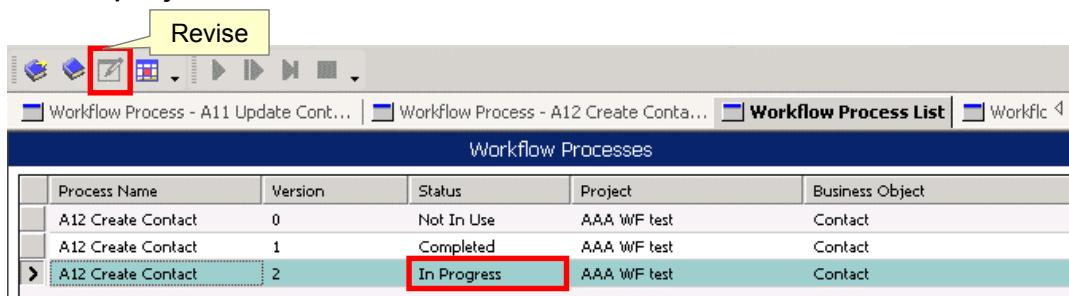
Deployment Considerations

- Deploy all child workflows (sub processes) first to make them available to the deployed workflow
- Compile any new repository objects referenced in the deployed workflow such as business components, fields, and views

Revising Workflows

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- Workflows are versioned
 - ▶ Existing versions are kept and a new version is created
- To revise a workflow
 - ▶ In Siebel Tools, select the desired workflow (check out if necessary)
 - ▶ Click the Revise button in the Workflow toolbar
 - Creates a copy of the workflow
 - ▶ Increments the version number
 - ▶ Sets status to In Progress
 - ▶ Edit and test the workflow
 - ▶ Deploy the workflow



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Administering a Revised Workflow

- In the Siebel Web Client, activate the workflow as before
 - ▶ Sets the deployment status of the prior version to Outdated
- After being activated the new version will be invoked
 - ▶ Any instances of the prior workflow version running at the time of activation run to completion



Name	Version	Deployment Status	Monitoring Level	Business Object
A12 Create Contact	2	Active	0 - None	Contact
A12 Create Contact	0	Outdated	1 - Status	Contact
A12 Create Contact	1	Outdated	1 - Status	Contact

Module Highlights

- Use the workflow simulator to verify that the workflow behaves as designed
 - ▶ Workflow simulation is controlled in Siebel Tools
 - ▶ Workflow is executed in an instance of a Siebel client
- Deploy a workflow to make it available for use in the run-time client
 - ▶ In Siebel Tools, publish the workflow
 - ▶ In the run-time client, activate the workflow to make the workflow available for invocation
- Revise a deployed workflow to edit it
 - ▶ This creates a new version



Lab

- In the lab you will:
 - ▶ Simulate workflows you previously configured

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Siebel 8.0 Essentials

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Module 37: Executing Workflow Processes

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Module Objectives

- After completing this module you should be able to:
 - ▶ Describe the workflow execution architecture
 - ▶ List several ways to invoke workflow
 - ▶ Invoke a workflow process using a run-time event
 - ▶ Invoke a workflow process using a custom control
- Why you need to know:
 - ▶ There are multiple ways to invoke a workflow process and you need to understand the choices available



Executing Workflow Processes

- Workflow processes are executed either in
 - ▶ The user's application object manager
 - Supports synchronous processing
 - ▶ A separate server component known as the Workflow Process Manager component
 - Supports asynchronous processing
- In both cases workflow processes are executed using the Workflow Process Manager business service
 - ▶ Is often referred to as the Workflow Engine

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Reference

Siebel Business Process Framework: Workflow Guide: Introduction to Workflow Processes



Synchronous Workflow Processing

- Is typically executed in the user's application object manager
 - ▶ User is forced to wait until the workflow completes (or pauses)
 - Hourglass icon appears
- Can be triggered by an action on the part of the user:
 - ▶ Directly by clicking a button or menu item
 - ▶ Indirectly by performing a record or applet operation
- Is used to execute specific business logic that:
 - ▶ Is triggered by the user's activity
 - ▶ Should be completed before the user continues activity



Asynchronous Workflow Processing

- Is executed in the Workflow Process Manager server component
 - ▶ User (if any) is not prevented from continuing activity
- Is typically triggered by a change in the value of some column in a database table
 - ▶ Can respond to changes not associated with user activity
 - For example: updates resulting from Enterprise Integration Manager imports
 - ▶ Can respond to conditions that exist for some threshold period of time
- Is used to execute specific business logic when a specified condition is satisfied
- Will be discussed in the following module



Invoking Workflow Processes

- A workflow process can be invoked by a variety of mechanisms
 - ▶ Run-time events
 - ▶ Custom buttons and menu items
 - ▶ Workflow policies
 - ▶ Programmatically (that is as part of script)
- 
- This module*
- Next module*
- Beyond scope*
- A red curly brace is positioned to the right of the fourth bullet point, grouping it with the others. To the right of the brace, three labels are aligned vertically: "This module", "Next module", and "Beyond scope".



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/from an applet
 - ▶ The resultant processing
 - Workflow
 - One or more calls to business services
 - ▶ Known as an action set

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Reference

Siebel Personalization Administration Guide: Tracking Run-Time Events

Run-time events were introduced as part of Siebel Personalization and are therefore described in the Personalization Administration Guide.



Run-Time Events Continued

- Can be defined for three types of objects:
 - ▶ Application
 - Examples: logging in, logging out
 - ▶ Applet
 - Examples: displaying an applet, displaying a record
 - ▶ Business component
 - Examples: Querying, deleting a record, setting a field value
- Are fired when a user performs the corresponding activity

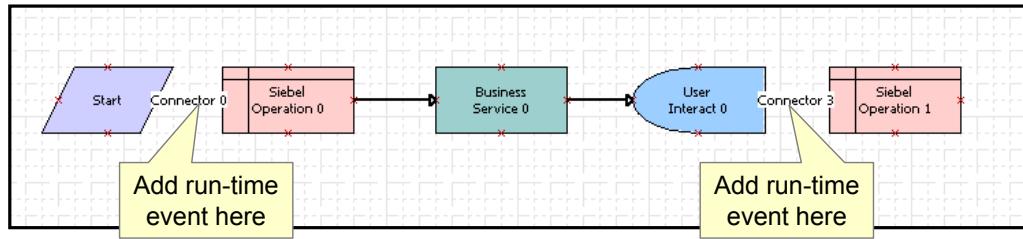
Business Component Events

- Business component events often come in pairs such as:
 - ▶ PreDelete/Delete
 - ▶ PreSetField/SetField
 - ▶ PreWriteRecord/WriteRecord
- The Pre- event is fired immediately prior to object manager executing the operation
 - ▶ Example: PreWriteRecord executes customer processing before the record is saved
 - Allows for possible verification of field values
- The other event is fired immediately after the object manager executes the action
 - ▶ Example: WriteRecord executes customer processing after the record is written
 - Allows for follow-on processing after a record is saved

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Adding a Run-Time Event to a Workflow Process

- A run-time event can be added to a workflow process as a condition on the connector out of a:
 - ▶ Start step
 - Used to invoke the workflow
 - ▶ Wait step
 - Used to resume the workflow
 - ▶ User interact step
 - Used to resume the workflow



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Reference

Siebel Business Process Framework: Workflow Guide: For Developers:
Understanding How Workflow Processes Are Designed

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Invoking a Workflow Using a Run-Time Event

1. Add the Run-Time Event
2. Deploy and Activate the Workflow
3. Reload the Run-Time Events

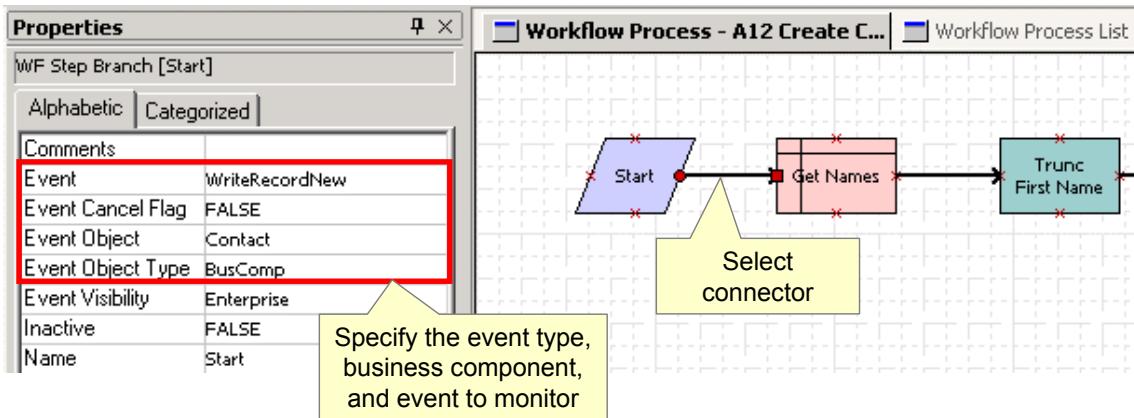
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1. Add the Run-Time Event

- Create the workflow process as usual
- Select the connector to attach a run-time event
 - ▶ Must be a start, wait, or user interact step
- In the properties window, specify the triggering event
- Caution: A workflow with a run-time event on the start step cannot be tested with the workflow simulator



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2. Deploy and Activate the Workflow

- In Siebel Tools, deploy the event
- In the Siebel client, activate the event

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The screenshot shows the Siebel client interface for executing workflow processes. At the top, there is a navigation bar with links for Home, Accounts, Contacts, Opportunities, Quotes, Administration - Business Process, Workflow Processes, Workflow Deployment, Task Deployment, Workflow Instance Admin, and Workflow Instance Monitor.

The main area displays two tables:

- Repository Workflow Processes:** A table with columns: Name, Version, Business Object, Status, Group, and Mode. It shows two entries:
 - A12 Create Contact (Version 1, Contact, Completed, Service Flow)
 - AAA WF (Version 0, Completed, Service Flow)
- Active Workflow Processes:** A table with columns: Name, Version, Repository Version, Business Object, Group, Deployment Stat, and Activation. It shows two entries:
 - A12 Create Contact 1 (Version 0, Contact, Active)
 - A12 Create Contact 0 (Version 0, Contact, Outdated)

A red arrow points from the "Activate" button in the Repository Workflow Processes table to the "Activation" column in the Active Workflow Processes table, indicating the relationship between deployment and activation.

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2. Deploy and Activate the Workflow Continued

- Activating the event automatically registers the run-time event and associated workflow with the Siebel run-time event engine
 - ▶ Creates an action set that invokes the Workflow Process Manager

The screenshot shows the Siebel Administration - Runtime Events screen. A workflow named 'Workflow_6-4DMOX' is selected. The 'More Info' panel displays its configuration:

- Name:** Workflow_6-4DMOX
- Action Type:** BusService
- Sequence:** 1
- Active:** checked
- Start Date:** (empty)
- End Date:** (empty)
- Description:** (empty)

Annotations highlight specific fields:

- A yellow box labeled "Row ID of activated workflow" points to the "Name" field.
- A yellow box labeled "Business Service, method to invoke" points to the "Action Type" dropdown.
- A red box highlights the "Business Service Name" field containing "Workflow Process Manager".
- A red box highlights the "Business Service Method" field containing "RunProcess".
- A red box highlights the "Business Service Context" field containing "ProcessId", "6-4DMOX".
- A yellow box labeled "Arguments to pass in" points to the "Value", "Set Minimum", and "Set Maximum" fields.

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3. Reload the Run-Time Events

- Navigate to Administration - Runtime Events > Events
- Select Menu > Reload Runtime Events
 - ▶ Updates the run-time event engine with the new run-time event
 - ▶ Not necessary to query for the specific run-time event

The screenshot shows the Siebel interface with the 'Events' screen open. The top navigation bar includes links for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, and Administration - Runtime Events. Below the navigation is a toolbar with Action Sets, Event Aliases, and Events.

The main area displays a grid of events. One row is highlighted in yellow, and a callout box points to it with the text: "Run-time event created by activating the workflow process". The grid columns are: Name, Object Type, Object Name, Event, Subevent, and Action Set Name. The highlighted row contains: WriteRecordNew, Contact, BusComp, Workflow_6-48ZIJ.

Name	Object Type	Object Name	Event	Subevent	Action Set Name
New Record [Ctrl+N]	BusComp	Contact	WriteRecordNew		Workflow_6-48ZIJ
Copy Record [Ctrl+B]					
Save Record [Ctrl+S]					
New Query [Alt+Q]					
Run Query [Alt+ENTER]					
Refine Query [Alt+R]					
About Record [Ctrl+Alt+K]					
Record Count [Ctrl+Shift+3]					
Create Bookmark...					
Print Preview...					
Print...					
Columns Displayed [Ctrl+Shift+K]					
Advanced Sort [Ctrl+Shift+O]					
Import...					
Export...					
XML Export...					
XML Import...					
Reload Runtime Events					

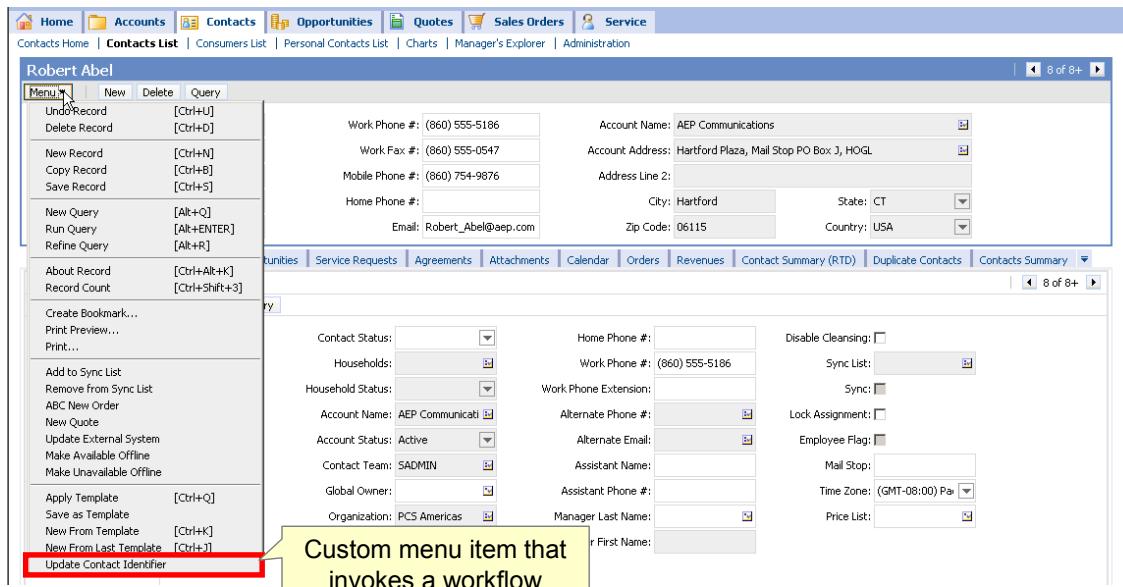
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Invoking Workflows Using a Custom Control

- User explicitly clicks a custom button or menu item to invoke the workflow
- Configuration involves applet user properties



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Invoking a Workflow Using a Custom Menu Item

- Create a command object
 - ▶ Specify a value for the Method property
- Add an applet method menu item to reference the command

The screenshot shows the Siebel application interface with three windows:

- Commands**: A grid view showing a row for "Update Customer Code". The "Name" column contains "Update Customer Code", the "Project" column contains "AAA Workflows Server", and the "Method" column contains "ABCWF".
- Applets**: A grid view showing a row for "Contact Form Applet". The "Name" column contains "Contact Form Applet", the "Project" column contains "Contact (SSE)", and the "Business Component" column contains "Contact".
- Applet Method Menu Item List**: A grid view showing a row for "Update Customer Code". The "Command" column contains "Update Customer Code", the "Menu Text" column contains "Update Contact Identifier", and the "Menu Text - String Reference" column contains "Update Contact Identifier".

A red arrow points from the "Update Customer Code" entry in the Commands window to the same entry in the Applet Method Menu Item List window.

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Invoking a Workflow Using a Custom Menu Item Continued

- Add a new Applet User property that associates the workflow to be invoked with the new named method

The screenshot shows two windows from a Siebel application:

- Commands Window:** A grid view with columns: W, Name, Changed, Project, Target, Method, Business Service. A row for "Update Customer Code" has its "Method" field set to "ABCWF". This row is highlighted with a red box.
- Applet User Properties Window:** A grid view with columns: W, Name, Changed, Value. It lists several properties. One row, "Named Method: ABCWF", is highlighted with a red box. Its value column contains the following Java code:


```
INVOKESEVC, 'Workflow Process Manager', 'RunProcess', [ProcessName], "A11 Update ContactCode", "RowId", [Id]
```

Two callout boxes point to the highlighted rows:

- An arrow points to the "Named Method: ABCWF" row in the Applet User Properties window with the text: "Invoke this business service and method and ..."
- An arrow points to the "Value" column of the same row with the text: "... pass in these pairs of argument names and values"

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Invoking a Workflow Using a Custom Button

- Create a custom control for the button
 - ▶ Specify a value for the Method Invoked property
- Add a new Applet User property that associates the workflow to be invoked with the new named method

The screenshot shows two windows from a Siebel application:

- Controls** window: A table with columns Name, Caption, and Method Invoked. A row for "CreateActivity" has "Create Activity" in the Caption column and "NewActivity" in the Method Invoked column. A callout bubble points to the Method Invoked field with the text: "Specify a user-defined name for a Method to invoke on the control".
- Applet User Properties** window: A table with columns W, Name, and Value. A row for "Named Method: NewActivity" has "INVOKESVC", "Workflow Process Manager", "RunProcess", "", "ProcessName", "", "CreateActivity", "", "RowId", "[Id]" in the Value column. A callout bubble points to this row with the text: "Create an applet user property specifying the workflow to execute when the named method is invoked".

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Invoking a Workflow Process Explicitly

- The Workflow Process Manager business service can be referenced explicitly:
 - ▶ In a script
 - ▶ As parameters in declarative configuration
- Developers must specify:
 - ▶ The name of the business service and method
 - ▶ The name of the workflow process and other parameters as input arguments
 - Often the RowId parameter must be passed in

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Invoking a Workflow Process Explicitly Continued

- A workflow process can also be executed using the business service simulator
 - ▶ Is an alternative way of testing new workflows

The screenshot shows the Siebel Business Service Simulator interface. At the top, there's a navigation bar with links like Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, Administration - Business Service, and a dropdown menu. Below the navigation bar is a toolbar with buttons for Simulator, Menu, New, Delete, Query, Run, Load From File..., Save To File..., and Run On One Input. The main area has a title 'Service Name' and 'Method Name'. Under 'Service Name', 'Workflow Process Manager' is selected, and under 'Method Name', 'RunProcess' is selected. A callout box points to this row with the text 'Business service that executes workflow processes'. Below this is a table titled 'Input Arguments'. It has columns: Test Case #, Type, Value, Child Type, Child Value, Property Name, and Property Value. A single row is shown with 'Test Case #' as '>', 'Type' as 'ProcessName', 'Value' as 'A12 Create Contact', and 'Property Name' and 'Property Value' both as 'A12 Create Contact'. A callout box points to the 'Value' column with the text 'Provide name of workflow process as input argument'. At the bottom of the interface, there are links for Details, Methods, Scripts, Simulator, and User Prop.

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Module Highlights

- Workflow processes are executed in the Workflow Process manager in either the application object manager or in a server component
 - ▶ Can be executed either synchronously or asynchronously
- A workflow process can be invoked by a variety of mechanisms
 - ▶ Run-time events
 - ▶ Custom buttons and menu items
 - ▶ Workflow policies
- Run-time events are a mechanism that allows customer-configured processing to be triggered by user activity



Lab

- In the lab you will:
 - ▶ Invoke a workflow from a custom menu item
 - ▶ Invoke a workflow using a run-time event

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Module 38: Using Workflow Policies

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Module Objectives

- After completing this module you should be able to:
 - ▶ Create a workflow policy that invokes a workflow process in the Workflow Process Manager server component
 - ▶ Enable the workflow policy using workflow server components
- Why you need to know:
 - ▶ Some workflow processes are best executed asynchronously on the Siebel server

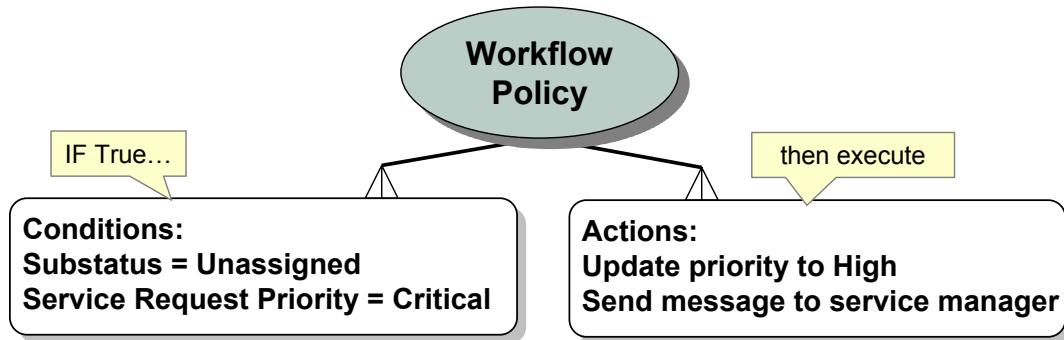


Asynchronous Workflow Processing

- Some workflows need to be executed asynchronously
 - ▶ They might run for a long time and should not execute in the user's object manager
 - ▶ They might need to wait for the invoking condition to be satisfied for some period of time
 - Example: If a critical service request remains unassigned for more than two hours, notify the service manager and set the priority to High
- Workflow policies are a mechanism for asynchronous execution of workflow processes

Workflow Policies

- A workflow policy is a rule consisting of:
 - ▶ One or more policy conditions
 - ▶ A policy action
- Action is invoked when all conditions are true
- Example: When a service request priority = Critical AND substatus = Unassigned:
 - ▶ Send urgent message to service manager



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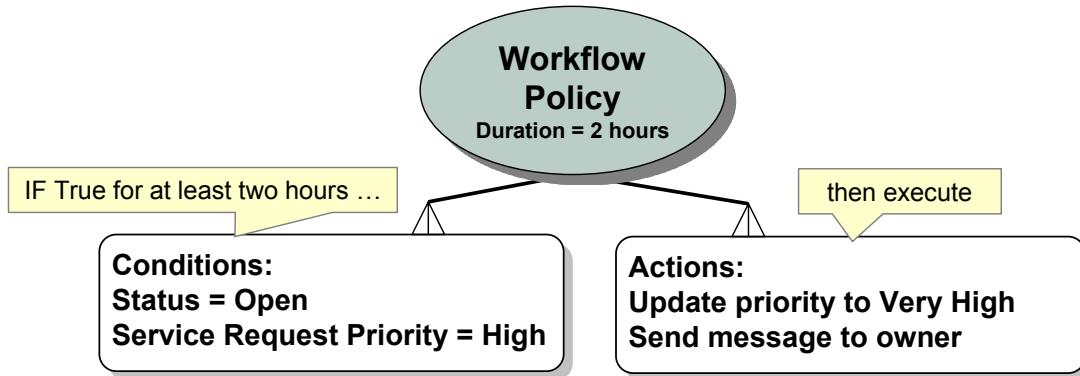
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Reference

Siebel Business Process Framework: Workflow Guide: Workflow Policies

Workflow Policy Conditions

- Policy condition specifies a logical relationship between a workflow policy column and a value
- All policy conditions must be satisfied for a condition to apply
- Policy may have a duration specified
 - ▶ Conditions must apply for the duration before the action is executed



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Workflow Policy Column

A workflow policy column is an object definition configured in Siebel Tools that identifies a column in a Siebel database table that can be monitored by a workflow policy.



Workflow Policy Actions

- A workflow policy action is the response to be executed
- Consists of:
 - ▶ Type of program to be executed
 - Examples: Run workflow process, send email, send message broadcast
 - ▶ One or more program-specific arguments
- Multiple types of programs are supported
 - ▶ Not restricted to running workflow processes
- Actions are defined separately
 - ▶ Can be used in multiple workflow policies



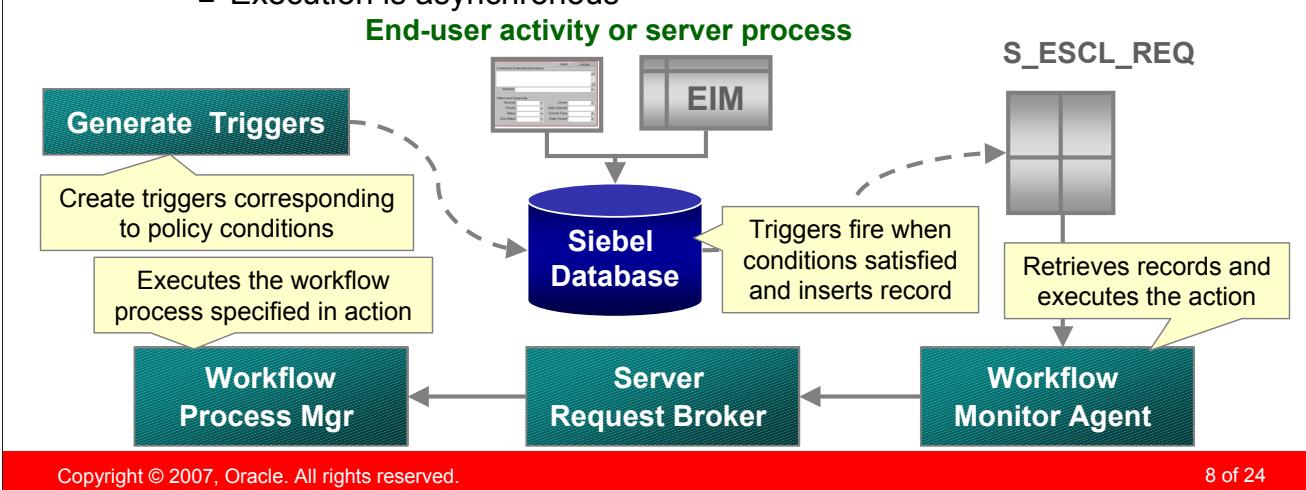
Workflow Policies

- Leverage:
 - ▶ A separate server component known as the Workflow Process Manager component
 - Is a server component optimized for executing workflows
 - ▶ Behaves like an object manager
 - Can access the business and data layers
 - ▶ Does not have a user interface for direct user interaction
 - ▶ Database triggers:
 - A trigger is a process or a stored procedure attached to a database table that fires when a specified data modification event occurs
 - Are created by the Generate Triggers server component

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Executing Workflow Policies

- Generate Triggers creates the database triggers required to monitor conditions in policies
- Workflow Monitor Agent checks for fired triggers
 - ▶ Identifies policy conditions that are satisfied
 - ▶ Invokes the desired workflow process
- Workflow Process Manager executes the workflow process
 - Execution is asynchronous



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Workflow Policy Groups

- A workflow policy group is a collection of workflow policies that are monitored as a group by a workflow monitor agent process
 - ▶ Typically workflow policies that can be monitored at the same frequency are assigned to the same policy group

The screenshot shows the Siebel 8.0 Business Process Administration interface. At the top, there's a navigation bar with links like Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, Administration - Business Process, and Policy Groups. Below the navigation bar, the main content area has two sections: 'Policy Groups' and 'Policies'.
Policy Groups: This section displays a table with columns 'Name' and 'Comments'. One row is highlighted with a yellow background and shows 'Marketing' as the name and 'Opportunity Workflow Group' and 'Opportunity Workflow 7.5' as comments. A red box highlights the 'Marketing' entry.
Policies: This section displays a table with columns 'Name', 'Object', 'Activation', 'Expiration', and 'Comments'. One row is highlighted with a yellow background and shows 'Automatic Data Retrieval' as the name, 'Data Retrieval' as the object, '3/1/2002 04:00:00' as the expiration, and 'Data Retrieval' as the comment. A red box highlights the 'Automatic Data Retrieval' entry.

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Prerequisite for Executing Workflow Policies

- Enable the Workflow Management component group on the enterprise
- Assign and enable the component group on a server
 - ▶ Navigate to Administration - Server Configuration > Enterprises > Component Groups

The screenshot shows the Siebel Server Configuration Administration interface. The top navigation bar includes links for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, Administration - Server Configuration, Enterprise Explorer, Enterprises, Servers, and Job Templates. The main content area is titled "Enterprise Servers" and shows a list of servers, with "Siebel" selected. Below this is a "Component Groups" table.

Component Group	Alias	Number of Comp	Enable state	Description
Workflow Management	Workflow	6	Enabled	Workflow Management Components
Territory Management	TerritoryMgmt	8	Enabled	Territory Management Components

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Enable Component Group

If the Workflow Management component group is not enabled as part of installation, it can be enabled using the Server Configuration Administration screen.



Workflow Component Definitions

- Workflow Component Group consists of six server component definitions

Component	Alias	Description
Generate Triggers	GenTrig	Generates triggers for Workflow Manager and Assignment Manager
Workflow Action Agent	WorkActn	Executes Workflow Manager actions
Workflow Monitor Agent	WorkMon	Monitors Workflow Manager events
Workflow Process Batch Manager	WfProcBatchMgr	Executes Business Processes in batch
Workflow Process Manager	WfProcMgr	Executes real-time Business Processes
Workflow Recovery Manager	WfRecvMgr	Recovers interrupted Business Processes due to server failures

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Generate Triggers	Creates insert, update, and delete triggers on base tables based on defined workflow policies.
Workflow Action Agent	Optional component with email consolidation. Executes actions associated to a workflow policy.
Workflow Monitor Agent	Monitors workflow policies to invoke workflow processes.
Workflow Process Batch Manager	Enables workflow processes to be run in batch mode, allowing actions to be executed for multiple records.
Workflow Process Manager	This is the workflow engine for workflow processes and is used for real-time process automation.
Workflow Recovery Manager	Recovers crashed instances and resumes instances that have been waiting beyond a due date.

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Implementing a Workflow Policy

1. Create a Workflow Group
2. Create a Workflow Policy Action
3. Create a Workflow Policy
4. Generate Database Triggers
5. Start Workflow Monitor Agent

1. Create a Workflow Group

- Navigate to Administration - Business Process > Policy Groups
- Create a new policy group

The screenshot shows the Siebel application interface with the following details:

- Top Navigation Bar:** Home, Accounts, Contacts, Opportunities, Quotes, Administration - Business Process, Workflow Processes, Workflow Deployment, Task Deployment, Workflow Instance Admin, Workflow Instance Monitor, Policy Groups.
- Sub-Header:** Policy Groups, Menu ▾, New, Delete, Query, 1 - 10 of 11+.
- Data Grid:** A table with two columns: Name and Comments. One row is visible: "Hourly Service Requests" with the comment "Monitor high priority SRs".

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2. Create a Workflow Policy Action

- Navigate to Administration - Business Process > Actions
- Create a new action
 - ▶ Specify Run Workflow Process
- Provide workflow process as an argument

The screenshot shows the Siebel interface for creating a new workflow policy action. The top navigation bar includes Home, Accounts, Contacts, Opportunities, Quotes, Administration - Business Process, and a dropdown menu. Below the navigation bar are links for Workflow Processes, Workflow Deployment, Task Deployment, Workflow Instance Admin, Workflow Instance Monitor, and Actions.

The main area displays two tables. The first table, titled "Actions", has columns for Name, Program, Workflow Object, and Comments. It shows one entry: "New Service Request" with "Run Workflow Process" as the program and "Service Request" as the workflow object. A callout box points to the "Program" column with the text "Specify the Run Workflow Process program".

The second table, titled "Arguments", has columns for Argument, Required, and Value. It shows one entry: "ProcessName" with "Service Order ASI" as the value. A callout box points to the "Value" column with the text "Specify the workflow process to invoke".

At the bottom left, a copyright notice reads "Copyright © 2007, Oracle. All rights reserved." At the bottom right, it says "14 of 24".

3. Create a Workflow Policy

- Navigate to Administration - Business Process > Policies
- Create a new policy
 - ▶ Specify conditions
 - ▶ Add one or more actions

Policies List

Name	Workflow Object	Policy Group	Activation	Expiration
New Service Request Policy	Create a policy			

Conditions

Condition Field	Operation	Value
Service Request Component	IS ADDED	

Actions

Action	Sequence	Consolidate
New Service Request	1	

Associate an action to invoke the workflow process

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3. Set Duration

- Set duration for the workflow policy
 - ▶ All conditions must be met *and* the policy duration must be satisfied to trigger the workflow policy actions
 - ▶ Defaults to 0
 - The workflow policy actions are triggered as soon as the policy conditions are met

The screenshot shows the Siebel application interface. At the top, there is a navigation bar with links for Home, Accounts, Contacts, Opportunities, Quotes, Administration - Business Process, and Policies. Below the navigation bar, the main area displays two tables.

Policies List: This table lists a single policy named "New Service Request Policy". The columns include Name, Workflow Object, Policy Group, Duration, Units, and Activation. The "Duration" field contains "1" and the "Units" field contains "Hour(s)". The "Activation" column shows a green status bar.

Name	Workflow Object	Policy Group	Duration	Units	Activation
New Service Request Policy	Service Request	Hourly Service Requests	1	Hour(s)	(Green Status Bar)

Conditions: This table lists a condition for the "Service Request Component" with the operation "IS ADDED".

Condition Field	Operation	Value
Service Request Component	IS ADDED	

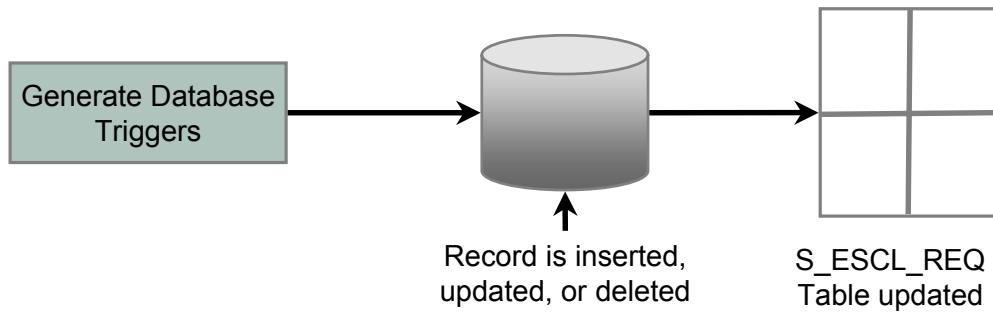
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4. Generate Database Triggers

- Run a Generate Triggers batch job to create database triggers corresponding to the policy conditions
 - ▶ When a trigger fires against a Policy Condition, a record is inserted in the Escalation Request Table (S_ESCL_REQ)
 - ▶ S_ESCL_REQ contains all the rows in the database that could trigger a policy to take action

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4. Generate Database Triggers Continued

- Navigate to Administration - Server Management > Jobs
- Create a new job
 - ▶ Select Generate Triggers
 - ▶ Specify parameters
- Submit job

The screenshot shows the Siebel Administration - Server Management interface. The top navigation bar includes Home, Accounts, Contacts, Opportunities, Quotes, and Administration - Server Management. Below the navigation bar is a toolbar with buttons for New, Delete, Query, Submit Job, Cancel Job, Hold Job, and Resume Job. The main area displays a table of jobs, with one row selected. A callout box points to the 'Submit Job' button with the text 'Click Submit Job to start Component Job'. Another callout box points to the 'Component/Job' column of the selected row with the text 'Create new Job and select Generate Triggers'. Below the table is a 'Job Parameters' dialog box. It has columns for Name, Value, Required?, and Fixed?. A red box highlights the 'Value' column for the parameter 'EXEC', which is set to 'True'. A callout box points to this row with the text 'Specify parameters'.

State (Icon)	ID	Component/Job	Repeating?	Requested Serve	Execution Server	Reqes
>	1-13F5	Generate Triggers				

Name	Value	Required?	Fixed?
EXEC	True		
Privileged User Password	SIEBEL		
Privileged User	SIEBEL		

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Privileged User

Credentials for a privilege user must be specified in order to allow the generation of triggers on the Siebel database tables. Most often the database owner for the Siebel database is specified.

5. Start Workflow Monitor Agent

- Create a custom Workflow Monitor Agent component definition to specify a Workflow group
 - ▶ Monitors all policies within a single Workflow group
- Activate the new component definition to make it available

The screenshot shows the Siebel interface for managing enterprise servers. The top navigation bar includes Home, Accounts, Contacts, Opportunities, Quotes, Administration - Server Configuration, Enterprise Explorer, Enterprises, Servers, and Job Template. Below this is a sub-navigation bar for Enterprise Servers, Menu, Backup Enterprise, and a page counter (1 - 1 of 1). The main content area is titled 'Enterprise Server Description' and shows a list of servers: Siebel (Siebel Enterprise Server). A sub-tab bar below lists Component Groups, Component Definitions (which is selected), System Alerts, Profile Configuration, Parameters, and Synchronize. A toolbar below the sub-tabs includes New, Delete, Query, Activate (which is highlighted with a red box), Deactivate, and Synchronize. A table below lists components with columns: Component, Alias, Component Type, State, and Component Group. The table rows are:

Component	Alias	Component Type	State	Component Group
Workflow Action Agent	WorkActn	Workflow Action Agent	Active	Workflow Management
Workflow Monitor Agent	WorkMon	Workflow Monitor Agent	Active	Workflow Management
Workflow Monitor Agent Hourly	WFM Hourly	Workflow Monitor Agent	Creating	Workflow Management
Workflow Process Batch Manager	WfProcBatchMgr	Business Service Manager	Active	Workflow Management

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Verify the Workflow Policy

- Create a test record (or modify an existing record) that violates the policy condition
- Wait for at least the policy duration
- Verify that the desired workflow actions are executed

Comparing Different Methods

- Use different methods for different needs

	Workflow Policies	Runtime Events	Custom Control
Generate Triggers	Required	Not Required	Not Required
WF Monitor Agent	Required	Not Required	Not Required
Runtime Event	Not Used	Invokes process	Not Used
Synchronous	Asynchronous (runs in background)	Synchronous (runs in user session)	Synchronous (runs in user session)
Runs on Mobile Client	No (runs on Siebel Server)	Yes	Yes

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Module Highlights

- A workflow policy is a rule consisting of one or more conditions and a policy action to be executed when the conditions are satisfied
- Workflow policies implement asynchronous execution of workflow processes
- Workflow policies require the use of:
 - ▶ Generate Triggers to create the database triggers
 - ▶ Workflow Monitor Agent to check for fired triggers
 - ▶ Workflow Process Manager to execute the associated workflow policy



Lab

- In the lab you will:
 - ▶ Create a workflow policy
 - ▶ Enable the workflow management group components
 - ▶ Test the workflow policy

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Siebel 8.0 Essentials

Module 39: Siebel Task UI

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Module Objectives

- After completing this module you should be able to:
 - ▶ Describe the role and benefits of Siebel Task UI
 - ▶ Invoke and complete a task
- Why you need to know:
 - ▶ Siebel Task UI provides an alternate style of user interaction that assists successful completion of business tasks and incorporates automation of activities



Business Challenge

- Many tasks require users to perform several steps to complete the task
 - ▶ Users may not be familiar with the sequence of steps
 - ▶ Users may inadvertently skip a step
 - ▶ Users often require additional training to complete the task
- Companies would like to implement a user interaction style that assists users in completing such tasks

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Business Solution: Siebel Task UI

- Uses a wizard-like interface to guide users through steps in a task
 - ▶ Consists of a sequenced set of views, each of which collects a small set of relevant data from the user
- Extends business process automation to the UI layer
 - ▶ Users are directed to complete some steps in a task in a prescribed order

The screenshot shows a Siebel Task UI window. At the top, there is a navigation bar with icons for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Service. On the left, a sidebar titled "Current Task" lists the steps: "Create a New Contact", "Enter Name and Phone Numbers", "Enter Contact Details", and "Review and Submit". The main area is titled "Create a New Contact: Enter Contact Details". It contains four input fields: "Last Name:" with a red asterisk, "First Name:" with a red asterisk, "Middle Initial:", and "Mr/Ms:" with a dropdown arrow. Below the input fields are buttons for "Pause", "Previous", "Next", and "Cancel".

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Features of Siebel Task UI

- Supports forward and backward navigation through a sequence of views
 - ▶ Allows for a set of records to be reviewed and corrected prior to completion of the task
- Supports branching based on user input
- Supports pausing and resuming tasks if users are interrupted
 - ▶ Instance of the partially completed task is saved in the user's inbox
 - Context and all data are maintained
 - ▶ Task is resumed from the Universal Inbox
- Supports transfer of paused tasks to other users

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Task UI

Task UI refers to both the wizard-like style of the user interface as well as to the underlying Task UI framework which consists of the development, run-time, and administrative features that support this type of user interface.

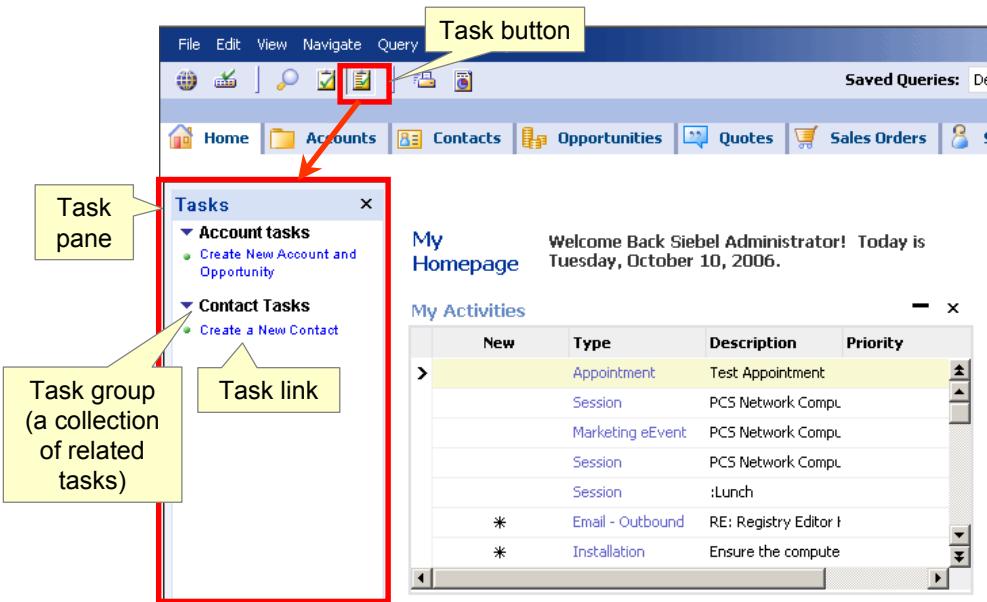
Task

The term task (in the context of task UI) refers in general to a unit of work to be performed by a user as part of larger business process. The term task is also used to refer to a specific task developed using the Task UI framework.



Using Task UI

- Click the Task button to expose the Task pane
 - ▶ Displays links to tasks that can be invoked in the current application context



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Reference

Siebel Business Process Framework: Task UI Guide: Task UI Concepts



Invoking a Task

- Click the link for the desired task
 - ▶ A task view replaces the standard Siebel view
 - ▶ Task pane displays other views in the task to provide context for the overall task
 - Views may be grouped into chapters
- Enter data in fields in the first view
- Click Next to proceed to subsequent views

The screenshot shows the Siebel Task UI interface. At the top, there is a navigation bar with icons for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Service. Below the navigation bar, a task pane titled "Current Task" is open, displaying a list of steps: "Create a New Contact and Add Notes", "Enter Name and Phone Numbers", "Enter Contact Details", "Add a Contact Note", and "Review and Submit". The "Enter Contact Details" step is currently selected and highlighted in yellow. The main workspace shows a form titled "Create a New Contact and Add Notes: Enter Contact Details". The form contains fields for Last Name (Tiger), First Name (Scott), Middle Initial (empty), and Mr/Ms (Mr.). To the right of the form, a yellow callout bubble says "Click Next to proceed". At the bottom of the workspace, there are buttons for Pause, Previous, Next, and Cancel.

Task pane shows current position in task

Enter data

Click Next to proceed

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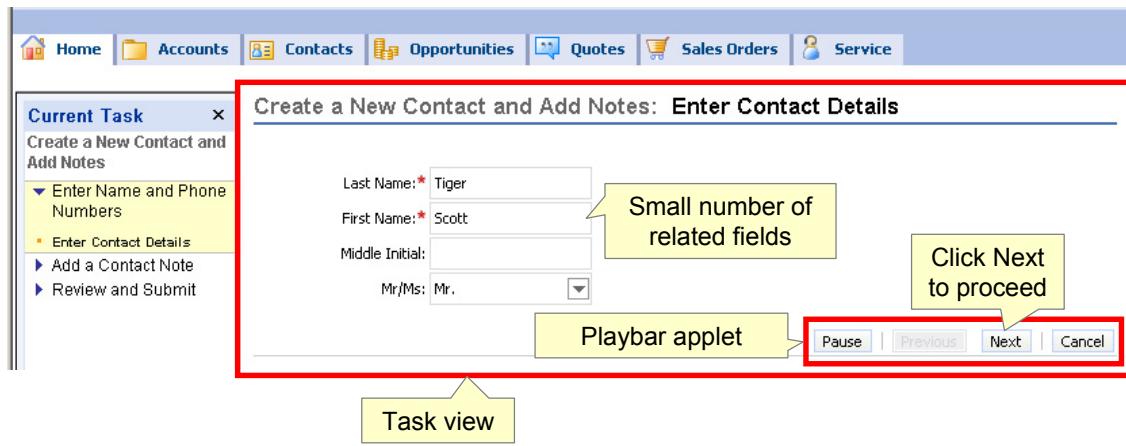
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Invoking a Task Continued

- Task views are typically characterized by:
 - ▶ Small number of fields in each applet in the view
 - Each view focuses the user on a specific set of data to edit
 - ▶ A set of navigation buttons located above and/or below the applets
 - Known as a Playbar applet
 - ▶ Absence of navigation options such as view tabs and hyperlinks



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Progressing Through a Task

- Enter data in each subsequent view
- Click Next to proceed
- Click Back to return to a previous view to inspect or modify previously entered data

The screenshot shows the Siebel Task UI interface. At the top, there is a navigation bar with links: Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Service. Below the navigation bar, a title bar reads "Create a New Contact and Add Notes: Enter Phone Details". On the left, a "Current Task" sidebar lists steps: "Create a New Contact and Add Notes", "Enter Name and Phone Numbers" (which is expanded), "Enter Contact Details", "Enter Phone Details" (highlighted with a yellow background and a yellow arrow pointing to it), "Add a Contact Note", and "Review and Submit". To the right of the sidebar, there are input fields for phone numbers and an email address. At the bottom right, there are buttons for Pause, Previous, Next, and Cancel.

Task views in chapter
are listed as user
navigates to the view

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Branching in a Task

- Tasks can branch based on data the user inputs
 - ▶ Example: branching based on lead quality of an opportunity
- Some views may explicitly present to the user a choice about the next step to be executed
 - ▶ Select the desired activity and click Next

The screenshot shows a Siebel Task UI interface. At the top, there is a navigation bar with links: Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Service. Below the navigation bar, a title bar says "Create a New Contact and Add Notes: Get the next step". On the left, a sidebar titled "Current Task" lists steps: "Create a New Contact and Add Notes", "Enter Name and Phone Numbers", "Add a Contact Note" (which is expanded to show "Get the next step", "Add a Note for Contact", "Get the next step", "Add a Note for Contact", and "Get the next step"), and "Review and Submit". In the center, a question "What would you like to do next?*" is followed by two radio buttons: "Review and submit" and "Add a new note". The "Add a new note" button is selected and highlighted with a red box. A yellow callout box labeled "User makes a selection" points to the radio buttons. At the bottom right of the main area, there are buttons for "Pause", "Previous", "Next", and "Cancel".

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Pausing a Task

- Click Pause to suspend task activity
 - ▶ All data and context is retained
 - ▶ A link to the paused task is added to the user's inbox
- Navigating outside the task view implicitly pauses a task
 - ▶ For example clicking a screen tab or the site map button

The screenshot illustrates the Siebel Task UI. At the top, there is a navigation bar with tabs: Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Service. Below the navigation bar, a modal window titled "Current Task" is open, prompting the user to "Create a New Contact and Add Notes" and enter phone details. The "Enter Phone Details" section contains fields for Work Phone, Work Fax, Mobile Phone, Home Phone, and Email, with the email field showing "Email: scott.tiger@oracle.com". At the bottom of this window is a "Pause" button, which is highlighted with a red box. Below the modal, the main application interface shows an "Inbox" tab selected. The "My Inbox Items" list displays two items: "Create a New Contact" from "Siebel Administrator" and "Create Account" from "Siebel Administrator". An arrow points from the "Create a New Contact" item in the inbox list to the "Pause" button in the modal window.

Completed	Category	Name	From	Action	Priority	Received	Last Updated	Context
>		Create a New Contact	Siebel Administrator			10/10/2006 7:32:12	10/10/2006 7:32:12	
		Create Account	Siebel Administrator			10/5/2006 1:48:30 F	10/5/2006 1:48:30 F	

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Resuming a Task

- Click the link in the Inbox to resume the task
 - ▶ Task resumes exactly where it was paused

The screenshot illustrates the 'Resuming a Task' process in Siebel. It shows two main views:

- Inbox View:** A grid of tasks. One task, "Create a New Contact", has its link highlighted with a red box. A yellow callout box labeled "Inbox" points to the top-left corner of the grid.
- Create a New Contact View:** A detailed form for creating a new contact. A red arrow points from the highlighted link in the inbox to this view. A yellow callout box labeled "Task view reappears" points to the left side of this window.

The "Create a New Contact" form contains the following fields:

Field	Value
Work Phone #:	(925) 694-1111
Work Fax #:	(925) 694-1991
Mobile Phone #:	(510) 325-1199
Home Phone #:	(510) 654-9119
Email:	scott.tiger@oracle.com

At the bottom of the form are buttons for "Pause", "Previous", "Next", and "Cancel".

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Completing a Task

- Review the data if a final summary view is provided
- Click Submit or Finish to complete the task
 - ▶ Commits all remaining uncommitted data to the database
- The task view is closed and the previous standard view is displayed

The screenshot shows the Siebel Task UI interface. At the top, there's a navigation bar with links: Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Service. Below the navigation bar is a sidebar titled "Current Task" with the following options:

- ▶ Enter Name and Phone Numbers
- ▶ Add a Contact Note
- ▶ **Review and Submit** (this option is currently selected)
- ▶ Review Details

On the right side of the interface, there's a form titled "Create a New Contact and Add Notes: Review Details". It contains fields for Last Name (Tiger), First Name (Scott), Middle Initial (empty), Mr./Ms. (Mr.), Work Phone (925) 694-1111, Work Fax (925) 694-1991, Mobile Phone (510) 325-1199, Home Phone (510) 654-9119, and Email (scott.tiger@oracle.com). Below this is a "Public Notes" section with a table:

Created	Created By	Type	Description
10/12/2006 8:06:10	SADMIN	Note	He would like a on-site visit
10/12/2006 8:05:09	SADMIN	Note	He's extremely interested in our new

At the bottom of the screen, there are buttons for Pause, Previous, Submit (which is highlighted with a red box), and Cancel.

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Persistent Data in Task UI

- All data entered during a task is initially stored in temporary storage managed by the Object Manager
 - ▶ Is not automatically written to the database as user proceeds to next view
- Persistent data is committed to the database:
 - ▶ When the task completes
 - ▶ At intermediate points in the task flow if the underlying task flow contains explicit commit steps
- Records can not be rolled back after being committed
- Data created or modified is not available to others until it is committed
- Data in temporary storage:
 - ▶ Is maintained while the task is paused
 - ▶ Is cleared only when the task is cancelled or completed



Transient Data in Task UI

- Refers to data collected and used during the execution of a task but not saved afterwards
 - ▶ Example: user choice about the next step
- Transient data may be mapped to persistent data in a later step in the task
 - ▶ User enters name of a contact to retrieve
 - ▶ If no contact is found, a new contact record is created and saved
- Transient data disappears when the task ends

The screenshot shows the Siebel Task UI interface. At the top, there's a navigation bar with icons for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Service. Below the navigation bar, a blue header bar displays the title "Create a New Contact and Add Notes: Get the next step". A yellow callout bubble labeled "Task applet" points to this header. On the left, a sidebar titled "Current Task" lists steps: "Enter Name and Phone Numbers", "Add a Contact Note" (which is expanded to show "Get the next step", "Add a Note for Contact", "Get the next step", "Add a Note for Contact", and "Get the next step"), and "Review and Submit". The main content area contains a form with a question "what would you like to do next? *". Two radio buttons are shown: "Review and submit" (unchecked) and "Add a new note" (checked). A red box highlights the "Add a new note" button. A yellow callout bubble points to this button with the text "User's selection does not need to be stored persistently". At the bottom right of the main area, there are buttons for "Pause", "Previous", "Next", and "Cancel".

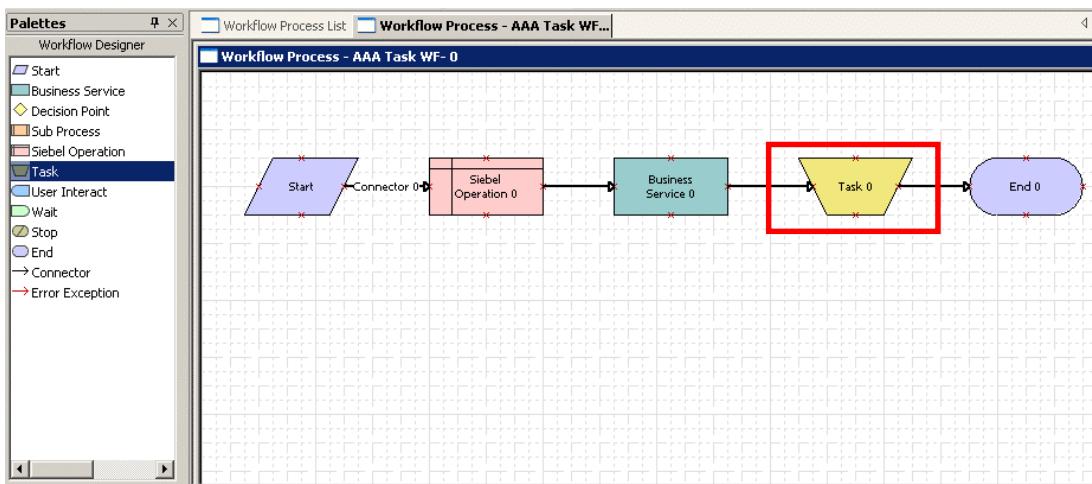
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Tasks and Workflow Processes

- A workflow process can invoke a task
 - ▶ Invokes a task step in the workflow process
- A task can invoke a workflow process
 - ▶ Invokes Workflow Process Manager business service in a task flow
 - ▶ Invokes a workflow using event handlers associated with a Playbar button

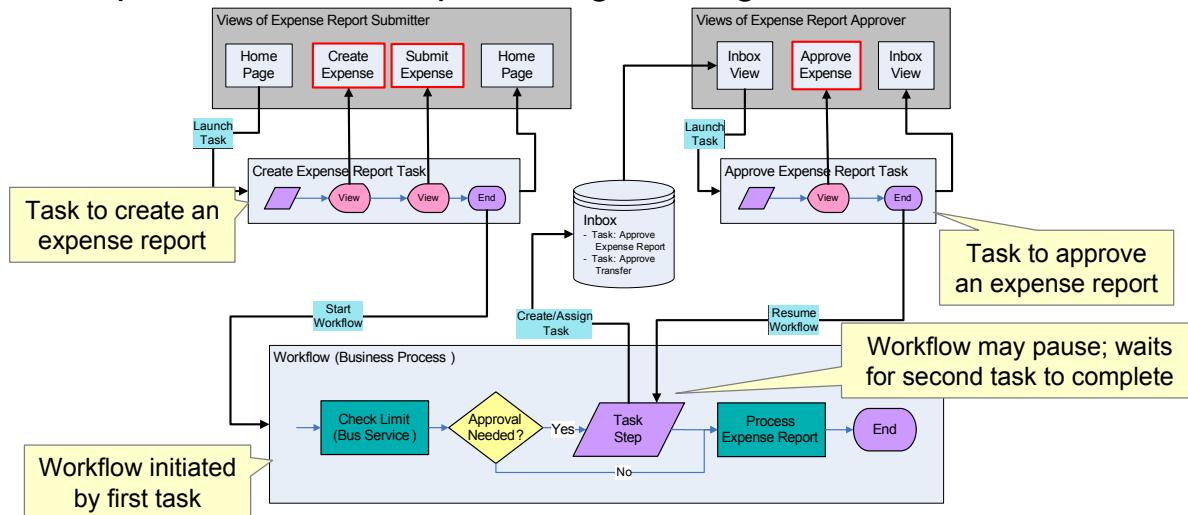


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Tasks and Long-Running Workflow Processes

- Initial task can start a long-running workflow upon completion
- Long-running workflow can assign a task to a user's inbox and then go to sleep
- User can invoke the assigned task from the inbox and upon completion will wake up the long-running workflow



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Comparison of Task UI and the Standard UI

- Consider using Task UI for tasks that:
 - ▶ Are inherently complex
 - Lengthy, complex sets of inputs, lots of branching
 - ▶ Are performed by novice or infrequent users
 - ▶ Can take advantage of the the ability to pause and transfer tasks
 - ▶ Involve transactional processing
 - ▶ Might be integrated with workflows
- Consider using the standard UI for tasks that:
 - ▶ Are simpler
 - ▶ Are performed frequently by power users
 - ▶ Do not involve transactional processing



Module Highlights

- Siebel Task UI is a wizard-like interface that guides users through steps in a task
- Invoke a task from a link in the task pane
- Use the buttons in the Playbar applet to proceed, return to the previous view, pause, or complete the task
 - ▶ Paused tasks are resumed from the user's inbox
- Data collected during a task is not committed to the database
 - ▶ Until the task is completed
 - ▶ Or is explicitly committed at specific points in the task

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Lab

- In the lab you will:
 - ▶ Execute a task

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Module 40: Task UI: Creating a Task

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Module Objectives

- After completing this module you should be able to:
 - ▶ Identify the major components of a task
 - ▶ Configure a task
 - ▶ Administer a task
- Why you need to know:
 - ▶ These are the steps to create and deploy a task



Creating a Task

- Consists of the following activities:
 - ▶ Configuring several types of Task UI components in Siebel Tools
 - ▶ Deploying the task to the run-time client
 - ▶ Administering the task in the run-time client

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Components of a Task

Task Flow

Task View

Task Group

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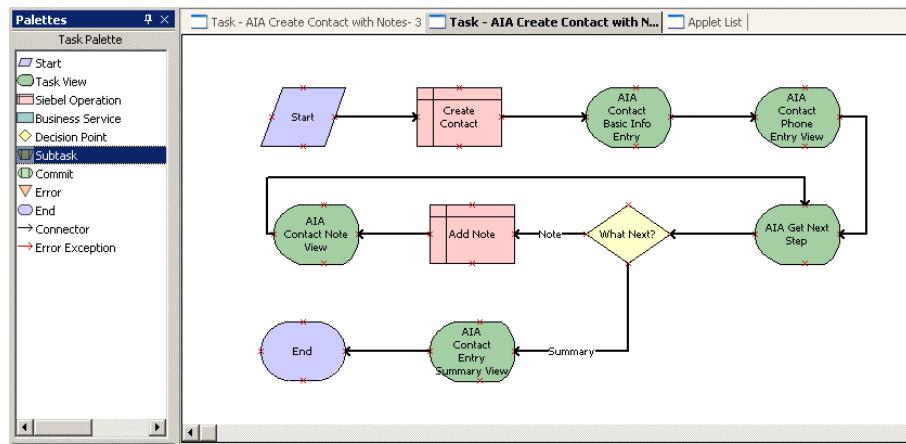
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Reference

Siebel Business Process Framework: Task UI Guide: Task UI Concepts

Task Flow

- Specifies the flow of a task as a sequence of task steps
 - ▶ Examples: Siebel operation, business service, and so on
- Includes one or more task view steps that display a view to the user
- Is configured in Siebel Tools using the Task Flow Designer
 - ▶ Is a visual, declarative editor similar to the workflow designer



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Task View

- Is a special type of view used in a task
 - ▶ Displays data to a user
 - ▶ Allows user to enter data
 - ▶ Allows user to navigate using the buttons in the Playbar applet
- Consists of one or more applets and the Playbar applet
- Is invoked in a task view step in a task flow

The screenshot shows the Siebel Task View interface. At the top, there is a navigation bar with icons for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Service. Below the navigation bar, a blue header bar displays the title "Create a New Contact and Add Notes: Enter Contact Details". On the left, a sidebar titled "Current Task" lists steps: "Create a New Contact and Add Notes", "Enter Name and Phone Numbers", "Enter Contact Details" (which is currently selected), "Add a Contact Note", and "Review and Submit". The main area contains form fields for entering contact details: "Last Name:" with value "Tiger", "First Name:" with value "Scott", "Middle Initial:" (empty), and "Mr/Ms:" with value "Mr.". At the bottom right of the main area are buttons for "Pause", "Previous", "Next", and "Cancel".

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Task View Continued

- Differs from standard views
 - ▶ The view is not displayed in the context of a screen
 - ▶ The user must use buttons in the Playbar applet to navigate
 - Clicking any UI element outside the task view and task pane pauses the task and displays the prior standard Siebel view
 - ▶ Applets in a task view do not have
 - An applet menu
 - The standard record controls such as New, Delete, and Query

The screenshot shows the Siebel Task View interface. At the top, there is a navigation bar with links for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Service. On the left, a vertical sidebar titled "Current Task" lists steps: "Create a New Contact and Add Notes", "Enter Name and Phone Numbers", "Enter Contact Details", "Add a Contact Note", and "Review and Submit". The main area is titled "Create a New Contact and Add Notes: Enter Contact Details". It contains fields for Last Name (Tiger), First Name (Scott), Middle Initial (empty), and Mr/Ms (Mr.). At the bottom right are buttons for Pause, Previous, Next, and Cancel.

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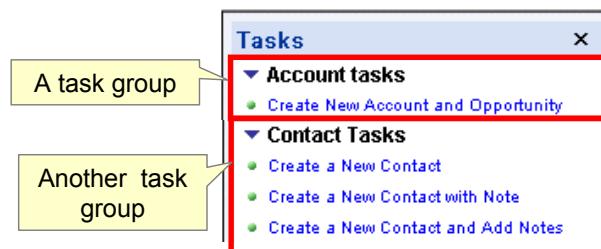
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Task Group

- Represents a collection of related tasks that can be displayed as a set in the task pane
- Can be configured to be:
 - ▶ Associated with a single standard view
 - ▶ Available independent of the standard view
 - ▶ Restricted to a single application
 - ▶ Available across all applications



Configuring a Task

1. Configure the Task Flow
2. Create Applets for Task Views
3. Configure the Task Views
4. Bind the Task Views
5. Configure Remaining Task Steps
6. Assign Chapters

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Configuring a Task Continued

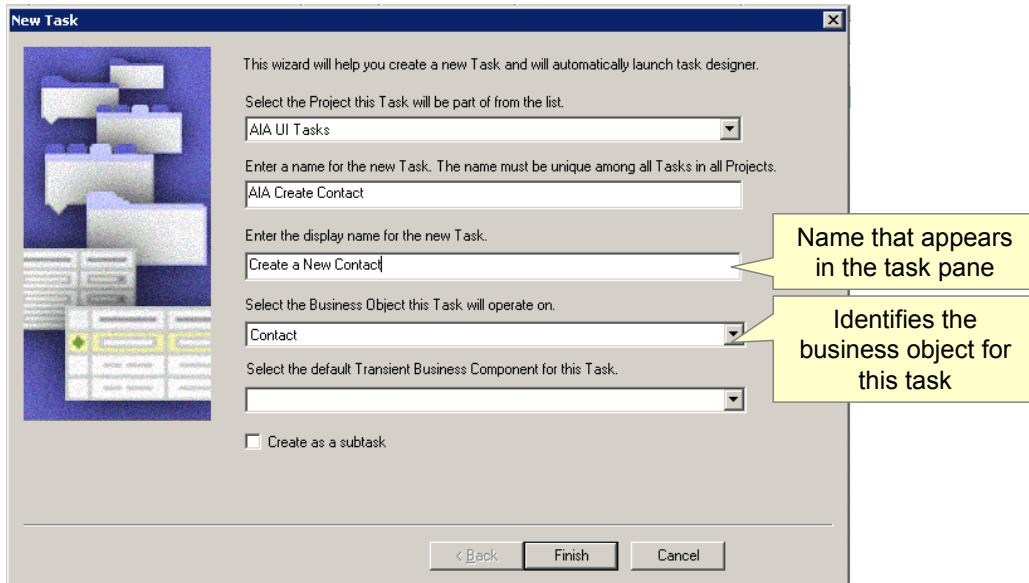
7. Create the Task Group

8. Compile the Configured Objects

9. Publish the Task Flow

1. Configure the Task Flow

- Use the Task Wizard to create a Task object
 - ▶ Select File > New Object
 - ▶ Select the Task Tab and click the Task icon
 - ▶ Enter fields as below:



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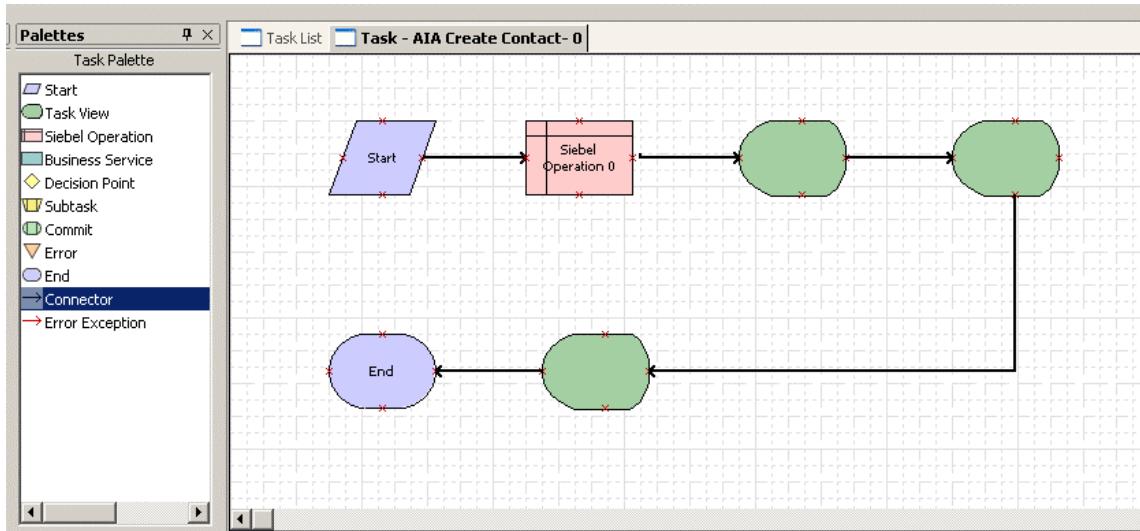
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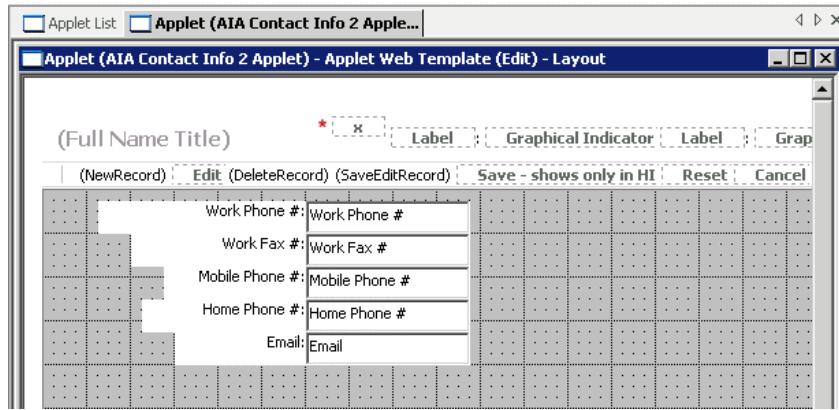
1. Configure the Task Flow Continued

- In the task Designer, add steps as required
 - ▶ Drag connectors and anchor them to the steps



2. Create Applets for Task Views

- Use the Form Applet Wizard to create applets that display a small set of focused data
- Alternatively, copy an existing applet and delete the unnecessary fields



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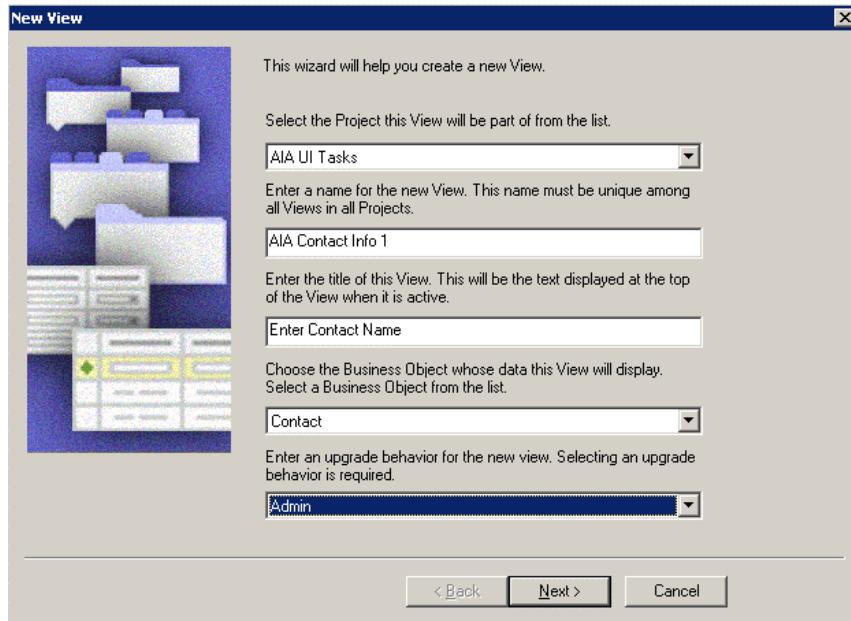
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3. Configure the Task Views

- Use the Task View Wizard to create one or more task views
 - ▶ View objects with type = Task



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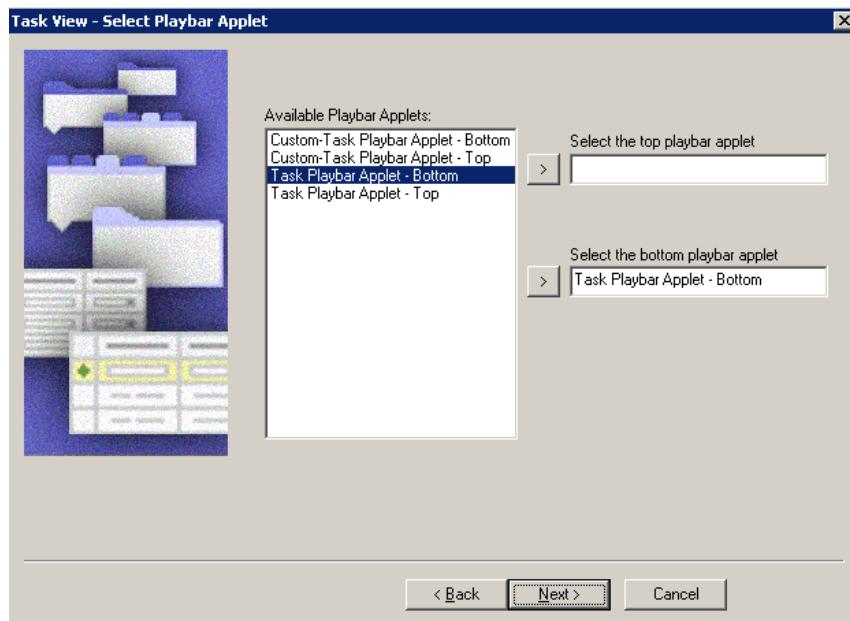
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Upgrade Behavior

Upgrade behavior is a property of several object types that specifies how the object should be processed when a repository merge is run with an Incorporate custom layout.

3. Configure the Task Views Continued

- Select a view Web template
- Assign one or more customized applets
- Add the Playbar applet to the top and/or the bottom of the view



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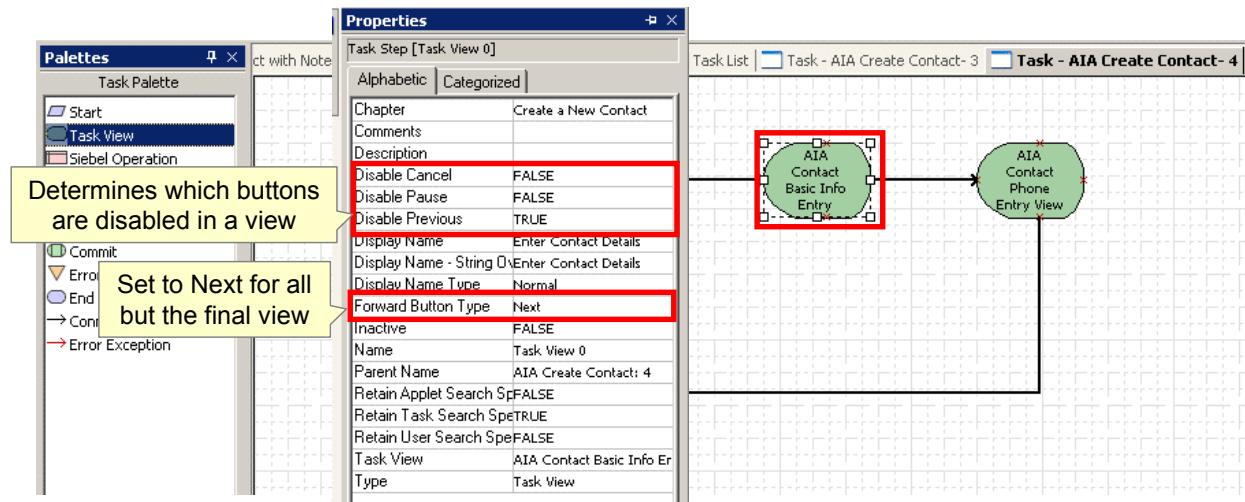
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4. Bind the Task Views

- For each task view step in the flow, assign a task view
 - ▶ Right-click the task step and select Bind Task View
 - ▶ Select the view from the list of available views
 - ▶ Set the button properties for the view

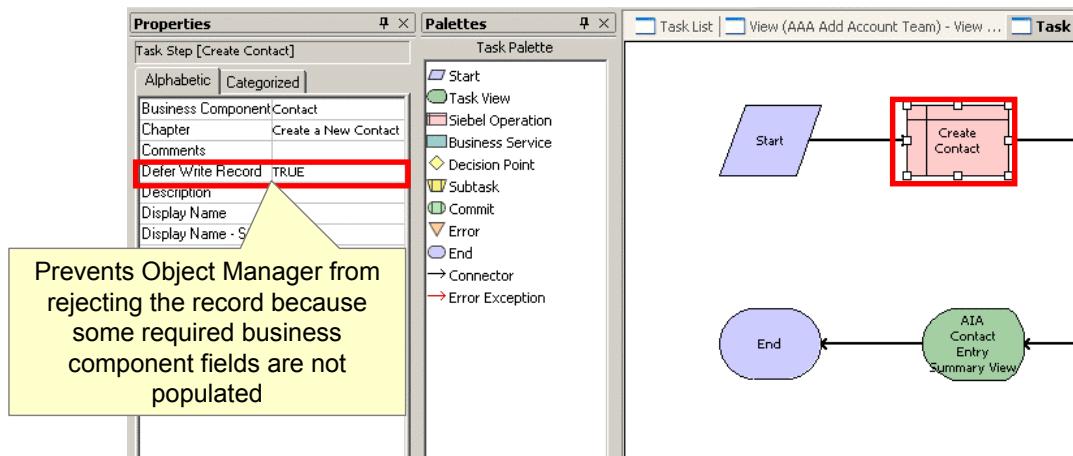


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5. Configure Remaining Task Steps

- Configure other types of steps such as:
 - ▶ Siebel Operation
 - Identify the business component and operation
 - Set the Defer Write property to TRUE if necessary
 - ▶ Decision Point step
 - Set the conditions on each branch



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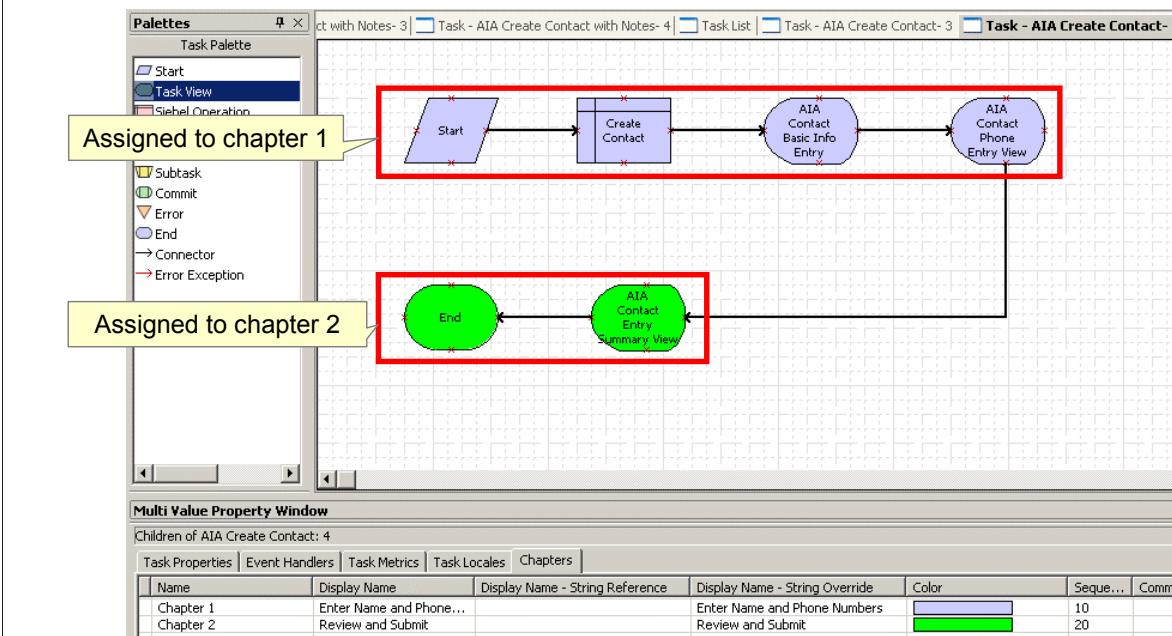
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6. Assign Chapters

- Optionally, create chapters to group steps in the task pane
- Assign each step to a chapter



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7. Create the Task Group

- Assign the task to an existing (or new) task group
 - ▶ Groups several tasks in the task pane
- Assign the task group to a view
 - ▶ Assign to the Task Pane View to make the tasks visible in all views

The screenshot shows the Siebel Task UI interface with three main windows:

- Task Group Item List**: Shows a table with columns W, Name, Changed, Project, and Display Name. One row is selected: "AIA Contact Tasks" under "AIA UI Tasks".
- Task Group Items**: Shows a table with columns W, Action Invoked, Changed, Type, and Sequence. One row is selected: "AIA Create Contact" under "Task".
- View Task Groups**: Shows a table with columns W, Name, Changed, Project, and Business Obj. One row is selected: "Task Pane View" under "Task UI Framework".

Annotations with callouts point to specific areas:

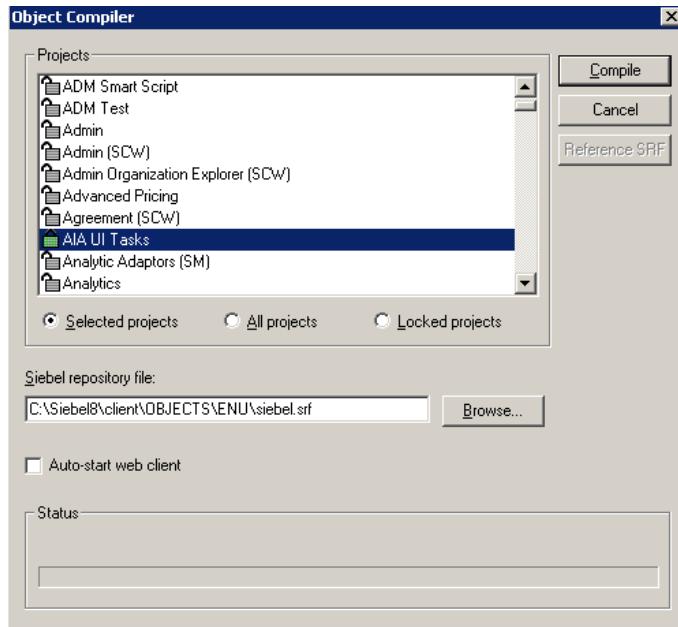
- An annotation labeled "Assign task to task group" points to the "Task Groups" table in the first window.
- An annotation labeled "Assign task group to view" points to the "View Task Groups" table in the third window.
- An annotation labeled "Assign to single application if required" points to the "Business Obj" column in the "View Task Groups" table, where the value "Application" is highlighted with a red border.

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8. Compile the Configured Objects

- Compile the configured objects into the target SRF file

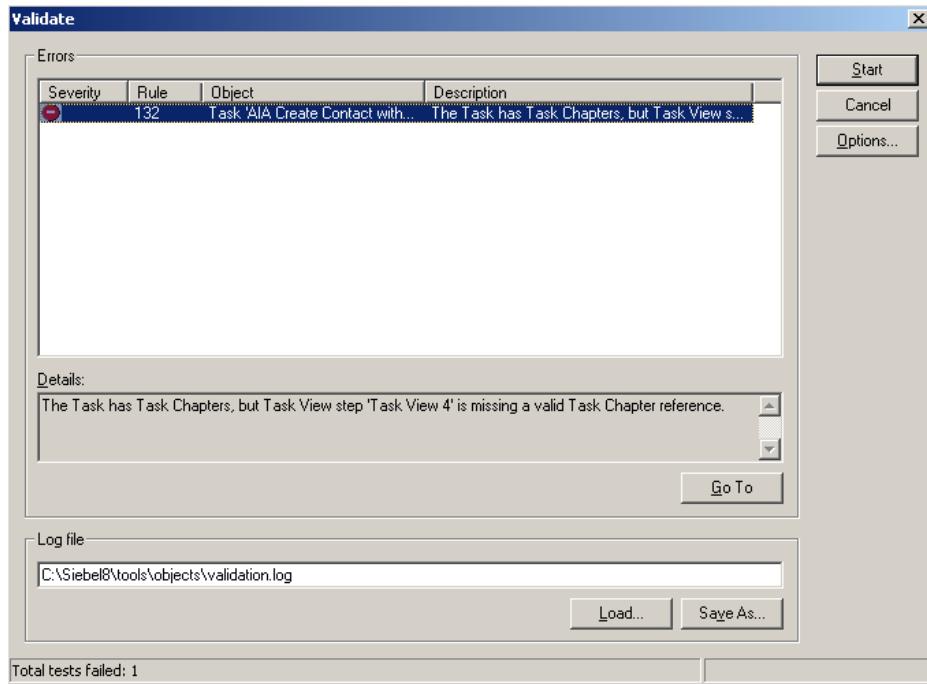


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9. Publish the Task Flow

- Validate the task flow to identify any possible errors
 - ▶ Right-click and select Validate



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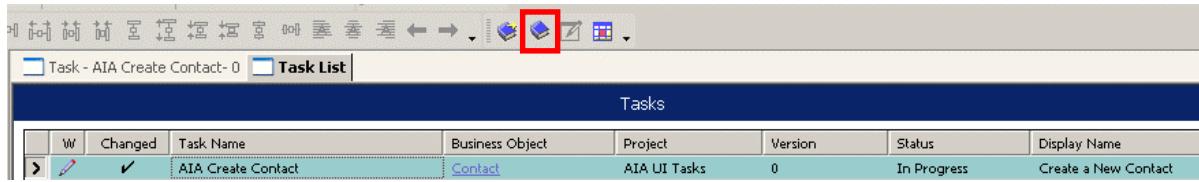
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9. Publish the Task Flow Continued

- Click the Publish button in the Deployment toolbar to deploy the task flow
 - ▶ Sets the task flow to complete
 - ▶ Makes it available for activation



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Administering a Task

1. Activate the Task Flow

2. Register the Task Flow

3. Add Responsibilities

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Reference

Siebel Business Process Framework: Task UI Guide: Administering Task UI

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1. Activate the Task Flow

- Navigate to Administration - Business Processes > Task Deployment
- Select the published task and click Activate
 - ▶ Makes the task available for use in the client
- Alternatively, publish/activate directly from Siebel Tools

The screenshot shows the Siebel Task Deployment interface. At the top, there's a navigation bar with links like Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Administration - Business Process. Below the navigation bar, a toolbar has buttons for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Administration - Business Process. The main area is divided into two sections: 'Published Tasks' and 'Active Tasks'.
Published Tasks: A table with columns Name, Business Object, Status, and Version. One row is shown: 'AIA Create Contact' (Business Object: Contact, Status: Completed, Version: 0).
Active Tasks: A table with columns Name, Version, Repository Versic Business Object, Deployment Stat, Activation Date/`Expiration Date. One row is shown: 'AIA Create Contact' (Version: 0, Repository Versic Business Object: Contact, Deployment Stat: Active).
A red box highlights the 'Activate' button in the toolbar.

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2. Register the Task Flow

- Navigate to Application - Administration > Tasks
- Create a new record and select the task from the list of published tasks

The screenshot shows the Siebel application interface with the following details:

- Top Navigation Bar:** Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Administration - Application.
- Sub-navigation:** Branch Locator, Contact Us, Alerts Online, License Keys, Predefined Queries, Reports Server Administrator Profile, Responsibilities, Tasks.
- Current Screen:** Registered Tasks.
- Toolbar:** Menu, New, Delete, Query, Clear Cache, Query Results.
- Table:** Default Local Access
- Data:** A single row with Task Name "AIA Create Contact".
- Page Footer:** Copyright © 2007, Oracle. All rights reserved.
- Page Number:** 25 of 30

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3. Add Responsibilities

- Add one or more responsibilities to the registered task
 - ▶ Allows users with the responsibility to see the task in the task pane
 - ▶ Click Clear Cache to make the task immediately available

The screenshot shows two Siebel application windows side-by-side.

Top Window: Registered Tasks

- Header: Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Administration - Application, Branch Locator, Contact Us, Alerts Online, License Keys, Predefined Queries, Reports Server Administrator Profile, Responsibilities, Tasks.
- Toolbar: Registered Tasks, Menu, New, Delete, Query, **Clear Cache** (highlighted with a red box), Query Results, 1 - 1 of 1, Print.
- Data Grid:

Task Name	Description	Default Local Access
> AIA Create Contact		

Bottom Window: Responsibilities

- Header: Responsibilities, Menu, New, Query, 1 - 1 of 1, Print.
- Data Grid:

Responsibility	Description	Allow Delete	Allow Transfer	Local Access	Web Access	Broadcast
> Siebel Administrator	Siebel System Administrator	✓	✓			

A yellow callout box points from the "Clear Cache" button in the top window to the "Siebel Administrator" responsibility in the bottom window, with the text: "Adds task to the Siebel Administrator responsibility".

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Testing the Deployment

- Click the Tasks button to display the Task pane
- Verify that the desired task appears
- Click the task link and execute the task



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Module Highlights

- Creating a task in Siebel Tools consists of:
 - ▶ Configuring a task flow
 - Creating and binding task view steps
 - Assigning steps to chapters
 - ▶ Adding the task to a task group
 - ▶ Assigning the task group to a view
 - ▶ Publishing the task to the run-time client
- Administering the task in the run-time client consists of:
 - ▶ Activating the task
 - ▶ Registering the task
 - ▶ Adding the task to one or more responsibilities



Lab

- In the lab you will:
 - ▶ Create a task
 - ▶ Deploy and administer the task

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Siebel 8.0 Essentials

Module 41: Transient Business Components and Branching

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Module Objectives

- After completing this module you should be able to:
 - ▶ Describe the role of transient business components and task applets
 - ▶ Configure branching logic in a task
- Why you need to know:
 - ▶ Transient business components allow you to incorporate branching logic into task flows and to manage user data that is not mapped immediately to a business component field



User-Entered Data

- Is typically persistent
 - ▶ Maps immediately to regular business component fields
 - ▶ Is written to the database during or at the end of the task flow
- May be transient
 - ▶ Is entered and then referenced in a subsequent step in the task flow
 - ▶ Does not need to be stored persistently

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Transient Business Component (TBC)

- Is used to represent user input and other data that does not need to persist beyond the lifetime of the task
 - ▶ Type is Transient
 - ▶ Has one or more single-value fields
 - ▶ Does not support joins or multi-value fields
 - ▶ Maps to a special table: S_TU_LOG
 - ▶ Is based on a special class: CSSBCTaskTransient
 - ▶ Stores one record at most
- Is managed by the Object Manager

The screenshot shows the Siebel Object Manager interface. On the left is the Object Explorer pane, which lists project types like Siebel Objects, Applet, Application, and Business Component. Under Business Component, several sub-items are listed: BusComp Browser, BusComp Server S, BusComp View Mo, Business Compone, and Field. The main workspace is titled "Single Value Field List" and displays a table for "Business Components". A row for "AIA Next Step TBC" is selected, highlighted with a red border. The columns in the table are W, Name, Type, Table, and Class. The values are: W (checkbox), Name (AIA Next Step TBC), Type (Transient), Table (S_TU_LOG), and Class (CSSBCTaskTransient). Below this table is another titled "Single Value Fields", which contains a single row for "Next Step". The columns here are Name, Column, Type, and Text Length. The values are: Name (Next Step), Column (FLD_VAL_V50_03), Type (DTYPE_TEXT), and Text Length (40).

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Reference

Siebel Business Process Framework: Task UI Guide: Configuring Transient Business Components



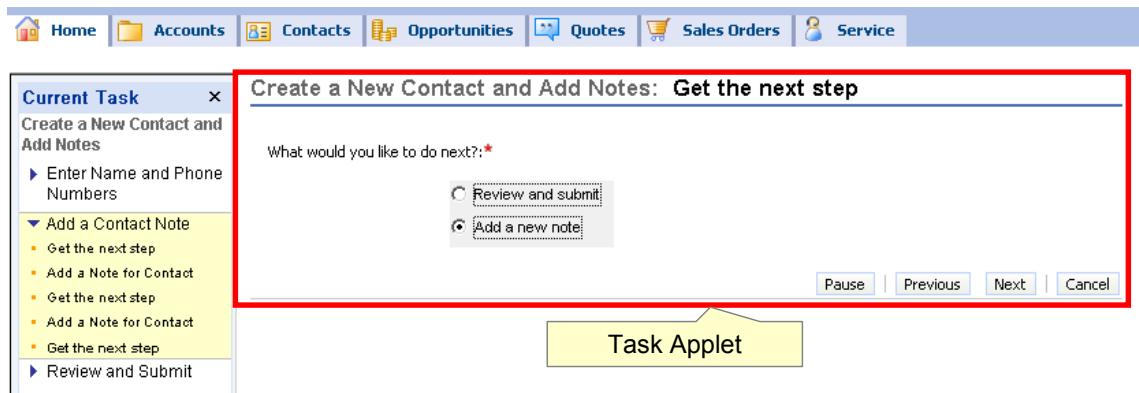
Uses for a Transient Business Component

- Capture user selections that control the flow of a task at run-time
- Collect data that will be incorporated into persistent data later in the task such as:
 - ▶ Postal code or telephone area code
 - ▶ Data that may be conditionally mapped to business component fields in subsequent task steps
- Support applets that display data from several business components
 - Example: an applet that needs to show some quote and order fields

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Task Applet

- Is a special type of applet used to display and collect transient data
 - ▶ Maps to a transient business component
 - ▶ Displays data from only that business component
- Can be assigned only to a task view
 - ▶ Can appear in a view by itself or with one or more standard applets



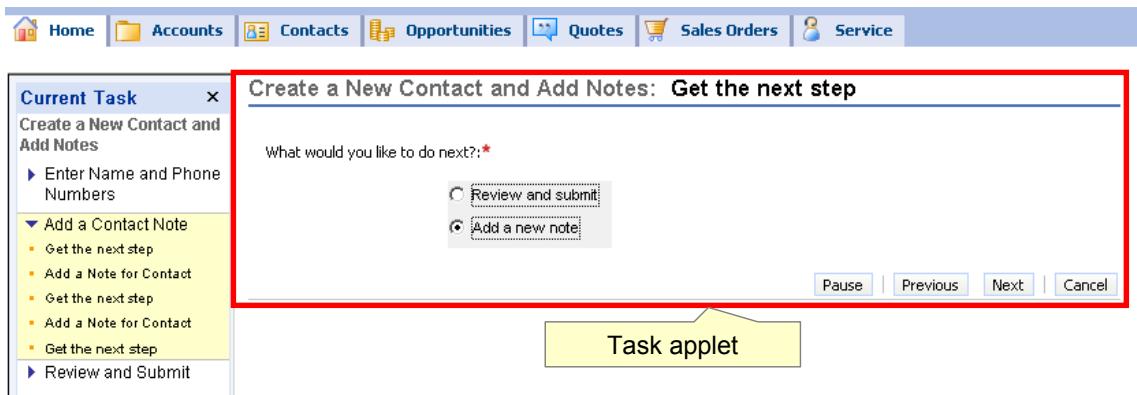
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Task Applet Continued

- Differs from standard applets
 - ▶ Is always a form applet displaying a single record
 - ▶ Must be based on grid Web templates
 - Applets do not display an applet title or applet menu
 - ▶ Is based on a specialized class: CSSSWEFrameTask



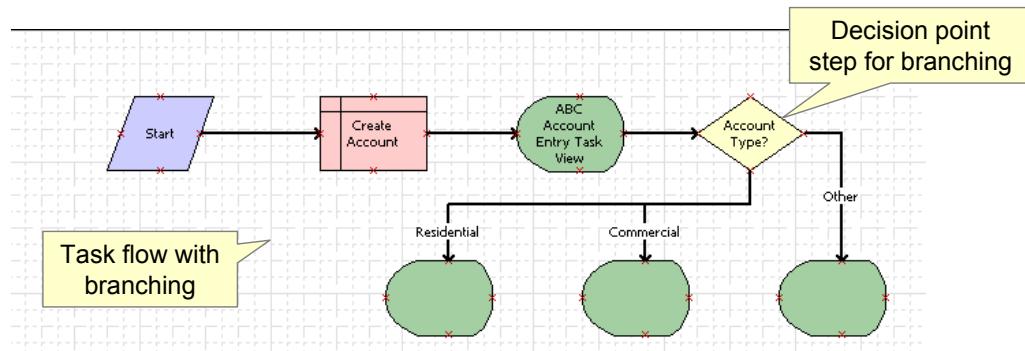
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Branching in a Task

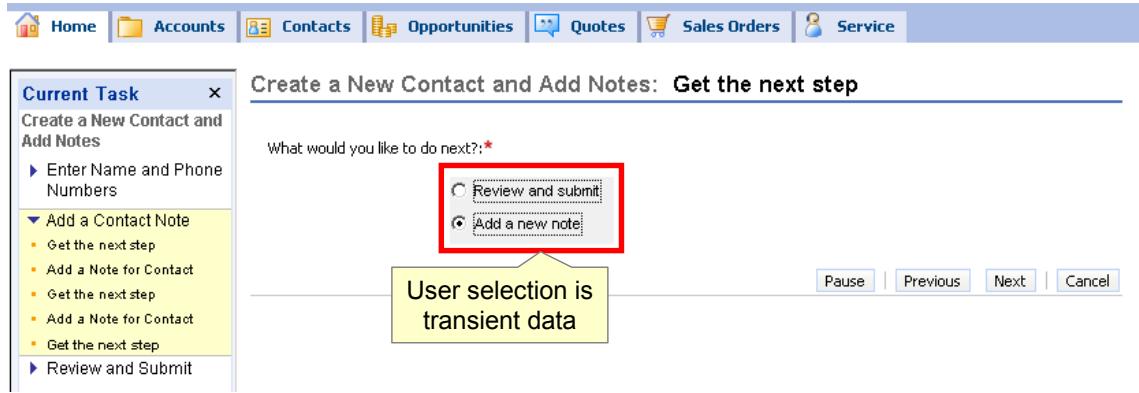
- Task UI framework supports branching (in a task) based on user input
- Input can be persistent data such as the account type
- Is implemented by configuring a decision point step
 - ▶ Follow the same procedure as in a workflow process



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Branching in a Task Continued

- Input can also be transient data, such as the selection that the user makes when presented a choice about the next step
- Requires the use of a transient business component
- Is implemented by configuring a decision point step



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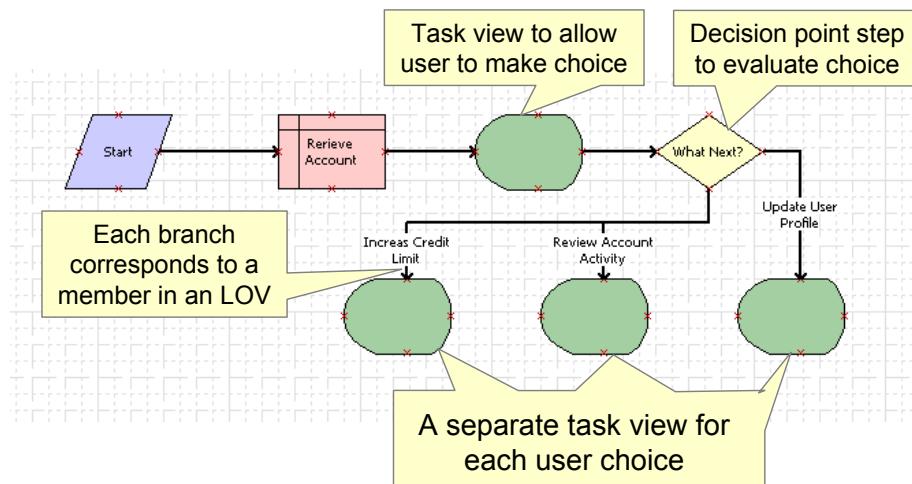
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Configuring Branching in a Task Using a TBC

1. Modify the Task Flow
2. Create a Picklist
3. Create the Transient Business Component
4. Create the Task Applet
5. Create the Task View
6. Configure the Decision Point Step
7. Complete the Configuration

1. Modify the Task Flow

- Add a task view step to the flow to allow the user to make a choice
- Add a decision point step to evaluate the user's choice
- Add connectors to implement the desired business flow
 - ▶ Example of direct branching

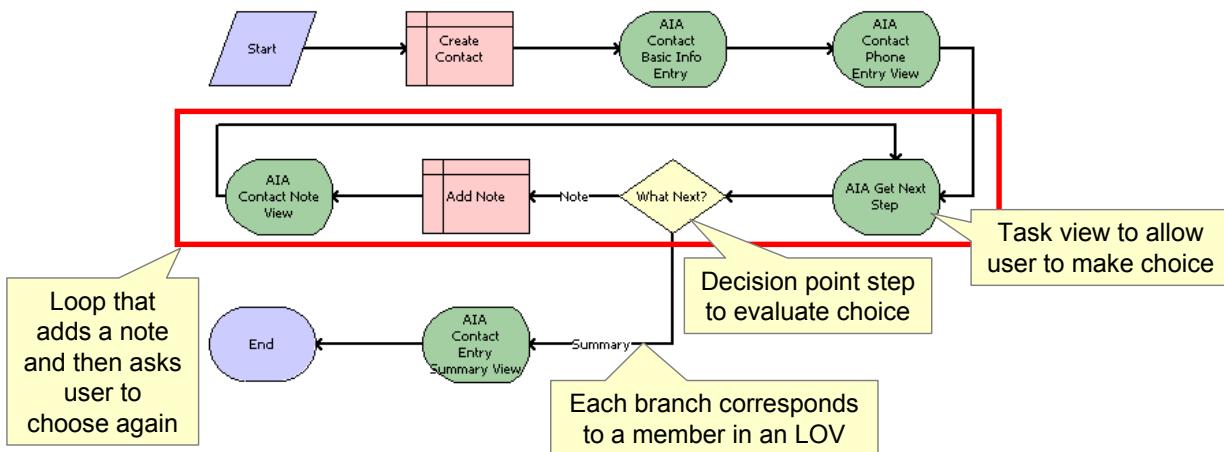


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1. Modify the Task Flow Continued

► Example of iteration



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2. Create a Picklist

- A picklist is required when the user is presented a set of choices
- Select an existing picklist if available
- Alternatively create a new picklist
 - ▶ Represent the choices as members of a List Of Values type
 - ▶ Configure the PickList object

Type	Display Value	Changed	Order	Translate	Multilingual	Language-Independent Code	L
CONTACT_TSK	Review and submit	✓	1	✓		Review and submit	E
CONTACT_TSK	Add a new note	✓	2	✓		Add a new note	E

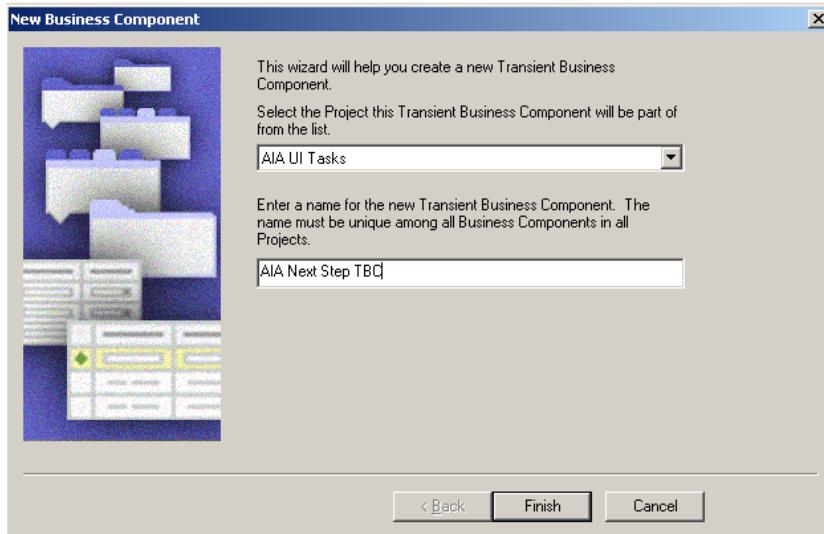
W	Name	Project	Changed	Bounded	Business Component	Type Field	Type Value
	AIA Contact Prompt	AIA UI Tasks	✓	✓	PickList Generic	Type	CONTACT_TSK

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3. Create the Transient Business Component

- Use the Transient BusComp Wizard to create the transient business component
 - ▶ Should use the wizard since it assigns required values to multiple TBC properties

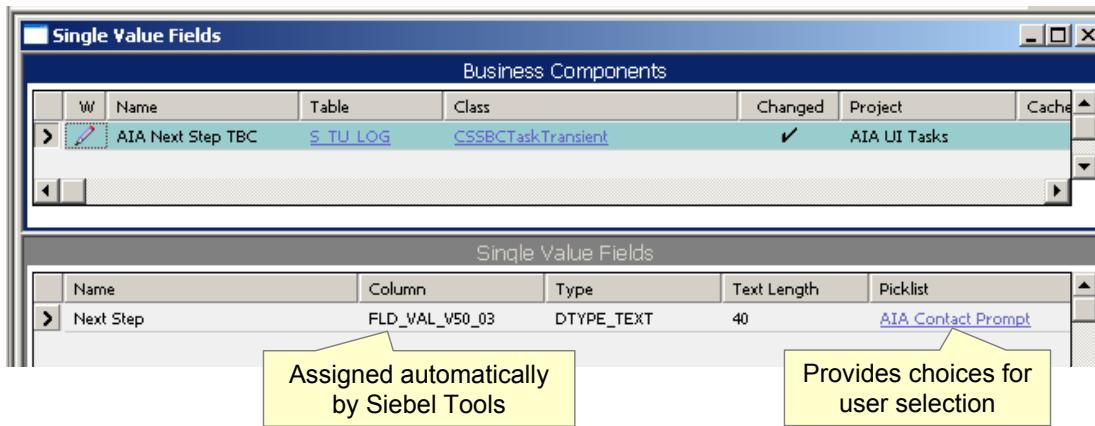


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3. Create the Transient Business Component Continued

- Add one or more fields
 - ▶ Assign name, type, and length as required
 - ▶ Do not assign a column
 - Will be assigned automatically after the record is saved
 - ▶ If required, assign the picklist
 - Create the single-value field pick map

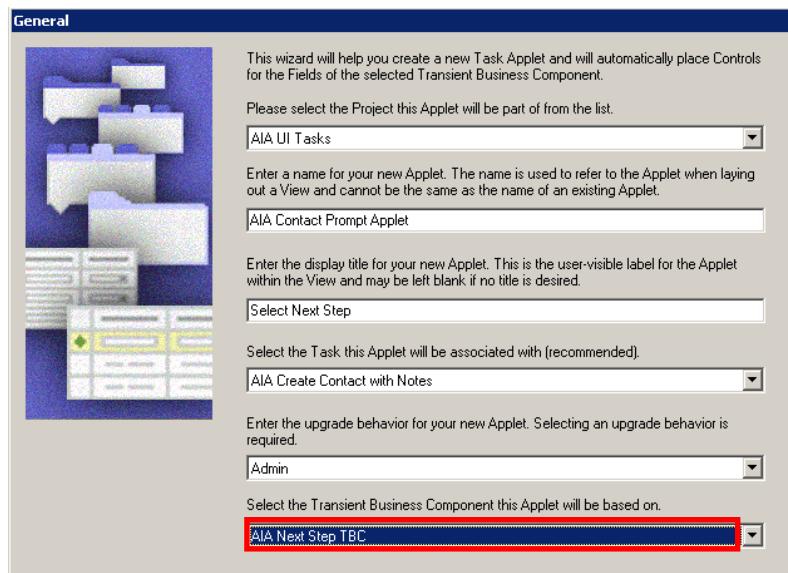


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4. Create the Task Applet

- Use the Task Applet Wizard to create the task applet
 - ▶ Identify the transient business component
 - ▶ Identify the task in which the applet will be used
 - ▶ Select the TBC field(s) that are to be displayed

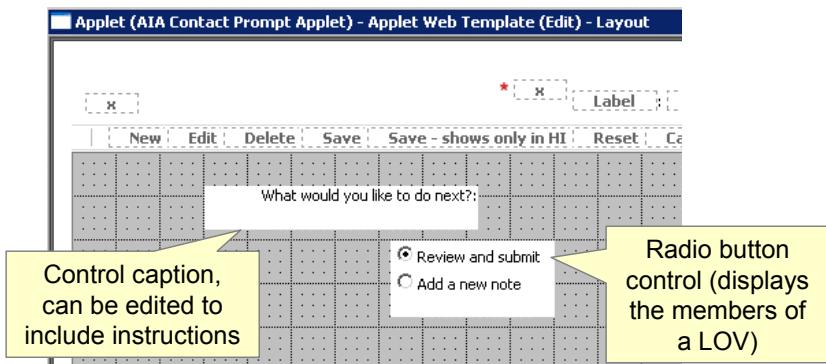


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4. Create the Task Applet continued

- Inspect the applet in the Web Layout Editor
 - ▶ Wizard assigns a radio button control to all fields
- For fields with a picklist, the radio button control:
 - Displays the members of the underlying list of values (LOV)
 - Allows users to select a value by clicking a radio button
- For other fields, manually change the HTML type to the desired value
- Reposition and/or resize the label and control for each field



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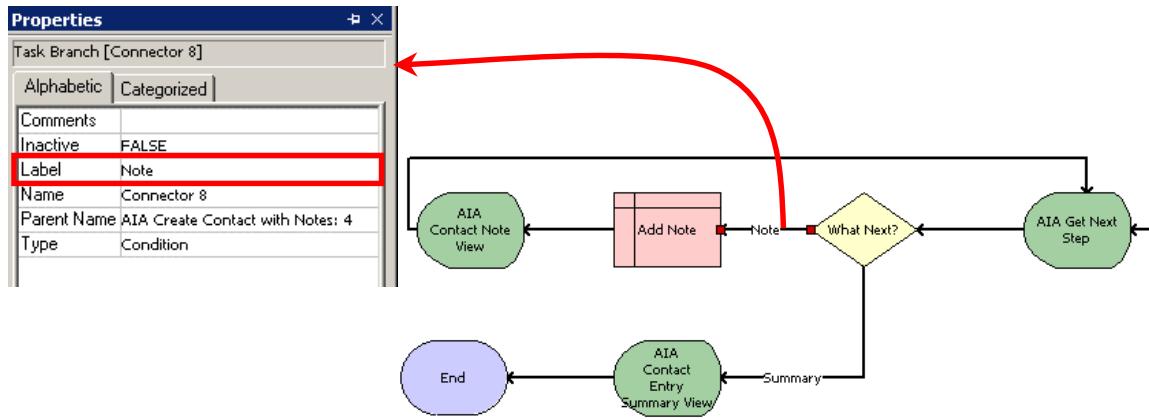
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5. Create the Task View

- Use the Task View Wizard to create a new task view
 - ▶ Assign zero or more regular applets as required
 - ▶ Assign the task applet
 - Selection is restricted to task applets assigned to the task
 - ▶ Select and position the Playbar applet
- Alternatively, add the task applet to an existing task view
 - ▶ Drag a Task Applet icon from the Applet pane to an applet placeholder
 - ▶ Select the desired task applet

6. Configure the Decision Point Step

- Right-click the decision point step
 - ▶ Set the name property to a meaningful value
- Right-click each connector leading from the decision point step
 - ▶ Set the label property to a meaningful value as well

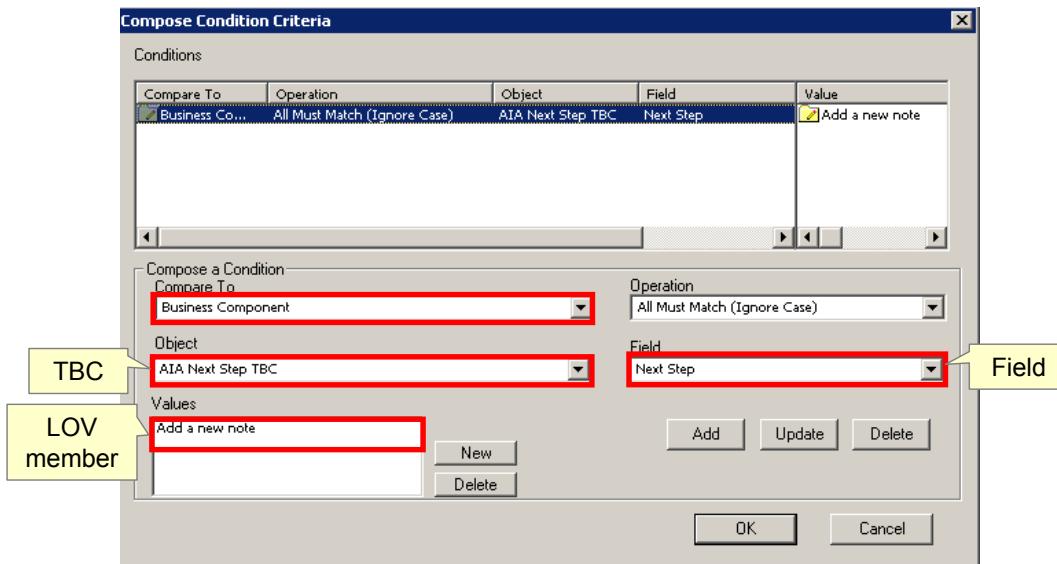


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6. Configure the Decision Point Step Continued

- Compose the conditions for each connector
 - ▶ Right-click each connector leading from the decision point step and select Edit Conditions
 - ▶ Select TBC, field, and desired value for this branch



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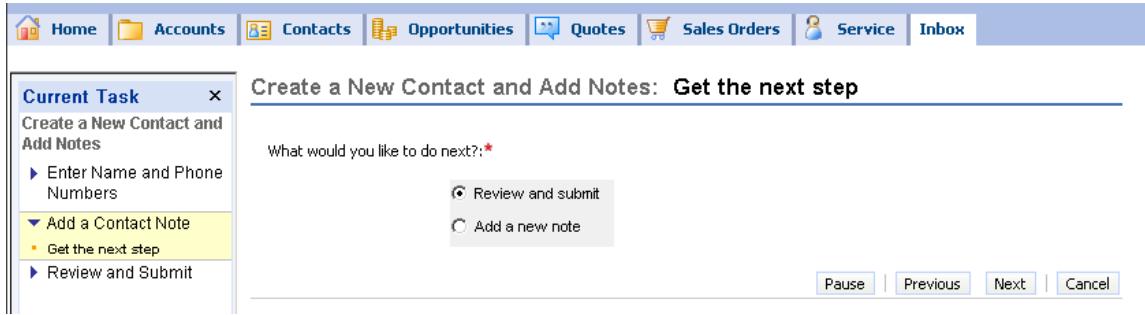
7. Complete the Configuration

- Configure remaining steps (task views, Siebel operation, and so on)
- For each task view step, bind the corresponding task view
 - ▶ Remember to set the Forward Button Type to Next
- Assign each step to a chapter
- Compile all new and modified objects

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Test the Modified Task

- Validate the task
- Publish and activate the task
- Invoke the task in the client and verify that the task applet appears and branches as desired



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Module Highlights

- Tasks may include transient data
 - ▶ Data entered by users that does not need to be stored once the task completes
- A transient business component is required to store data entered by a user that is not required after the task completes
- A task applet is required to display data stored in a transient business component
- A task can include branching based on user entered values including transient data
- Branching requires adding a decision point step to the task flow



Lab

- In the lab you will:
 - ▶ Extend a task to include branching

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Siebel 8.0 Essentials

Module 42: Siebel Business Rules

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Module Objectives

- After completing this module you should be able to:
 - ▶ Describe the Siebel Business Rules architecture
 - ▶ Use HaleyAuthority to examine business rules
- Why you need to know:
 - ▶ Siebel Business Rules provides a powerful way to automate business decisions and logic in a Siebel application



Implementing Business Logic in Siebel Applications

- Can often be done using declarative configuration such as:
 - ▶ Properties in business components and fields
 - Example: validation and post-default values
 - ▶ Siebel workflows
 - ▶ Siebel state models
- Occasionally requires custom scripting
- Can result in:
 - ▶ Business logic that is distributed throughout the application
 - Difficult to understand the complete set of implemented logic
 - ▶ Business logic that is represented in multiple ways with different syntax
 - Difficult to modify to meet new requirements
 - ▶ The need to compile and deploy a new Siebel repository file (SRF)



Business Challenge

- Companies want a more unified way to implement business logic
 - ▶ Centralized store of business rules or logic that can be easily modified to incorporate changing business processes
 - ▶ Reviewable by non-implementers such as business analysts
 - ▶ Deployable without recompiling the SRF file
 - Allows updating of business logic at run time



Solution: Siebel Business Rules

- Provides the ability for companies to create and enforce rules that capture their business policies
 - ▶ Rules are expressed in “natural English” rather than a script or SQL statements
 - Rules can be specified and reviewed by business experts
 - ▶ Rules are centrally developed and administered
 - ▶ Rules are enforced globally throughout the Siebel application
- Uses client-side configuration rather than repository-based configuration and compilation
 - ▶ Allows rules to be created, updated, and deployed during run time

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Reference

Siebel Business Rules Administration Guide: About Business Rules

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Examples of Uses of Siebel Business Rules

- Perform validation of data
- Provide default values for fields in records
- Provide default child records
- Update records
- Implement dynamic read-only/required behavior
- Compute values of parameters to be used in decision steps in workflow process and UI tasks
- Perform business calculations
 - ▶ Determine if a warranty applies
 - ▶ Determine if a customer is eligible for a discount or offer and explain why
 - ▶ Approve or reject an application for insurance
 - ▶ Compute a limit for loans or insurance coverage



Siebel Business Rule

- Is a conditional or qualified statement about business entities and characteristics that apply in a business environment
 - ▶ Is written using the rules of English grammar

if an expense has any expense item which does not have a description then
invalidate the expense with "All expense items must have a description"

Conditional rule statement

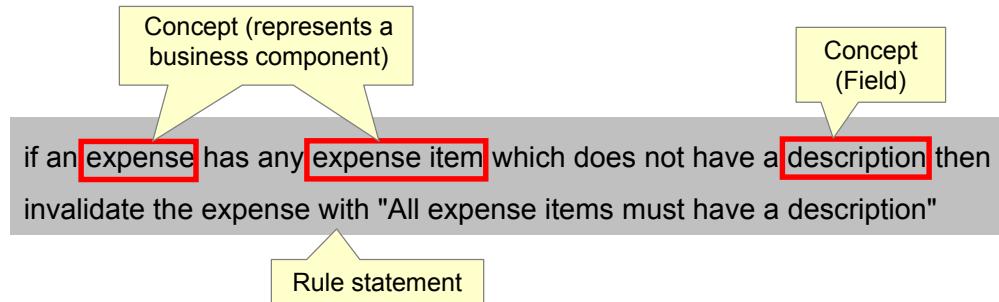
Set "Reimbursable Flag" of an expense item to false

 if the expense item's expense item type is "Personal"
 unless the expense item's description is "Pre-approved"

Qualified rule statement

Concepts

- Are nouns that represent the entities and their characteristics
 - ▶ Are used to build rule statements
- Correspond to business components and fields in the Siebel data model



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Noun	In traditional grammar, a noun is described as a word or expression that refers to a person, thing, event, place, concept, and so forth.
-------------	--



Siebel Business Rules

- Are created using HaleyAuthority
- Are executed in the Siebel client using a run-time inference engine

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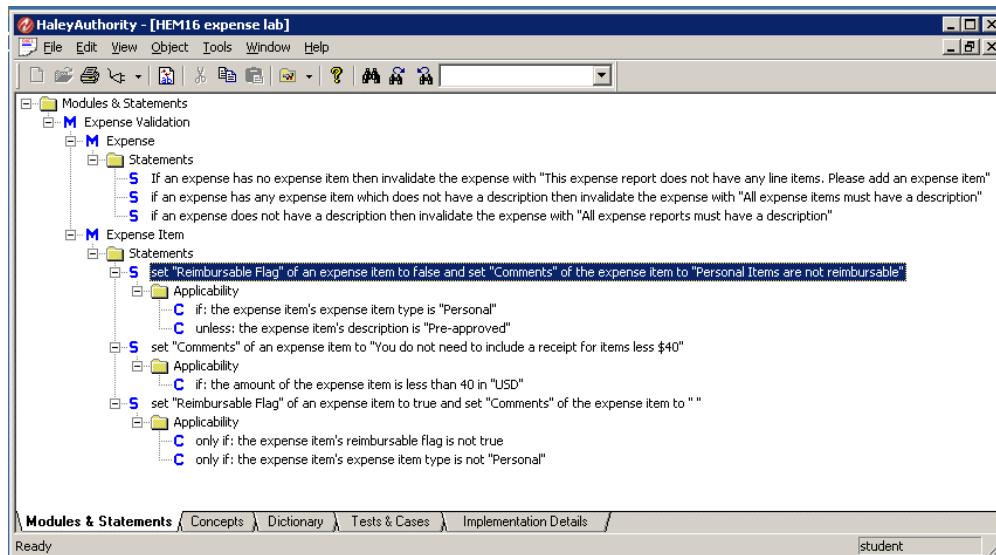
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HaleyAuthority

- Is a separate third-party application used to examine and develop Siebel business rules
 - ▶ Is installed as part of a Siebel Tools installation
 - ▶ Is invoked from the Siebel Tools program group



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HaleyAuthority Continued

- Imports relevant object definitions from the Siebel development repository
- Generates the corresponding Haley concepts
- Is used to author the rule statements based on the generated concepts
- Stores concepts and statements in a separate database referred to as a knowledge base
- Deploys rules to a set of tables in the Siebel run-time client



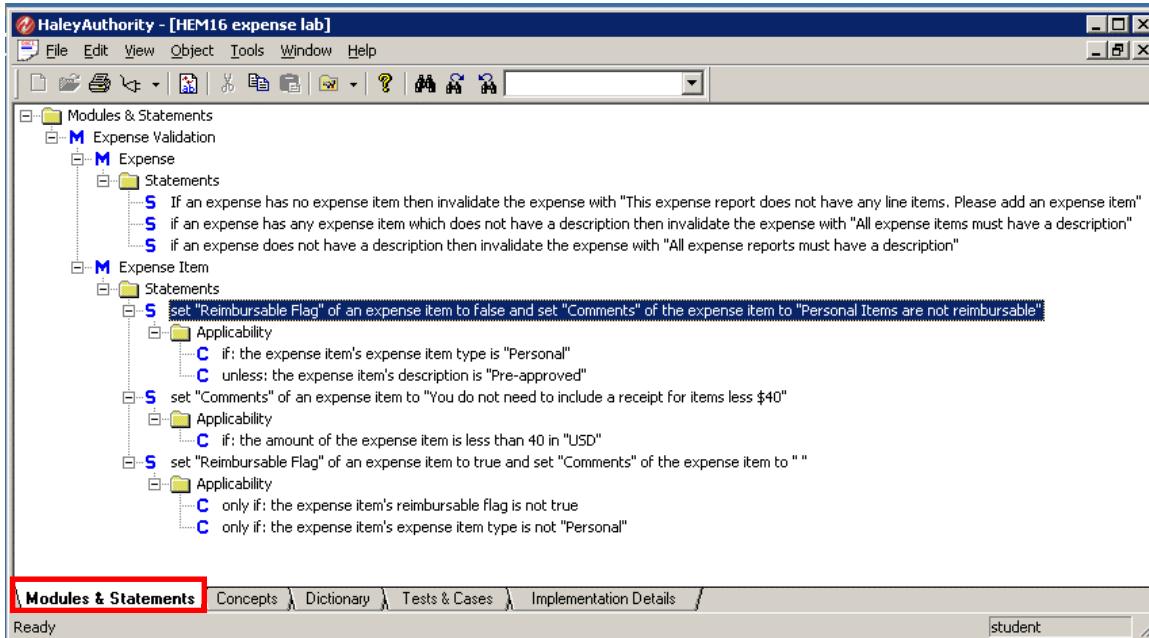
Run-Time Inference Engine

- Is a third-party rules engine used to evaluate and execute business rules at run time
- Is installed automatically in the Siebel client during a standard client installation
- Is accessed by calling the Business Rules Service business service
 - ▶ Serves as the interface to the inference engine
- Can be invoked using:
 - ▶ An action set in a run-time event
 - ▶ A business service step in a Siebel workflow or task
 - ▶ A business service call in a script

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Exploring Rules

- Use HaleyAuthority to examine rules
 - ▶ Click the Modules & Statements tab to display rule statements



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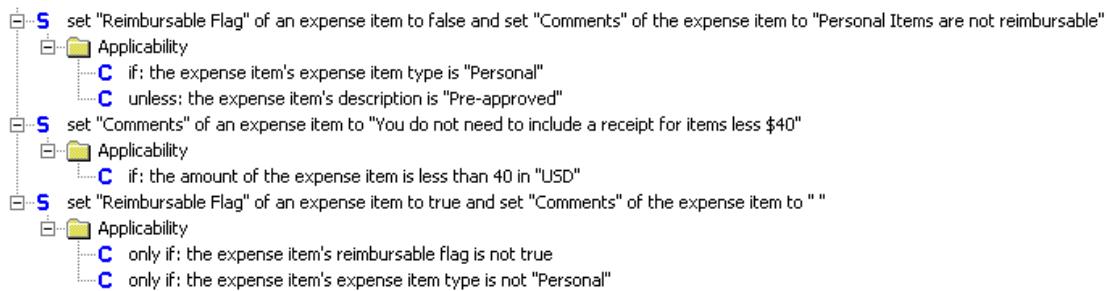
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Structure of Rules

- Rules are written using English grammar (“natural English”)
 - ▶ A given rule can be expressed in several ways
- Common practice is to create statements followed by qualifiers that determine if the statement applies
 - ▶ If: statement applies when at least one *if* qualifier is true
 - ▶ Unless: statement does not apply when *unless* qualifier is true
 - ▶ Only if: statement applies when all *only if* qualifiers are true





Rule Statements

- A statement can be either a:
 - ▶ Statement of fact
 - Example: An expense report is a valid expense report
 - ▶ Statement of action
 - Set “Reimbursable Flag” of an expense item to false
- Siebel-specific actions consist of three action types
 - ▶ Actions: Produce output or modify data in the Siebel application
 - Set a field value, invalidate with reason
 - ▶ Functions: Return a value from the Siebel application
 - Get profile attribute, get active view name
 - ▶ Predicates: Return a Boolean value
 - User in task mode, currency is equal to

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Invalidate with Reason	This action raises an error but does not stop evaluation of rules. Accordingly the message displayed upon completion might contain multiple such error messages.
Reference	For a list of all of the Siebel supported actions, functions, and predicates refer to Siebel Business Rules Administration Guide: :Reference Topics for Siebel Business Rules.

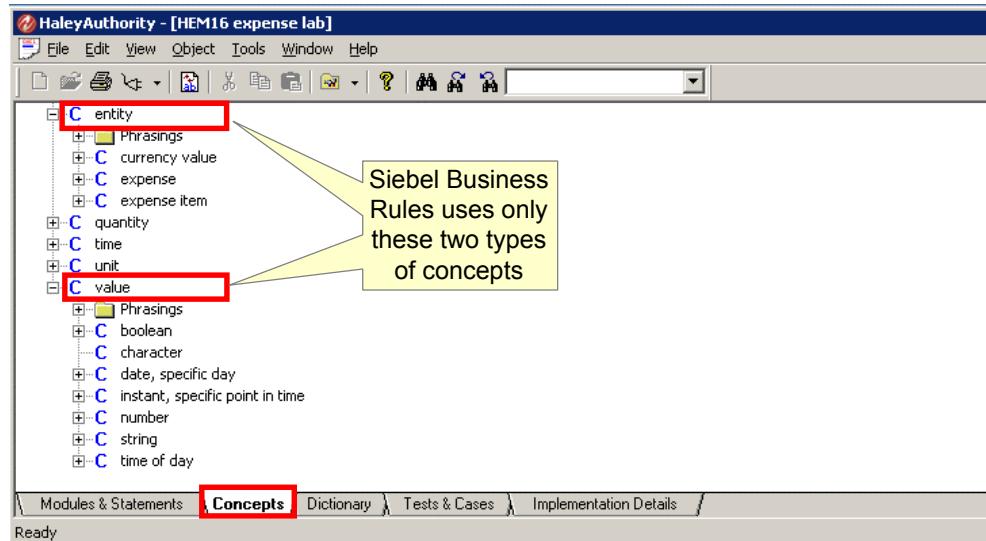
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Concepts

- Click the Concepts tab in HaleyAuthority to display the concepts
 - ▶ Entity: Describes entities (things) in the business model
 - ▶ Value: Describes characteristics of entities in the business model



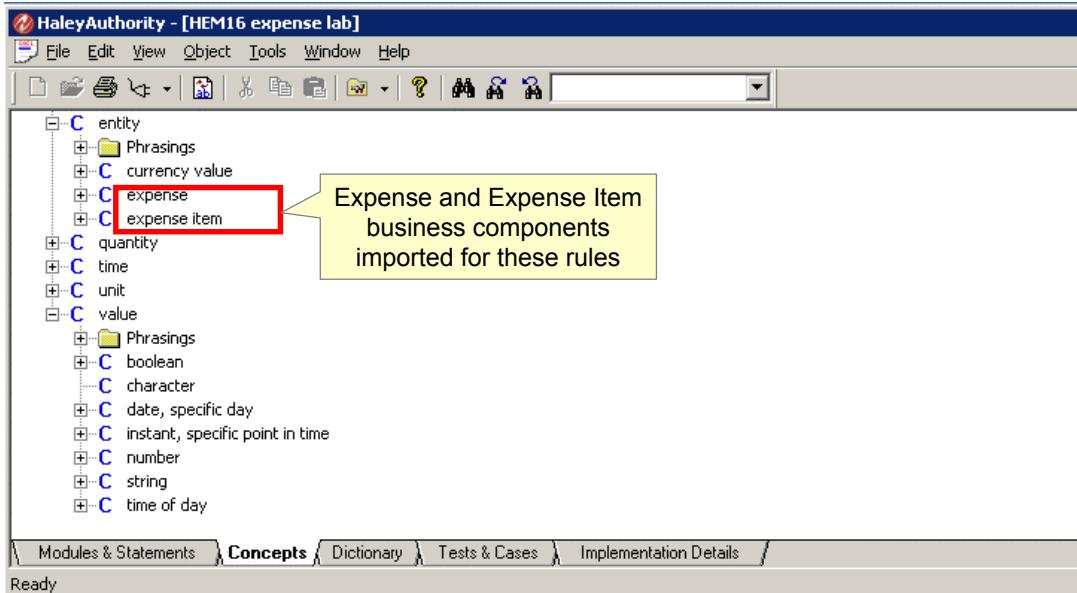
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Entities

- Expand Entity to display the entities
 - ▶ Represent the business components imported from the Siebel repository



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Value

- Expand Value and its children types to display the values
 - ▶ Represent business component fields imported from the Siebel repository
 - ▶ Are grouped by the type of the field

HaleyAuthority - [HEM16 expense lab]

File Edit View Object Tools Window Help

Concepts

- time
- unit
- value
 - Phrasings
 - boolean
 - reimbursable flag
 - character
 - date, specific day
 - instant, specific point in time
 - number
 - string
 - Phrasings
 - Sentences
 - comments
 - currency code
 - description
 - expense item type
 - expense number
 - status
 - time of day

Modules & Statements Concepts Dictionary Tests & Cases Implementation Details

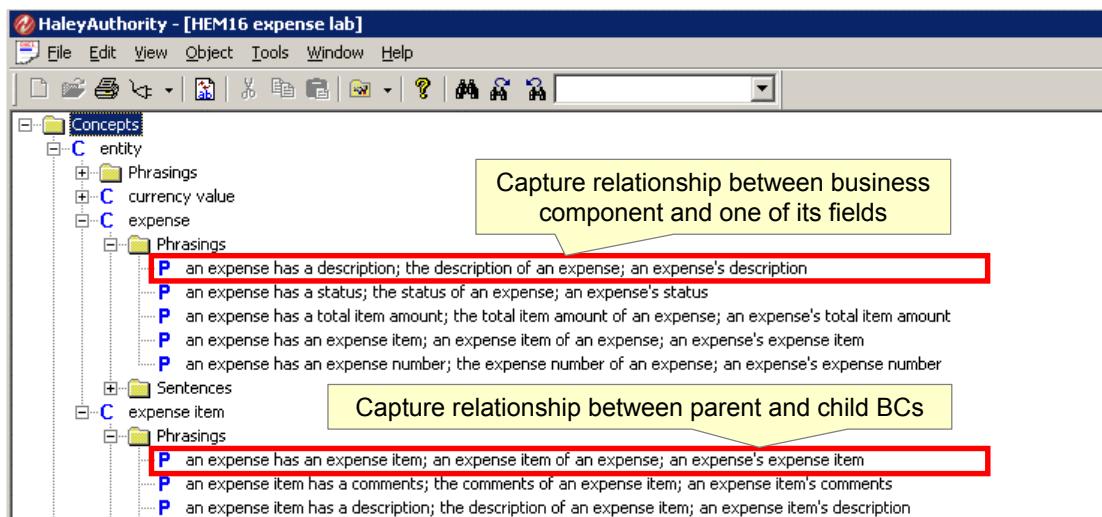
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Phrasings

- Consist of short expressions that capture a relationship between concepts
 - ▶ Typically represent the relationship between a business component and one of its fields or a child business component
- Are used to build rule statements



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Concepts in Siebel Business Rules

- Concepts are generated automatically using the Siebel Object Importer in HaleyAuthority
 - ▶ Entities correspond to Siebel objects
 - ▶ Values correspond to single-value fields of objects
- Rules developers must not modify or extend the concepts in any way



Module Highlights

- Siebel Business Rules allows users to create and enforce rules that capture business policies
 - ▶ Rules are expressed in natural English
 - ▶ Rules are developed by client-side configuration
- Siebel Business Rules consist of:
 - ▶ Authoring tool accessible from Siebel Tools
 - ▶ A run-time execution engine accessed by calling a business service
- A rules module consists of multiple statements based on a set of predefined concepts, actions, functions, and predicates
 - ▶ Concepts correspond to business components and fields in the Siebel repository



Lab

- In the lab you will:
 - ▶ Examine an existing rule

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Module 43: Creating Business Rules

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Module Objectives

- After completing this module you should be able to:
 - ▶ Create rules using HaleyAuthority
 - ▶ Deploy and administer rules in the Siebel client
 - ▶ Invoke rules in the Siebel client
- Why you need to know:
 - ▶ You perform these steps to create business rules



Creating Siebel Business Rules

- Concepts are generated in HaleyAuthority
 - ▶ Are based on object definitions in the Siebel repository
 - ▶ Are created by invoking the Siebel Object Importer
- Statements are then written based on the concepts
 - ▶ Rules developers must not:
 - Modify the underlying concepts
 - Create additional concepts manually

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Developing Rules

1. Create a New Knowledge Base
2. Import Siebel Object Definitions
3. Create a Rule Module
4. Deploy the Rule Module

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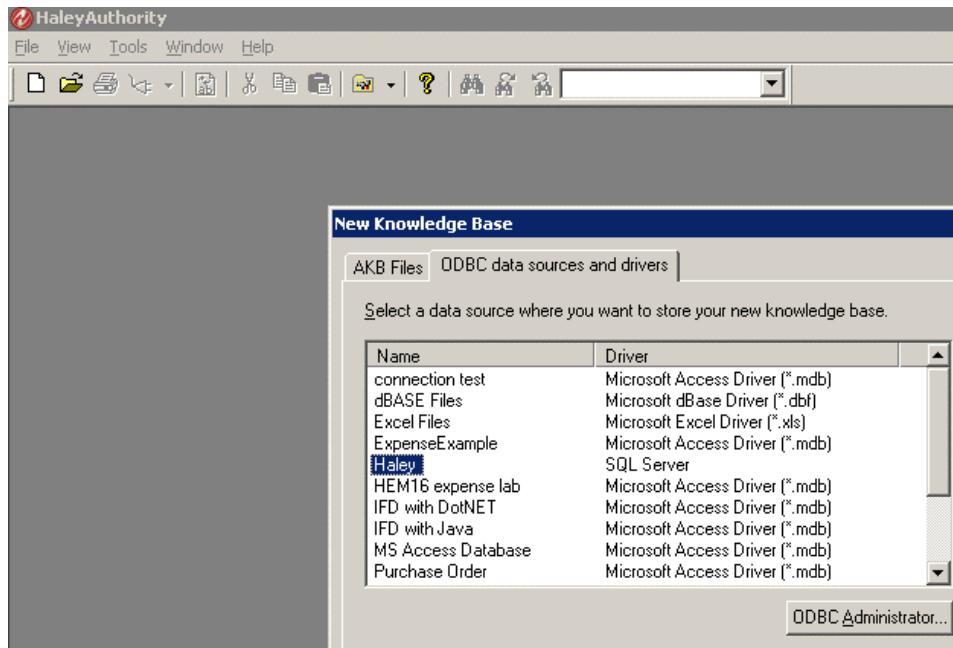
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Reference

Siebel Business Rules Administration Guide: Creating and Deploying Rules

1. Create a New Knowledge Base

- Start HaleyAuthority from the Siebel Tools program group
- Select the ODBC connection string for the new knowledge base



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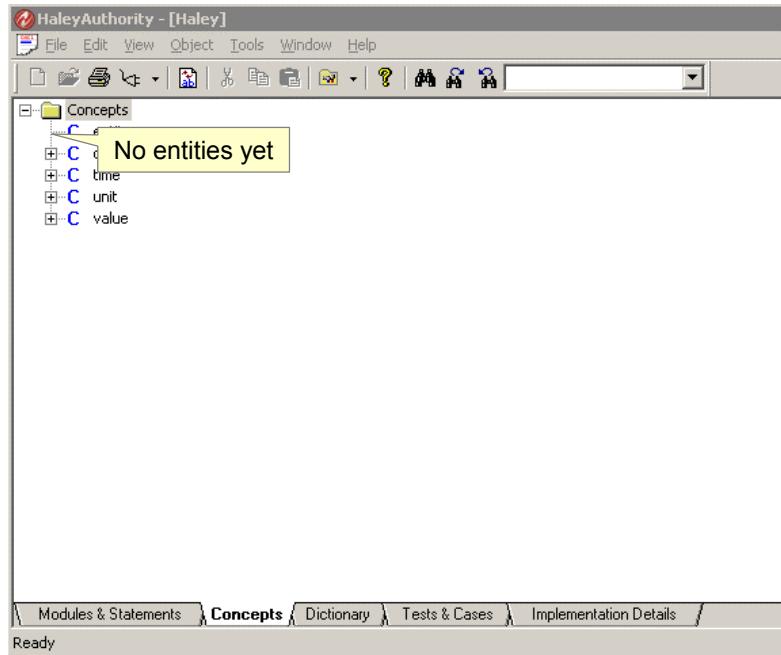
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AKB Files

HaleyAuthority also supports using an Access local database for single developer prototyping.

1. Create a New Knowledge Base Continued

- Verify that a base set of Haley concepts appears

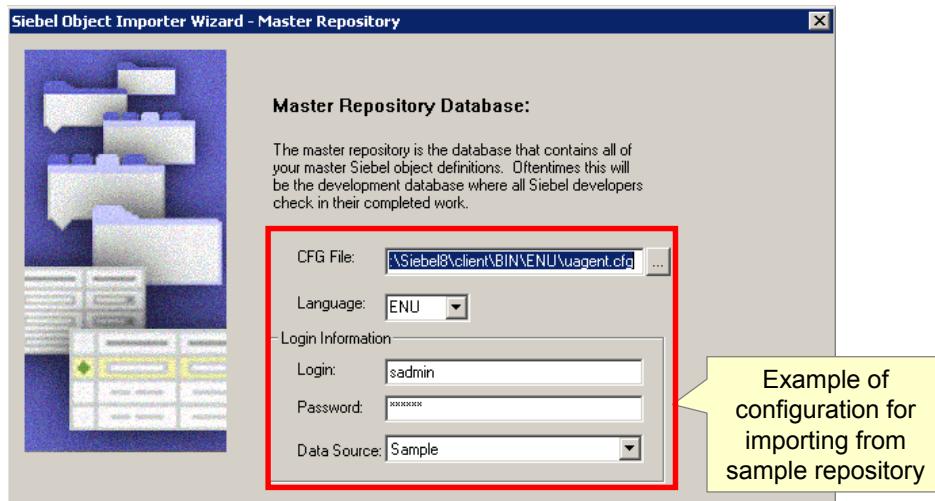


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2. Import Siebel Object Definitions

- Invoke the Siebel object importer
 - ▶ In HaleyAuthority, select File > Import > Siebel Object
- Provide the connection information for:
 - ▶ Master repository data source (source of object definitions)
 - ▶ Run-time data source (environment where rules will be run)

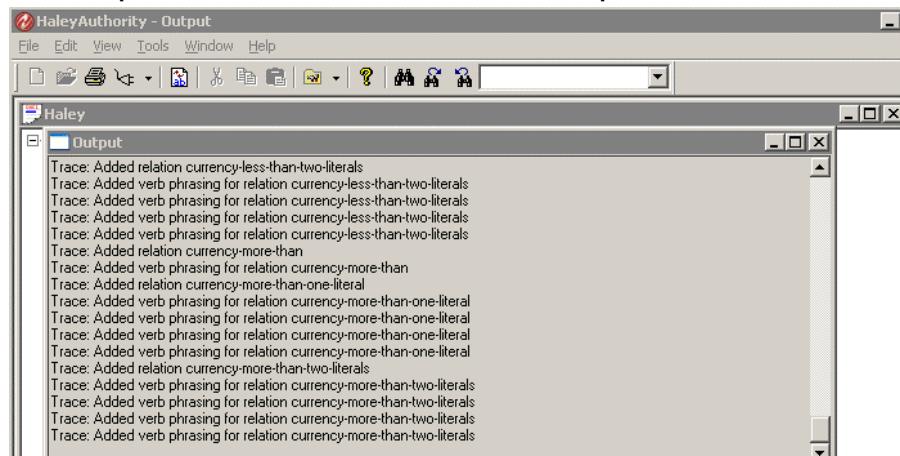


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2. Import Siebel Object Definitions Continued

- On the first import for a new knowledge base the following occurs immediately:
 - ▶ Object definitions relating to currency and currency code are imported
 - ▶ Concepts to support Siebel currency calculation procedures are created
 - ▶ Siebel-specific actions, functions, and predicates are created



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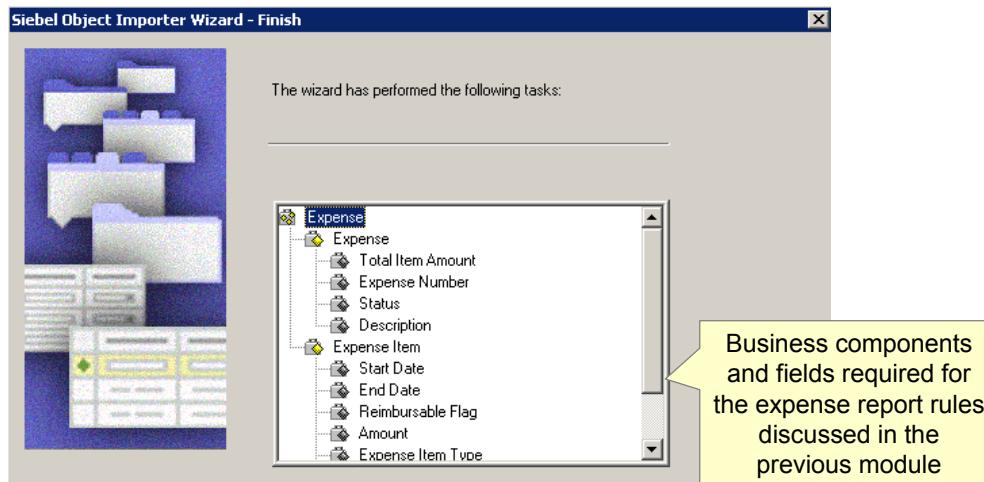
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Currency Calculations

Siebel applications manage currency using amounts, currency codes, and exchange rates. Rules that include references to currencies must use callbacks (actions and functions) to the Siebel application for currency operations. These operations are not supported using the base set of Haley actions and functions.

2. Import Siebel Object Definitions Continued

- After currency-related concepts are created:
 - ▶ Select Import Siebel Objects
 - ▶ Specify the Siebel Business Object
 - ▶ Select the business component and, possibly, child business components
 - ▶ For each selected business component, select one or more fields

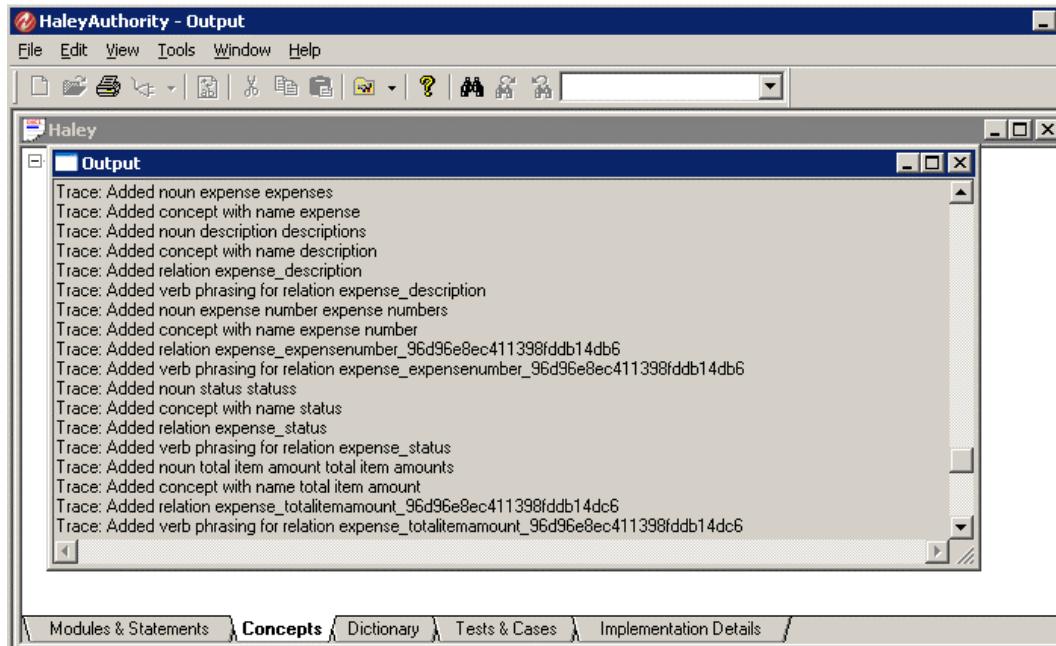


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2. Inspect Concepts

- Inspect the output window to verify that corresponding nouns, concepts, and phrasings were created

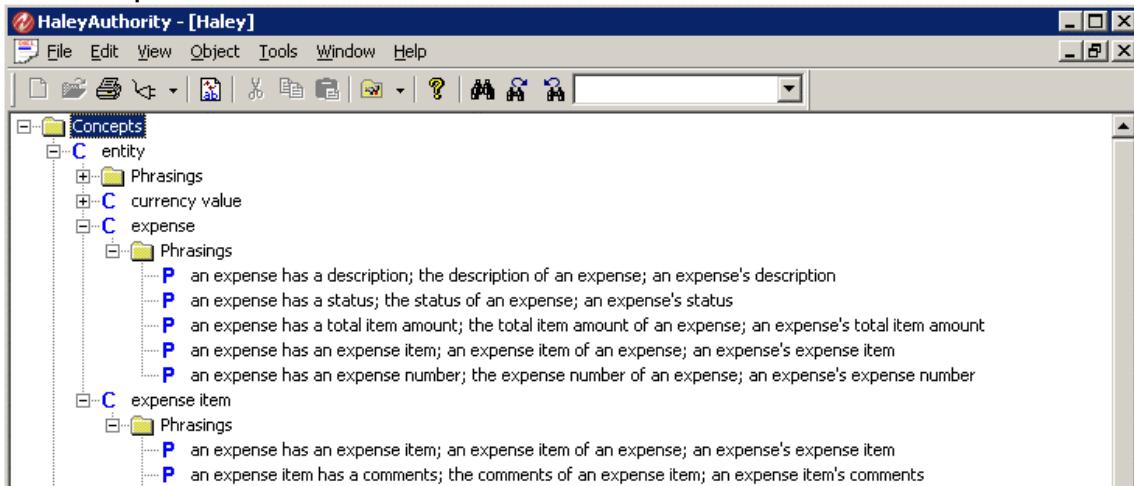


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2. Inspect Concepts Continued

- In the Concepts tab, expand entity and value
- Verify that the entities and values corresponding to the objects and fields have been created
- Inspect the phrasings
 - ▶ Should be of the form “a <BusComp> has a <Field>” and equivalents

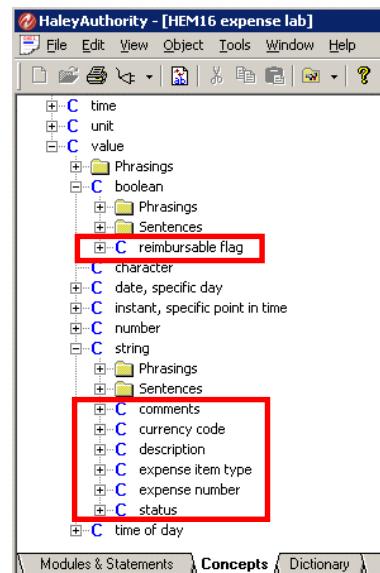


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2. Import Siebel Object Definitions Continued

- Additional import considerations
 - ▶ Entities are used to represent business components
 - Parent and child business components that are selected explicitly
 - Business components that are referenced in multi-value fields
 - ▶ Values are used to represent single-value fields
 - Are categorized by the field type
 - ▶ Example:
 - DTYPE_TEXT → value: string
 - DTYPE_PHONE → value: string
 - DTYPE_INTEGER → value: number
 - ▶ Several Siebel field types cannot be converted
 - Are not displayed in the list of selectable fields



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Field Mappings

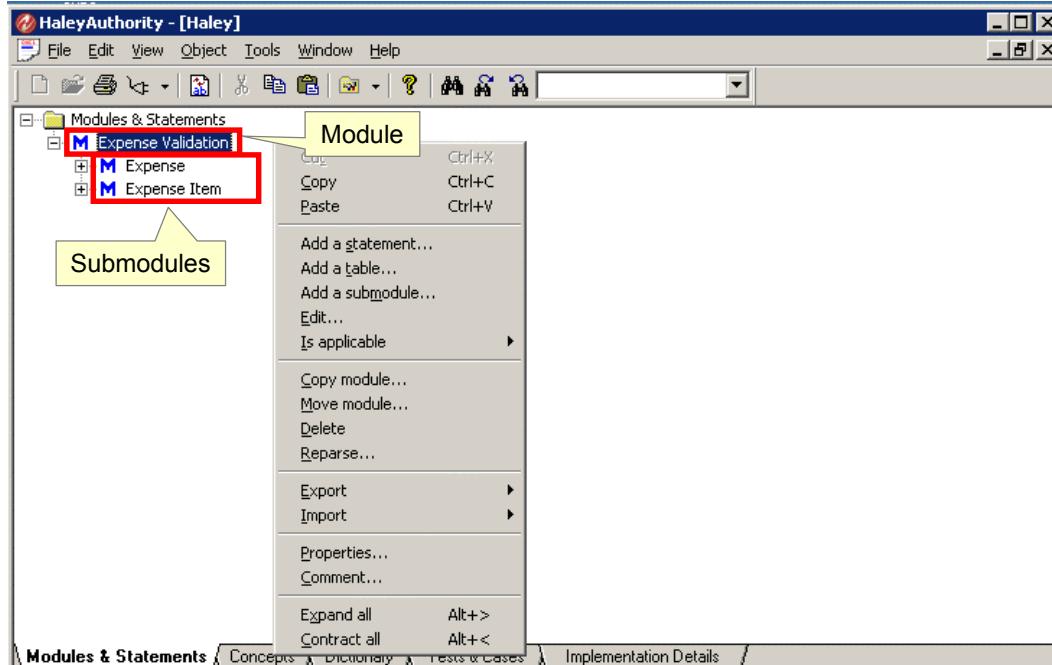
For a list of all of the mappings (including field types that can not be converted) refer to Siebel Business Rules Administration Guide: Reference Topics for Siebel Business Rules.

3. Create a Rule Module

- A module is a collection of rule statements that are deployed together
 - ▶ Suggestion:
 - Create a rule module to contain only the statements that need to be evaluated as a set by the rules engine
 - Name the rule module to indicate how the module will be invoked
- A module can be divided into submodules to improve readability

3. Create a Rule Module Continued

- Click the Modules & Statement tab
- Add a new module (and submodules if desired)

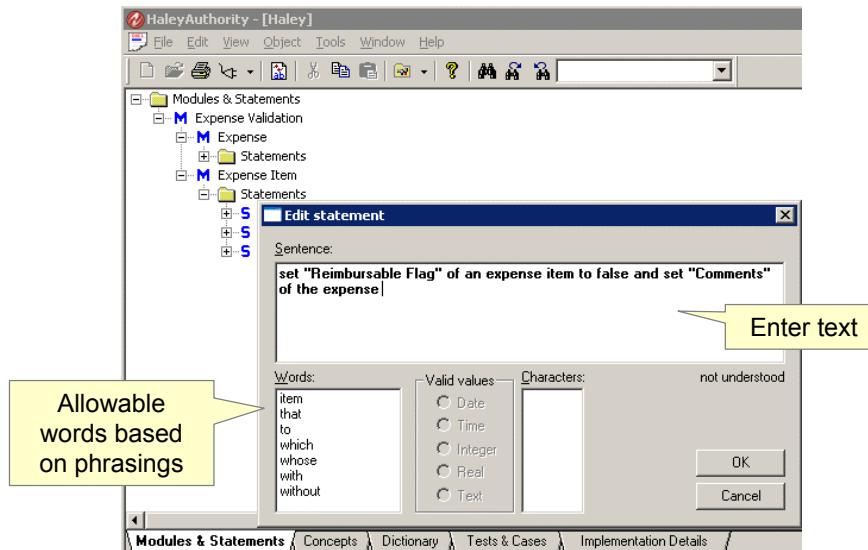


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3. Create a Rule Module Continued

- Add one or more statements
 - ▶ Use the Edit Statement dialog box to enter the statement
 - Text is bolded if it can be parsed, that is if the words entered correspond to defined concepts and phrases
 - A list of eligible words is presented at all times

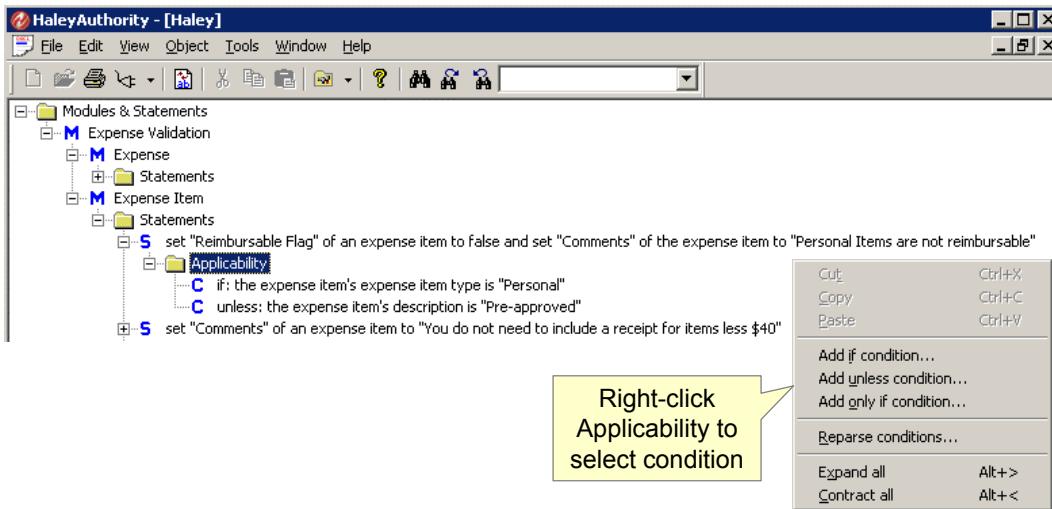


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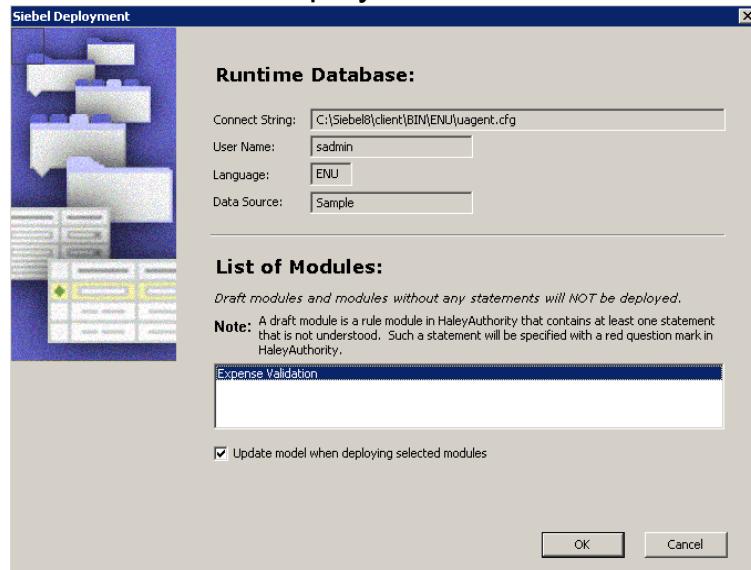
3. Create a Rule Module Continued

- Add applicability conditions to specify when the statement applies
- Edit statements until all content parses



4. Deploy the Rule Module

- Invoke the Siebel Deployer
 - ▶ In HaleyAuthority select Tools > Siebel Deployment
 - ▶ Verify the connection parameters for the run-time data source
 - ▶ Select the modules to deploy and click OK



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Siebel Deployer

The Siebel Deployer is a HaleyAuthority plug-in that allows developers to deploy to a run-time environment rule modules that they created.

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Administer Deployed Rules

- In the Siebel client, navigate to Administration - Business Rules > Rule Modules List
- Select the deployed rule module
- Specify the business object that will provide data to the run-time rules engine
 - ▶ Should be the business object specified for object import

The screenshot shows the Siebel Rule Modules List interface. At the top, there is a navigation bar with links for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Administration - Business Rules. Below the navigation bar, the title 'Rule Modules List' is displayed. The main area contains a table with the following data:

Name	Status	Business Object	Inconsistent	Data Assertion	M	Comment
> Expense Validation	Inactive	Expense	N			For All

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Reference

Siebel Business Rules Administration Guide: Configuring and Activating Rule Modules

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Administer Deployed Rules Continued

- Create one or more Rule Module Relation records
 - ▶ They identify the business components necessary to evaluate the rules
- Click New and select the records that specify the parent-child relationships captured in the rules

The screenshot shows the Siebel application interface. At the top, there is a navigation bar with links for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Administration - Business Rules. The Administration - Business Rules link is highlighted.

The main area displays two tables:

- Rule Modules List:** A table with columns: Name, Status, Business Object, Inconsistent, Data Assertion Mode, and Comment. One row is shown: Expense Validation, Inactive, Expense, N, For All.
- Rule Module Relations:** A table with columns: Parent Business Component, Business Component, Cardinality, and Search Specification. One row is shown: Expense, Expense Item, 1:M.

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Inconsistent	A value of Y in the Inconsistent field indicates that the data model and Siebel repository and the concepts in the knowledge base are no longer consistent. In this event, the models need to be resynchronized before the rule module can be administered.
Data Assertion Mode	This field indicates whether the complete set of Siebel data should be provided to the rules engine at once or smaller sets of data can be provided. This is relevant when the rules iterate over a set of records.

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Activate Rules

- Click the Activate button in the Rule Modules list applet to set the status to active
 - ▶ Only active rules are evaluated by the rules engine

The screenshot shows the Siebel interface with the following components:

- Top Navigation Bar:** Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Administration - Business Rules.
- Rule Modules List Applet:** A table titled "Rule Modules".

Name	Status	Business Object	Inconsistent	Data Assertion M	Comment
Expense Validation	Inactive	Expense	N	M	For All

A callout box points to the "Inactive" status cell with the text "Status changes to Active". The "Activate" button in the toolbar above the table is also highlighted with a red box.
- Rule Module Relations Applet:** A table titled "Rule Module Relations".

Parent Business Component	Business Component	Cardinality	Search Specification
Expense	Expense Item	1:M	

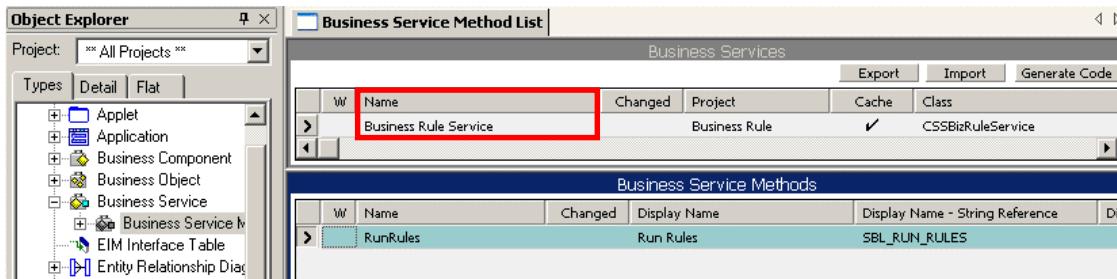
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Invoking the Rules Engine

- The rules engine is accessed by calling the Business Rule Service business service
 - ▶ Can be invoked using an action set for a run-time event



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Creating a Run-Time Event Action Set

- In the Siebel client, navigate to Administration - Runtime Events > Action Sets
- Create a new action set, and a child action of BusService type

The screenshot shows the Siebel client interface for creating a Run-Time Event Action Set. The top navigation bar includes Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Administration - Runtime Events. The main window displays two tables:

Name	Action Type	Sequence	Active	Start Date	End Date	Description
Expense Validation	BusService		✓			

A callout box labeled "Action for the action set" points to the "Expense Validation" row. Another callout box labeled "Action set" points to the first table, specifically the row for "AAA Expense Validation".

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Reference

Siebel Business Rules Administration Guide: Integrating Rules with Siebel Runtime Events

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Creating a Run-Time Event Action Set Continued

- In the More Info applet
 - ▶ Specify Business Rule Service and RunRules as the business service name and method
 - ▶ Specify the rule module name as the context

The screenshot shows the Siebel interface with two main windows:

- More Info** window (top):
 - Fields: Name (Expense Validation), Sequence (1), Active (checked), Start Date, End Date, Action Type (BusService), Description, Conditional Expression.
 - Buttons: Profile Attribute, Set Operator, Value, Set Minimum, Set Maximum.
 - Advanced settings (highlighted by a red box):
 - Business Service Name: Business Rule Service
 - Business Service Method: RunRules
 - Business Service Context: Expense Validation (highlighted by a red box)
 - Method Name: (empty)
 - Method Argument: (empty)
- Rule Modules List** window (bottom):

Name	Status	Business Object	Inconsistent	Data Assertion Mode	Comment
Expense Validation	Active	Expense	N	For All	

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Creating a Run-Time Event Action Set Continued

- Navigate to Administration - Runtime Events > Events
- Create an event record for the business component
 - ▶ Specify the desired run-time event
 - ▶ Assign the action set
- Select Reload Runtime Events from the applet menu

Name	Action Set Name	Sequence	Object Type	Object Name	Event	Subevent	Condition
>	AAA Expense Validation		BusComp	Expense	WriteRecord		

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Test the Rule Module

- Create a record and trigger the run-time event
 - ▶ Verify that the desired business logic is executed
- Create additional records as required to fully test the rules

The screenshot shows the Siebel application interface for 'Expense Reports'. A validation error dialog box titled 'Siebel' is displayed, stating: 'Executing 'Expense Validation' rule module returned the following invalid validation result. Expense (6-494ET) All expense items must have a description All expense reports must have a description (SBL-BZR-00142)'.

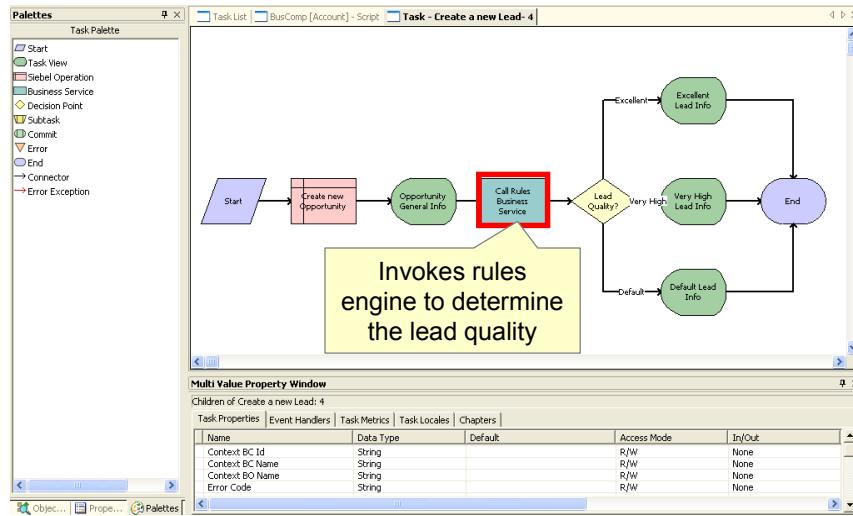
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Additional Ways to Invoke the Rules Engine

- The business rules service can be invoked:
 - ▶ In custom scripts
 - ▶ In business service steps in Siebel workflows and tasks



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Invoking the Rules Engine in a Workflow A limitation of this release is that custom scripting is required to extract the arguments returned by the Business Rules Service business service. Consult Bookshelf for an example of such a custom script.



Module Highlights

- Create rules by:
 - ▶ Creating concepts by importing business components and fields from the Siebel repository
 - ▶ Building statements based on the concepts
- Deploy the rules module to the Siebel run-time client
- Activate the rules in the client
- Invoke the rules by using a run-time event
 - Configure an action set



Lab

- In the lab you will:
 - ▶ Create a new rule
 - Import a set of Siebel objects
 - Create the rule module
 - Deploy and administer the module
 - Create an action set triggered by a run-time event

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Siebel 8.0 Essentials

Module 44: Introducing Siebel Assignment Manager

44

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Module Objectives

- After completing this module you should be able to:
 - ▶ Explain the role of Siebel Assignment Manager
 - ▶ List the elements used to create rules that assign business data
- Why you need to know:
 - ▶ Your company may have rules and policies about how to assign data that can be automated using Siebel Assignment Manager



Business Challenge

- Companies need to assign business data in a timely fashion and in a way that consistently follows their business rules and policies
 - ▶ Sales leads
 - ▶ Contacts
 - ▶ Accounts
 - ▶ Service requests
- Typical characteristics
 - ▶ Large volumes of data
 - ▶ Short response times
 - ▶ Multiple rules and policies
 - Complex
 - Conflicting

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Business Solution: Siebel Assignment Manager

- Allows companies to automatically assign business data to the most appropriate positions, people, and organizations
- Consists of:
 - ▶ Administrative functionality to define assignment rules
 - ▶ Server components to automatically assign business data according to the rules

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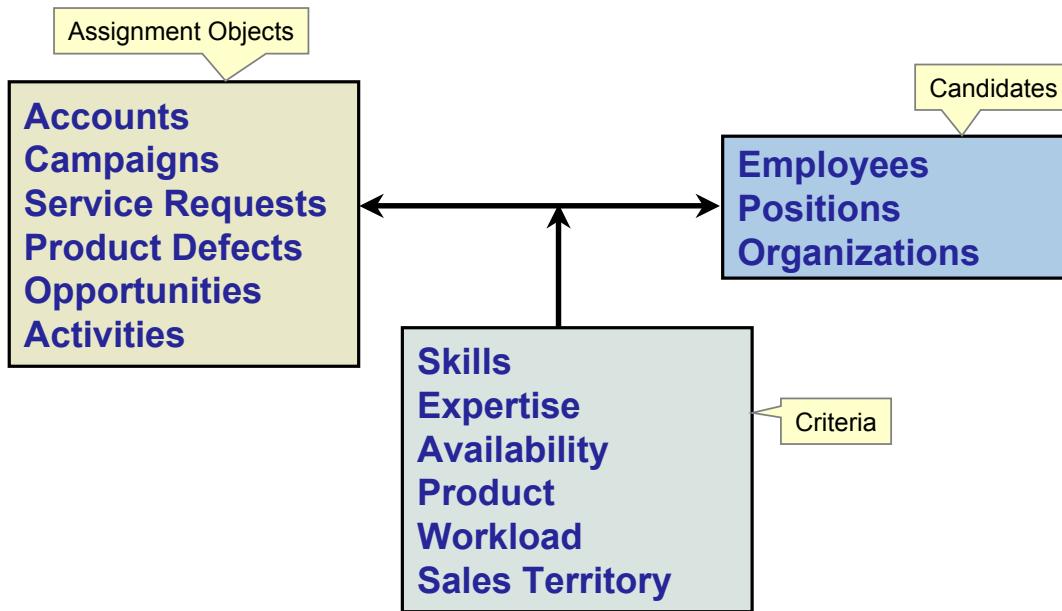
Reference

Siebel Assignment Manager Administration Guide

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Assignment Rules

- Assignment Manager uses assignment rules to assign data
 - ▶ Rules assign one or more candidates to assignment objects based on one or more criteria



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Assignment Objects

- Assignment objects identify the type of data being assigned
- Several assignment objects are pre-configured in the as-delivered application
 - ▶ Examples:
 - Account
 - Contact
 - Service Request

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Assignment Candidates

- Candidates are instances of entities to which data can be assigned
 - ▶ Position
 - ▶ Employee
 - ▶ Organization
- Examples of candidates for pre-configured objects:
 - ▶ Accounts can be assigned to both positions and organizations
 - ▶ Activities can be assigned to employees
 - ▶ Service Requests can be assigned to both employees and organizations
- Types of candidates must be consistent with the allowed access control mechanisms for the object



Assignment Criteria

- Criteria express conditions that must be satisfied for data to be assigned
 - ▶ Are expressed in terms of attributes of objects and/or candidates
 - ▶ Examples:
 - Account State = CA
 - Account Product = a product that candidate has expertise for
- Rules often include multiple criteria

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Administering Assignment Rules

- Rules are created and administered using the Siebel Web Client
 - ▶ Are not part of the Siebel repository
 - ▶ Are not compiled into the .srf file
 - ▶ Can be deployed during run time

The screenshot shows the Siebel Assignment Rules List interface. The top navigation bar includes File, Edit, View, Navigate, Query, Tools, Help, and a search bar. Below the navigation is a toolbar with icons for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, Expense Reports, and Administration - Assignment. The main content area displays a table titled "Assignment Rules List". The columns are Name, Objects to be Ass Rule Group, Sequence, Activation, and Expiration. Two rows are visible: "AAA SR Rule" (Service Request, Default Rule Group) and "AAA Sales Rule" (Opportunity, Default Rule Group). Action buttons New, Delete, Query, and Release are located at the top of the list table.

Name	Objects to be Ass Rule Group	Sequence	Activation	Expiration
AAA SR Rule	Service Request	Default Rule Group		
AAA Sales Rule	Opportunity	Default Rule Group		

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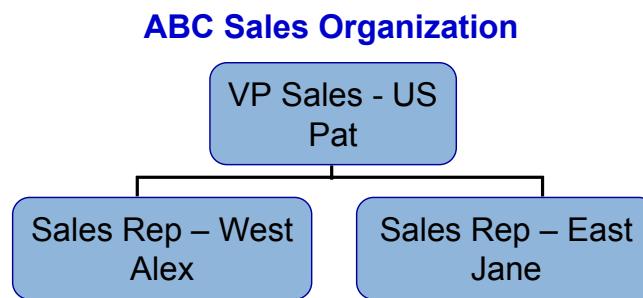
Examples of Assignment Rules

Assign Accounts by Sales Region

Assign Service Requests to Skilled Agents

Assign Accounts by Sales Region

- ABC Company assigns accounts to its sales organization
- ABC Company also assigns accounts to its sales reps by sales region
 - ▶ Opportunities in the Western Region (CA, OR, WA) are assigned to Sales Rep – West
 - ▶ Opportunities in the Eastern Region (CT, MA, ME, NH, RI, VT) are assigned to Sales Rep – East



Rule to Assign Accounts by Sales Region

- Rule includes
 - ▶ Candidates (desired organization and positions)
 - ▶ Criteria for determining region to assign the account

Rule: Assign East Accounts

Position candidate
Organization candidate
Rule applies when

Object: Account
Candidates:

- Sales Rep – East
- Sales Organization

Criteria: Account State is one of CT,MA,ME,NH,RI,VT

Rule to Assign Accounts by Sales Region Continued

- A separate rule is required for each sales region

Rule: Assign West Accounts

Object: Account

Candidates:

- Sales Rep – West
- Sales Organization

Criteria: Account State is one of
CA,OR,WA

This rule applies when

Rule: Assign East Accounts

Object: Account

Candidates:

- Sales Rep – East
- Sales Organization

Criteria: Account State is one of
CT,MA,ME,NH,RI,VT

This rule applies when

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Territory

Territory is another name for sales region. Formally, a territory is a collection of accounts, contacts, and or assets that are managed by a team of positions. Most often a territory is based on a geographical area such as states.

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Candidates for Rules

- Two assignment rule records are created
- Candidates are listed in the Position Candidates view

The screenshot displays the Oracle Siebel Assignment Manager interface. At the top, there is a navigation bar with links for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, and Administration - Assignment. Below the navigation bar, a sub-menu for Assignment Rules List is open, showing options like Load Splitter Configuration, Assignment Rules List, Rule Group Explorer, Rule Groups List, Territories, Assignment Policies, and Workload Distribution Rules.

The main area shows two assignment rule records:

Name	Objects to be Assigned	Rule Group	Sequence	Activation	Expiration
> Assign East Accounts	Account	Default Rule Group			
Assign West Accounts	Account	Default Rule Group			

Below this, a detailed view for "Assign East Accounts" is shown. It includes fields for Name, Rule Group, Description, Activation, Expiration, Score, Sequence, and Exclusive. To the right, Candidate Details settings are displayed, including Person Candidates Source (From Rule), Organization Candidates Source (From Rule), Assignee Filter (All, Above Minimum), Candidate Passing Score (0), and Check Employee Calendar (unchecked).

At the bottom, a Position Candidates view is shown with one record:

Position	Division	First Name	Last Name	Score	Activation	Expirat
> ABC Sales Rep - East	ABC Sales					

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Criteria for Rules

- Applicable states are listed in the Criteria view

The screenshot shows the Siebel Assignment Manager interface. At the top, there's a header bar with tabs like 'Criteria', 'Employee Candidates', etc. Below it is a main form for 'Assign East Accounts' with fields for Name, Rule Group, Description, Activation, Expiration, Score, Sequence, Candidate Details, and various filters. Below this is a table titled 'Rule Criterion' with columns for 'Rule Criterion', 'Comparison Method', 'Inclusion', 'Required', 'Score', 'Minimum Score', and 'Description'. A row for 'Account State' is selected and highlighted with a red border. At the bottom is another table for 'State' with columns 'Score' and 'State', containing rows for CT, MA, ME, NH, RI, and VT, also highlighted with a red border.

Rule Criterion	Comparison Method	Inclusion	Required	Score	Minimum Score	Description
> Account State	Compare to Object	Include	Always			

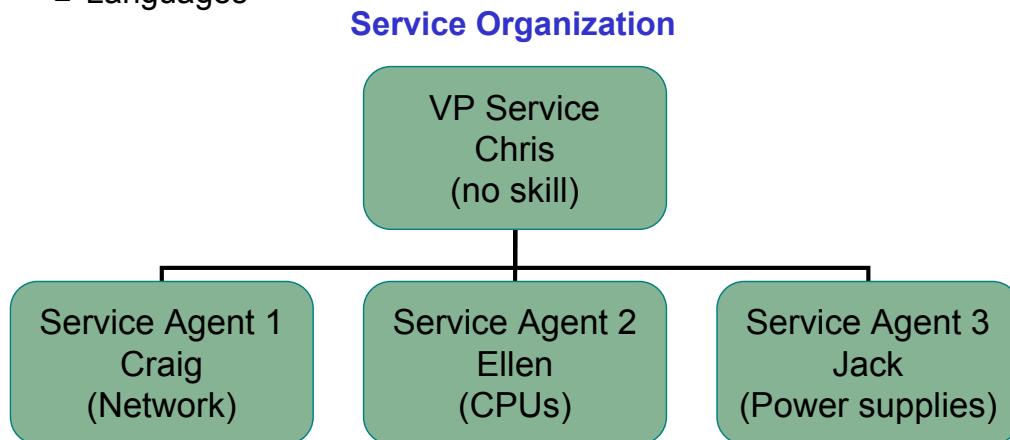
Score	State
>	CT
	MA
	ME
	NH
	RI
	VT

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Assign Service Request to Skilled Agents

- XYZ company assigns service requests to employees with the correct skills to resolve them
 - ▶ Skills are properties that reflect the candidate's abilities in various areas such as:
 - Product expertise
 - Installation and upgrade skills
 - Languages



Assign Service Request to Skilled Agents Continued

■ Rule includes

- ▶ Criteria for assigning request
 - Employee skill matches the area of the service request
- ▶ Candidates to be considered
 - Can list select employees or consider all available employees

Rule: Assign Service Request

Object: Service Request

Candidates:

- All service agents

Criteria: Candidate's product skill =
product associated with Service
Request

Employee candidates

Rule applies when



Running Assignment Manager

- Assignment Manager can be invoked in three modes
 - ▶ Batch Assignment: Can be used to submit batches of data for one-time assignment or reassignment
 - ▶ Dynamic Assignment: Automatically invokes Assignment Manager to assign data in near real time as records are created or modified
 - ▶ Interactive Assignment: Can be used to manually assign candidates in real time
 - Enabled for Service Request and Activity assignment objects



Module Highlights

- Siebel Assignment Manager allows companies to automatically assign business data to the most appropriate positions, people, and organizations
- Assignment rules are used to assign candidates to objects
 - ▶ Include assignment objects, candidates, and criteria

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Siebel 8.0 Essentials

Module 45: Creating Assignment Rules

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Module Objectives

- After completing this module you should be able to:
 - ▶ Create an assignment rule that assigns sales data to a sales team
 - ▶ Create an assignment rule that assigns service data to a skilled employee
 - ▶ Test assignment rules
- Why you need to know:
 - ▶ Assignment Manager uses rules to assign data to candidates

Assignment Rules

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- Assign one or more candidates to assignments objects based on one or more criteria
- Are specified using several key concepts

Candidate Details

- Name: * Assign East Accounts
- Rule Group: * Default Rule Group
- Description:
- Activation:
- Person Candidates Source: From Rule
- Organization Candidates Source: From Rule
- Assignee Filter: * All, Above Minimum
- Candidate Passing Score: * 0
- Check Employee Calendar:

Criteria

Criteria	Employee Candidates	Position Candidates	Workload Distribution	Organization Candidates	Organization Workload Distribution	
Rule Criterion	Comparison Method	Inclusion	Required	Score	Minimum Score	Descrip
Account State	Compare to Object	Include	Always			

Rule Criterion

Score	State
CT	MA

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Reference

Siebel Assignment Manager Administration Guide: Assignment Rule Administration



Creating Assignment Rules

- General process to create assignment rules:
 - ▶ Design the rule
 - ▶ Create the rule record
 - ▶ Define the criteria
 - ▶ Specify the candidates

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Example: Assigning Data by Sales Region

1. Design the Assignment Rules
2. Create the Rule
3. Specify the Criteria
4. Specify the Candidates

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1. Design the Assignment Rules

- Determine the criteria to identify each sales region
 - ▶ Example: Sales regions are based on account state
 - East region includes MA, VT, NH, ME, RI, CT
- Determine the candidates to be assigned in each sales region

Region	Positions
East (CT, MA, ME, NH, RI, VT)	Sales Rep - East Sales Mgr - East
West (CA, OR, WA)	Sales Rep - West 1 Sales Rep - West 2

2. Create the Rule

- Navigate to Administration - Assignment > Assignment Rules List
- Create a new rule for each sales region
 - ▶ Select the assignment object
 - ▶ Set Person Candidate Source to *From Rule*
 - ▶ Select the Assignee Filter
 - ▶ Assign a rule group

The screenshot shows the Siebel Assignment Rules List interface. A specific rule named "Assign East Accounts" is selected. The "Candidate Details" section is highlighted with a yellow box and contains the following annotations:

- Consider only the candidates listed in rule**: Points to the "Person Candidates Source: From Rule" dropdown.
- Specify Default Group if not rule groups**: Points to the "Rule Group: Default Rule Group" field.
- Assigns multiple qualifying candidates**: Points to the "Assignee Filter: All, Above Minimum" dropdown.

Other visible fields include "Name: Assign East Accounts", "Objects to be Assigned: Account", "Activation", "Expiration", "Score", "Sequence", "Exclusive", "Organization Candidates Source: From Rule", "Candidate Passing Score", and "Check Employee Calendar".

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3. Specify the Criteria

- Drill down on the rule
- In the Criteria view, create a new Rule Criterion to be used to assign data
 - ▶ Example: Only opportunities with an account state in the East region will be assigned
- Specify the Comparison Method
- Specify the attribute value(s) to be used in the comparison

The screenshot shows the Siebel Criteria view. At the top, there are tabs for Criteria, Employee Candidates, Position Candidates, Workload Distribution, Organization Candidates, and Organization Workload Distribution. Below the tabs is a toolbar with New, Delete, Query, and Create From Templates buttons. A status bar indicates "1 - 1 of 1".

The main area displays a table with columns: Rule Criterion, Comparison Method, Inclusion, Required, Score, Minimum Score, and Description. A single row is visible, with "Account State" in the Rule Criterion column, "Compare to Object" in the Comparison Method column, and "Include" in the Inclusion column. The Required column shows "Always".

A callout box points from the "Compare to Object" field to a sub-table below. This sub-table has columns: Score and State. It lists several states: CT, MA, ME, NH, RI, and VT. The "State" column is highlighted with a red border.

A status bar at the bottom right of the sub-table area says "1 - 6 of 6".

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4. Specify the Candidates

- Navigate to the Position Candidates view
- Add a new record for each position to be assigned
- Optionally assign organizations using the Organization Candidates view

The screenshot shows the 'Assign East Accounts' screen in Siebel. At the top, there are fields for Name (Assign East Accounts), Rule Group (Default Rule Group), and Description. Below these are sections for Activation, Expiration, Score, Sequence, and Exclusive. On the right, Candidate Details are set to 'From Rule'. Below this is a tab bar with 'Position Candidates' highlighted in red. The main area displays a table of positions:

Position	Division	First Name	Last Name	Score	Activation
ABC Sales Manager - East	ABC Sales				
ABC Sales Rep - East	ABC Sales				

A callout box points to the table with the text 'Specify one or more positions'.

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Example: Assigning Service Data to Employees

1. Design the Assignment Rule
2. Create the Rule
3. Specify the Criteria
4. Specify the Candidates
5. Associate Skills with Candidates

1. Design the Assignment Rule

- Determine the criteria to assign a candidate to a service request
 - ▶ Matching criteria include:
 - Skill match
 - Location
 - Availability
 - Workload
- Determine the set of eligible candidates
 - ▶ Alternatively consider all available employees

Object: Service Request

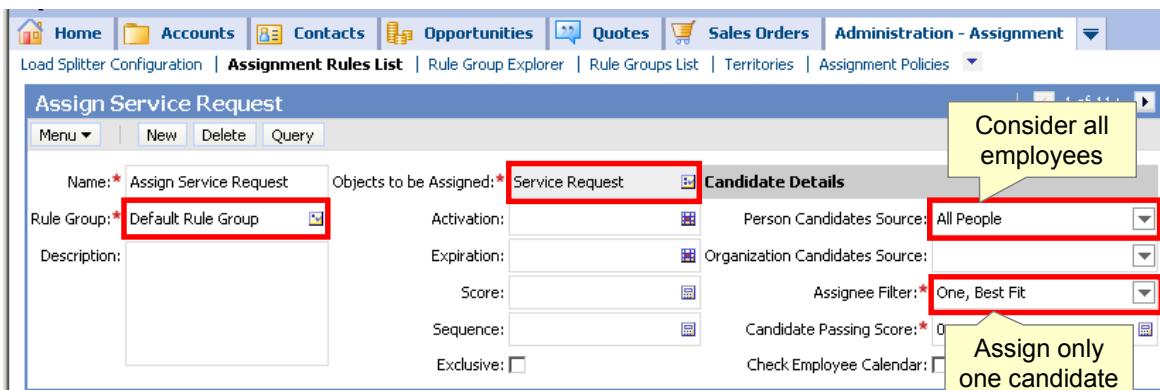
Candidates:

- All service agents

Criteria: Candidate's product skill =
product associated with service
request

2. Create the Rule

- Navigate to Administration - Assignment > Assignment Rules List
- Select the assignment object
- Set Person Candidate Source to *All People*
- Set Assignee Filter to *One, Best Fit*
- Assign a rule group



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3. Specify the Criteria

- Drill down on the rule
- In the Criteria view, create a new rule criterion to be used to assign data
 - ▶ Example: Consider employees only if they are skilled in the product associated with the SR
- Specify the comparison method

Criteria	Employee Candidates	Position Candidates	Workload Distribution	Organization Candidates	Organization Workload Distribution	
Rule Criterion	Comparison Method	Inclusion	Required	Score	Minimum Score	
> Product	Compare Object to Person	Include	Always			

Qualify only employees with product skill

4. Specify the Candidates

- When considering a restricted set of candidates for assignment, set Person Candidate Source = From Rule
 - ▶ Navigate to the Employee Candidates view
 - ▶ Add a new record for each employee to be considered
- Otherwise set Person Candidate Source = All People
 - ▶ Do not explicitly add any employees to rule

The screenshot shows the 'Assign Service Request' screen. In the 'Candidate Details' section, the 'Person Candidates Source' dropdown is set to 'All People', which is highlighted with a red box. Below this, a note 'Do not add any employees' is displayed in a yellow box with an arrow pointing to the table below. The table has columns: Last Name, First Name, Short Name, Job Title, Score, Activation, and Expiration. A message 'No Records' is shown at the top right of the table area.

Last Name	First Name	Short Name	Job Title	Score	Activation	Expiration
Do not add any employees						

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5. Associate Skills with Candidates

- Navigate to Administration - User > Employees Assignment Skills
 - ▶ Skills are employees attributes that can be used in assignment
- Select a skill and assign one or more values that apply to the user

The screenshot shows the Oracle Siebel interface for managing employee assignments. At the top, there's a navigation bar with links like Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, and Administration - User. Below that is a sub-navigation bar for Employees, with options for More Info, Calendar, Certification, Competency, Education, Employee Assignment Rules, and Assignment Skills.

The main area displays a list of employees. One employee, "Iyer" (Andy), is selected. Below the list, there's a table titled "Assignment Skill Items" showing assigned skills. The first row has "Skill" and "Comments" columns. The second row, "Product", is highlighted with a red box and has a callout pointing to a yellow box labeled "Areas of expertise".

Below this, another table shows "Assignment Skill Items" for "Product". It has "Product" and "Expertise" columns. The first row lists "10/100 Network Interface Card", "10/100 Ethernet Card - Half Height", and "10Mbps Network Card". A callout from this row points to a yellow box labeled "Specific skills in the area".

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Overview of Key Concepts

Person Candidate Source

Comparison Method

Scoring

Assignee Filter

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Person Candidate Source

- Determines the set of possible candidates that can be assigned to data by this rule

Candidate Source	Action
All People	Consider every employee/position as a candidate
From Rule	Consider only employees/positions listed explicitly as a candidate in the rule
Team Name	Consider the members of a team as candidates Implements dynamic assignment

Comparison Method

- Determines how a rule is evaluated
 - ▶ Expressed in terms of object and candidate attributes

Comparison Method	Action
Compare to Object	Checks if a record attribute matches a value specified in rule
Compare to Person	Checks if a person attribute matches a value specified in a rule
Compare Object to Person	Checks if a record attribute matches that attribute of an employee or position candidate
Compare to Organization	Checks if an organization attribute matches a value specified in a rule
Compare Object to Organization	Checks if record attribute matches that attribute of an organization candidate

Scoring

- Is a mechanism used to rank candidates for potential assignment
 - ▶ Rules can specify passing scores
 - ▶ Assign higher scores to more important criteria and lower scores to less important criteria

*Objects to be Assigned: Account

Activation: 10/31/1998 11:59:59 PM

Expiration: 12/30/2002 11:59:59 PM

Score: Add this value to candidates score if candidate qualifies

Sequence:

Exclusive:

Assignee Filter

- Determines how candidates that qualify are selected for assignment
 - ▶ Multiple candidates might qualify
 - ▶ Some rules may allow multiple candidates to be assigned

Assignee filter	Action
All, above minimum	Assign all candidates with a score higher than the rule's passing score
All, must assign	Assign the highest scoring candidate as well as any others with scores higher than the rule's passing score
One, best fit	Assign the candidate with the highest score (must score higher than the rule's passing score)
One, random	Assign a single qualifying candidate by random selection

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Testing Assignment Rules

- After creating a rule, run Batch Assignment to test the rule

1. Release Assignment Rules
2. Enable Detailed Logging
3. Run a Batch Assignment
4. Examine the Assigned Records
5. Inspect the Assignment Log Files

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1. Release Assignment Rules

- In the Assignment Rules List view:
 - ▶ Verify that the rule has not expired
 - ▶ Click Release to update the list of rules used by Assignment Manager
 - A rule must be released again every time it is modified

The screenshot shows the Siebel Assignment Rules List screen. At the top, there is a navigation bar with links for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, and Administration - Assignment. Below the navigation bar, a toolbar has buttons for New, Delete, Query, and Release, with the Release button highlighted by a red box. The main area displays a table of assignment rules:

Name	Objects to be Assigned	Rule Group	Sequence	Activation	Expiration
Assign Service Request by Product Expertise	Service Request	Default Rule Group		8/31/2006 11:59:59	
Assign East Accounts	Account	Default Rule Group			
Assign Fast Track Partners Opportunities BP	Opportunity	Default Rule Group		4/28/2003 5:00:00 F	

A yellow callout box points to the table with the text: "All rules are active and are released".

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2. Enable Detailed Logging

- Navigate to Administration - Server Configuration > Servers > Components
 - ▶ Select Batch Assignment
 - ▶ Set Log Level for Object Assignment and Rules Evaluation to 4
 - Log levels can range from 0 to 5 in order of increasing detail

The screenshot shows two tables side-by-side. The top table is titled 'Components' and lists various server components with their types and groups. The bottom table is titled 'Events' and lists log events with their levels and descriptions.

Component	Component Type	Alias	Component Group
Assignment Manager	AsgnSrvr	AsgnSrvr	AsgnMgmt
Batch Assignment	AsgnBatch	AsgnBatch	AsgnMgmt
Call Center Object Manager (ENU)	AppObjMgr	SCCObjMgr_enu	CallCenter
Database Extract	DbXtract	DbXtract	Remote
File System Manager	FSMSrvr	FSMSrvr	SystemAux
Generate New Database	GenNewDb	GenNewDb	Remote
Parallel Database Extract	PDbXtract	PDbXtract	Remote

Event Type	Log Level	Description
Object Assignment	4	Tracing rules, organizations and persons assignment
Assignment Manager Generic	1	Tracing of assignment manager generic operations
Loading	1	Tracing of assignment manager loading
Rules Evaluation	4	Tracing assignment rules evaluation

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3. Run a Batch Assignment

- Navigate to Administration - Server Management > Jobs
- Create a Batch Assignment job and submit the request

The screenshot shows the Siebel application's 'Administration - Server Management' module. A new job is being created with the following details:

Name	Value	Required?	Fixed?
Assignment Object Name	Service Request		

A callout box highlights the 'Assignment Object Name' row with the text: "Specify assignment object for this job".

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4. Examine the Assigned Records

- Navigate to the list view for the data assigned
- Inspect the records and verify that the desired assignments were made

The screenshot shows a Siebel application window titled "6-7135517". The window contains various fields for a service request, including "SR #", "Last Name", "Account", "Email", "Entitlement", "Product" (which is highlighted with a red box), "Work Phone #", "First Name", "Site", "Date Opened", "Date Committed", "Date Closed", "Summary", "Description", "Area", "Subarea", "Source", and "Recommendation". The "Status" is set to "Open" and the "Substatus" is "Assigned". The "Owner" field is set to "AIYER" and is also highlighted with a red box. A yellow callout bubble points from the "Product" field to the text "Has expertise in this product".

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5. Inspect the Assignment Log Files

- Navigate to the Siebel Server log directory to locate the log file generated by the Batch Assignment job
 - ▶ Detailed log files document:
 - How each rule is evaluated and why it failed or passed
 - Whether the candidates from each passed rule qualify
 - How the assignees are determined from the list of qualified candidates

```
C:\>useas\siebsrvr\log\AsgnBatch_0017_17825794.log 8.0 [20301] ENU
Match Object 2 00000006458a1690:0 2006-12-21 21:20:56 ##### BEGIN EVALUATION
Match Object 2 00000006458a1690:0 2006-12-21 21:20:56 Object: Account, Name: Broadway Lights, Site: [1-10B9]
Match Rule 3 00000006458a1690:0 2006-12-21 21:20:56 ++++++ BEGIN RULE EVALUATION
Match Rule 3 00000006458a1690:0 2006-12-21 21:20:56 Rule: Assign Finance Accounts [1-1967], sequence: 1, Rule
Group: Sales Rules Group, Score: 0, Minimum: 0, Type: Multiple
Match Rule 3 00000006458a1690:0 2006-12-21 21:20:56 Rule: Assign Finance Accounts [1-1967], Person Candidates:
From Rule, organization Candidates: From Rule, Non-Exclusive
Match Criterion 4 00000006458a1690:0 2006-12-21 21:20:56 ----- BEGIN CRITERIA EVALUATION
Match Criterion 4 00000006458a1690:0 2006-12-21 21:20:56 Criteria failed
Match Criterion 4 00000006458a1690:0 2006-12-21 21:20:56 ----- END CRITERIA EVALUATION
Match Rule 3 00000006458a1690:0 2006-12-21 21:20:56 Rule failed
Match Rule 3 00000006458a1690:0 2006-12-21 21:20:56 ++++++ END RULE EVALUATION
Match Rule 3 00000006458a1690:0 2006-12-21 21:20:56 ++++++ BEGIN RULE EVALUATION
Match Rule 3 00000006458a1690:0 2006-12-21 21:20:56 Rule: Assign East Accounts [1-ZU9], Sequence: 2, Rule Group:
Sales Rules Group, Score: 0, Minimum: 0, Type: Multiple
Match Rule 3 00000006458a1690:0 2006-12-21 21:20:56 Rule: Assign East Accounts [1-ZU9], Person Candidates: From
Rule, organization Candidates: From Rule, Non-Exclusive
Match Criterion 4 00000006458a1690:0 2006-12-21 21:20:56 ----- BEGIN CRITERIA EVALUATION
Match Criterion 4 00000006458a1690:0 2006-12-21 21:20:56 Criteria passed with score = 0
Match Criterion 4 00000006458a1690:0 2006-12-21 21:20:56 ----- END CRITERIA EVALUATION
Match Rule 3 00000006458a1690:0 2006-12-21 21:20:56 Rule passed
Match Rule 3 00000006458a1690:0 2006-12-21 21:20:56 ++++++ END RULE EVALUATION
```

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Module Highlights

- General process to create assignment rules:
 - ▶ Design the rule
 - ▶ Create the rule record
 - ▶ Define the criteria
 - ▶ Specify the candidates
- Test assignment rules by:
 - ▶ Releasing the rule
 - ▶ Running a batch assignment
 - ▶ Examining the assignment records
 - ▶ Inspecting the assignment log files
 - Enable an appropriate level of detailed logging



Lab

- In the lab you will:
 - ▶ Create assignment rules
 - ▶ Test the rules

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Siebel 8.0 Essentials

Module 46: Tailoring Assignment Manager Behavior

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Module Objectives

- After completing this module you should be able to:
 - ▶ Describe the steps in the assignment methodology
 - ▶ Prioritize rules using exclusive rules and rule group sequencing
 - ▶ Modify the behavior of an assignment object
- Why you need to know:
 - ▶ Developing effective rules requires an understanding of the ways assignments rules can be tailored



Assignment Methodology

- Refers to the steps followed by Assignment Manager to assign candidates to objects
- Simplified representation (does not contain all steps)
 - ▶ Identify rules that apply
 - ▶ Identify a list of qualified candidates for the applicable rules
 - ▶ Determine primary assignee and assign candidates
- For more details, consult the Assignment Methodology section in the *Siebel Assignment Manager Administrative Guide*

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Reference

Siebel Assignment Manager Administration Guide: Overview of Siebel Assignment Manager

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Identify Rules That Apply

- Assignment Manager evaluates all rules that apply to the object
 - ▶ Eliminates rules that fail the Compare to Object criteria
 - Example: Value of Required field determines if rule qualifies
 - ▶ Multiple rules may survive

The screenshot shows a Siebel application window titled 'Criteria'. The top navigation bar includes tabs for 'Employee Candidates', 'Position Candidates', 'Workload Distribution', and 'Organization Candidates'. Below the tabs is a toolbar with buttons for 'Menu', 'New', 'Delete', 'Query', and 'Create From Templates'. The main area displays a table with columns: 'Rule Criterion', 'Comparison Method', 'Inclusion', 'Required', and 'Score'. A row is selected for 'Account State' with 'Compare to Object' as the comparison method and 'Include' as the inclusion criterion. The 'Required' column contains a dropdown menu with four options: 'Always', 'Never', 'When Available', and 'Always' (which is currently selected). A callout box below the dropdown provides definitions for each option:

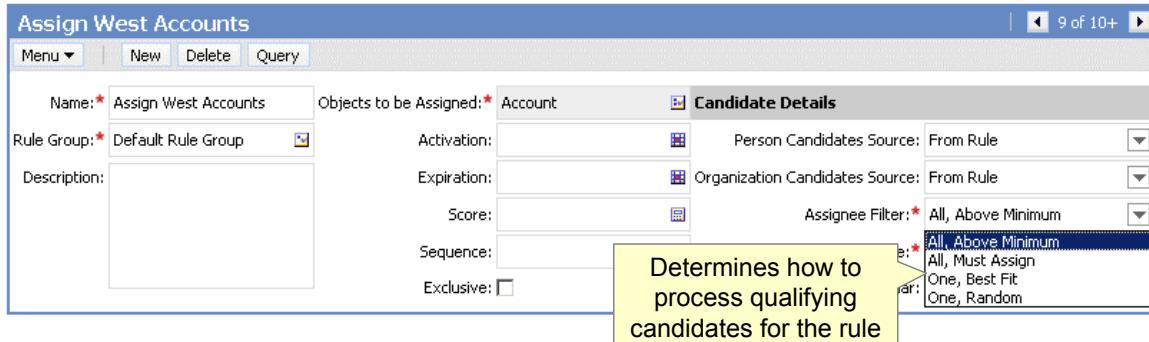
Rule Criterion	Comparison Method	Inclusion	Required	Score
Account State	Compare to Object	Include	Always Never When Available	

Always: Rule qualifies if and only if State = CA, OR, or WA
Never: Rule qualifies regardless of state
When Available: Rule qualifies if state not specified or State = CA, OR, or WA

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Identify Qualified Candidates

- For each rule that passes, Assignment Manager generates a list of qualified candidates
 - ▶ Evaluates the candidates specified in the rule using criteria:
 - Compare to Person/Organization
 - Compare Object to Person/Organization
 - ▶ Scores each candidate
 - ▶ Applies the Assignee Filter



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Score Candidates

- Scores can be defined for many parameters:

Item Scored	Action
Assignment rule	To apply the score to the candidate's total score when the candidate meets the rule criteria
Criteria	To rank criteria from the most important to the least important
Criteria values	To rank criteria values from the most important to the least important
Candidate	To rank the best candidate from a group of qualified candidates
Workload distribution	To distribute workload across all candidates The higher the candidate's current workload is, the lower his/her score is

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Score Candidates Continued

- A candidate's score is the sum of the individual scores

The screenshot shows the 'Assign East Accounts' configuration screen. In the 'Candidate Details' section, the 'Score' field is set to 20, highlighted with a red box. The 'Candidate Passing Score' field is set to 30, also highlighted with a red box. Below this, a table lists two candidates: 'ABC Sales Manager - East' with a score of 20, and 'ABC Sales Rep - East' with a score of 15. A callout box points to the 20-score row with the text 'Candidate total score = 40 ...'. Another callout box points to the 15-score row with the text 'Candidate total score = 35 ...'. A final callout box at the bottom right states '... so both candidates qualify as each score exceeds the passing score'.

Position	Division	Score
ABC Sales Manager - East	ABC Sales	20
ABC Sales Rep - East	ABC Sales	15

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Assign Candidates

■ Assignment Manager:

- ▶ Generates assignments using the Assignees Filter from the rule with the highest scoring assignee
- ▶ For team-based assignment, the highest-scoring qualifying candidate from the highest-scoring rule is made primary
 - Rule may optionally identify the primary explicitly

Assign East Accounts

Criteria Employee Candidates Position Candidates Workload Distribution Organization Candidates Organization Workload Distribution

Position	Division	Score	First Name	Last Name	Activation	Expiration
ABC Sales Manager - East	ABC Sales	20				
ABC Sales Rep - East	ABC Sales	15				

Will be assigned as primary (total score = 40)

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Workload Distribution

- Is used to distribute work among qualified candidates
 - ▶ Prevents individuals from being overloaded with work
- Consists of:
 - ▶ Workload Distribution Rule
 - ▶ Maximum Workload
 - ▶ Score

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Service Scenario

- Business Rule: Assign service requests to agents based on product skill and current workload

The screenshot shows the Oracle Siebel Service Requests List interface. A service request (SR # 6-7135519) is selected, which is an open request for a '10/100 Network Interface Card' and is currently 'Unassigned'. A callout box points to this row with the text 'Assign incoming service requests ...'. Another callout box points to the three employee profiles below with the text '... to the appropriate candidate'. The three employees listed are:

New	SR #	Status	Product	Substatus	Summary
>	6-7135519	Open	10/100 Network Interface Card	Unassigned	

Employee: Craig
Skill: Network
Workload: 18 SRs

Employee: Ellen
Skill: CPU
Workload: 10 SRs

Employee: Jack
Skill: Network
Workload: 20 SRs

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Workload Distribution Rules

- Balance workload across candidates
- Assign a computed score to candidates based on:
 - ▶ Maximum Workload: the maximum number of service requests that a candidate should own at any time
 - ▶ Score: the weight assigned to workload in comparison to other criteria

Assign Service Request

Menu New Delete Query

Name: * Assign Service Request	Objects to be Assigned: * Service Request	Candidate Details	
Rule Group: * Default Rule Group	Activation:	Person Candidates Source:	All People
Description:	Expiration:	Organization Candidates Source:	From Rule
	Score:	Assignee Filter:	* One, Best Fit
	Sequence:	Candidate Passing Score:	* 0
	Exclusive:	Check Employee Calendar: <input type="checkbox"/>	

Criteria Employee Candidates Position Candidates **Workload Distribution** Organization Candidates Organization Workload Distribution

1 - 1 of 1

Workload Distribution Rule	Assignment Object	Score	Required	Maximum Workload	Description
> Total Open Service Requests	Service Request	45	Always	20	

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Calculating Scores for the Scenario

- Compute a workload score and add it to other scores
 - ▶ Assign a score for product skill

Assign incoming network service request to Craig

Service Request		
Product = Network		
Criteria	Score	
Product	20	
Workload Rule	Score	
Total Open Service Requests	45	
Employee	Product Score	Employee Workload Score
		Score * [1 - (Current Workload / Max Load)]
Craig	20	45 * [1 - (18 / 20)] = 4.5
Ellen	0	45 * [1 - (10 / 20)] = 22.5
Jack	20	45 * [1 - (20 / 20)] = 0
		Total Score
		24.5
		22.5
		20

Craig is assigned

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Rule Prioritization

- Multiple assignment rules may exist for the same assignment object
 - ▶ Can result in qualified candidates from both rules being assigned
- Business policies may require that candidates from only a single rule be assigned

**Assign Opportunities based on
Account State to the state sales
office**

**Assign Opportunities based on
Account Industry to *only* the
industry specialists**

Only positions from this
rule should be assigned

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Reference

Siebel Assignment Manager Administration Guide: Assignment Rule Administration

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Exclusive Rules

- Rules can be marked exclusive to prioritize them
 - ▶ Results in only the qualified candidates from that rule being assigned
- All rules are first evaluated and scored as before
 - ▶ Exclusive rule must first pass and have qualifying candidates

The screenshot shows the 'Assign Financial Accounts' dialog box. On the left, there's a sidebar with 'Name: * Assign Financial Accounts', 'Rule Group: * Default Rule Group', and a 'Description:' field. On the right, the 'Candidate Details' tab is selected, showing fields for 'Activation', 'Expiration', 'Score', 'Sequence', 'Person Candidates Source: From Rule', 'Organization Candidates Source:', 'Assignee Filter: * All, Above Minimum', 'Candidate Passing Score: * 0', and 'Check Employee Calendar:'. A red box highlights the 'Exclusive' checkbox under 'Sequence'. A yellow callout bubble with a black border and white text points to the 'Exclusive' checkbox with the instruction 'Set flag to make rule exclusive'.



Multiple Exclusive Rules

- When several exclusive rules have qualifying candidates, the rule with the highest scoring candidate prevails
 - ▶ Keep qualifying assignees from only that rule
- When two or more exclusive rules tie for highest score, none of the rules prevail
 - ▶ Only the default candidate is assigned
 - ▶ Design exclusive rules carefully to avoid such behavior

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Sequencing Rules

- Rules within a rule group can be sequenced to prioritize them
 - ▶ A rule group is a named collection (or subset) of assignment rules
 - A rule can appear in one and only one group
 - Rules not explicitly assigned to a group belong automatically to the Default Rule Group

The screenshot displays two Siebel application windows side-by-side.

Top Window: Rule Groups List

Name	Description	Parent Rule Group
> ABC Sales Org Rules	Rules used in the ABC Sales Org	
Default Rule Group		

A red arrow points from the text "Defines rules groups" to the "Parent Rule Group" column header. Another red arrow points from the "ABC Sales Org Rules" row in the list to the "Rule Group" column header in the bottom window.

Bottom Window: Assignment Rules List

Name	Objects to be Assigned	Rule Group	Sequence
> Assign Comm Accounts	Account	ABC Sales Org Rules	
Assign East Accounts	Account	ABC Sales Org Rules	
Assign Financial Accounts	Account	ABC Sales Org Rules	
Assign West Accounts	Account	ABC Sales Org Rules	
Assign Cordan Partner Opportunities BP	Opportunity	Default Rule Group	
Assign Fast Track Partners Opportunities BP	Opportunity	Default Rule Group	

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Rule Sequence

- Specifies the order in which Assignment Manager evaluates rules in a group
 - ▶ Rules with the same sequence number are evaluated in unspecified order
 - ▶ Rules with no sequence number are considered to have a sequence number of 0

The screenshot shows the Siebel Assignment Rules List screen. The table has columns: Name, Objects to be Assigned, Rule Group, and Sequence. The rows are:

Name	Objects to be Assigned	Rule Group	Sequence
Assign Comm Accounts	Account	ABC Sales Org Rules	0
Assign East Accounts	Account	ABC Sales Org Rules	1
Assign West Accounts	Account	ABC Sales Org Rules	1
Assign Financial Accounts	Account	ABC Sales Org Rules	2

Callouts explain the evaluation order:

- Rule evaluated first (points to the first row, Sequence 0)
- Two rules evaluated next (points to the second and third rows, Sequence 1)
- Rule evaluated last (points to the fourth row, Sequence 2)

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Rule Sequence Continued

- Assignment Manager pauses after evaluating rules with a given sequence number
 - ▶ Stops if an assignment can be made
 - ▶ Otherwise, continues to rules with next higher sequence number
- Permit hierarchical assignment strategies
 - ▶ For example:
 - Assign opportunity first to a qualifying local office
 - If not, then to a district office
 - If not, then to a regional office
 - If not, then to headquarters

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Run-Time Behavior of Assignment Manager

- Is determined by the Assignment object definition
 - ▶ Is located in the repository
 - ▶ Is configured individually for each assignment object

The screenshot shows the Siebel Object Explorer interface. On the left, there's a tree view with categories like Workflow Policy Column, Workflow Policy Object, Assignment Object, and Workflow Policy Component. The Assignment Object is selected. On the right, a Properties window is open for the Assignment Object [Account]. It lists various configuration settings, such as Group Primary System Column (ASGN_SYS_FLG), Group System Column (S_ORG_TERR), and several Keep Man Asgn properties (TRUE or FALSE). A callout box with the text "70 plus properties" points to the list of properties in the Properties window.

Properties	
Assignment Object [Account]	
Alphabetic Categorized	
Group Primary System Column	ASGN_SYS_FLG
Group System Column	S_ORG_TERR
Group Table	
Ignore Assignment Attributes	TRUE
Inactive	FALSE
Keep Creator	FALSE
Keep Man Asgn Primary Employee	TRUE
Keep Man Asgn Primary Group	TRUE
Keep Man Asgn Primary Org	FALSE
Keep Man Asgn Primary Position	TRUE
Keep User Assigned	FALSE
Max Number Per Role	
Name	Account
Org Column	BU_ID

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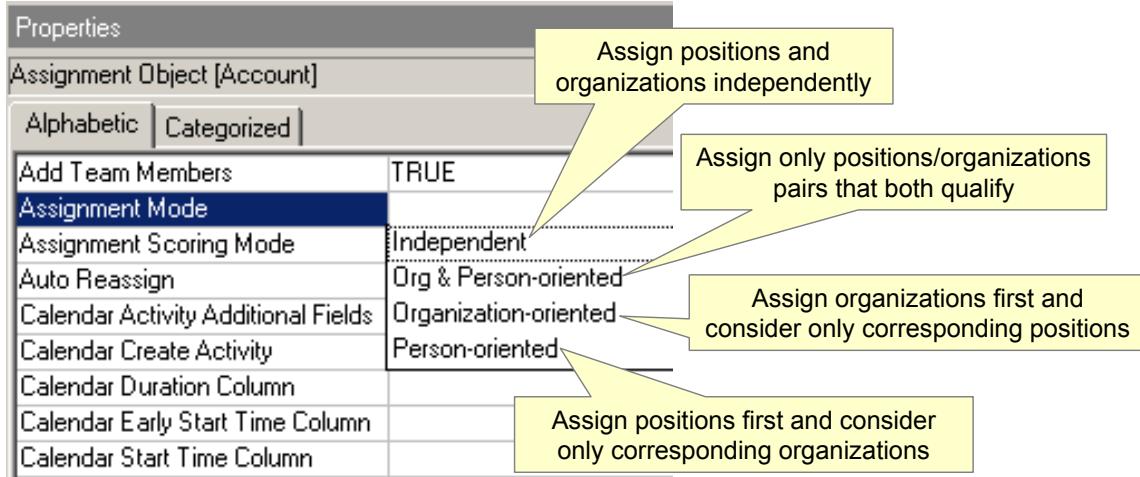
Reference

Siebel Assignment Manager Administration Guide: Advanced Assignment Manager Configuration

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Assignment Mode

- Specifies how candidates are assigned when a rule assigns both positions and organizations





Default Candidate

- Is a predefined position/employee who is assigned in the following situations:
 - ▶ Conflict between two rules with same score
 - Assigns candidates for both rules and assigns the default candidate to the team
 - Makes default candidate the primary for team-based assignments
 - ▶ Conflict between two exclusive rules with the same score
 - Assigns default candidate to the team as primary
 - ▶ Rules do not identify any candidates to assign
 - Assigns default candidate to the team as primary

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Default Candidate Continued

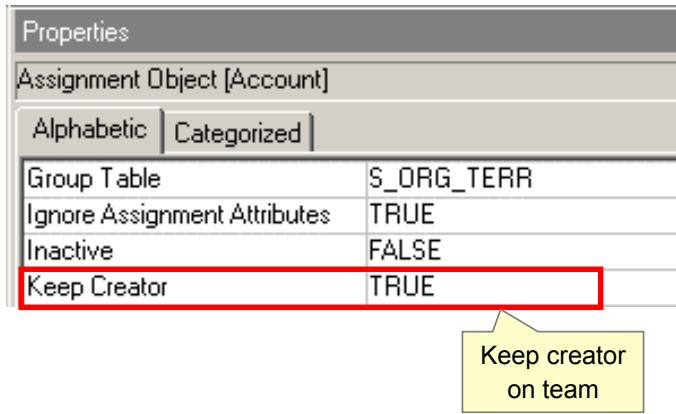
- Is specified as properties of the Assignment Object definition
 - ▶ Default Employee
 - ▶ Default Group
 - ▶ Default Org
 - ▶ Default Position

Properties	
Assignment Object [Account]	
Comments	
Default Employee	SADMIN
Default Group	
Default Org	Default Organization
Default Position	Siebel Administrator

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Keep Creator

- If this property is set to TRUE, Assignment Manager keeps the creator of the record on the team regardless of which rules pass



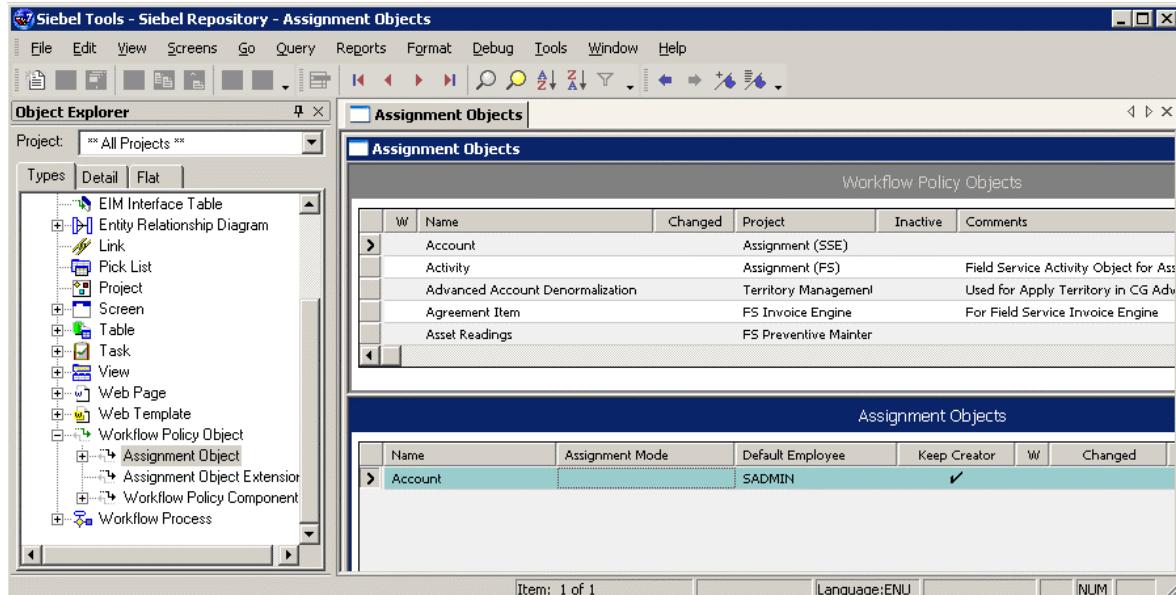
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Configuring Assignment Manager Objects

- Use Siebel Tools to edit object definitions to modify the behavior of Assignment Manager
 - ▶ Same as editing other object definitions



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Assignment Manager

- Reads Assignment object from repository tables (not the repository file) at run time
 - ▶ No need to compile the Assignment object itself
 - ▶ Can deploy a modified Assignment object at run time

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Module Highlights

- Assignment methodology refers to the steps followed by Assignment Manager to assign candidates to objects
 - ▶ Identify rules that apply
 - ▶ Identify a list of qualified candidates for the applicable rules
 - ▶ Scoring candidates
 - ▶ Determine primary assignee and assign candidates
- Workload rules can be used to distribute work among qualified candidates
- Multiple assignment rules may exist for the same assignment object
 - ▶ Rules can be prioritized by
 - Marking a rule as exclusive
 - Sequencing rules
- Run-time behavior of Assignment Manager is specified by the configuration of the assignment object



Lab

- In the lab you will:
 - ▶ Create prioritized rules
 - ▶ Modify the run-time behavior of Assignment Manager

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Module 47: Invoking Siebel Assignment Manager

47

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Module Objectives

- After completing this module you should be able to:
 - ▶ List the modes in which Assignment Manager can be invoked
 - ▶ Invoke Assignment Manager in dynamic mode
- Why you need to know:
 - ▶ You need to enable your Siebel environment to support dynamic assignment management

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Running Assignment Manager

- Assignment Manager is invoked in three modes:
 - ▶ Batch Assignment
 - ▶ Dynamic Assignment
 - ▶ Interactive Assignment
- All modes require that the Assignment Manager component group be enabled

The screenshot shows the Siebel Assignment Manager interface. At the top, there's a navigation bar with tabs: Component Groups, Component Definitions, System Alerts, Profile Configuration, Parameters, and Synchronize. Below the navigation bar are two tables. The first table, titled 'Component Groups', lists three groups: Assignment Management (selected), Auxiliary System Management, and Communications Management. The 'Assignment Management' row has a red box around it. The second table, titled 'Components', lists two components: Assignment Manager and Batch Assignment. The 'Assignment Manager' row also has a red box around it. At the bottom of the page is a red footer bar with the text 'Copyright © 2007, Oracle. All rights reserved.' and '3 of 16'.

Component Group	Alias	Number of Comps	Enable state	Description
> Assignment Management	AsgnMgmt	2	Enabled	Assignment Management Components
Auxiliary System Management	SystemAux	5	Enabled	System Management Auxiliary Components
Communications Management	CommMgmt	8	Enabled	Communications Management Components

Component	Description
> Assignment Manager	Assigns positions and employees to objects
Batch Assignment	Batch assigns positions and employees to objects

Reference

Siebel Assignment Manager Administration Guide: Running Assignment Manager



Batch Assignment

- Is used to submit batches of data for one-time assignment or reassignment
- Is implemented via a server task
- Business scenarios:
 - ▶ Change assignment rules and reassign existing objects that are already assigned
 - ▶ Sales region or territory realignment
 - ▶ Existing assignments are inaccurate
 - ▶ After a batch data load



Dynamic Assignment

- Automatically invokes Assignment Manager to assign data in near real time as records are created or modified
- Business scenarios:
 - ▶ Whenever a service request is created, assign it to a service agent with the appropriate product skill
 - ▶ Whenever an opportunity is created, assign it to the sales representative who handles that territory

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Dynamic Assignment Continued

- Is implemented using:
 - ▶ Assignment policies
 - ▶ Generate Triggers
 - ▶ Workflow Monitor Agent
 - ▶ Assignment Manager
- Is similar to workflow policies
 - ▶ Both execute asynchronously on the server

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Assignment Policies

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- Specify which objects are to be assigned
- Are expired by default
 - ▶ Navigate to Site Map > Administration – Assignment > Assignment Policies
 - ▶ Remove the expiration date to activate policies

The screenshot shows a Siebel application window titled "Assignment Policies". The top navigation bar includes links for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Service, and Administration - Assignment. Below the navigation bar is a toolbar with buttons for New, Delete, and Query. The main content area displays a table of assignment policies. The columns are: Name, Workflow Object, Policy Group, Activation, and Expiration. The table lists nine entries, all of which have their Expiration field set to 12/31/1998 4:00:00 AM.

Name	Workflow Object	Policy Group	Activation	Expiration
ASGN: Account	Account	Assignment Group	12/31/1998 4:00:00 AM	
ASGN: Activity	Activity	Assignment Group	12/31/1998 4:00:00 AM	
ASGN: Campaign	Campaign	Assignment Group	12/31/1998 4:00:00 AM	
ASGN: Campaign Co Campaign Contact	Campaign Contact	Assignment Group	2/13/2002 7:00:54 PM	
ASGN: Contact	Contact	Assignment Group	12/31/1998 4:00:00 AM	
ASGN: Opportunity	Opportunity	Assignment Group	12/31/1998 4:00:00 AM	
ASGN: Product Defect	Product Defect	Assignment Group	12/31/1998 4:00:00 AM	
ASGN: Service Request	Service Request	Assignment Group	12/31/1998 4:00:00 AM	
Contact Denormalized	Contact Denormalized	Assignment Group	3/1/2001 4:00:00 AM	

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Generate Triggers

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- Is a server task that creates database triggers
 - ▶ Builds triggers for all active assignment policies
- Must be run after policies are activated

Job Detail | Repeating Instances

Menu ▾ | New | Delete | Cancel | Query

Component/Job:*	Generate Triggers	Requested Server:
Component:		Request Key:
Scheduled Start:	12/21/2006 04:10:55 PM	Delete Interval: 1
Expiration:		Delete Unit: Weeks
Description:		

Job Parameters | Menu ▾ | New | Delete | Query

Name	Value	Required?
EXEC	True	
Privileged User Password	SIEBEL	
Privileged User	SIEBEL	

Requires a user with privileges to add triggers to the database

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Workflow Monitor Agent

- Start Workflow Monitor Agent and specify:
 - ▶ Group Name (the group of assignment policies you activated)
 - ▶ Sleep Time (interval in seconds between iterations)
- Follow steps used in enabling workflow policies

The screenshot shows the Siebel Component Definitions screen. At the top, there are tabs: Component Groups, Component Definitions (which is selected), System Alerts, and Profile Configuration. Below the tabs are buttons for Menu, New, Delete, Query, Activate, Deactivate, and Synchronize.

Component	Alias	Component Type	Status
Transaction Router	TxnRoute	Transaction Router	Active
Upgrade Kit Builder	UpgKitBldr	Business Service Ma	Active
Workflow Action Agent	WorkActn	Workflow Action Agt	Active
Workflow Monitor Agent	WorkMon	Workflow Monitor Agt	Active
Workflow Process Batch Manager	WfProcBatchMgr	Business Service Ma	Active
Workflow Process Manager	WfProcMgr	Business Service Ma	Active
Workflow Recovery Manager	WfRecvMgr	Business Service Ma	Active

Component Parameters		
Parameter	Value	Default Value
Check Error Leaks	False	FALSE
Enable Event History Facility	True	TRUE
Event History Sleep Time	30	30
Siebel File System	C:\siebfile	
Mute Idle State		
Sleep Time	60	60

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Assignment Manager

- Is invoked by Workflow Monitor Agent
 - ▶ Assignment Manager server component must be online
- Performs the assignment of data to candidates



The screenshot shows the Siebel Assignment Manager interface. At the top, there is a navigation bar with links for Home, Accounts, Contacts, Opportunities, Quotes, Sales Orders, Administration - Server Management, Servers, Components, Jobs, Tasks, Sessions, and Enterprise. Below the navigation bar is a toolbar with buttons for Components, Menu, Query, Resume, Pause, Startup, and Shutdown. A message "1 - 10 of 20" is displayed next to a print icon. The main area contains a table titled "Components" with the following data:

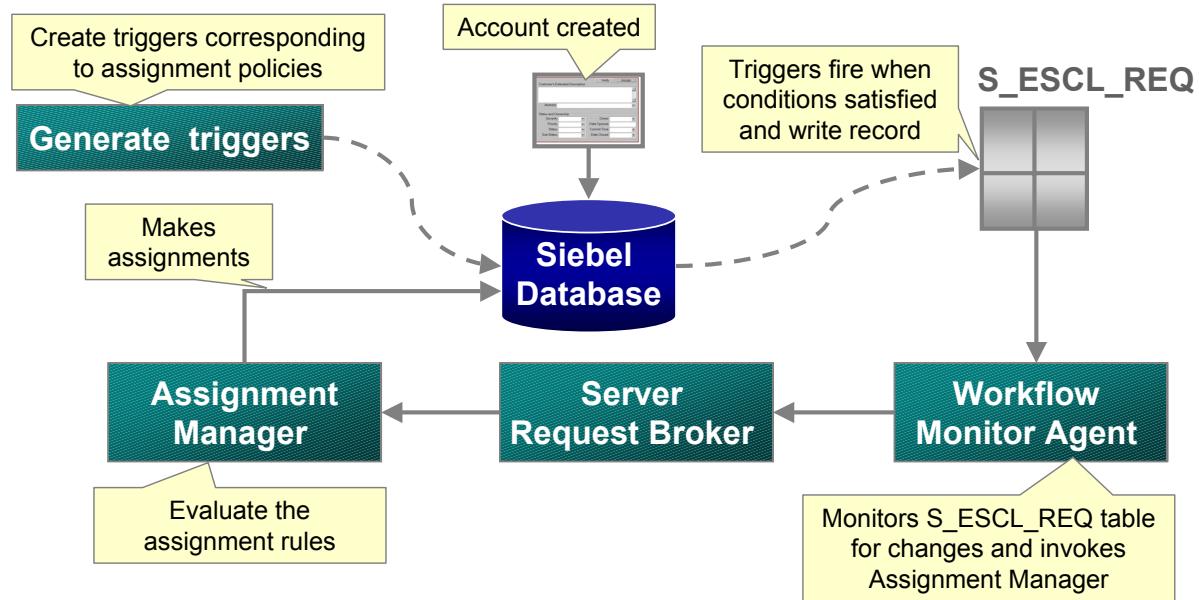
State (Icon)	Component	State	Running Tasks	Running MTS	Max MTS	Start Time	End Time
>	Assignment Manager	Online	0	1	1	9/28/2006 09:56:07	
	Batch Assignment	Online	0			9/28/2006 09:56:07	
	Call Center Object Manager (ENU)	Running	1	1	1	9/28/2006 09:56:08	
	Database Extract	Online	0			9/28/2006 09:56:08	

At the bottom left of the main area, there is a copyright notice: "Copyright © 2007, Oracle. All rights reserved." At the bottom right, it says "10 of 16".

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Dynamic Assignment Process Flow

- Is similar to the flow for workflow policies



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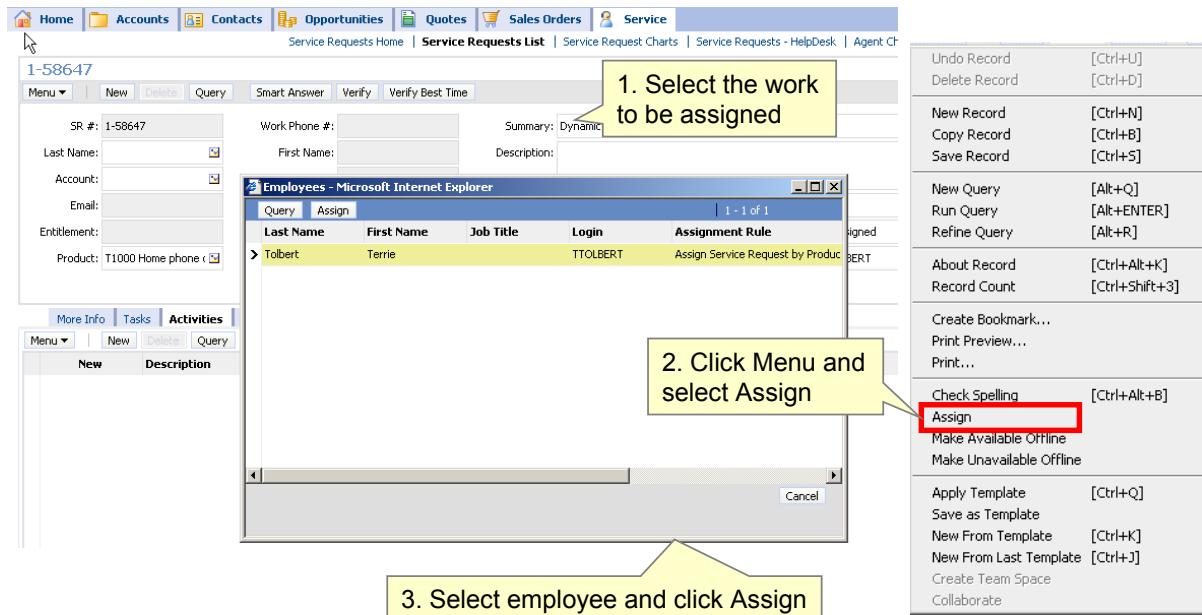
Interactive Assignment

- Is used to assign candidates in real time
 - ▶ Enabled for Service Request and Activity assignment objects
- Business scenarios:
 - ▶ A customer service representative receives a call and creates a new service request, then clicks Assign to find the right person to work on that service request
 - ▶ A field service supervisor wants to find the right person to work on a repair activity, and uses Interactive Assignment to obtain a list of people with the right skills to perform the repair

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Using Interactive Assignment

- Implemented via user interaction and tasks on server
 - ▶ User makes assignment from a generated list of candidates



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Requirements for Interactive Assignment

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- Verify that Assignment Manager is online and Server Request Broker is running

State (Icon)	Component	State	Running Tasks	Running MTS	Max MTS
Assignment Manager	Online	0	1	1	
Batch Assignment	Online	0			
Call Center Object Mana	Performs Assignment	1	1	1	
Database Extract	Online	0			
File System Manager	Online	0	1	1	
Generate New Database	Online	0			
Parallel Database Extract	Online	0	1	1	
Replication Agent	Online	0			
Server Manager	Running	1			
Server Request Broker	Running	10	1	1	

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Module Highlights

- Assignment Manager is invoked in three modes
 - ▶ Batch Assignment: Is used to submit batches of data for one-time assignment or reassignment
 - Is implemented by submitting a job request
 - ▶ Dynamic Assignment: Is used to assign data in near real time as records are created or modified
 - Is implemented using:
 - ▶ Assignment policies
 - ▶ Generate Triggers
 - ▶ Workflow Monitor Agent
 - ▶ Assignment Manager
 - ▶ Interactive Assignment: Is used to assign candidates in real time
 - Is implemented via user interaction and tasks on server

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Lab

- In the lab you will:
 - ▶ Create new service records and verify that they are dynamically assigned to the desired employee

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Module 48: State Models

48

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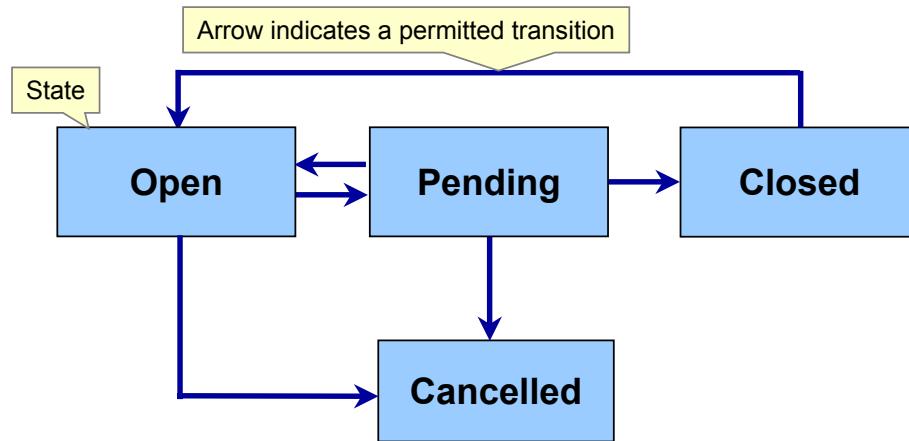
Module Objectives

- After completing this module you should be able to:
 - ▶ Describe how state models can enforce business logic
 - ▶ Create a new state model
- Why you need to know:
 - ▶ A state model is a simple declarative way to enforce business logic that involves changes to values of certain fields in a business component

Business Entities and Life Cycles

48

- Many business entities have a defined life cycle described by:
 - ▶ A set of states named by the values of one of the entity's fields
 - ▶ A set of allowed transitions between the states
- For example: A service request could have a life cycle defined in terms of these values of the status field:
 - ▶ Open, Pending, Closed, Cancelled



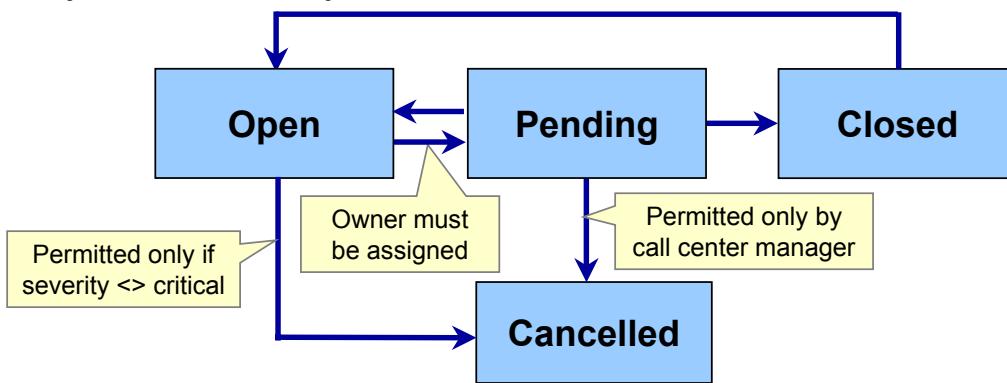
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Business Challenge

- A company's business policies may restrict transitions between states
 - ▶ Direct transitions between all pairs of states may not be permitted
 - ▶ Not everyone may be permitted to invoke a specific transition
 - ▶ There may be conditions that must apply before a transition can occur
- Need a way to easily incorporate such restrictions into the life cycle of an entity



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Business Solution

- A state model captures and enforces such restrictions on transitions
 - ▶ Uses a set of rules and conditions that specify allowed transitions
 - Uses declarative configuration as opposed to script
 - ▶ Is implemented in the Siebel client and not Siebel Tools
 - Does not involve compiling and deploying a new SRF file

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Reference

Siebel Applications Administration Guide: State Models

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State Model

- A state model consists of:
 - ▶ A set of states corresponding to the values of a single-value field
 - Must have a bounded picklist declared in the List Of Values table

Service Request State Model

Menu New Delete Cancel Query

Name: * Service Request State I Activation: * 8/18/2002 6:28:01 F Created By: SADMIN

Business Component: * Service Request Expiration: 8/18/2006 6:28:25 F Created Date/Time: * 9/27/2006 3:59:46 F

Field: * Status Comments: State Model for essentials module

State field

More Info States Transitions

Menu New Delete Query

State Name	Default	No Delete	No Update	Restrict Transition	Description
Cancelled			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Cancelled
Closed				<input checked="" type="checkbox"/>	Closed
Open	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	Open
Pending				<input checked="" type="checkbox"/>	Pending

States for this state model

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State Model Continued

- A state model also consists of:
 - ▶ A set of allowed transitions that can be restricted
 - Only can be executed by authorized positions
 - Only can be executed when a condition is satisfied

Service Request State Model

Name:*	Service Request State	Activation:*	8/18/2002 6:28:01 F	Created By:	SADMIN
Business Component:*	Service Request	Expiration:	8/18/2006 6:28:25 F	Created Date/Time:*	9/27/2006 3:59:46 F
Field:*	Status	Comments:	State Model for essentials module		

More Info States **Transitions**

From State	To State	Public	Rule Field	Rule Operator	Rule Value	Rule Expression
Closed	Open	✓				Unrestricted
Open	Cancelled	✓	Severity	<>	"1-Critical"	Condition on transition
Open	Closed	✓				
Open	Pending	✓				
Pending	Cancelled					Only selected positions allowed to make transition
Pending	Closed	✓				
Pending	Open	✓				

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Enabling Siebel State Model

- Only a small number of business components are enabled for state model in the as-delivered application
 - ▶ Indicated by a business component user property (State Model, Y)
- Other business components can be enabled for state model
 - ▶ Business component class is restricted to CSSBCBase

The screenshot shows two windows of the Siebel Business Component User Properties interface.

The top window displays the "Business Components" list, showing a single entry: "Service Request" under the "Service" project, with the "Class" set to "[CSSBCServiceRequest](#)".

The bottom window shows the "Business Component User Properties" details for "Service Request". It lists three properties:

W	Name	Changed	Value	Comments
>	State Model		Y	Set 'State Model' UserProp to Y to enable the State Machine
	Selective Retrieval Owner Id		Owned By Id	
	Selective Retrieval Dock Flag		Dock Flag	

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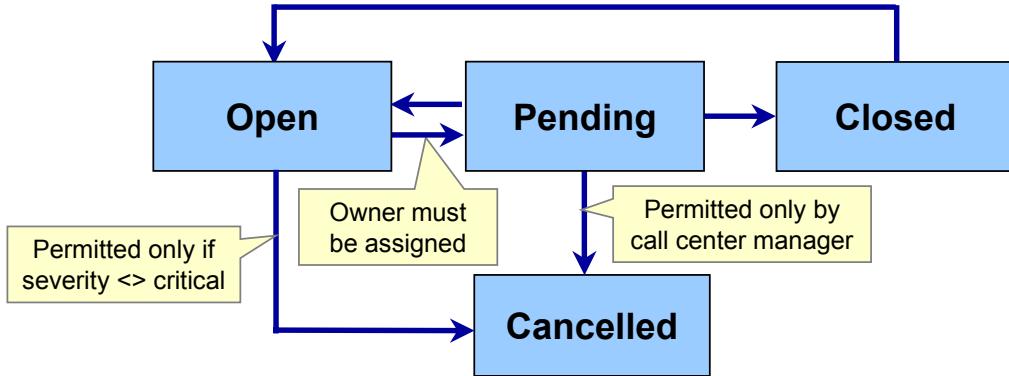
Creating a State Model

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1. Define the Desired Life Cycle
2. Create a New State Model
3. Specify the Allowed States
4. Specify the Allowed Transitions and Restrictions
5. Specify Authorized Positions
6. Test the State Model

1. Define the Desired Life Cycle

- Review relevant business policies to identify restricted transitions
- Document the allowed transitions and corresponding restrictions



2. Create a New State Model

- Navigate to Administration - Application > State Models
- Create a new state model record
 - ▶ Specify the business component and “state” field

Name	Business Component	Field	Activation	Expiration
> Service Request State Model	Service Request	Status	8/18/2002 6:28:01 F	8/18/2006 6:28:25 F

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3. Specify the Allowed States

- Navigate to the States view
- Create a record for each allowable value of the “state” field
 - ▶ Specify one state as the default initial state in which new records are created

The screenshot shows the 'Service Request State Model' interface. At the top, there is a header with 'Service Request State Model' and navigation buttons: Menu, New, Delete, Cancel, and Query. Below the header, there are several input fields:

- Name: * Service Request State I
- Activation: * 8/18/2002 6:28:01 F
- Created By: SADMIN
- Business Component: * Service Request
- Expiration: 8/18/2006 6:28:25 F
- Created Date/Time: * 9/27/2006 3:59:46 F
- Field: * Status
- Comments: State Model for essentials module

Below these fields, there are tabs: More Info, States, and Transitions. The States tab is selected, showing a table of states:

State Name	Description	Default	Restrict Transition	No Delete	No Update
Cancelled	Cancelled		✓		
Closed	Closed		✓		
Open	Open	✓	✓		
Pending	Pending		✓		

A yellow callout box points to the 'Set by default' button at the bottom right of the table.

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4. Specify the Allowed Transitions and Conditions

- Navigate to the Transitions view
- Create a record for each allowable transition
 - ▶ Select the from and to states using the drop-down list
 - ▶ Indicate if there are restrictions on who can execute the transition
 - ▶ Specify any conditions to be satisfied before transition can occur

From State	To State	Public	Rule Field	Rule Operator	Rule Value	Rule Expression
Closed	Open	<input checked="" type="checkbox"/>	Severity	<>	"1-Critical"	
Open	Cancelled	<input checked="" type="checkbox"/>	Owner	<>	NULL	
Open	Closed	<input checked="" type="checkbox"/>				
Open	Pending	<input checked="" type="checkbox"/>				
Pending	Cancelled	<input type="checkbox"/>				
Pending	Closed	<input checked="" type="checkbox"/>				
Pending	Open	<input checked="" type="checkbox"/>				

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5. Specify Authorized Positions

- For any transitions not marked Public, specify the positions that are permitted to execute the transition in the Authorized Positions applet

The screenshot shows two Siebel application windows:

- Transitions Applet:** Displays a grid of state transitions. A specific row for "Pending > Cancelled" is highlighted with a red border and a yellow callout box labeled "Transition restricted".
- Authorized Positions Applet:** Displays a grid of authorized positions. One row for "Call Center Manager" is highlighted with a yellow callout box labeled "Specify positions allow to make the transition".

Transitions Grid Data:

From State	To State	Public	Rule Field	Rule Operator	Rule Value	Rule Expression
Closed	Open	✓				
Open	Cancelled	✓	Severity	<>	"1-Critical"	
Open	Closed	✓				
Open	Pending	✓	Owner	<>	NULL	
Pending	Cancelled					
Pending	Closed	✓				
Pending	Open	✓				

Authorized Positions Grid Data:

Position	Division	Position Type
Call Center Manager	PCS Sales	Manager

6. Test the State Model

- Make sure the state model activation and expiration dates are valid
 - ▶ Only one state model based on a given field can be active at any given time
- Create one or more test records and verify that the business policy is correctly implemented
 - ▶ New state model is effective when a new application object manager process starts
 - New process reads the updated state model cache



Module Highlights

- A state model restricts the life cycle of a business component
 - ▶ Defines a set of states and allowed transitions between the states
- State models:
 - ▶ Are built in the Siebel client using declarative configuration
 - ▶ Do not require recompiling the .srf file
- Transitions between states can be restricted as follows:
 - ▶ Not allowed at all
 - ▶ Allowed under only certain conditions
 - ▶ Allowed by only certain positions
- A few as-delivered business components are enabled for state model
 - ▶ Customers can enable others for state model if the business component class is CSSBCBase

Lab

- In the lab you will:
 - ▶ Create and test a state model

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Module 49: Introducing Enterprise Integration Manager

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Module Objectives

After completing this module you will be able to:

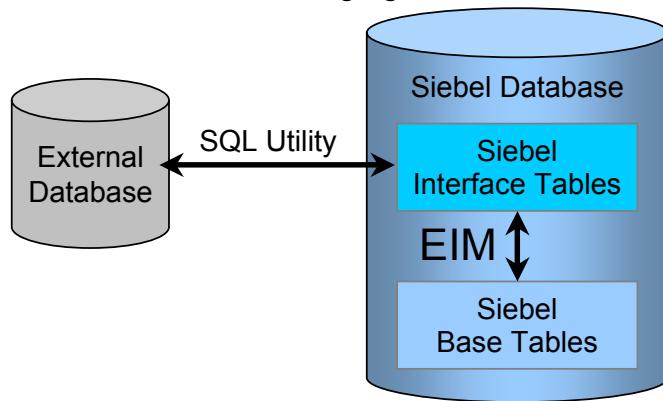
- ▶ Describe the features of Enterprise Integration Manager (EIM)
- ▶ Describe how EIM supports referential integrity
- ▶ Describe why direct SQL statements must not be used to insert user data

Why you need to know:

- ▶ EIM enables you to properly import external data into the Siebel database

Enterprise Integration Manager (EIM)

- Business Challenge: To exchange large volumes of data between an external application and the Siebel database
 - ▶ Implementation project challenge: To perform an initial data load for a Siebel application
- Business Solution: Enterprise Integration Manager (EIM)
 - ▶ Is a server component that moves large volumes of data in batch mode between Siebel interface tables and Siebel base tables
 - Interface tables act as a staging area for external data



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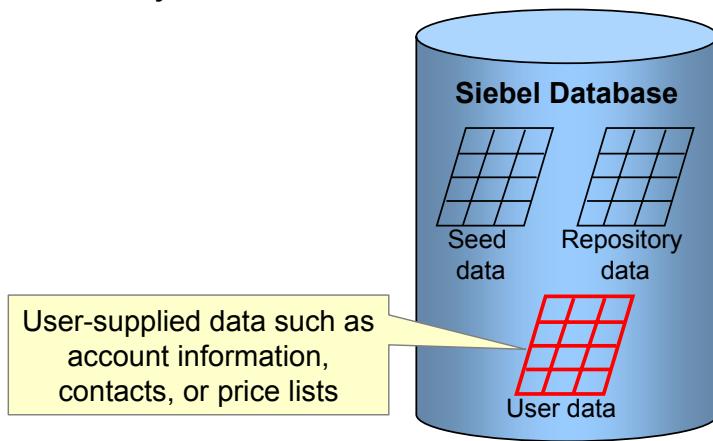
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Exchanging Data

To exchange large volumes of data, a SQL utility copies mainframe updates to EIM interface tables, and then EIM runs a batch job to synchronize the Siebel account data.

User Data

- The Siebel database contains several types of data:
 - ▶ Seed data: application data populated during product installation
 - ▶ Repository data: metadata initialized at installation and modified during application configuration
 - ▶ User data: user-supplied data, such as account records, contacts, price lists, or assignment rules
- EIM is only used to move user data



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Populating and Managing User Data

- Use the client application to enter, update, or delete small amounts of user data directly in the base tables
- Use EIM to:
 - ▶ Import large amounts of data from external sources through interface tables
 - ▶ Delete large amounts of data

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Components of EIM

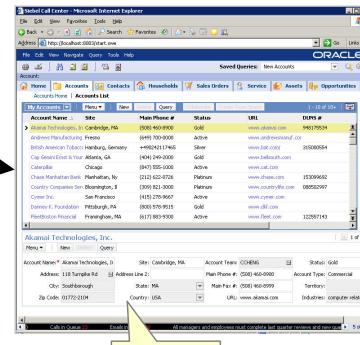
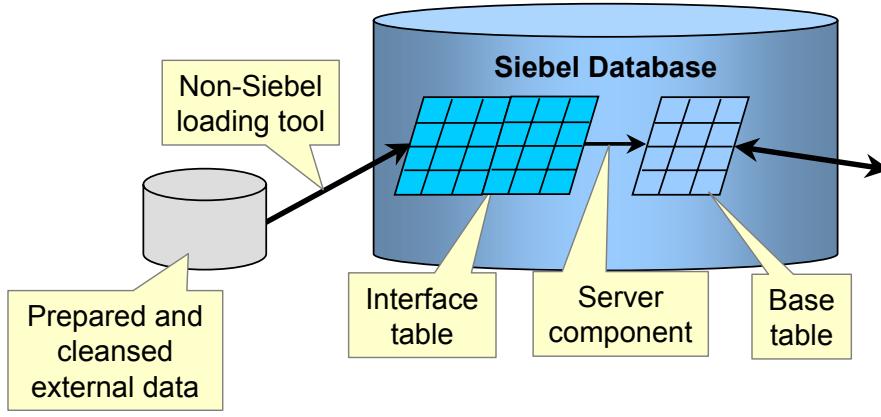
- Important components of EIM are:

Base Tables

Interface Tables

EIM Server Component

EIM Configuration File

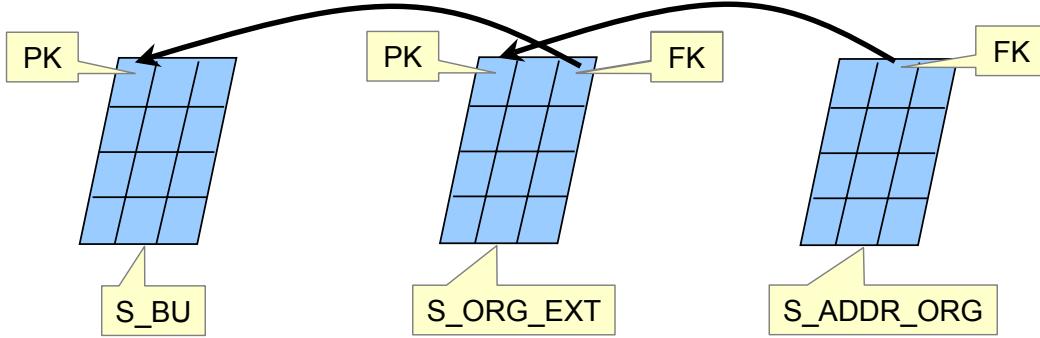


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Base Tables

- User data is stored in one or more base tables in the Siebel database
 - ▶ Relationships between base tables (referential integrity) rely upon primary keys (PKs) and foreign keys (FKs) based on ROW_IDs
 - ROW_ID is the system primary key for every base table
 - ROW_ID is a system-generated value



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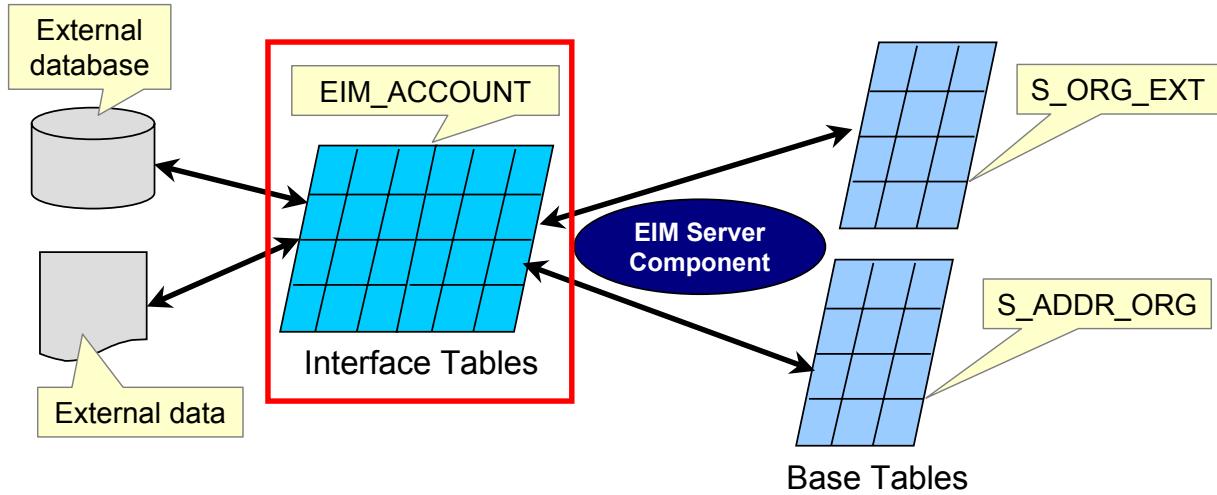
Base Tables

There are two types of base tables:

- Target base tables (also known as parent tables); examples include S_PARTY, S_PROD_INT, and S_OPTY.
- Non-target base tables (also known as secondary base tables); examples include S_ORG_EXT, S_ADDR_ORG, AND S_ACCT_POSTN.

Interface Tables

- Interface tables store external data inside the Siebel database
 - ▶ Staging area for data to be imported, updated, or merged into base tables by EIM
 - ▶ Staging area for data exported by EIM
 - ▶ Staging area for data to be deleted in the base table by EIM



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Data Cleansing

During imports, EIM attempts to import data from the interface table to the base tables. It is important to note that if the data loaded in the interface table is faulty, it will remain faulty in the base table(s). EIM does not perform data cleansing.

Interface Tables Continued

- Are meant to represent typical business “entities”
- Typically map to multiple Siebel base tables
 - ▶ Are denormalized
 - ▶ Example: EIM_ACCOUNT interface table maps to eight base tables

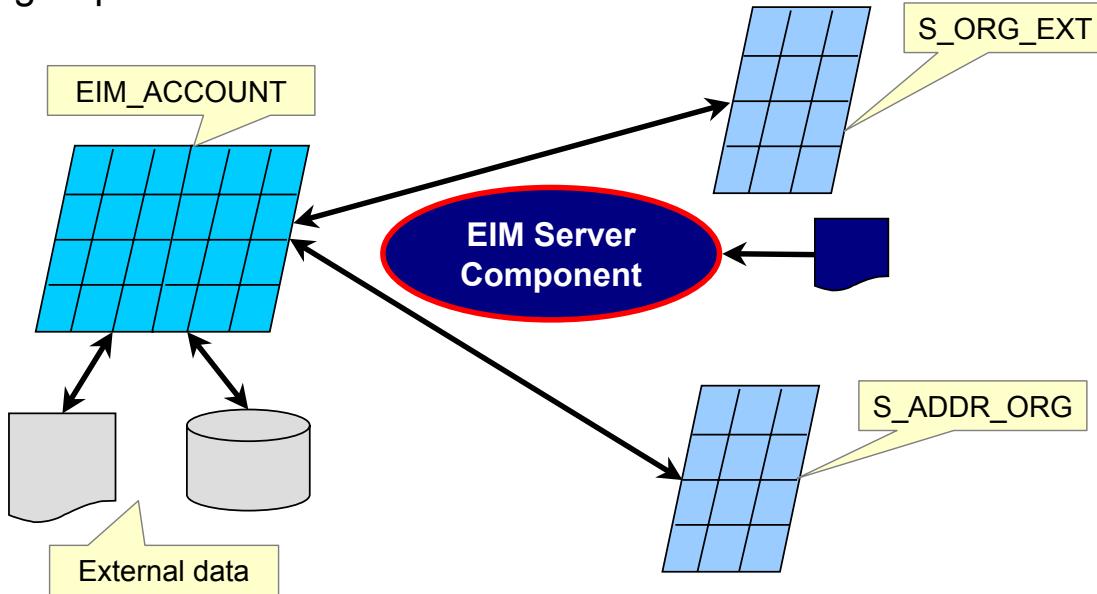
49

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EIM Server Component

- Manages the exchange of data between interface tables and user data in base tables
- Belongs to Enterprise Application Integration (EAI) component group



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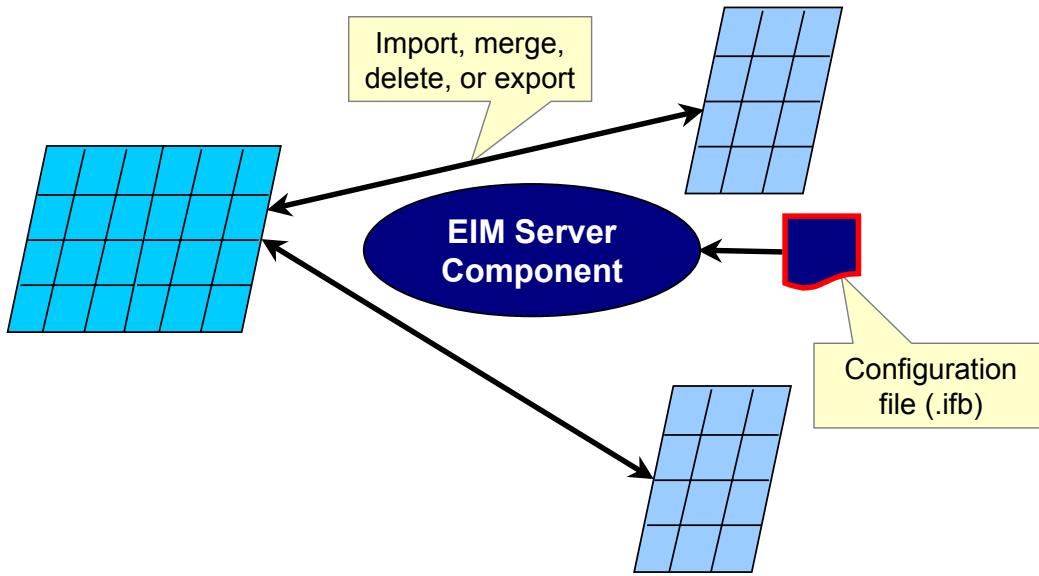
Reference

Siebel Enterprise Integration Manager Administration Guide

EIM Configuration File

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- EIM server component reads a configuration file (.ifb) to determine:
 - ▶ Whether data should be imported, merged, deleted, or exported
 - ▶ Which interface table(s) and base table(s) are used and affected



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Course Focus

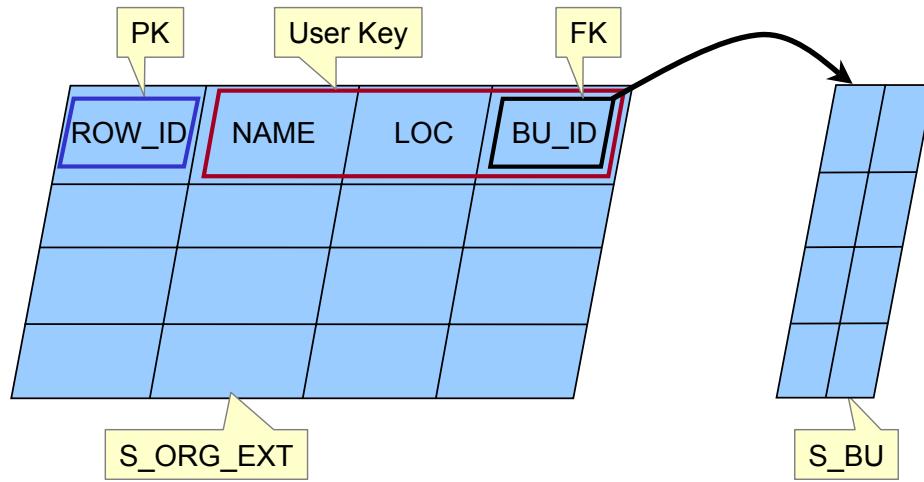
This course focuses on import (insert) and delete.

Archiving

EIM deletes are useful for archiving old data and deleting obsolete data. During delete processing, deleted rows are written to interface tables, from which they can be archived in a format allowing easy re-import if necessary.

User Keys

- Based on multiple columns, user keys are used to uniquely identify a row for EIM
- Primary and foreign keys based on ROW_ID are used for system-wide referential integrity



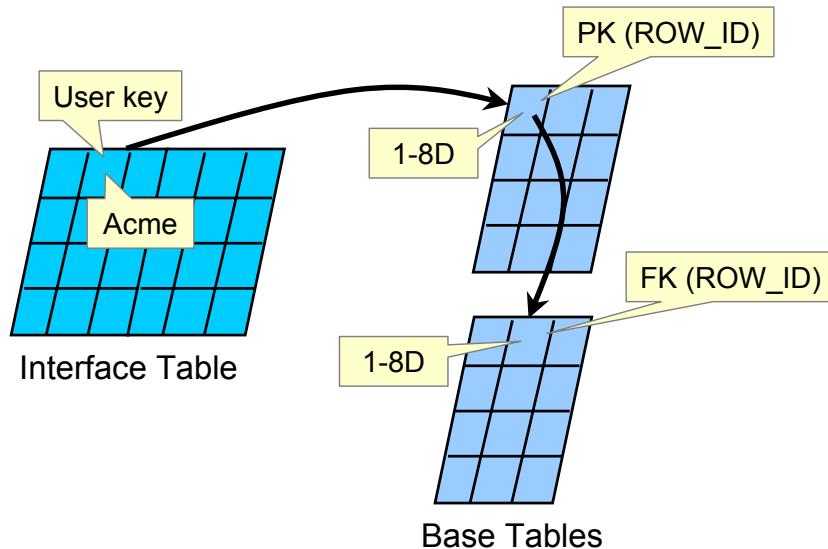
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Referential Integrity

- User key column mappings in interface tables are used to resolve ROW_IDs for base tables, maintaining referential integrity

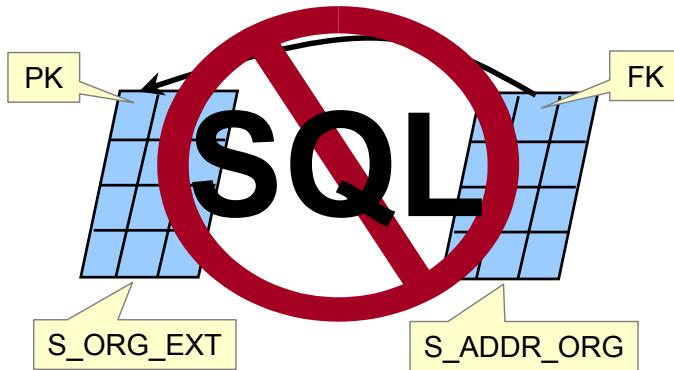
49





SQL

- You must not use SQL to populate user data in base tables
 - ▶ Relationships between tables are complex
 - ▶ Referential integrity is maintained programmatically through ROW_IDs, not using constraints on the database
 - ▶ SQL statements cannot generate Siebel ROW_IDs





Module Highlights

- Enterprise Integration Manager (EIM) is a server component that supports bulk imports and exports to and from a Siebel database
 - ▶ Useful for initial data loads
- The main components of EIM are:
 - ▶ Base tables
 - ▶ Interface tables
 - ▶ EIM server component
 - ▶ EIM configuration files (.ifb)
- You must not insert user data into Siebel base tables using SQL!

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Siebel 8.0 Essentials

Module 50: Creating Data Maps

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Module Objectives

After completing this module you should be able to:

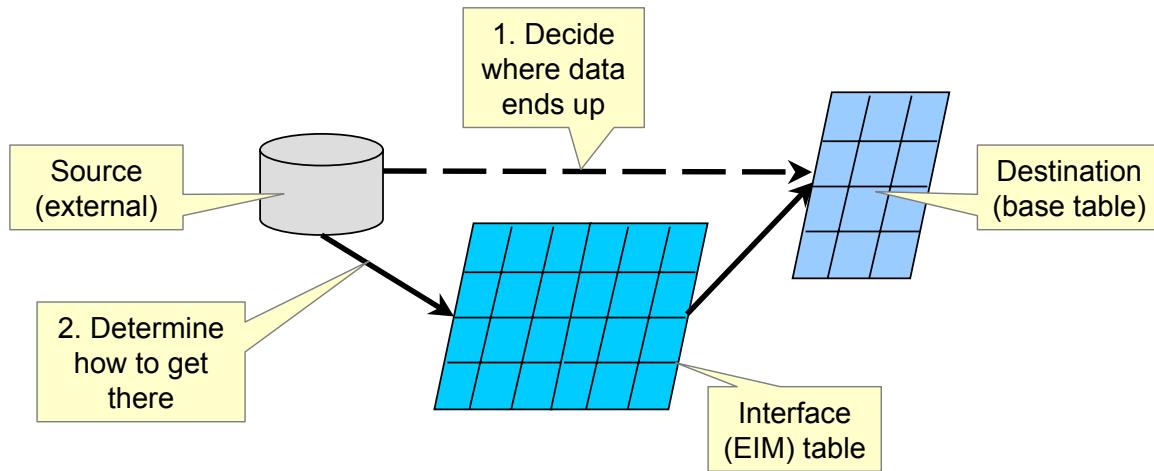
- ▶ Determine correct interface (EIM) tables and columns to use to import data into and delete data from Siebel base tables and columns
- ▶ Document data mappings between EIM tables and Siebel base tables

Why you need to know:

- ▶ Enables you to construct a strategy for successfully importing data into and deleting data from the Siebel database

Data Mapping

- The first step in using EIM to import external data is data mapping
- Data mapping determines:
 1. Which Siebel base table columns will store external source data
 2. Which interface (EIM) table columns will be used to import from source to destination



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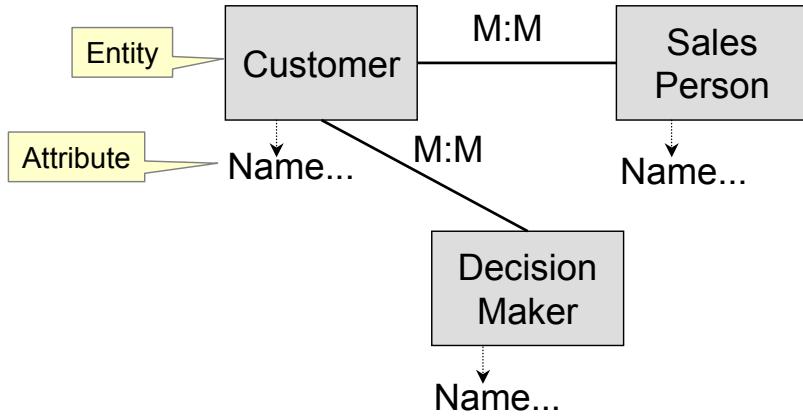
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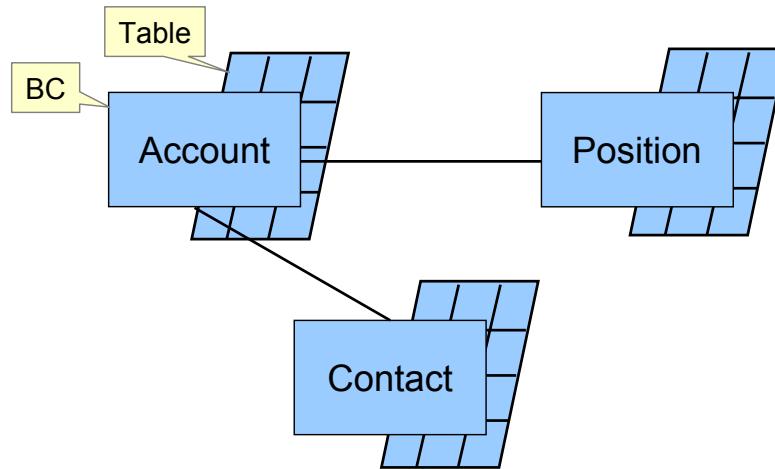
Source Data

- Analyze external source data
 - ▶ Decide which attributes to store
 - ▶ Determine which entity the collection of attributes represents
 - ▶ Analyze relationships between entities



Siebel Destination

- Analyze Siebel destination tables and columns
 - ▶ Start with applets and fields used, and work down to business layer
 - ▶ Use Siebel Tools to view tables and columns, business components (BCs), and relationships



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Party Business Components

Account, Position, and Contact entities are person- and organization-related. Therefore, their business components share the S_PARTY table.

Siebel Tools

Relationships between business components and BC fields and base tables and columns can be examined easily in Siebel Tools. Select the business component object definition of interest in Tools' Object List Editor, right-click, and choose View Details. The mapping of BC fields to database tables and columns will be graphically depicted.

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Identify and Verify Destination Tables and Columns

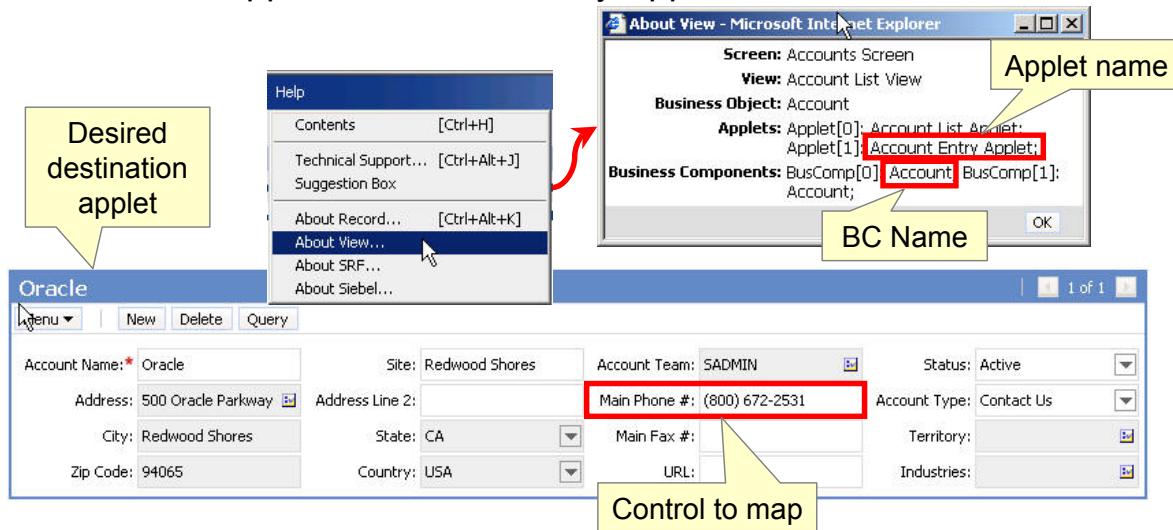
1. Determine Destination Applet
2. Identify BC Fields
3. Map BC Field to Database Column

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1. Determine Destination Applet

- Use the Siebel client to identify applets and controls where external data is to be displayed
 - ▶ Determine applet and business component names
- Example: Verify mapping for Main Phone # field of an account
 - ▶ Data to appear in Account Entry Applet



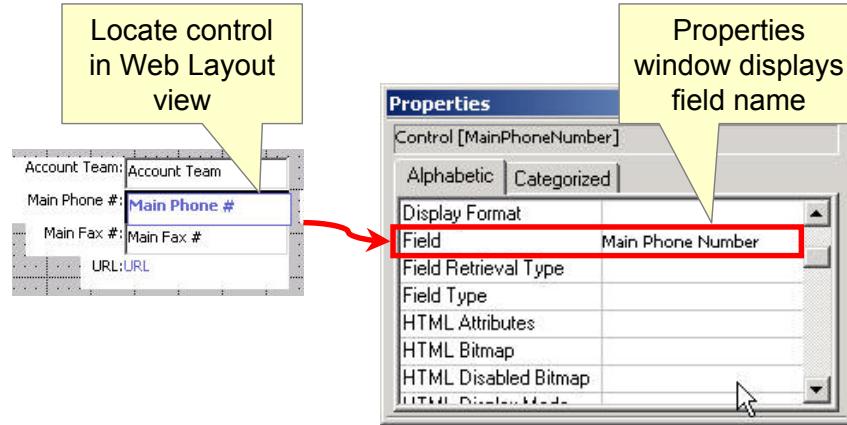
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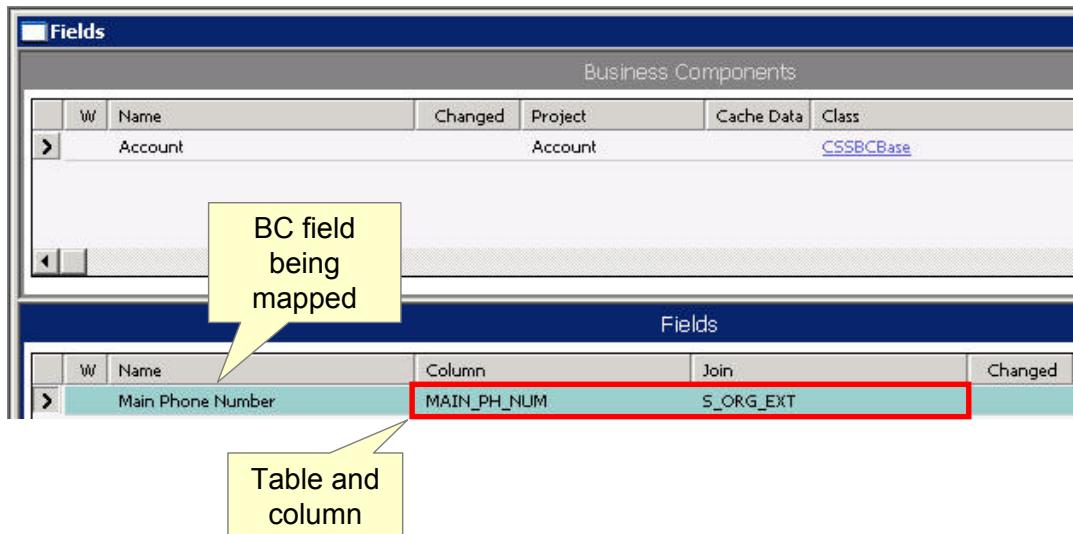
2. Identify BC Fields

- Use Siebel Tools to map the applet control to the BC field



3. Map BC Field to Database Column

- Examine BC field properties in Siebel Tools to determine which Siebel base table and column it maps to



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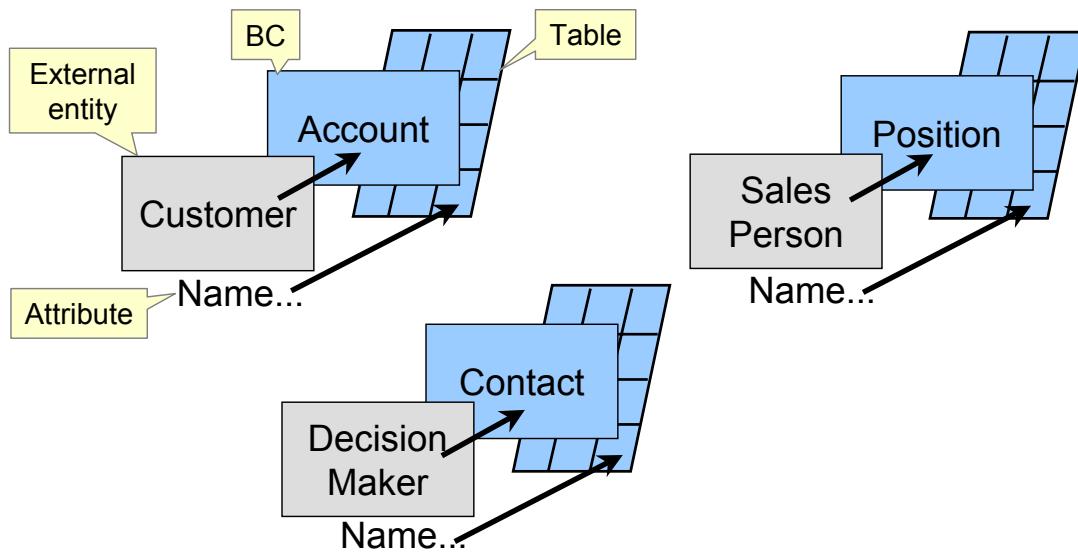
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Map Source to Siebel Destination

- Specify the source mapping to the Siebel destination
 - ▶ Identify business component mapped to external entity
 - ▶ Determine Siebel base tables and columns that will store source attributes



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Document Mappings

- Document mappings between source and base so that everyone has a common understanding
 - ▶ EIM and configuration tasks are often performed by different people
 - ▶ Can reduce need to re-do tasks if team members leave the project

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Source Entity	Source Attribute	EIM Table	EIM Column	Base Table	Base Column
Customer	Name			S_ORG_EXT	NAME
Customer	Phone			S_ORG_EXT	MAIN_PH_NUM
	Address			S_ADDR_ORG	ADDR
				S_ADDR_ORG	CITY
				S_ADDR_ORG	ZIPCODE

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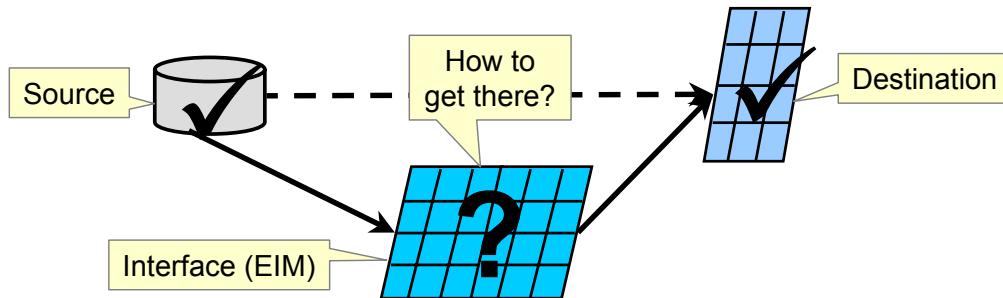
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How to Get There: Determine Interface Tables

- After verifying and documenting the source-to-base mappings, determine and document EIM-to-base mappings

Source Entity	Source Attribute	EIM Table	EIM Column	Base Table	Base Column
Customer	Name			S_ORG_EXT	NAME
Customer	Phone			S_ORG_EXT	MAIN_PH_NUM
	Address			S_ADDR_ORG	ADDR
				S_ADDR_ORG	CITY
				S_ADDR_ORG	ZIPCODE



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Reference

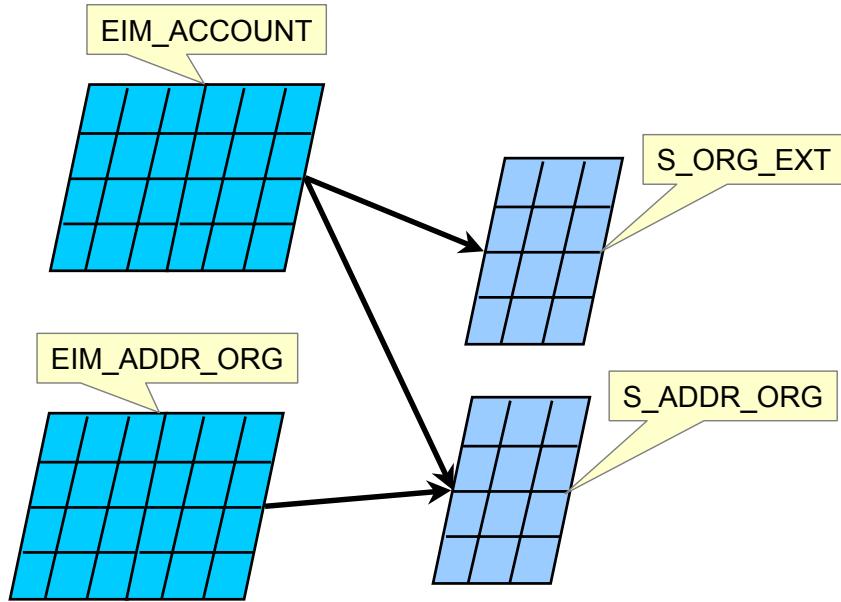
Siebel Tools Reference

Base Table

A base table is the destination table in the Siebel database for your data import.

Table Relationships

- An interface table may populate more than one base table
- A base table may be populated by more than one interface table



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Locate EIM Tables

- Locate candidate EIM tables using Siebel Tools
 - ▶ Example: Locate EIM tables that populate S_ORG_EXT

The screenshot shows two instances of the Siebel Object Explorer interface. In the top instance, the 'Flat' tab is selected in the 'EIM Table Mapping' section of the left pane. The 'Query' button is highlighted. The right pane displays a table titled 'EIM Table Mappings' with one row selected, showing 'S_ORG_EXT' in the 'Name' column and 'EIM_*' in the 'Parent EIM Interface Table' column. A red box highlights this row. In the bottom instance, the 'Flat' tab is also selected. A yellow box labeled 'Result' points to the right pane, which lists multiple entries under 'EIM tables that populate S_ORG_EXT'. These entries include various EIM table names such as EIM_ACCOUNT, EIM_ORG_INT, EIM_ACCOUNT2, etc., each associated with 'S_ORG_EXT' in the 'Name' column and a corresponding 'Parent EIM Interface Table' name in the adjacent column. A red box highlights the entire list of results.

Name	Parent EIM Interface Table
S_ORG_EXT	EIM_*

Name	Parent EIM Interface Table
S_ORG_EXT	EIM_ACCOUNT
S_ORG_EXT	EIM_ORG_INT
S_ORG_EXT	EIM_ACCOUNT2
S_ORG_EXT	EIM_ACCOUNT1
S_ORG_EXT	EIM_ORG_EXT_UK
S_ORG_EXT	EIM_ACCNT_DTL
S_ORG_EXT	EIM_ACCOUNT3
S_ORG_EXT	EIM_ORG_INT_DTL

Note: Use EIM_ tables, not _IF tables

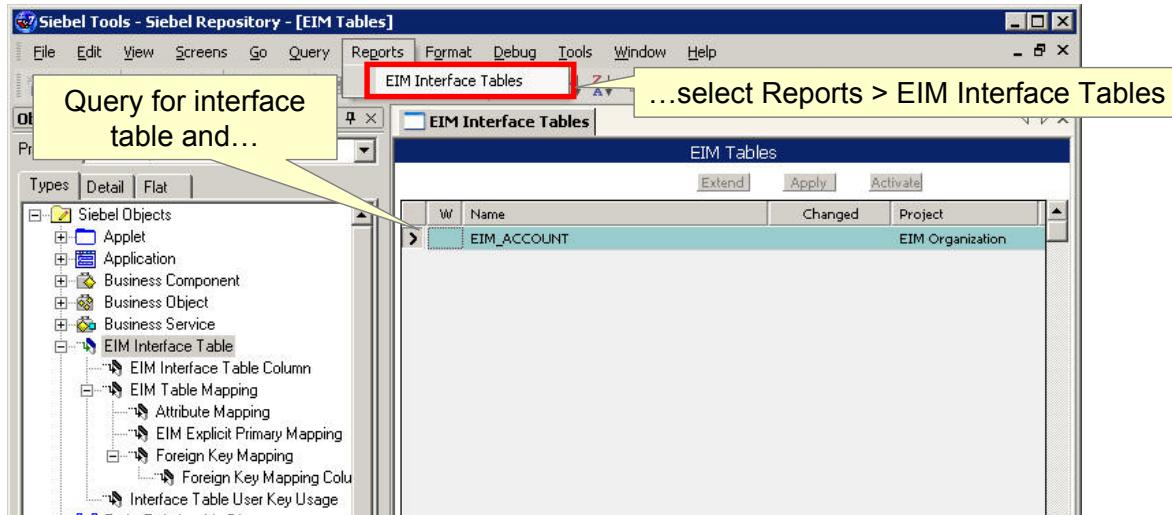
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Interface Table Documentation

- Mappings from interface tables to base tables are documented by:
 - ▶ EIM Interface Table report available in Siebel Tools
 - ▶ EIM Table Mapping objects
 - Less convenient than using report



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Interface Table Documentation Continued

- Table report documents EIM Table Mapping attributes

Interface table report for EIM_ACCOUNT

Repository EIM Interface Tables

SIEBEL

EIM_ACCOUNT

Primary Target Table: S_PARTY

Main interface table for Account and related information. Please note that S_ORG_BU, S_ACCNT_POSTN, and S_CTLG_CAT_ORG contain columns that are denormalized from S_ORG_EXT. If you want to update the source columns in S_ORG_EXT, you need to find out related records in these tables and populate EIM_ACCOUNT with them (for user key columns only). Otherwise, the denormalized columns will not be updated.

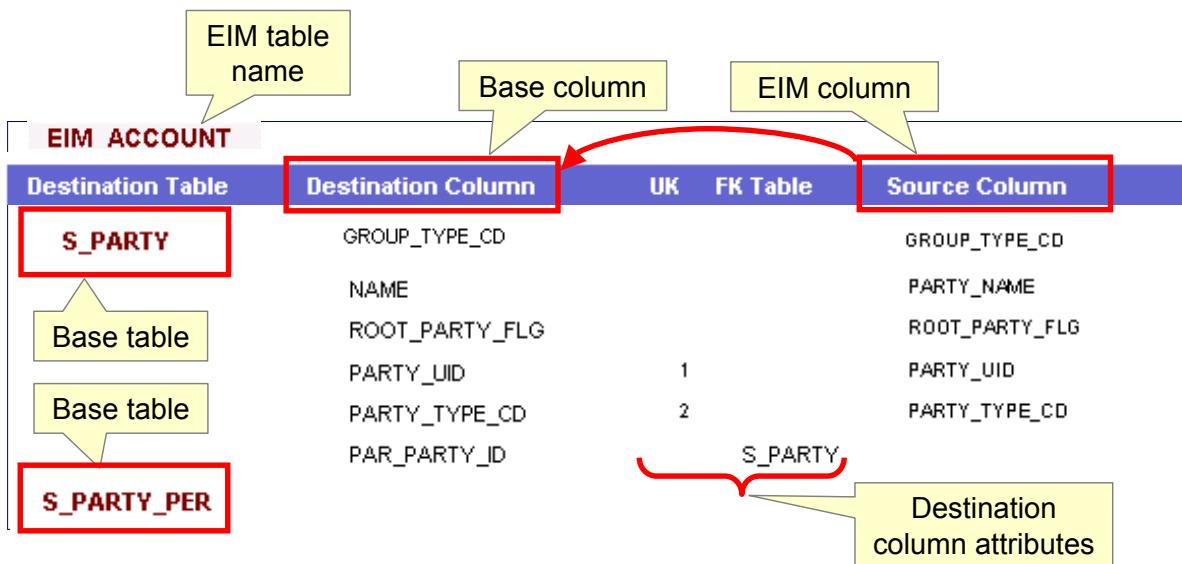
Destination Table	Destination Column	UK	Req	DType	DValue	Destination Description	Source Column	Data Type
S_ACCNT_POSTN								
	ROW_STATUS		Y			Row Status	ROW_STATUS	Varchar 10
	ASGN_DNRM_FLG		N			Denormalized assignment flag	ASGN_DNRM_FLG	Character 1
	ASGN_MANL_FLG		N			Manual Assignment Flag	ASGN_MANL_FLG	Character 1
	ASGN_SYS_FLG		N			System Assignment Flag	ASGN_SYS_FLG	Character 1
	COMMENTS		N			Comments	COMMENTS	Varchar 255
	DNRM_ACCNT_BMP_FLG		N			Denorm to Account Employee Flag	DNRM_ACCNT_BMP_FLG	Character 1

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Interface Table Documentation Continued

- The EIM Interface Table report shows mapping from a single EIM table to one or more Siebel base tables
 - ▶ EIM column (source) to base table column (destination) mapping
 - ▶ Column attributes (user keys, foreign key tables, required fields)



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Select EIM Table

- Select the EIM table that best maps to the target base tables and columns
 - ▶ Pick the EIM table that maps the most columns that you need to migrate
- Example:
 - ▶ EIM_ACCOUNT can be used to map Account-related Position data because it maps to the intersection table S_ACCNT_POSTN

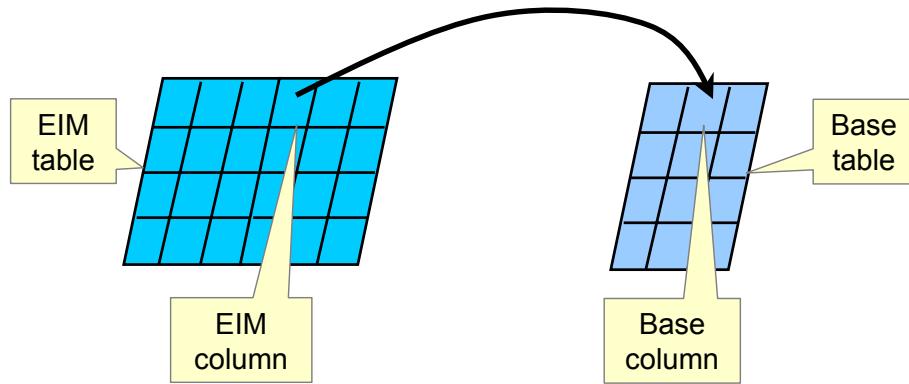
EIM_ACCOUNT		Primary Target Table: S_PARTY					
Destination Table	Destination Column	UK Req	DType	DValue	Destination Description	Source Column	Data Type
S_ACCNT_POSTN	ROW_STATUS	Y			Row Status	ROW_STATUS	Varchar 10
	ASGN_DNRM_FLG	N			Denormalized assignment flag	ASGN_DNRM_FLG	Character 1
	ASGN_MANL_FLG	N				ASGN_MANL_FLG	Character 1
	ASGN_SYS_FLG	N				ASGN_SYS_FLG	Character 1
	COMMENTS	N				COMMENTS	Varchar 255
	DNRM_ACCNT_BMP_FLG	N				DNRM_ACCNT_BMP_FLG	Character 1
	DOCK_FLG	N			Dock Flag	DOCK_FLG	Character 1
	END_DT	N			End Date	END_DT	Date 7
	INCLUDE_BRIEF_FLG	N			Include in Account Briefing. (Not	INCLUDE_BRIEF_FLG	Character 1
	RANK_CD	N	L0VB_ASSET_TEAM_ROLE		Rank Code	RANK_CD	Varchar 30

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EIM to Base Mappings

- Determine EIM columns that populate target base columns
- Determine other EIM required columns to populate the target base table
 - ▶ Other columns may be required based on required fields in the base table



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Determine EIM Columns

- Determine which EIM column populates the target base column in Siebel Tools
 - ▶ Example: MAIN_PH_NUM on EIM_ACCOUNT populates MAIN_PH_NUM on S_ORG_EXT

EIM ACCOUNT

Destination Table	Destination Column	UK	FK Table	Source Column	
S_ORG_EXT	MAIN_EMAIL_ADDR			MAIN_BMAIL_ADDR	
	MAIN_FAX_PH_NUM			MAIN_FAX_PH_NUM	
	MAIN_PH_NUM			MAIN_PH_NUM	
	OU_NUM			OU_NUM	
	OU_NUM_1			OU_NUM_1	
	OU_TYPE_CD			OU_TYPE_CD	
	PAR_			PAR_	
	Base column			EIM column	

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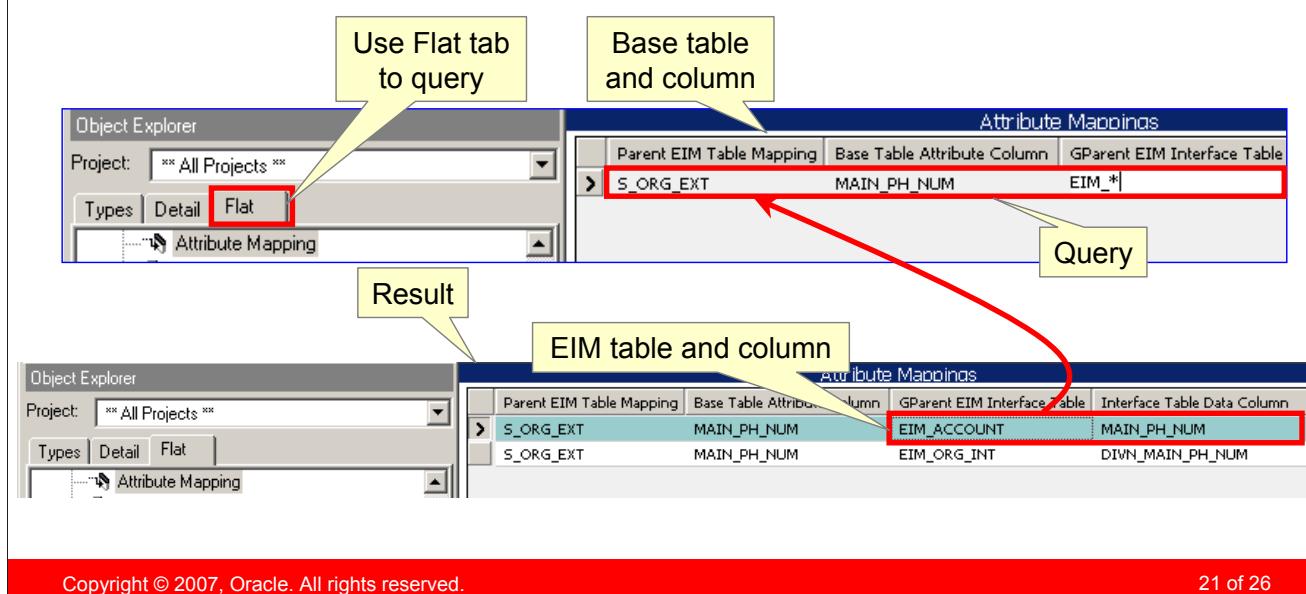
Column Names

Column names are often the same, but not always.

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Determine EIM Columns Continued

- Alternate method is to query Attribute Mappings in Siebel Tools to determine which EIM column populates the base column
 - ▶ Example: MAIN_PH_NUM on EIM_ACCOUNT populates MAIN_PH_NUM on S_ORG_EXT



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Determine Base Required Columns

- Determine required base table columns that do not have defaults (EIM does not recognize non-system default values)

The screenshot shows the Oracle Siebel EIM interface. On the left, the Object Explorer pane is open, with 'Query Column' selected. A yellow callout box points to this selection with the text 'Result = required base columns'. In the center, the 'Tables' view shows a table named 'S_ORG_EXT' with one column listed. A red box highlights the 'Required' column, which has a checkmark. An arrow points from this red box to another red box on the right. The right side shows a 'Columns' view with several columns listed. A red box highlights the 'Default' column for all rows, and another red box highlights the 'Type' column for all rows. A yellow callout box points to this second red box with the text 'Defaults not recognized by EIM'. The columns listed are: ACTIVE_FLG, BU_ID, DISA_CLEANSE_FLG, EVT_LOC_FLG, FCST_ORG_FLG, INT_ORG_FLG, NAME, and PROSPECT_FLG.

Name	Default	Type
ACTIVE_FLG	Y	Data (Public)
BU_ID	0-R9NH	Data (Public)
DISA_CLEANSE_FLG	N	Data (Public)
EVT_LOC_FLG	N	Data (Public)
FCST_ORG_FLG	N	Data (Public)
INT_ORG_FLG	N	Data (Public)
NAME		Data (Public)
PROSPECT_FLG	N	Data (Public)

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Finding Non-System Columns An alternative method of locating required, non-system columns is to query for required columns with Type equals Data(Public).



Mapping Considerations

- Understand how to enter organization data
 - ▶ Fill in _BU column with name of the organization
 - ▶ Leave _BI column blank
 - Populated with foreign key during import processing
- Understand additional columns that must be populated for party business components
 - ▶ Use EIM Interface Table report to identify these
 - ▶ Examples:
 - PARTY_UID
 - PARTY_TYPE_CD
 - ROOT_PARTY_FLG

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ROOT_PARTY_FLG	ROOT_PARTY_FLG is for Oracle implementations only. It was added to support performance for Oracle. A query to obtain top-level Positions, Organizations, or Access Groups can use either: <ol style="list-style-type: none">1. WHERE ROOT_PARTY_FLG='Y' or2. WHERE PAR_PARTY_ID is NULL Oracle cannot use an indexed access path for option 2 because there are no index entries for NULL, so ROOT_PARTY_FLG was added. ROOT_PARTY_FLG is set to 'Y' for top-level Positions, Organizations, and Access Groups as it applies only to these Party sub-types. It is set to 'N' for other party subtypes.
-----------------------	--



Mapping Considerations Continued

- Be aware of access control and data visibility issues
 - ▶ Set access control by:
 - Importing ownership information, or
 - Using assignment manager
 - ▶ If ownership is not set or is set incorrectly, data visibility will be incorrect
- Example:
 - ▶ Import product information to Siebel database
 - Product visibility is determined by organization
 - Map product and ownership information to EIM_PROD_INT (Product interface table)
 - Be sure to map from EIM_PROD_INT to both S_PROD_INT (Internal product base table) and S_PROD_INT_BU (Product/BU intersection table)
 - ▶ Mapping documented in EIM Interface Table report



Module Highlights

- Data mapping specifies:
 - ▶ Which base tables and columns will hold external data
 - ▶ Which interface tables and columns will be used by EIM during data movement
- Steps to create data mappings for EIM:
 - ▶ Map external entities to Siebel business-layer objects
 - ▶ Use the Siebel Web Client to identify and verify mapping of external attributes to BC fields
 - ▶ Select the interface table used by the mapping
 - ▶ Use Siebel Tools' EIM Interface Table report to perform column-to-column mappings between interface tables and base tables
 - ▶ Map all external attributes of interest plus required non-system columns
- Data mappings should be clearly documented



Lab

- In the lab you will:
 - ▶ Map external solutions data to EIM tables and base tables
 - ▶ Map external product data to EIM tables and base tables



Siebel 8.0 Essentials

Module 51: Running Enterprise Integration Manager

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Module Objectives

After completing this module you should be able to:

- ▶ Populate interface (EIM) tables for imports
- ▶ Modify configuration (.ifb) files for imports
- ▶ Invoke an Enterprise Integration Manager (EIM) server task
- ▶ Modify configuration (.ifb) files to optimize imports

Why you need to know:

- ▶ To successfully import external data into the Siebel database

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Interface Table Structure

- All interface tables have three required columns:
 - ▶ IF_ROW_BATCH_NUM and ROW_ID are set by the user to uniquely designate a record
 - ▶ IF_ROW_STAT is used by EIM to return status after an EIM run

IF_ROW_BATCH_NUM	Row_ID	IF_ROW_STAT	NAME
100	1	IMPORTED	Photocopier
100	2	IMPORTED	Fax Machine
200	1	IMPORTED	Shredder
200	2	IMPORTED	Toner Cartridge

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EIM T_ Columns

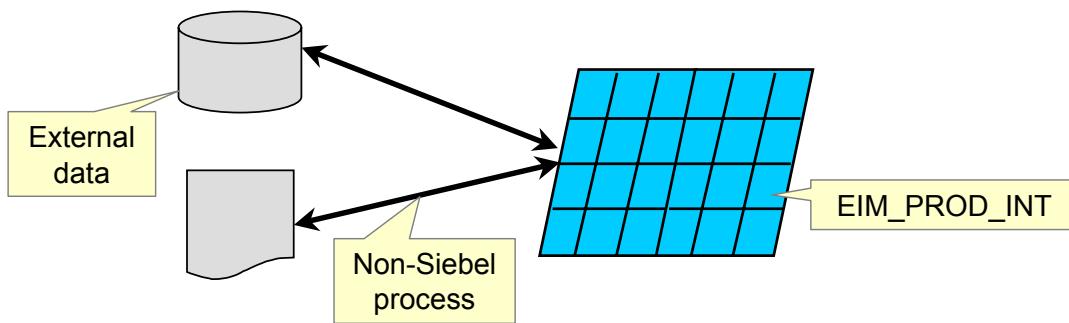
All EIM tables have columns to hold temporary values used by EIM during a job. These columns start with T_, and include some that end with the suffix _STA. These latter columns may provide troubleshooting assistance.

Running an EIM Task for Data Imports

1. Populate EIM Tables
2. Determine Processing Order
3. Run an EIM Task
4. Verify EIM Task Results
5. Remove Data from EIM Tables

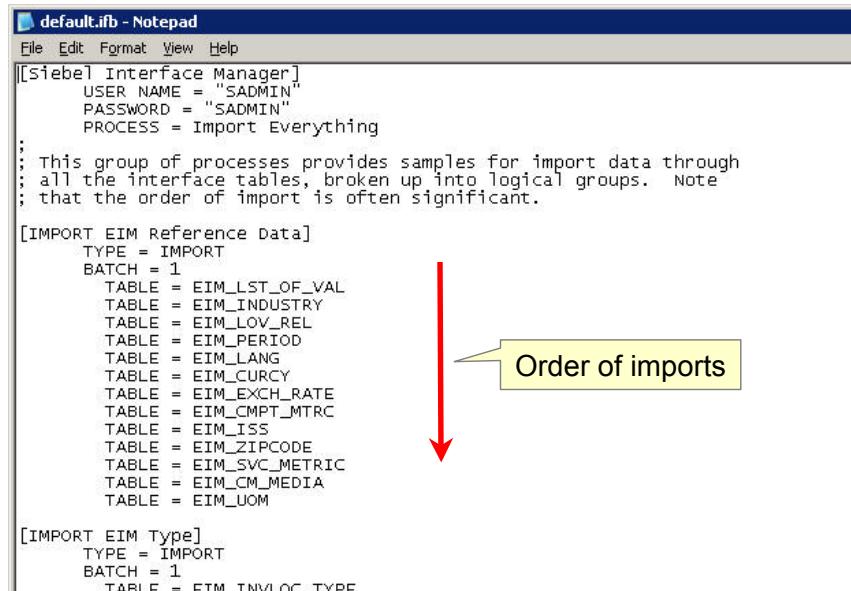
1. Populate EIM Tables

- Populate source data into EIM tables using a non-Siebel process
 - ▶ Use database vendor utilities to load data from flat files
 - ▶ Use SELECT INTO to pull data from other SQL databases
 - ▶ Use direct SQL insert, update, or delete statements to update columns in EIM tables
 - ▶ Use SQL queries to verify that EIM tables populated correctly



2. Determine Processing Order

- Determine the correct processing order for EIM tables
 - ▶ When importing, tables referenced via foreign key must be loaded first
 - ▶ Refer to the default.ifb for recommended processing order



```

default.ifb - Notepad
File Edit Format View Help
[[Siebel Interface Manager]
USER NAME = "SADMIN"
PASSWORD = "SADMIN"
PROCESS = Import Everything
;
; This group of processes provides samples for import data through
; all the interface tables, broken up into logical groups. Note
; that the order of import is often significant.

[IMPORT EIM Reference Data]
TYPE = IMPORT
BATCH = 1
TABLE = EIM_LST_OF_VAL
TABLE = EIM_INDUSTRY
TABLE = EIM_LOV_REL
TABLE = EIM_PERIOD
TABLE = EIM_LANG
TABLE = EIM_CURRENCY
TABLE = EIM_EXCH_RATE
TABLE = EIM_CMPT_MTRE
TABLE = EIM_ISS
TABLE = EIM_ZIPCODE
TABLE = EIM_SVC_METRIC
TABLE = EIM_CM_MEDIA
TABLE = EIM_UOM

[IMPORT EIM Type]
TYPE = IMPORT
BATCH = 1
TABLE = EIM_TNVI_OC_TYPE
  
```

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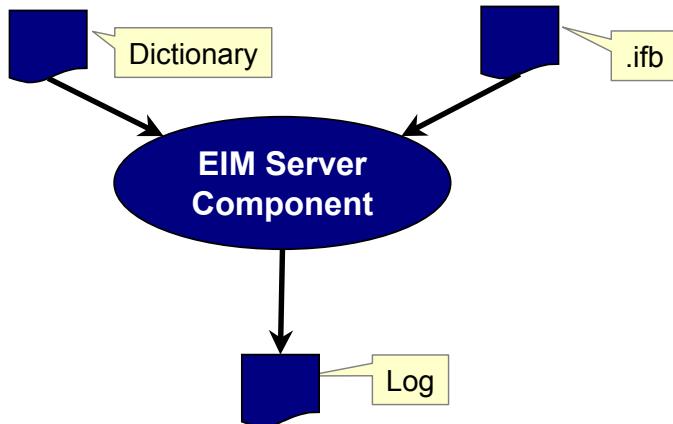
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Reference

The recommended processing order for EIM imports is also described in Siebel Bookshelf, Enterprise Integration Manager Administration Guide, "Importing Data".

3. Run an EIM Task

- Creates an operating system (OS) process that reads the .ifb file, loads the dictionary, executes EIM steps, and writes log entries



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EIM Dictionary

The dictionary used by EIM is a set of files used to speed EIM processing.

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3. Run an EIM Task continued

- Direct the execution of an EIM task using a configuration (.ifb) file
 - ▶ Specifies the batch, order, and type of processing
 - ▶ Use default.ifb as a template

```

product.ifb - Notepad
File Edit Format Help
[siebel Interface Manager]
USER NAME = "SADMIN"
PASSWORD = "SADMIN"
PROCESS = Import Products
[Import Products]
TYPE = IMPORT
BATCH = 100
TABLE = EIM_PROD_INT
ONLY BASE TABLES = S_PROD_INT
DEFAULT COLUMN = PROD_BU, "Default organization"
DEFAULT COLUMN = ACTIVE_FLG, "Y"
DEFAULT COLUMN = COMPENSATABLE_FLG, "Y"
DEFAULT COLUMN = ENTERPRISE_FLG, "N"
DEFAULT COLUMN = FEATURED_FLG, "N"
DEFAULT COLUMN = ORDERABLE_FLG, "Y"
DEFAULT COLUMN = POSTN_BL_PROD_FLG, "N"
DEFAULT COLUMN = SALES_PROD_FLG, "Y"
DEFAULT COLUMN = SALES_SRVC_FLG, "N"
  
```

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.ifb File Location

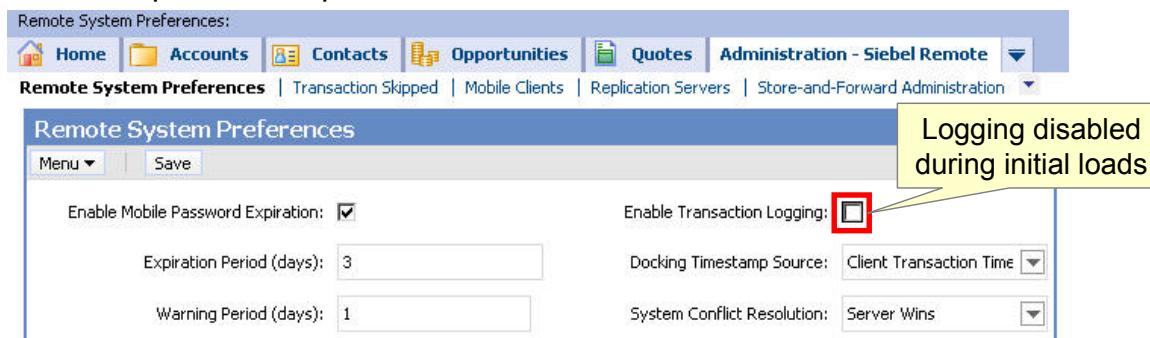
The template EIM configuration file, default.ifb, is located in {SiebSrvr_Base_Dir}\ADMIN.

Parameters for EIM Deletes

Because the focus of this module is on EIM imports, which are of critical importance as part of initial data loads in a Siebel implementation project, this module does not cover the details of configuring an EIM delete job. However, parameters in the .ifb file, deletes allow control over the tables and rows to be deleted. See the details for the parameters DELETE EXACT, DELETE MATCHES, and DELETE ALL ROWS in Bookshelf, Siebel Enterprise Integration Manager Administration Guide.

3. Turn Off Transaction Logging

- Siebel Remote logs transactions to allow synchronization of mobile clients
- Transaction logging reduces EIM performance
 - ▶ Before initial loads, turn off logging
 - Navigate to Administration – Siebel Remote > Remote System Preferences
 - ▶ After initial loads, turn on logging to support mobile clients
 - Turning off transaction logging in a running production system will require subsequent re-extraction of all mobile user databases

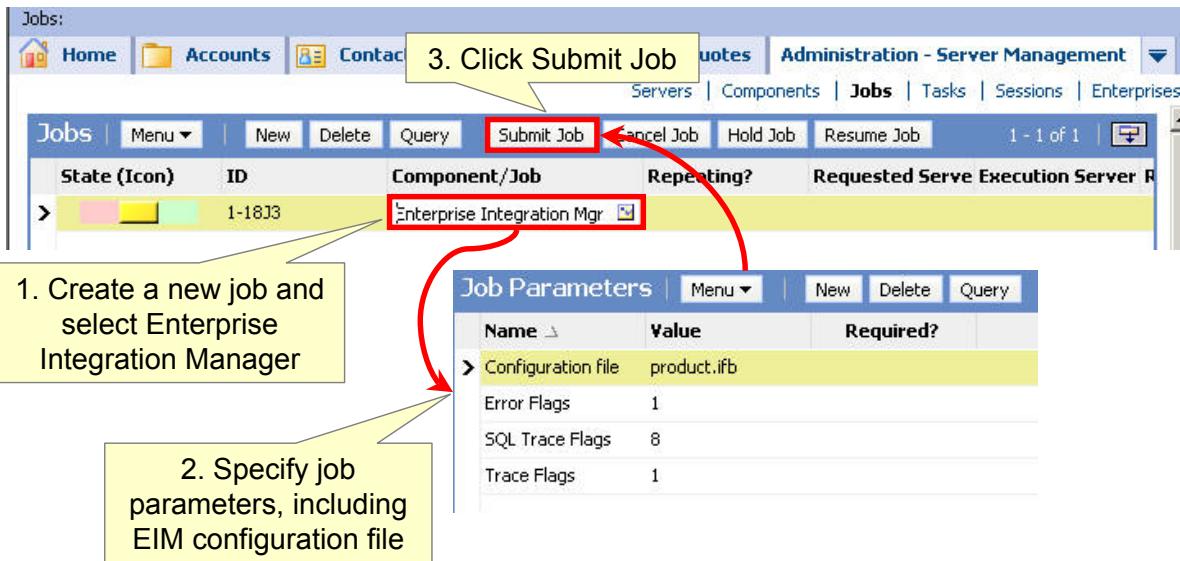


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3. Create and Run an EIM Job

- Navigate to Administration - Server Management > Jobs



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3. Monitor the EIM Task

- Navigate to Administration - Server Management > Tasks
 - ▶ Query to view progress
 - ▶ Review Task Information Log

The screenshot shows a software interface for monitoring EIM tasks. At the top, there are tabs: Log (which is highlighted with a red box), Parameters, State Values, and Statistics. Below the tabs is a menu bar with 'Menu' and 'Query'. The main area is a table titled 'Log ID' with columns for Log ID, Timestamp, Level, and Text. The table contains 10 entries. The first entry (Log ID 1) is highlighted with a yellow background and has a callout box pointing to it with the text: 'Log displays diagnostic information, including task parameters'. The other entries show various system parameters and their values.

Log ID	Timestamp	Level	Text
1	3/24/2004 10:58:55	4	The Parameters for the current task are :
2	3/24/2004 10:58:55	4	Enterprise : Siebel
3	3/24/2004 10:58:55	4	Server : SUrvr
4	3/24/2004 10:58:55	4	Siebel Home : C:\SUseal\siebsrvr
5	3/24/2004 10:58:55	4	Log Directory : C:\SUseal\siebsrvr\log
6	3/24/2004 10:58:55	4	Batch Number : 0
7	3/24/2004 10:58:55	4	Configuration file : product.ifb
8	3/24/2004 10:58:55	4	Extended Parameters :
9	3/24/2004 10:58:55	4	LOV Language : ENU
10	3/24/2004 10:58:55	4	Process :

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4. Verify EIM Results

- Run SQL SELECT statements to verify the table data

Query - EMELUC01.siebeldb.sa - Untitled1*

```
SELECT ROW_ID, IF_ROW_BATCH_NUM, IF_ROW_STAT, PART_NUM, NAME, UOM_CD
FROM siebeldb..EIM_PROD_INT
go
```

Select from EIM table

	ROW_ID	IF_ROW_BATCH_NUM	IF_ROW_STAT	PART_NUM	NAME	UOM_CD
1	100	100	IMPORTED	P1	Photocopier	Each
2	101	100	IMPORTED	T2	Toner Cartridge	Each
3	102	100	IMPORTED	F4	Fax Machine	NULL

Query - EMELUC01.master.sa - Untitled3*

```
SELECT ROW_ID, PART_NUM, NAME
FROM siebeldb..S_PROD_INT
go
```

Select from base table

	ROW_ID	PART_NUM	NAME
4	1-37-1	T2	Toner Cartridge
5	1-37-2	F4	Fax Machine
6	1-37-3	S6	Shredder
7	1-37-4	C4	Collation tray
8	1-37-7	F6	Network Printer
9	1-K4-0	P1	Photocopier

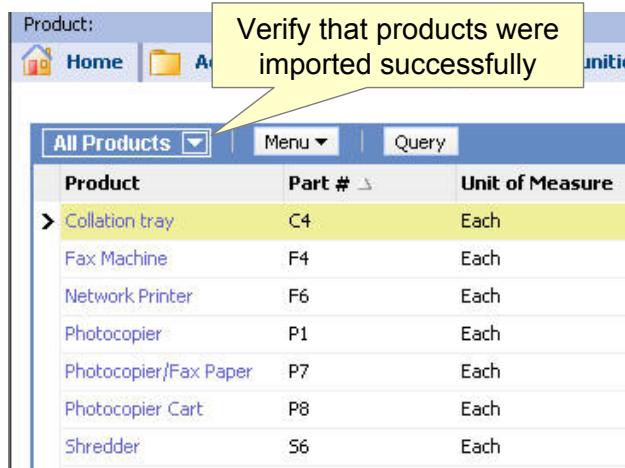
4. Verify EIM Results Continued

- After import, IF_ROW_STAT will contain a value that describes the status of each imported row

IF_ROW_STAT Value	Description
IMPORTED	Success for all destination tables
PARTIALLY_IMPORTED	Success for target base table; failure for secondary table
REQUIRED_COLS	Failed because required column has NULL value
DUP_RECORD_EXISTS	Failed because target table has row with same values
FOREIGN_KEY	Failed because a required foreign key could not be resolved
PICKLIST_VALUES	Failed because required picklist value not found in S_LST_OF_VAL

4. Verify EIM Results Continued

- Verify imported data in the application using appropriate views
 - ▶ Example: Products > Internal Product List

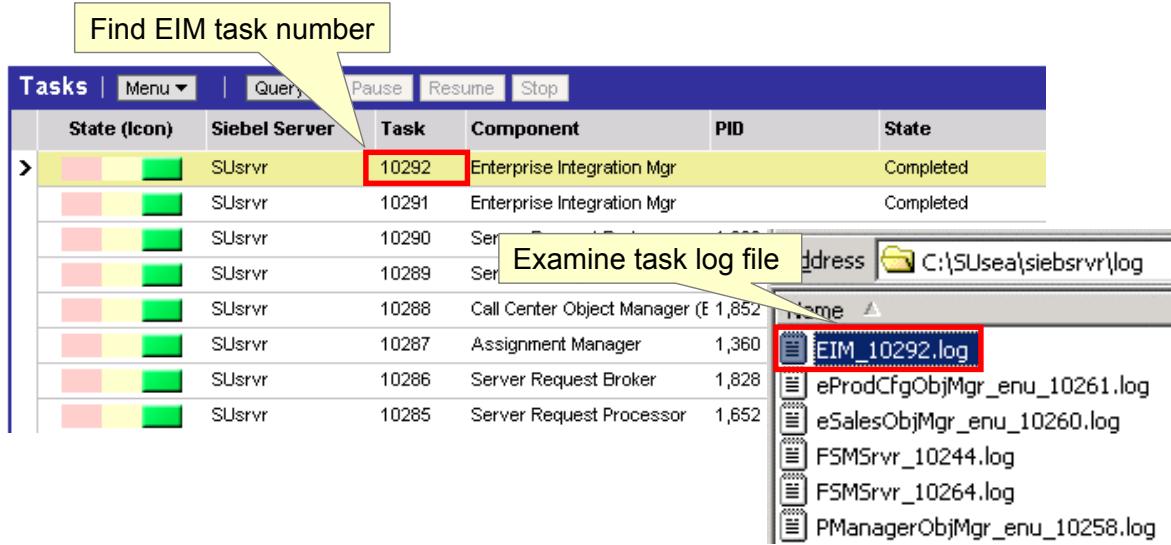


A screenshot of the Siebel Internal Product List view. The interface has a blue header bar with tabs for Home and Applications. Below the header is a toolbar with buttons for All Products, Menu, and Query. A yellow callout box with the text "Verify that products were imported successfully" points to the All Products button. The main area is a table with columns: Product, Part #, and Unit of Measure. The table contains the following data:

Product	Part #	Unit of Measure
Collation tray	C4	Each
Fax Machine	F4	Each
Network Printer	F6	Each
Photocopier	P1	Each
Photocopier/Fax Paper	P7	Each
Photocopier Cart	P8	Each
Shredder	S6	Each

4. Verify EIM Results Continued

- For troubleshooting:
 - ▶ Navigate to Administration – Server Management > Tasks
 - ▶ Find task number for EIM task
 - ▶ Examine log file in Siebel server log directory



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4. Verify EIM Results Continued

- Job parameters can override component-level event logging to create additional information in the log
 - ▶ Trace Flags = 1
 - Records processing steps
 - ▶ SQL Trace Flags = 8
 - Records summary SQL
 - Should only be done in test environment
 - Dramatically impedes EIM performance and generates large log file
 - ▶ Error Flags = 1
 - Records details regarding failed rows

Job Parameters	
Name	Value
Configuration file	product.ifb
Error Flags	1
SQL Trace Flags	8
Trace Flags	1

EIM logging flags used for troubleshooting

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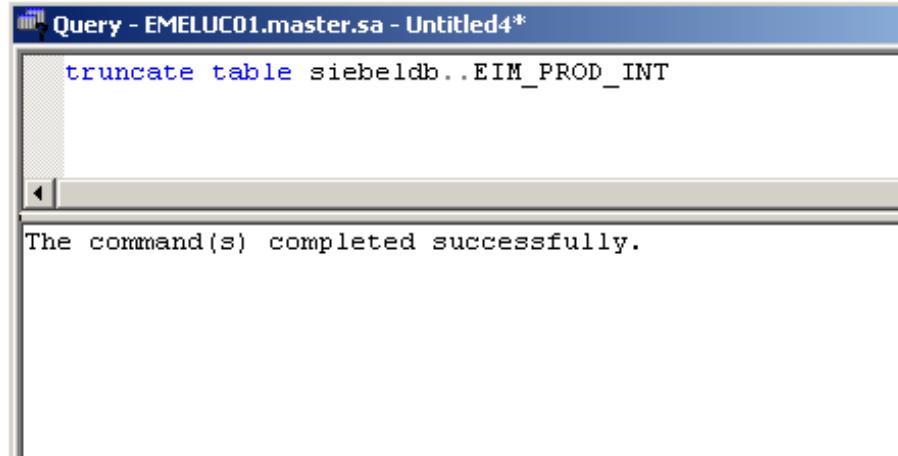
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Troubleshooting Flags

SQL Trace Flags = 8 should only be used for test EIM jobs with a small number of records. This option produces a very large log file and has a significant performance impact.

Remove Data from EIM Tables

- You are responsible for removing records from the EIM tables
 - ▶ Use SQL to delete EIM table records once they have been successfully processed



A screenshot of an Oracle SQL Developer window titled "Query - EMELUC01.master.sa - Untitled4*". The query editor contains the following SQL command:
`truncate table siebeldb..EIM_PROD_INT`

The output pane shows the message:
`The command(s) completed successfully.`

Additional Configuration (.ifb) Parameters

- Use enhanced configuration parameters to speed EIM processing and reduce elapsed time:

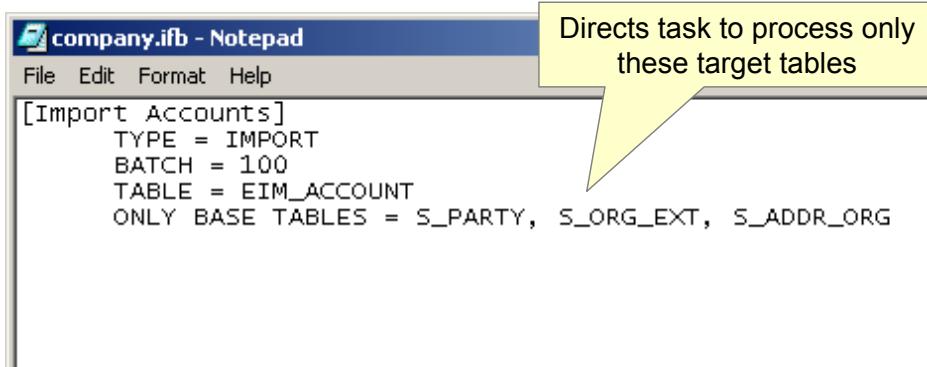
Process Options

Import Options

Primaries

Process Options

- Explicitly include or exclude tables and columns to avoid unnecessary processing
 - ▶ Use ONLY BASE TABLES, ONLY BASE COLUMNS
 - or
 - ▶ Use IGNORE BASE TABLES, IGNORE BASE COLUMNS
- Example:



A screenshot of a Windows Notepad window titled "company.ifb - Notepad". The window contains the following text:

```
[Import Accounts]
TYPE = IMPORT
BATCH = 100
TABLE = EIM_ACCOUNT
ONLY BASE TABLES = S_PARTY, S_ORG_EXT, S_ADDR_ORG
```

A yellow callout bubble points to the "ONLY BASE TABLES" line, with the text "Directs task to process only these target tables".

Process Options Continued

- Set options to control processing and enhance performance
 - ▶ Set USING SYONYMS to FALSE to avoid unnecessary processing
 - USING SYONYMS applies to accounts only
 - ▶ Use SHELL to process multiple EIM tables/sections in a single run
- Example:

```
[Siebel Interface Manager]
USER_NAME = "SADMIN"
PROCESS = Import All

[Import Accounts]
TYPE = IMPORT
BATCH = 100
TABLE = EIM_ACCOUNT
ONLY BASE TABLES = S_PARTY, S_ORG_EXT, S_ADDR_ORG
USING SYNONYMS = FALSE

[Import All]
TYPE = SHELL
INCLUDE = "Import Accounts"
INCLUDE = "Import Contacts"
```

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Synonyms

Some business components have a MVG field that contains synonyms, which are variations in the BC name. For example, the Account named IBM could have synonyms: “International Business Machines”, “Intl Bus Machines”, “IBM Co.”, and so on. Use of synonyms prevents multiple records being created based on misspelling or inconsistent usage.

Import Options

- Set options to preprocess EIM rows and columns
 - ▶ Use FILTER QUERY to select a subset of EIM rows for processing
 - ▶ Use DEFAULT COLUMN or FIXED COLUMN to set values for EIM columns
- Example:

```
employ.ifb - Notepad
File Edit Format Help
[siebel Interface Manager]
USER NAME = "SADMIN"
PROCESS = Import Everything

[Import LOV1]
TYPE = IMPORT
BATCH = 1
TABLE = EIM_LST_OF_VAL
FILTER QUERY =(LOV_TYPE = 'LOV_TYPE' AND LAST_UPD > '1980-01-02')

[Import LOV2]
TYPE = IMPORT
BATCH = 1
TABLE = EIM_LST_OF_VAL
FILTER QUERY =(LOV_TYPE <> 'LOV_TYPE' AND LAST_UPD > '1980-01-02')
```

EIM column,
operator, and value

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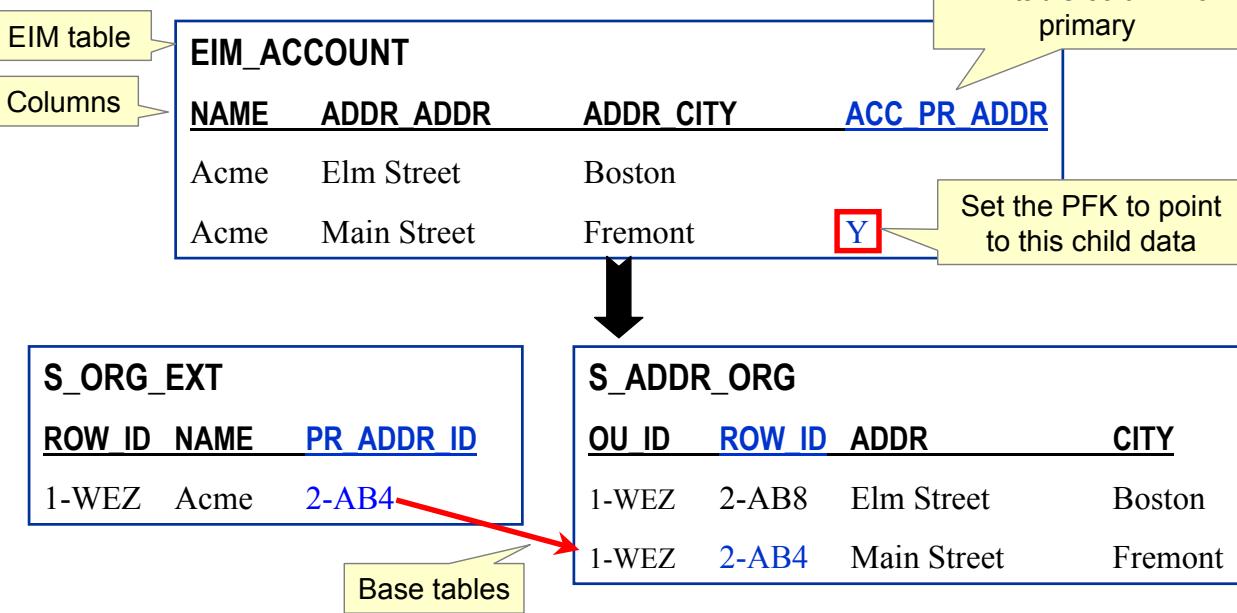
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Primaries

- Improve performance by eliminating sub-queries when displaying data from parent and child tables
- If primaries are not used, a new query needs to be executed to identify any child records each time a parent record is displayed
- Two types of Primary settings:
 - ▶ Explicit Primary
 - ▶ Implicit Primary

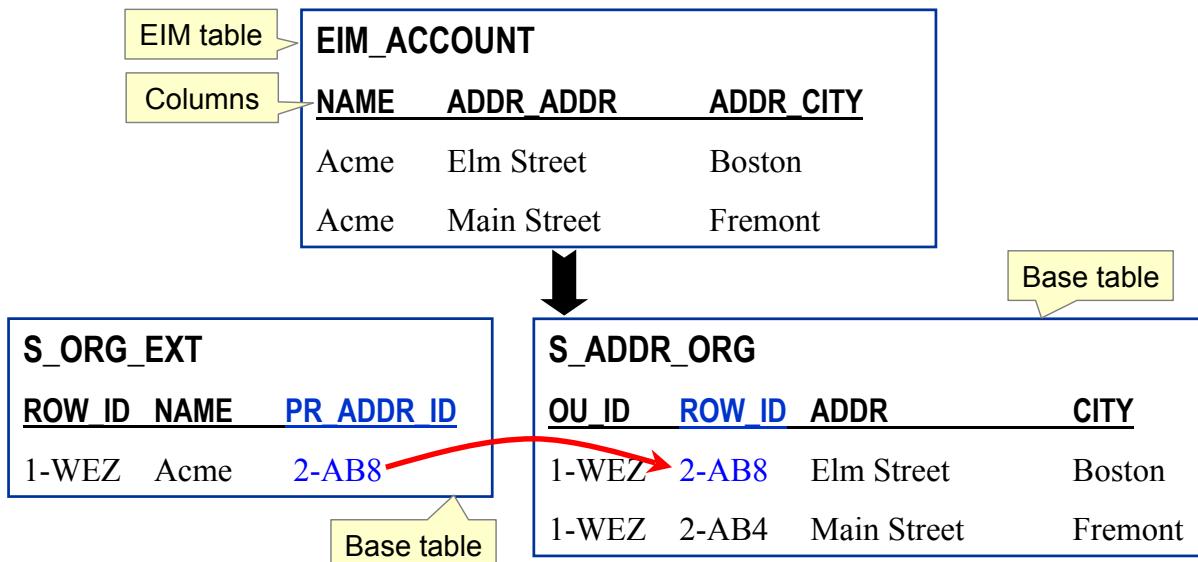
Set Primaries: Explicit Primaries

- Use the Primary flag to set explicit primaries through EIM
 - ▶ Use when the external system knows which child should be primary



Set Primaries: Implicit Primaries

- Allow EIM to implicitly set primaries
 - ▶ Use when the external system does not know the primary
 - ▶ Sets the primary to be the child with the lowest ROW_ID
 - ▶ Mimics auto primary in the application

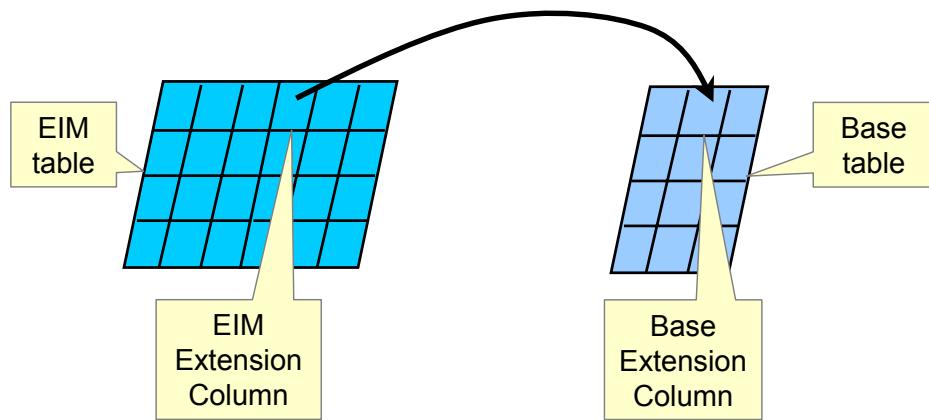


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Using EIM with Database Modifications

- To populate base table extension columns through EIM:
 - ▶ Add an extension column to the EIM table
 - ▶ Map the EIM column to the base column
 - ▶ Test the mapping by running EIM on the server
- Use the Interface Table Mapping Wizard



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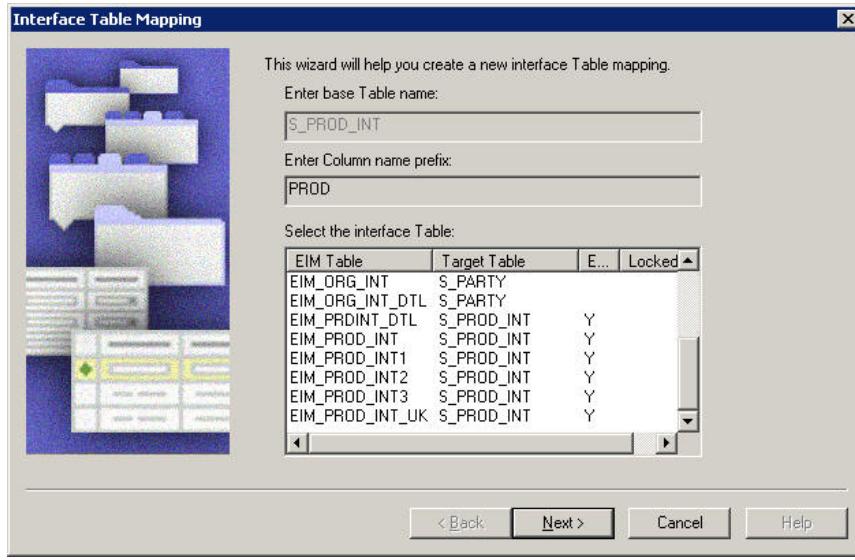
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Using EIM with Database Modifications Continued

- Update EIM table mappings to include columns or tables you have added using the Interface Table Mapping Wizard
- Select the table in Tools, right-click, select EIM Table Mapping... and complete the wizard



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Module Highlights

- All EIM tables have three special columns:
 - ▶ IF_ROW_BATCH_NUM
 - ▶ ROW_ID
 - ▶ IF_ROW_STAT
- EIM import steps are:
 - ▶ Populate EIM tables
 - ▶ Create an EIM configuration file (.ifb)
 - ▶ Run an EIM job
 - ▶ Verify job results
 - ▶ Remove EIM table records
- Parameters that can speed EIM processing:
 - ▶ No transaction logging
 - ▶ Process and import options in .ifb file
- Can set primaries during EIM import



Lab

- In the lab you will:
 - ▶ Load solutions data into the interface table
 - ▶ Import solutions data from the interface table to base table
 - ▶ Load company data into the interface table and import it to the base table

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Module 52: Introducing Application Deployment Manager

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Module Objectives

- After completing this module you should be able to:
 - ▶ Describe the Application Deployment Manager (ADM) architecture
 - ▶ Describe how deployment options are configured
- Why you need to know:
 - ▶ ADM provides a framework to deploy application customizations efficiently and predictably

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Business Challenge: Application Migration

- Deploying a customized Siebel application typically involves:
 - ▶ A development enterprise (a collection of Siebel servers), where customizations are created
 - ▶ A QA/test enterprise used to test application functionality
 - ▶ One or more production enterprises that require tested and stable software
 - May involve many production Siebel enterprises
- The migration of customizations may be very complex:
 - ▶ May involve hundreds of customizations
 - ▶ Source and target enterprises may have different configurations
 - Development enterprise may be simpler than test enterprise
 - ▶ Customizations may have dependencies on each other
 - Example: A new state model needs to be deployed after the modified business component object definition the model uses
 - ▶ Development and testing often occur concurrently



Business Solution: Application Deployment Manager (ADM)

- Is a framework for deploying application customizations to a target Siebel enterprise
- Is designed to provide an extensible facility for quick, reproducible deployment of a wide range of customizations
 - ▶ Includes support for many data types
 - ▶ Supports deployments ranging from a small patch with only a handful of application modifications to a major release with a new SRF file
 - ▶ Allows creation of reusable deployment packages that can be applied to multiple target enterprises

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Reference	Application Deployment Manager Guide
ADM Data Types	A complete list of data types supported by ADM can be found in Application Deployment Manager Guide: ADM Supported Data Types.
ADM in Siebel 8.0	ADM features and architecture have been significantly enhanced from prior versions.

Types of Customization

- ADM recognizes three types of application customizations:
 - ▶ Database customizations
 - ▶ Repository customizations
 - ▶ File customizations
- The steps to export and deploy each type differ

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Database Customizations

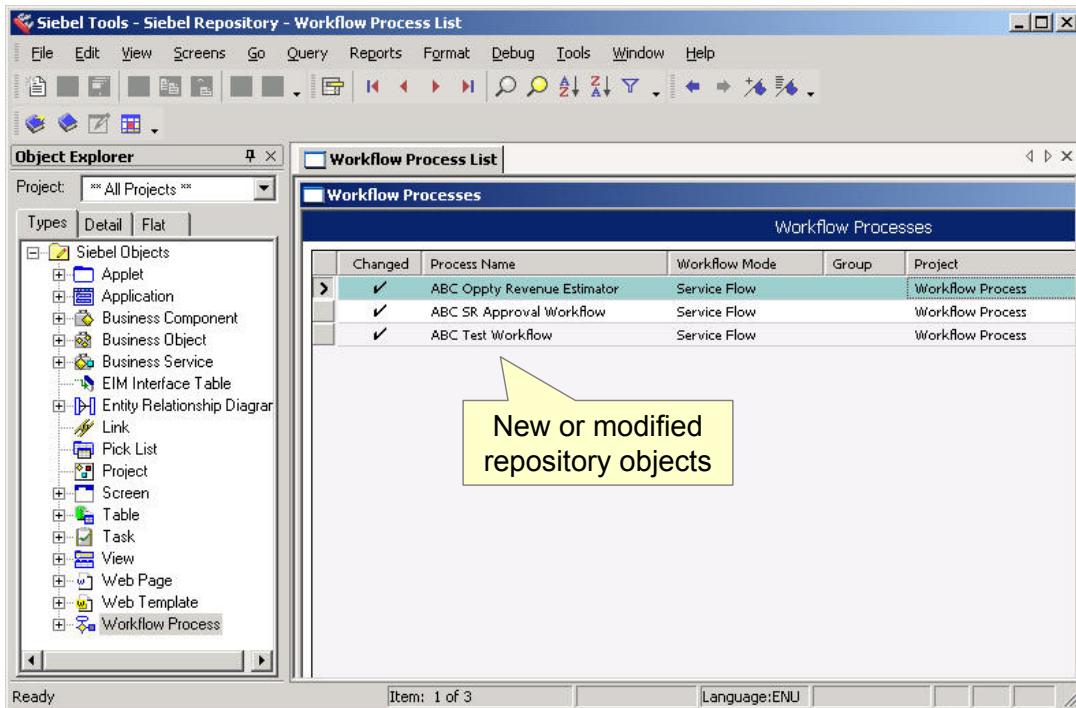
- Are changes to administrative and master data records in the Siebel database
 - ▶ Does not include repository table changes
 - ▶ Use EIM to migrate application records, such as Accounts, Contacts, Opportunities
- ADM supports deployment of many data types, including:
 - ▶ Lists of Values (LOVs)
 - ▶ User Lists
 - ▶ Assignment Rules
 - ▶ Access Groups

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Repository Customizations

- Are changes to object definitions made in Siebel Tools



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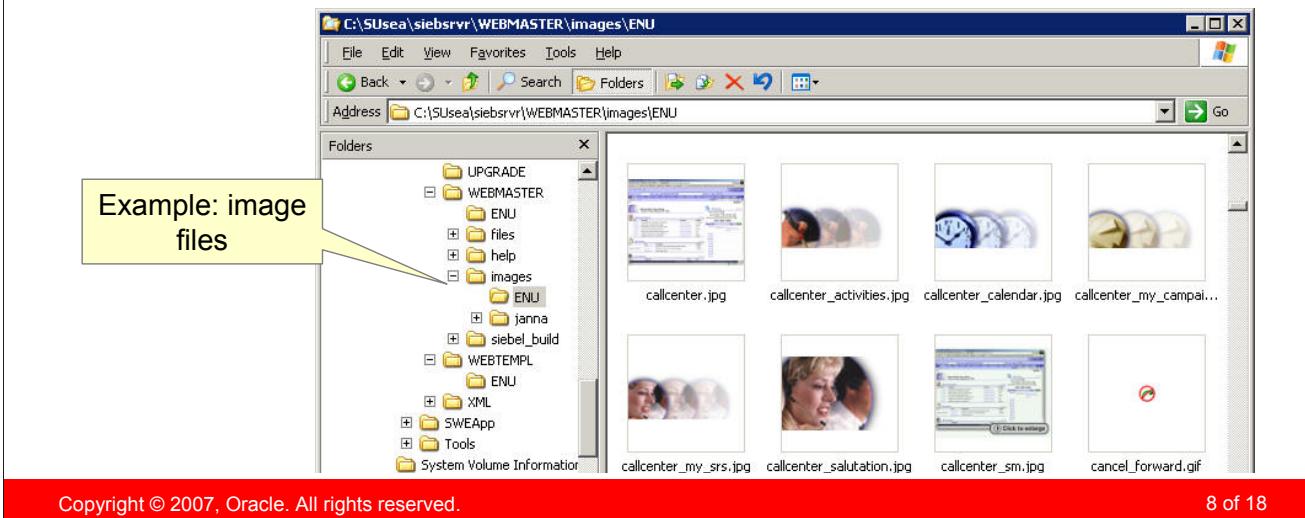
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File Customizations

- Are files modified as part of application configuration
- Examples:
 - ▶ Web Template files (.swt)
 - ▶ Image and Cascading Style Sheet (CSS) files
 - ▶ Siebel Repository file (.srf)
 - ▶ Reports files

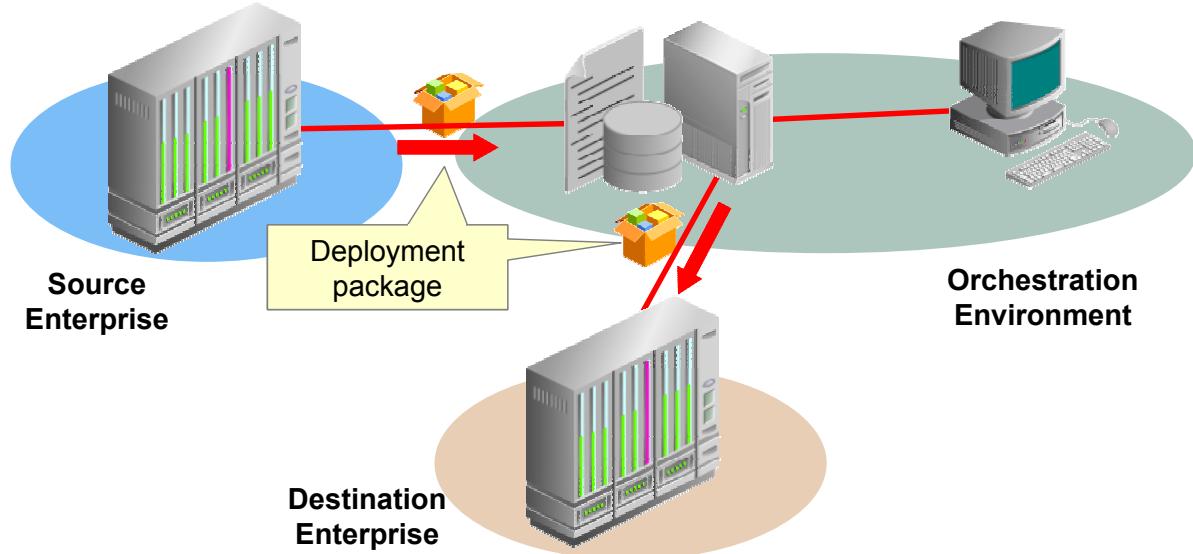


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ADM Architecture

- The three major parts of the ADM architecture are the:
 - ▶ Source enterprise
 - ▶ Orchestration environment
 - ▶ Destination enterprise(s) (can be multiple targets)



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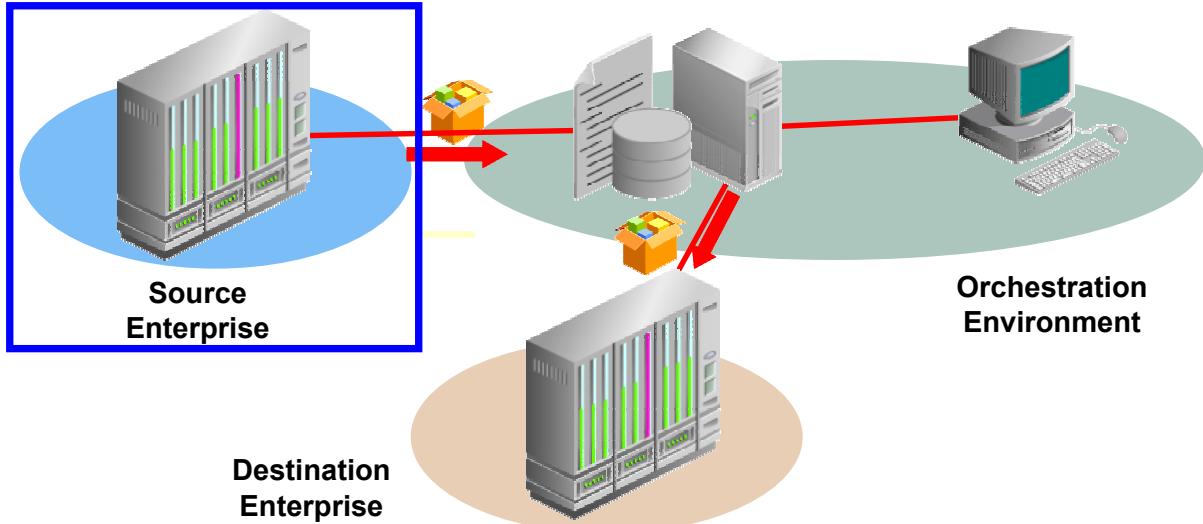
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Source Enterprise

- Is the Siebel enterprise containing modifications to be deployed
 - ▶ Example: a development enterprise
- Source enterprise components related to ADM include:
 - ▶ Siebel client and Siebel Tools functions to export customizations
 - ▶ A packager utility to bundle application customizations

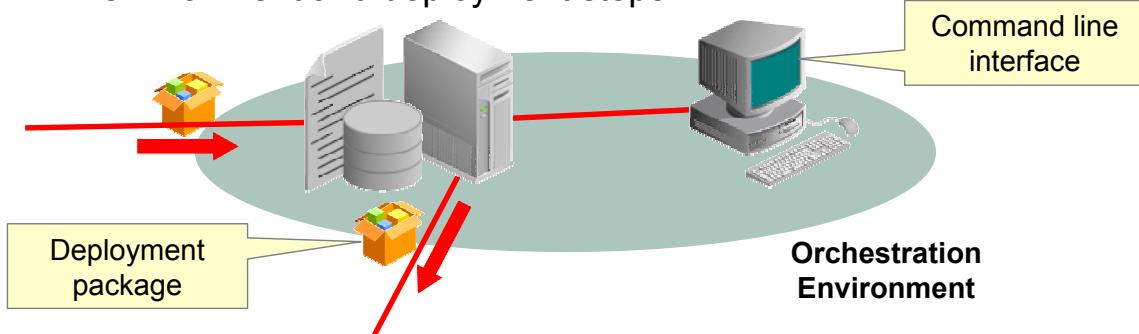


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Orchestration Environment

- Is a system used to execute ADM deployment
- Orchestration environment components include:
 - ▶ The Siebel Management Server
 - ▶ A database containing records on all deployments and data types contained in ADM packages
 - ▶ An ADM command line interface (CLI)
 - ▶ An ADM registry file
 - ▶ A target enterprise profile file, which describes the target environment and deployment steps



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Orchestration Environment

Continued

- Siebel Management Server is a service that supports:
 - ▶ The ADM orchestration environment
 - ▶ The Diagnostic Tool, which allows performance measurement of Siebel servers

Siebel Management Server
is the primary component of
ADM orchestration
environment

 Siebel Management Agent (port 1199)	Siebel Management Agent	Manual	Local System
 Siebel Management Server (port 1099)	Siebel Management Server	Started	Manual
 Siebel QuickStart Service		Disabled	Local System

Orchestration Environment Continued

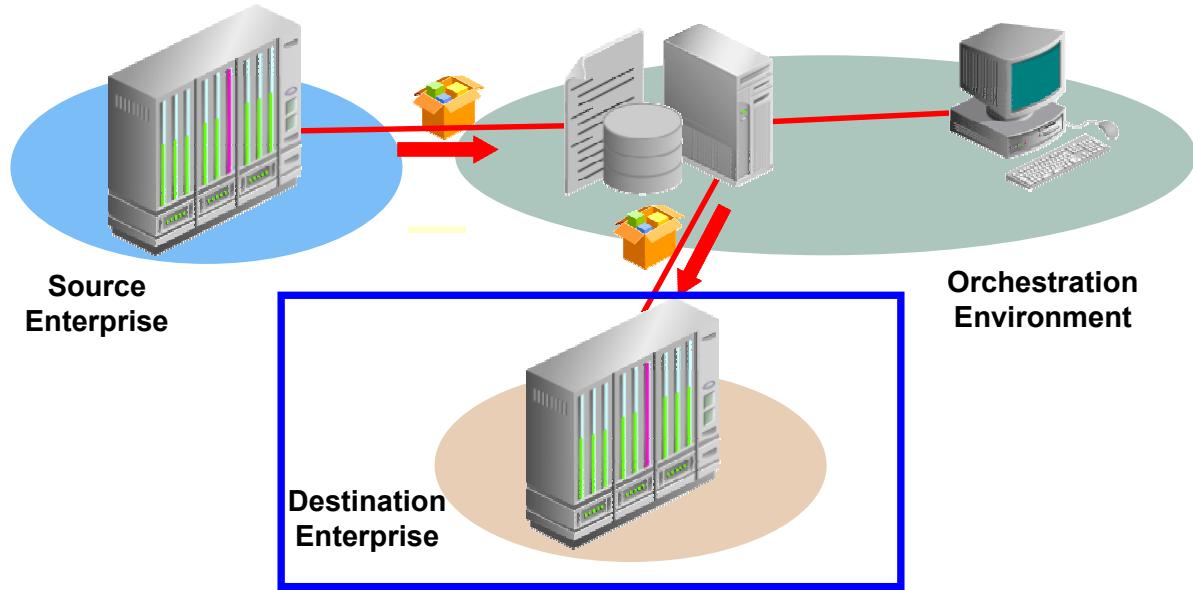
- The enterprise profile file:
 - ▶ Specifies target enterprise parameters
 - ▶ Is used to configure deployment options
 - ▶ Is discussed later in this module
- The ADM registry file:
 - ▶ Lists data types supported by ADM
 - ▶ Defines ADM operations for each data type
 - ▶ Defines deployment validation rules
 - ▶ Is usually not modified

```
<?xml version="1.0" encoding="UTF-8"?>
<adm_registry xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="adm_registry.xsd">
    <!--
        <version>1.0</version>
        <deployment_category name="Database">
            <deployment_level>Unit</deployment_level>
            <mbean>
                <type>ADM:type=ADMDataMBean</type>
            </mbean>
        </deployment_category>
    </version>1.0</version>
```

ADM registry
file

Destination Enterprise

- Is the target for deployment using ADM
 - ▶ Example: a QA/test Siebel enterprise
 - ▶ Can be multiple destination enterprises

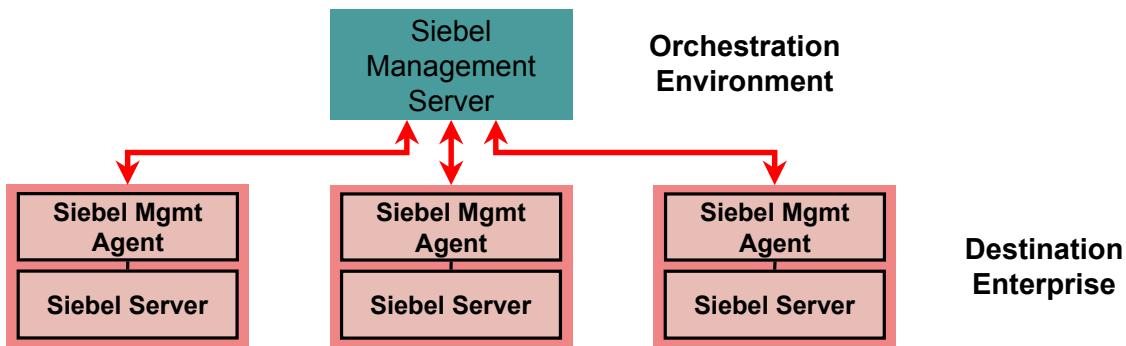


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Destination Enterprise Continued

- Destination enterprise components for ADM include:
 - ▶ A Siebel Management Agent for each Siebel Server in the target enterprise
 - ▶ ADM server components on each Siebel Server
- Siebel Management Agent is a service that runs in combination with a Siebel Server and provides support for Management Server requests



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Destination
Enterprise

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ADM Enterprise Profile File

- The enterprise profile file contains:
 - ▶ Parameters that specify target enterprise configuration
 - ▶ Parameters that control deployment orchestration
- Parameters that describe target enterprise configuration include:
 - ▶ Siebel Server connect string(s)
 - ▶ Siebel Management Agent name(s) and port number(s)

Enterprise Profile

SIEBEL

Name:	Siebel Profile	
Enterprise Name:	Siebel	
Enterprise profile for target enterprise Siebel		
Description:		
Parameters:		
Stop On Error:	No	
Perform Backup:	<input checked="" type="radio"/> Yes <input type="radio"/> Select...	
Perform Validation:	<input checked="" type="radio"/> Yes <input type="radio"/> No	
<input checked="" type="radio"/> Target Repository		
Enterprise Target Server Information		
Agent Name	Siebel Server Connect String	Server Install Dir
EMETFR09_1199	siebel://EMETFR09:2321/Siebel/	E:\OUsea\siebsrvr

Enterprise profile file opened in Microsoft InfoPath

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Editing the Enterprise Profile File

The recommended way to modify the enterprise profile file is to use Microsoft InfoPath, a component of Microsoft Office. XML form templates are provided for use with InfoPath. To install the InfoPath form and its descriptor as trusted forms, execute two batch files: `<mgmt server install dir>\adm\installprofile.bat` and `<mgmt server install dir>\adm\installdescriptor.bat`.



ADM Enterprise Profile File Continued

- Complex deployments can be customized by setting parameters to control:
 - ▶ Deployment sequence (some deployment units have dependencies)
 - Example: A modified assignment object may need to be deployed before a new assignment rule
 - ▶ Serial versus parallel deployment
 - ADM supports parallel deployment of file and database type customizations
 - ▶ Staging
 - Specifies deployment groupings by deployment unit or group, target Siebel server, or a collection of servers
 - ▶ Stop on error
 - Sets behavior of deployment on error



Module Highlights

- ADM may be used to move Siebel application modifications from a development environment to a test environment
 - ▶ Database changes (LOVs, assignment rules, and so on)
 - ▶ Repository changes (objects definitions, workflows, and so on)
 - ▶ Files changes (Web templates, CSS files, .srf files, and so on)
- The ADM architecture includes components on:
 - ▶ Source environment
 - ▶ Orchestration environment
 - ▶ Target environment
- Advanced deployment options are set by modifying the enterprise profile file EntProfile_<EnterpriseName>.xml

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Module 53: Deploying Application Customizations

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Module Objectives

- After completing this module you should be able to:
 - ▶ Use the packager utility to bundle application customizations
 - ▶ Deploy a package using the ADM command-line interface
- Why you need to know:
 - ▶ ADM provides a framework to deploy application customizations efficiently and predictably

Steps in Using ADM

Identify All Customizations to Deploy

Export Database Customizations

Export Repository Customizations

Move File Customizations

Create an ADM Package

Deploy the Package

Identify All Customizations to Deploy

- The first step in planning the deployment of application customizations is to identify changes
 - ▶ Examination of software configuration management or development logs may suffice
- Identify repository customizations within Siebel Tools:
 - ▶ Use Tools > Compare Objects to compare objects and/or archives
 - ▶ Generate a mid-level release (covered later in this module)
- Identify database changes using the Siebel client or development logs
- Determine file changes using operating system (OS) timestamps or third-party tools like diff

Identify All Customizations to Deploy Continued

- Analyze data dependencies to ensure successful deployment
 - ▶ Some ADM supported data types (parent types) are dependent on other data (child types)
 - ▶ Deploy parent types after child types
 - ▶ Examples:
 - User List depends on Users
 - Access Group depends on User Lists
 - State Model depends on List of Values
- Specify the order of deployment before exporting database changes using the Siebel client (covered later in this module)

Export Database Customizations

- Use the Siebel Web Client to export database modifications to files suitable for ADM packaging
 - ▶ Example: Export a collection of new User Lists
- Exported files include:
 - ▶ A file containing the exported data (XML)
 - ▶ A descriptor file (XML)
 - ▶ A log file giving export details and status
- To export database changes:
 - ▶ Create and enable a deployment project
 - ▶ Specify data dependencies
 - ▶ Create and deploy a deployment session

Export Database Customizations Continued

- Navigate to Application Deployment Manager > Deployment Projects
- Create, specify, and enable a deployment project
 - ▶ A deployment project is a specification of data to deploy

Project: [Home](#) | [Accounts](#) | [Contacts](#) | [Opportunities](#) | [Quotes](#) | [Application Deployment Manager](#) | [Data Type Details](#) | [Data Type Explorer](#) | **Deployment Projects** | [Deployment Sessions](#)

Deployment Projects | [Menu](#) | [New](#) | [Delete](#) | [Query](#) | [Enable](#) | 1 - 9 of 9 | [Print](#)

Name	Description	Active Flag	Export to File	Session	Configura	Status	Date Enabled
AAA User Lists		✓	✓		Draft		
Access Controlled Bi	Access Controlled Bi	✓	✓		Draft		
Access Controlled Ti	Access Controlled Ti	✓	✓		Draft		
Access Group	Access Group	✓	✓		Draft		
Joint Workspace	Joint Workspace sar	✓			Draft		
LOVs	List of Value sample	✓			Draft		
Prod-FeatureLine	Product features an	✓			Draft		
Tai Workspace		✓			Draft		
test		✓			Draft		

[Menu](#) | [New](#) | [Delete](#) | [Query](#) | [Validate Filter](#)

Data Type Name Active Flag Name Deployment Mod Deployment Filter PDQ Name Description

UserList ✓ UserList Synchronize [User List.Name] LIKE "AAA%" AAA User Lists

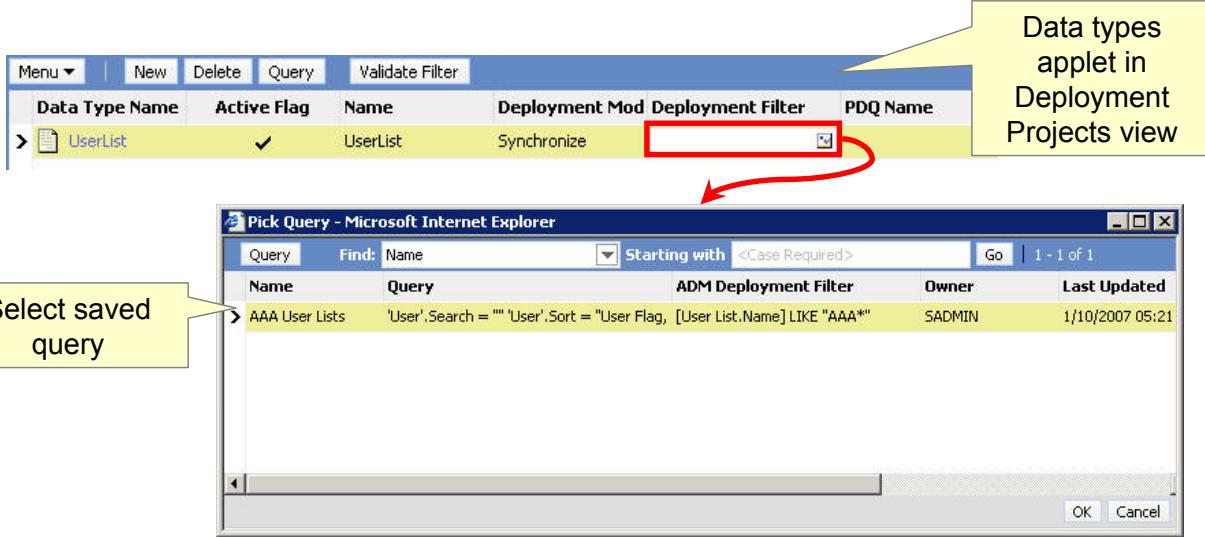
1 - 1 of 1 | [Print](#)

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Export Database Customizations Continued

- Use a deployment filter to limit the records to be exported:
 - ▶ Save a query that selects the records to be exported
 - Example: Save a query that selects User Lists with Name = "AAA"
 - ▶ In the ADM Deployment Projects view, enter saved query name in the Deployment Filter field



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Export Database Customizations Continued

- Determine order of data type deployment in the Application Deployment Manager > Data Type Explorer view
- Select parent data type in the Data Types applet, then add child type in child applet

The screenshot shows the Siebel Data Type Explorer interface. On the left, there's a tree view of data types, with 'StateModel' selected. The main area displays two tables: 'Data Types' and 'Content Object'. The 'Data Types' table lists various types like ProductData, Promotion, etc., with 'StateModel' highlighted. The 'Content Object' table shows 'State Models' as a child of 'StateModel'. A callout box points from the 'State Model (parent) type...' text to the 'StateModel' row in the first table, and another callout points from the '...depends on LOV (child) type' text to the 'State Models' row in the second table.

Name	Description	Content Object	Active
ProductData	Assoc. Product Data: Recommen Product (ADM)		✓
Promotion	Promotion, Customer Order Man. Promotion		✓
Proposal Template	Proposal Template	Proposal Template	✓
Responsibility	Responsibilities, associated		✓
Runtime Business Service	Runtime Business Se Runtime Business Service		✓
SmartScript	SmartScript - ADM		✓
StateModel	State Model	State Models	✓
Symbolic URL	Symbolic URL	WI Symbolic URL	✓
UIThemeMapping	UIThemeMapping	UI Theme Mapping	✓
UserList	User Lists		✓

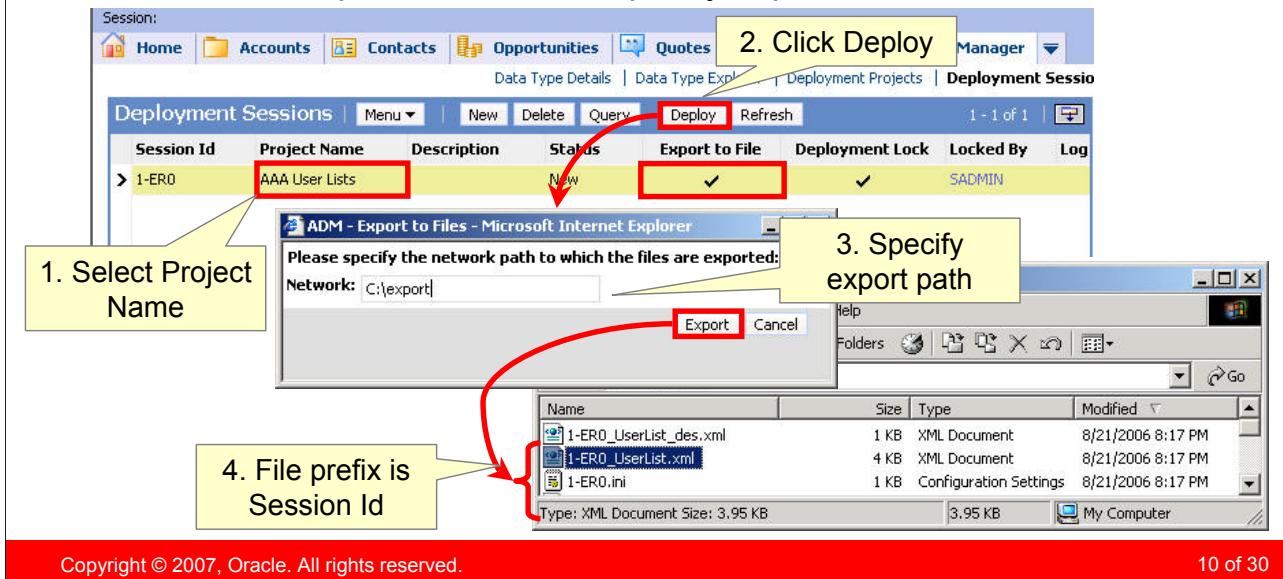
Name	Description	Content Object	Active
LOV	List of Values - Types and Values List of Values		✓

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Export Database Customizations Continued

- Navigate to Application Deployment Manager > Deployment Sessions
- Create a new session and specify project name
- Deploy the session
 - ▶ Select Export to File, then specify export destination



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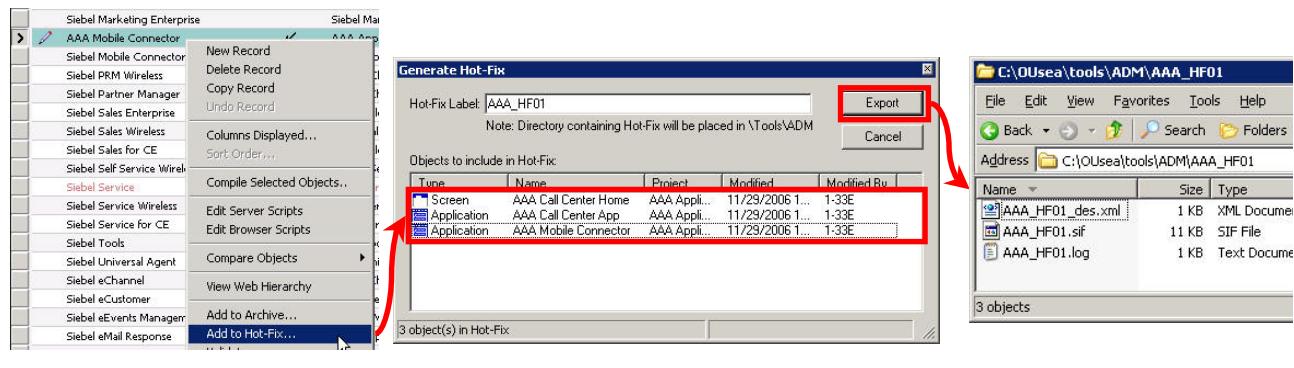
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Export Repository Customizations

- Use Siebel Tools to export repository customizations
- Files created during export include:
 - ▶ A .sif file containing the changes
 - ▶ A deployment descriptor file (XML)
 - ▶ A log file of export steps and status
- Tools offers two methods for exporting customizations:
 - ▶ Hot fix: typically a small set of hand-selected modifications
 - ▶ Mid-level release: repository changes after a specified cutoff date
 - List of objects may be edited after it is generated

Export Repository Customizations Continued

- To create a hot fix in Siebel Tools:
 1. Select the object definition to add to the hot fix
 2. Right-click and select Add to Hot-Fix
 3. Specify a name for the hot fix
 4. Return to Tools' Object Explorer and List Editor to add additional object definitions
 5. When done, click Export
 - ▶ Hot fix output is saved in ...\\Tools\\ADM\\<HF Name>



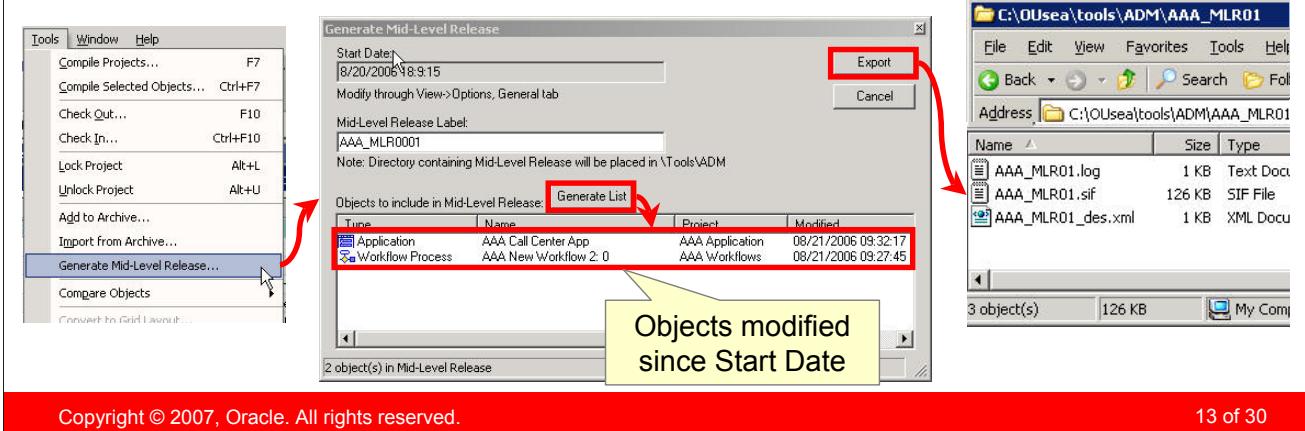
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Export Repository Customizations Continued

- To create a mid-level release in Siebel Tools:
 1. Navigate to View > Options > General and set Changed Date to specify the cutoff date for the release
 2. Select Tools > Generate Mid-Level Release
 3. Provide a name for the release and click Generate List
 4. Verify list contents and delete entries if necessary
 5. Click Export

■ Package is created in ...\\Tools\\ADM\\<MLR name>



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Move File Customizations

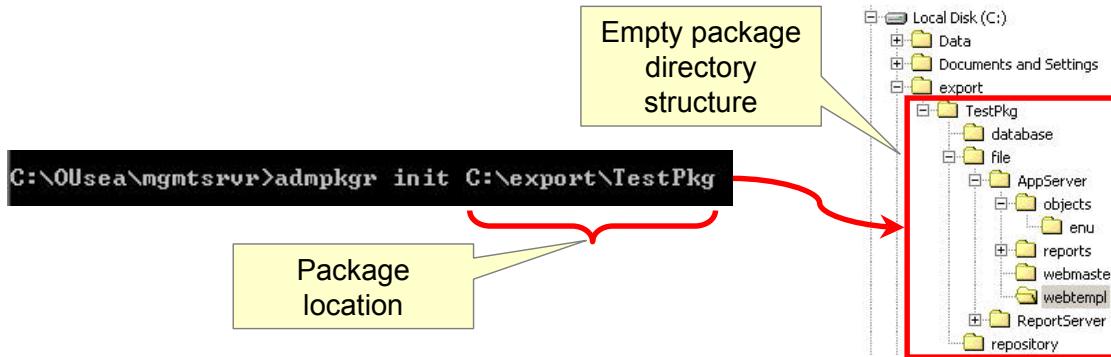
- File type customizations do not need to be exported using the Siebel client or Siebel Tools
 - ▶ Move files to the correct directory in the package tree (discussed later)
- The type for a custom Siebel Repository File (.srf) is File, not Repository

Create an ADM Package

- An ADM package is a collection of application customizations and includes:
 - ▶ A directory structure that organizes different types of customization (database, repository, and file)
 - ▶ An ADM package descriptor file describing its contents
- ADM includes a utility, admpkgr, which can create and verify an ADM package
 - ▶ Runs from command line
 - ▶ ADM packager syntax:
`% admpkgr <init | generate | validate> <pkg_name>`
- Steps to create a package:
 - A. Create an empty package structure
 - B. Populate the package directory structure
 - C. Generate the package descriptor file
 - D. Validate the package

A. Create an Empty Package

- Invoke admpkgr with the init command to create an empty package directory structure
- Command syntax:
`% admpkgr init <package name with path>`
- Example:



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Optional Switch

Set the language sub-directories in the empty package directory structure using the optional switch, `-g <lang>`. Example:

`admpkgr init -g ESP <pkg_name>`

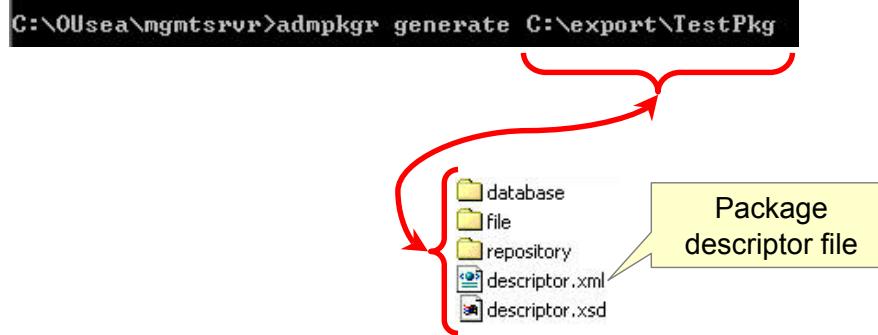
This command would create Spanish language subdirectories, which would be named ESP. The default language is American English (ENU).

B. Populate the Package Directory Structure

- Database and repository exports and file modifications need to be moved to the new package directory tree
 - ▶ For database type, move the .xml file containing data + descriptor file
 - ▶ For repository type, move the .sif file + the descriptor file
 - ▶ For file type modifications, the package sub-directory depends on the file category:
 - Repository file (.SRF): <*pkgdir*>\file\AppServer\objects\<*lang*>
 - Web templates: <*pkgdir*>\file\AppServer\webtempl\<*lang*>
 - Images, CSS files, browser script files:
<*pkgdir*>\file\AppServer\webmaster\<*lang*>
 - Report files: <*pkgdir*>\file\ReportServer\<*lang*>
- Unused package sub-directories should be deleted

C. Generate the Package Descriptor File

- Invoking admpkgr with the generate command:
 - ▶ Validates package directory contents
 - ▶ Calculates a checksum to ensure future integrity of the package
 - ▶ Creates a package descriptor file for the package
- Command syntax:
`% admpkgr generate <package name with path>`
- Example:



D. Validate the Package

- Invoking admpkgr with the validate command:
 - ▶ Verifies the existence and format of package descriptor file
 - ▶ Checks for empty folders and redundant units
 - ▶ Performs consistency checks for units
 - ▶ Checks for the existence of valid unit files and descriptor files for database and repository types
- Using validate is optional
- Command syntax:
`% admpkgr validate <package name with path>`
- Example:

```
C:\OUsea\mgmtsrvr>admpkgr validate C:\export\TestPkg
Current Time is :1:31:7:203

INFO: Program called with these options:
Package Name = 'TestPkg' , Package Location = 'C:\export' , Ignore errors = 'N'
Entering Validate :1

INFO: Package directory 'C:\export\TestPkg' was successfully validated with 0 warning(s).
INFO: Current Time is :1:31:7:875
Current Time is :1:31:7:875
```

Deploy the Package

- The ADM command-line interface (CLI) command set is executed on the Management Server host
 - ▶ Commands contained in a batch file created by a Perl script bundled with the Management Server
 - ▶ Batch file is named `deploy_<enterprise name>.bat`
 - Example: if enterprise name = Siebel, then ADM CLI batch file is named `deploy_Siebel.bat`
 - Typically created in ...\\<mgmt server install dir>\\bin
- ADM commands take command-line arguments:
 - ▶ Command name
 - ▶ User name
 - ▶ Password
 - ▶ Package name
 - ▶ Optional switches

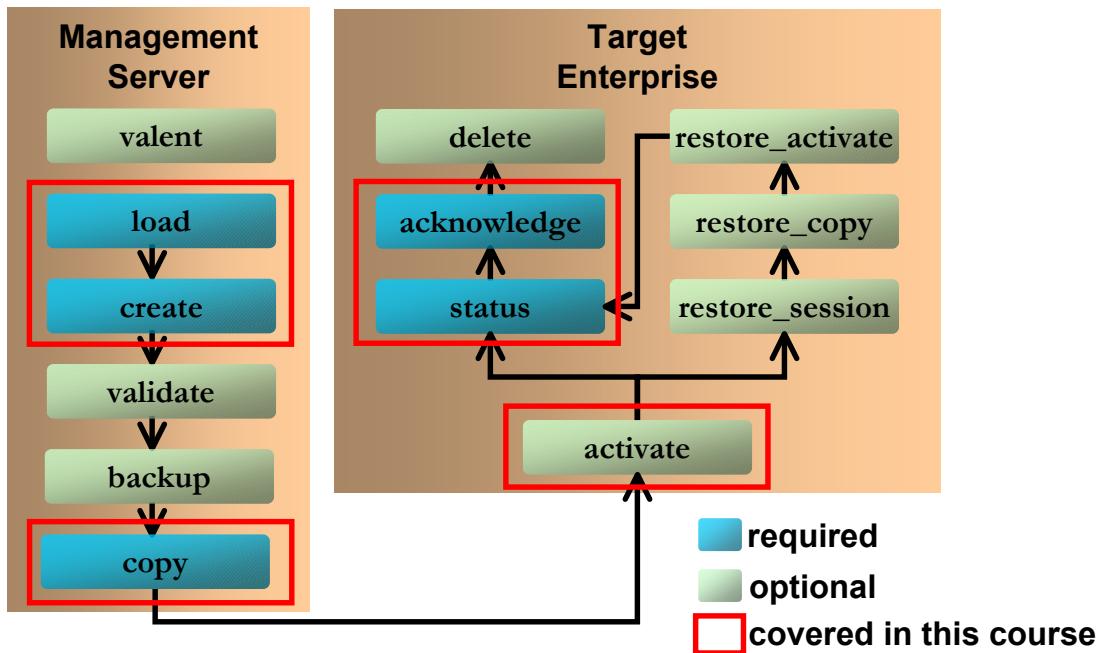
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CLI Optional Switches A complete list of command-line switches may be found in Siebel Bookshelf, Siebel Application Deployment Manager Guide.

Deploy the Package: Commands Overview

- The ADM CLI supports both required and optional commands
- Commands execute in a specific order



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Deploy the Package: Load

- Call *load* command to put references to package contents into the orchestration environment's database

- ▶ Validates package structure and checksum
 - ▶ Uses package descriptor file to map package contents to Management Server database
 - ▶ Command syntax:

`deploy_<enterprise> load <user> <password>`

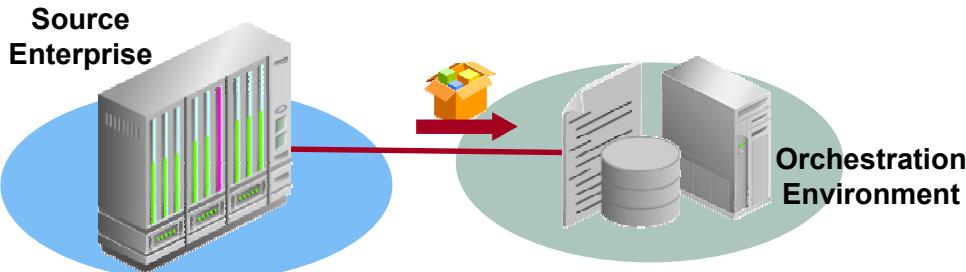
`<package name>`

User/password

Package name

- ▶ Example:

```
C:\OUsea\mgmtsrvr>deploy_Siebel load SADMIN SADMIN AAA_Package
Success
          Package 'AAA_Package' has been successfully loaded into database.
```



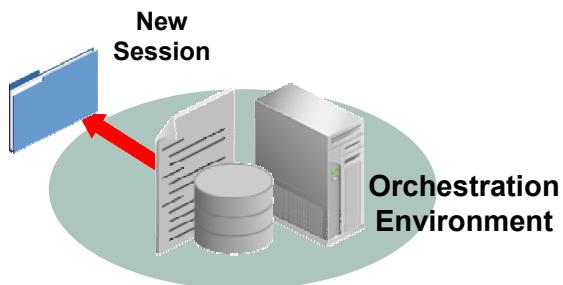
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Deploy the Package: Create

- Call *create* to initiate a deployment session
 - ▶ Command syntax:
`deploy_<enterprise> create <user> <password>`
`<package name>`
 - ▶ Example:

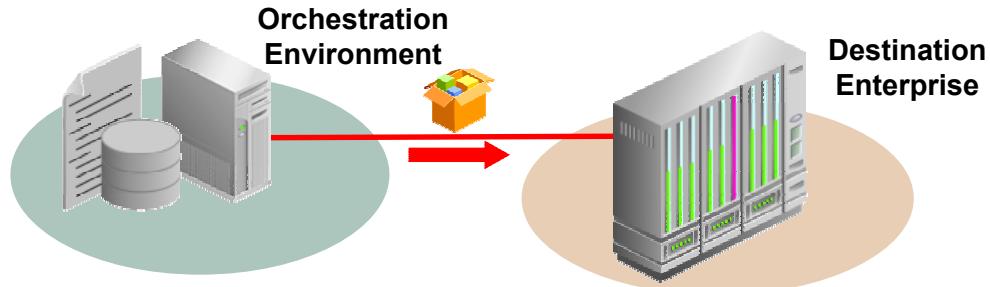
```
C:\0usea\mgmtsrvr>deploy_Siebel create SADMIN SADMIN AAA_Package  
Success Session was created successfully for package 'AAA_Package'.
```



Deploy the Package: Copy

- Call *copy* to move package contents to destination enterprise
 - ▶ Uses the appropriate copy method for each type of customization
 - Repository changes are copied to target repository
 - Database changes are loaded into target database
 - File changes are moved to correct location in target file system
 - ▶ Command syntax:
`deploy_<enterprise> copy <user> <password>`
`<package>`
 - ▶ Example:

```
C:\0Usea\mgmtsrvr>deploy_Siebel copy SADMIN SADMIN AAA_Package
Success
Command completed successfully.
```



Deploy the Package: Activate

- Call *activate* to perform any steps required to make customizations available to users
 - ▶ Most data types do not require activation
 - Example: Proposal Template
 - ▶ Activation examples:
 - LOV activation clears the LOV cache
 - Workflow process activation sets the process to Active
 - Image, CSS file, or Web template file activation propagated to Web server
 - ▶ Command syntax:
`deploy_<enterprise> activate <user> <password>
 <package name>`
 - ▶ Example:

```
C:\OUsea\mgmtsrvr>deploy_Siebel activate SADMIN SADMIN AAA_Package  
Success               Command completed successfully.
```

Deploy the Package: Status and Acknowledge

- Call *status* to get information about the deployment status of a package
 - ▶ Gives a summary of deployment status of units in the package
 - ▶ Use *status_detail* to see status information for each unit
- To complete a command-line deployment, call *acknowledge*:
 - ▶ Ends deployment session
 - ▶ Sets session status to complete in Management Server local DB
 - ▶ Removes backup package data from Management Server DB
- Status example:

```
C:\OUsea\mgmtsrvr>deploy_Siebel status SADMIN SADMIN AAA_Package
Package Name          AAA_Package
Enterprise Name        Siebel
Session Number         475
Session Status         Deployment Complete
Session Execution Status Not Running

Total Number of Units   3
Total Units Completed   3
Total Units Not Started 0
Total Units Failed      0
Total Units Running     0
```

Deploy the Package: Other Commands

- Other optional ADM CLI functions include:

Command	Description
valent	Validates enterprise profile file
validate	Performs checks on target enterprise before deployment
backup	Creates backup copy of target enterprise data that will be affected by deployment
restore_session, restore_copy, restore_activate	Sequence of commands that allows rollback of a deployment
list	Lists packages deployed by Siebel Management Server
delete	Deletes package references and session info from Siebel Management Server

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Reference

Further information about ADM package deployment using the ADM CLI can be found in Siebel Bookshelf, Application Deployment Manager Guide.



Module Highlights

- Export application customizations using:
 - ▶ Siebel Tools for repository modifications
 - ▶ The ADM screen in the Siebel client for database modifications
 - ▶ File copy into package for file modifications
- Use the ADM packager utility to bundle modifications for deployment to the target enterprise
- Execute commands from the ADM CLI to deploy an ADM package:
 - ▶ *Load* the package
 - ▶ *Create* a deployment session
 - ▶ *Copy* the package to the target environment
 - ▶ *Activate* the customizations (optional)
 - ▶ *Status* to verify correct deployment
 - ▶ *Acknowledge* to end the deployment session



Lab

- In the lab you will:
 - ▶ Export repository and database customizations
 - ▶ Create an ADM package
 - ▶ Use the ADM CLI to deploy this package

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