SIEBEL 7
eBusiness

**SIEBEL ORDER
MANAGEMENT GUIDE**
VERSION 7.5, REV. B

MARCH 2003

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Introduction

This guide explains order management for customers using Siebel Quotes, Siebel Orders, or Siebel Customer Order Management.

Although job titles and duties at your company may differ from those listed in the following table, the audience for this guide consists primarily of employees in these categories:

Call Center Administrators	Persons responsible for setting up and maintaining a call center. Duties include designing and managing Computer Telephony Integration (CTI), SmartScripts, and message broadcasts.
Sales Administrators	Persons responsible for setting up and administering sales within their organization.
Siebel Application Administrators	Persons responsible for planning, setting up, and maintaining Siebel applications.
Siebel Application Developers	Persons who plan, implement, and configure Siebel applications, possibly adding new functionality.
Siebel System Administrators	Persons responsible for the whole system, including installing, maintaining, and upgrading Siebel applications.

How This Guide Is Organized

The information in this guide is organized as follows:

- Introduction to order management concepts

  - Chapter 1, "Overview of Order Management"

- Tasks and considerations for setting up Siebel Customer Order Management

  - Chapter 2, "Setting Up Order Management"

  - Chapter 3, "Preparing for Integration"

- End-user experience of using order management features

  - Chapter 4, "Creating a Quote or Order"

  - Chapter 5, "Working with Quotes"

  - Chapter 6, "Working with Orders"

  - Chapter 7, "Using Asset-Based Ordering"

- References describing workflows and business services for asset-based ordering

  - Chapter 8, "Workflows for Asset-Based Ordering"

  - Chapter 9, "Business Service Methods Reference"

Revision History

Siebel Order Management Guide, Version 7.5, Rev. B

March 2003 Bookshelf

Table 1. Changes Made in Rev. B for March 2003 Bookshelf

Topic	Revision
"Summary of Lists of Values to Update" on page 55	Added table listing the Type field in LOV Administration for each list of values used in order management.
"Turning On the Explode Capability" on page 53	Added this section.
"Creating Quote Favorites for Reuse" on page 154	Added information about deleting a quote favorite.
"Converting a Quote to an Agreement" on page 159	Added this section.
"Displaying Charts to Analyze Quotes" on page 160	Added this section.
"Revising an Order" on page 169	Added information that the status changes to Pending when you revise an order.
"Set Field Value" on page 286	Corrected an argument for this method.

January 2003 Bookshelf

Table 2. Changes Made in Rev. A for January 2003 Bookshelf

Topic	Revision
Chapter 1, "Overview of Order Management"	Removed several sections about product and pricing administration, which duplicated information in other books.
Chapter 3, "Preparing for Integration"	Changed this from Chapter 7 to Chapter 3, so it is located after the Setup chapter, in the order that the user must perform the tasks.

Table 2. Changes Made in Rev. A for January 2003 Bookshelf

Topic	Revision
Chapter 4, "Creating a Quote or Order"	Added this chapter, so all the information about creating a quote or order is in one place. Added new process overviews.
Chapter 5, "Working with Quotes"	Moved sections about creating a quote to Chapter 4, "Creating a Quote or Order."
Chapter 6, "Working with Orders"	Moved sections about creating an order to Chapter 4, "Creating a Quote or Order."
Working with Quote and Order Details	Removed this chapter. Moved the information to Chapter 4, "Creating a Quote or Order."
Chapter 8, "Workflows for Asset-Based Ordering"	Updated with more recent information about workflows.
Custom Configurations	Removed this appendix. It has been replaced by Technical Notes with updated information.

Overview of Order Management **1**

This chapter provides a summary of the general order management process, and introduces the specific concepts and capabilities available through Siebel Customer Order Management.

NOTE: Many order management features are available in Siebel eSales and Siebel Partner Portal applications. This book focuses on order management features in employee applications such as Siebel Sales and Siebel Call Center. For details about Siebel eSales and Siebel Partner Portal, see *Siebel eSales Administration Guide* and *Siebel Partner Relationship Management Administration Guide*.

This chapter covers the following topics:

About Order Management

Siebel Order Management allows employees such as salespeople and call center agents to create and manage quotes and orders through their entire lifecycle. Siebel Order Management can be tightly integrated with back-office systems, allowing users to perform tasks such as checking credit and confirming availability, as well as monitoring the fulfillment process.

Asset-based ordering allow quotes and orders to be created based on a customer's existing assets. Asset-based ordering is particularly useful in supporting companies whose product offerings include complex service products, such as phone services and equipment.

Siebel Order Management allows employees to:

■ Create quotes and orders for new products and services

■ Create quotes and orders to modify existing products and services

■ Modify in-process orders that have been submitted for fulfillment

■ Generate order information for submission to back office billing and fulfillment systems

The Order Management Lifecycle

The order management life cycle includes tasks that fall into several groups:

■ **Preorder Tasks.** Can include creating accounts, contacts, and opportunities or helping anonymous customers through the needs-analysis process.

■ **Order Entry Tasks.** Can include selecting products and services, capturing quotes and orders, verifying products and pricing, checking availability to promise, entering shipping, tax, and payment information, and performing a credit check.

■ **Order Monitoring Tasks.** Can include providing the customer with order status, notifying the customer that the order has shipped, creating supplemental orders, and monitoring or modifying activities that support the order, such as installation.

The order management lifecycle is shown in Figure 1.
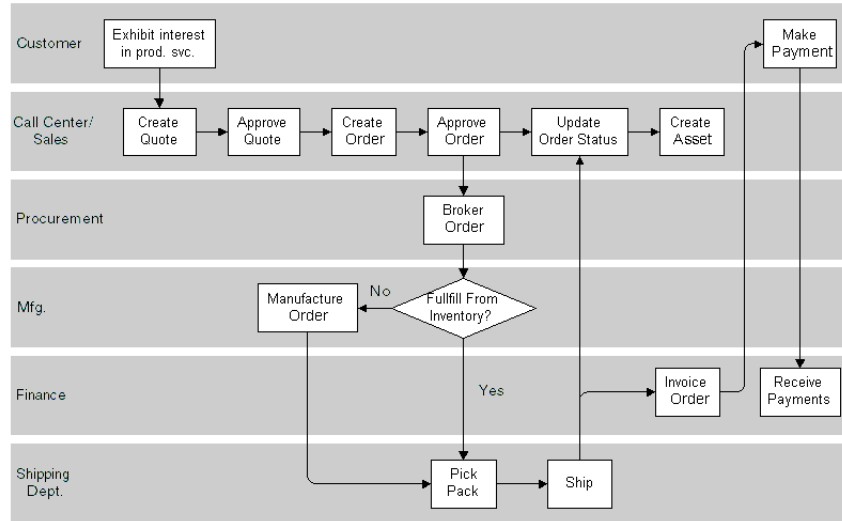
Figure 1. Order Management Cycle

Business Scenario for Order Management

This scenario provides an example of how order management can be used. Your company may follow a different process according to its business requirements.

■ As your customers express interest in your products and services, you can keep track of that information and help them identify the appropriate solution. A salesperson can create an opportunity and record the best solution to meet the customer's needs.

■ Once the best solution is identified, you can provide a quote provided that details the products and their prices. A salesperson may convert an opportunity to a quote, or create a quote manually. Products and services can be customized so that the customer can specify exactly what options they are interested in and can see the associated prices.

■ Once a customer accepts a quote, it can be converted to an order. Alternatively, a salesperson may create an order directly, without creating a quote.

■ The salesperson can enter shipment information and check on the availability of the items. If an order contains a number of items, availability can be checked for each line item.

■ The salesperson can perform tasks such as calculating tax and shipping costs, verifying payment information, checking the customer's credit, and authorizing their use of a credit card.

■ The salesperson may perform final tasks such as attaching electronic documents to the order, such as a purchase order or a letter of credit, and generating service activities related to the order such as installation.

■ The salesperson submits the order.

■ If appropriate, the order can be routed for approval by a supervisor.

■ An acknowledgement of the order can automatically be sent to the customer by email.

■ If you are using asset-based ordering, when the order has been filled, the appropriate product line items become assets. Assets are associated with the customer's account and are a central part of the customer's service profile.

■ If you are using asset-based ordering, not all products in an order convert to assets. For example, when an order for telephone service is provisioned, installation is a line item of the phone service product, but it does not become an asset. You can specify what products will become trackable assets through the Product Administration screen.

■ If customers change their minds and want to revise an order before it has been fulfilled, the change can be handled by modifying unsubmitted orders or by creating supplemental orders that revise submitted orders.

■ As a customer's needs evolve over time, the customer may request additions and changes to the products and services they have. To make these changes, new quotes and orders can be based on the current items in the customer's profile. Requests for changes to existing services are called *delta quotes* or *delta orders*.

Although end users may start the order management process at a number of different screens and views, the underlying order management cycle is essentially the same.

Setup and Use of Siebel Customer Order Management

This section summarizes the process of setting up and using Siebel Customer Order Management, which is covered in detail in the rest of this book.

Setup of Siebel Customer Order Management

The process of setting up order management includes setting up customer accounts and contacts, creating records for sales people, defining products, setting up pricing structures, and developing a catalog of products and services. Your Siebel Sales and Call Center applications draw on this information as customers request quotes and place orders.

For details about the setup tasks required for order management, see Chapter 2, "Setting Up Order Management."

Integration

As part of setting up Siebel Customer Order Management, you integrate with third party applications that are used to integrate quotes and orders with the back office, check product availability to promise, and check customer credit.

For details about integration with third-party applications, see Chapter 3, "Preparing for Integration."

End Users' Work with Quotes and Orders

Siebel Customer Order Management allows end users to create quotes and orders from many different screens within your Siebel application. Sales representatives can create an opportunity and use it to generate a quote, can create a quote directly, or can create an order directly, without previously having an opportunity or a quote. Salespeople can also add line items to the quote or order in different ways, depending on whether the user knows the product number, wants to browse through a catalog, or wants assistance selecting the product from eAdvisor.

The processes for developing quotes and orders are very similar. With each, users can add line items and provide discounts, enter payment information, check availability to promise, and enter shipping information.

For detailed instructions showing how users can work with quotes and orders, see:

■ Chapter 4, "Creating a Quote or Order"

■ Chapter 5, "Working with Quotes"

■ Chapter 6, "Working with Orders"

Asset-Based Ordering

If you use asset-based ordering, your Siebel application automatically creates an Asset record when an order is placed, and it allows you to create quotes and orders based on assets. This is useful if your business continues to provide on-going service to the asset after the customer has purchased it and sells other products connected with existing assets.

For example, if you sell telephone systems and telephone service, you could use asset-based ordering to create asset records for each telephone you sell. These asset records allow you to keep track of the phone service that you provide for each telephone. It also allows you create quotes and orders based on these assets to sell other products and services to people who already own phones.

Because asset-based ordering features are workflow-based, they can be easily customized to meet the specific needs of your company.

For background concepts about asset-based ordering, see "Basic Concepts for Asset-Based Ordering" on page 23.

For more information about asset-based ordering, see Chapter 7, "Using Asset-Based Ordering."

For more information about the workflows used by asset-based ordering, see Chapter 8, "Workflows for Asset-Based Ordering."

Basic Concepts of Order Management

This section describes basic features and concepts that are useful as background to your work with Siebel Order Management.

For concepts that are specific to asset-based ordering, see "Basic Concepts for Asset-Based Ordering" on page 23.

Quote and Order Header Summaries

Header summaries appear at the top of the Quote Detail and Order Detail views and remain in place even when users select different view tabs and work with subviews to perform various tasks. These two-row forms contain key information fields that users frequently need to refer to during the quote and order process, such as the Quote or Order number, name, price list, total price, and status.

Product Selection

Users can add products to quotes and orders that have been carefully defined in the Product Administration screen, so that they appears correctly in the quote or order. Product selection methods include:

■ Adding an individual item in a line item record

■ Adding multiple items with the Add Items button

■ Browsing a catalog and selecting items

■ Using eAdvisor, a needs analysis tool, to help select a product

■ Selecting a template of products to be added at once

■ Adding a series of items and then grouping them as a package to offer an appropriate package discount

■ Writing in an item that hasn't been defined

For details about these different selection methods, see "Adding Products to a Quote or Order" on page 99.

Pricing and Discounts

When products are added to a quote or order, their prices are based on the price list associated with the order. The default price list is typically based on the account, but sales representatives can also select a price list in the quote or order. If you have Siebel ePricer, pricing rules and factors may affect the prices shown. Sales representatives can also offer manual discounts for individual line items or for the entire order instead of the pricing shown. For details about pricing and discounts, see "Viewing and Recalculating Prices" on page 110.

Calculating Taxes

Tax rates and tax exemption information can be entered manually, or you can integrate with third-party tax software to determine tax rates.

Availability of Products

The sales representative can check availability of products for the customer. Customers can request particular delivery dates, indicate whether partial shipments are acceptable, and specify fulfillment from particular inventory sources. The sales representative can use the availability-to-promise features include the ability to see if the items are available and to reserve them in the back office. For more information about checking availability, see "Checking Availability to Promise (ATP)" on page 124.

Shipping and Delivery Information

Ship-to information, delivery method, and carrier can all impact total cost. This information can be detailed in the quote or order and shipping costs can be calculated by accessing a third-party system. Actual delivery information returned from a third-party or back-office system updates the order. For details, see "Adding Shipping Information" on page 121 and "Calculating Shipping Charges" on page 122.

Multiple Methods of Payment

By default, Siebel Customer Order Management includes six methods of payment—credit card, purchase order, check, wire transfer, cash, and stored value. Customers can use any of those methods or can use multiple methods of payment. For example, part of an order might be paid with a check and the remainder with a credit. Information for each method is collected through specialized payment detail forms. For example, credit card payment detail includes credit card number, expiration date, cardholder name, and so forth. Credit cards payments can be authorized by a third party, to validate the customer's ability to pay. For details about payment methods, see "Adding Payment Information" on page 128.

Activities and Activity Plans

Before submitting an order, sales representatives can review activities associated with particular line items. For example, if a product requires installation, an activity to schedule the installation can be associated with that line item. If bundles of activities are required, they can be set up in advance as activity plan templates and added all at once.

Fulfillment Status

After an order has been submitted, sales representatives can check on the order status for customers. Typically, order status information is updated in the Siebel Customer Order Management system regularly. However, a sales representative can also check on the current status, providing the customer with up-to-the-moment information about their order and expected delivery.

Quote-to-Order

When a customer approves a quote and it becomes an order, an employee end user can convert the quote into an order with the click of a button. When the end user clicks the Sales Order or Service Order button, the following occurs:

■ A new order is generated

■ All line items in a quote are converted to order line items

After a quote is converted to an order, the original quote still exists and can be referenced, but it will be inactive. The quote number will appear in the order details.

Revising an Order

Revising an order allows the representative to change an order while maintaining a record of the original order. This can be used by the back office for processing modifications.

Smart Part Numbers

When interfacing with back-office fulfillment systems, it is very important that each product can be identified. Smart part numbers are used to identify each combination of product ID and product attributes. The smart part number becomes the SKU used in the back office.

You can create smart part numbers manually, or you can interface with an auto-generation system.

The smart part number for each line item appears in the Order screen, in the Line Detail subview associated with the line item.

For more information about smart part numbers, see *Product Administration Guide*.

Other Concepts

To administering order management, you should also understand these concepts:

- **Product and Pricing.** To administer order management most effectively, you should understand product and pricing administration. For more information, see *Product Administration Guide* and *Pricing Administration Guide*

- **Business Process Designer.** If you want to change the order management process by modifying the workflows that drive order management, you should be familiar with Siebel Business Process Designer. For more information, see *Siebel Business Process Designer Administration Guide*

- **Integration.** To plan how to integrate order management into your other systems and processes, you may want to refer to the following books:

  - *Overview: Siebel eBusiness Application Integration Volume I*

  - *Integration Platform Technologies: Siebel eBusiness Application Integration Volume II*

  - *Application Services Interface Reference*

Basic Concepts for Asset-Based Ordering

Asset-based ordering allows companies to:

■ Generate asset records from orders

■ Create quotes for new products and services based on existing assets

■ Create quotes to modify existing products and services

■ Modify in-process orders that have been submitted for fulfillment

■ Have visibility into the asset life cycle during customer interactions

Asset-based ordering is included with Siebel Order Management, but it must be activated separately, as described in "Setting Up Asset-Based Ordering" on page 50.

Because asset-based ordering features are workflow-based, they can be easily customized to meet the specific needs of your company. The user interface is described in Chapter 7, "Using Asset-Based Ordering." The workflows are described in Chapter 8, "Workflows for Asset-Based Ordering."

Figure 2 shows the cycle of events for asset-based ordering.
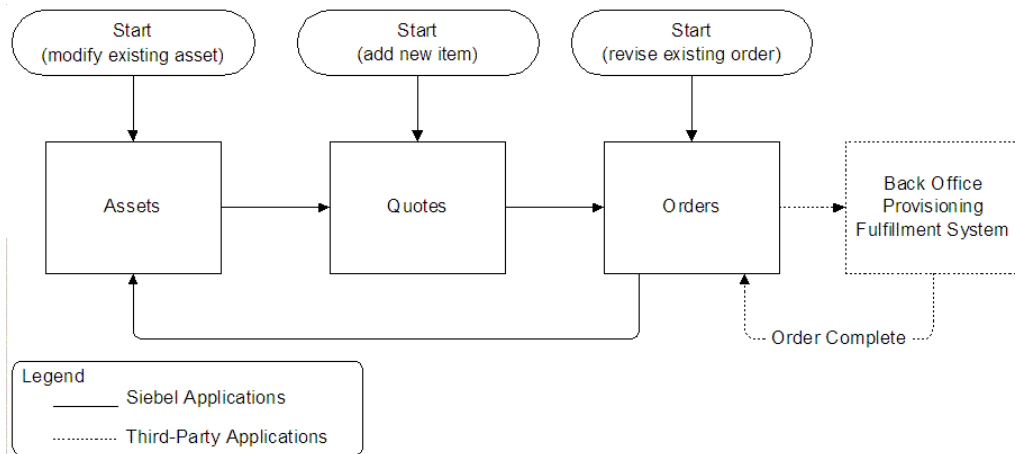
Figure 2. Asset-Based Order Management Cycle

This section describes some background and concepts that are important if you use the asset-based ordering functionality available in Siebel Order Management. It covers the following topics:

■ "Customer Profile" on page 24

■ "Quote and Order Concepts in Asset-Based Ordering" on page 25

Customer Profile

When you have asset-based ordering turned on in Siebel Order Management, end users have access to two views on the Accounts screen that display a customer's profile:

■ **Account Summary.** Gives general information about the customer's account.

■ **Installed Assets.** Lists all installed assets for the account. Installed assets can include both products and services. A line item from an order becomes an installed asset if it is marked as a trackable asset in the product record.

When these views are used with the automated asset-based order workflows, the amount of time to create quotes, orders, and asset records is reduced because many tasks are automated.

The customer's profile allows the end user to:

■ See all the quote and orders for a customer.

■ In the Installed Assets list, drill down into each item for additional detail about an asset.

■ From the Installed Assets list, start the quote-order process for a new item or service or start the process to modify an existing asset. When the user clicks New, the Quote Line Item list displays.

Figure 3 shows the Account Summary view, including the Installed Assets List, and lists of quotes and orders for the account.

Figure 3. Account Summary View

Quote and Order Concepts in Asset-Based Ordering

This section describes quote and order concepts that are useful for understanding asset-based ordering.

New Quotes and Orders

In asset-based ordering, new quotes and orders are those that identify products and services that are first-time acquisitions for a customer or that are repeat orders such as additional software licenses.

After being processed and fulfilled, new quotes and orders result in new assets that become part of a customer's profile. A line item from an order becomes an installed asset if it is marked as a trackable asset in the product record.

Delta Quotes and Delta Orders

A delta quote or order is usually initiated when the customer asks to make a change to an existing product or service.

For example, the local telephone company provides local phone service to a residential customer. After the service has been installed, customers may want to make additions and changes to the services they receive, such as adding call waiting or changing the number to call when forwarding a call.

Each of these changes is a delta (or change) of the current asset. When the customer inquires about them, the salesperson issues a delta quote for the change. After the customer accepts the delta quote, it becomes a delta order.

When asset-based ordering is not turned on, you can create delta quotes and delta orders, but the result is simply to add the product difference to your quote or order, linking the delta quote or order into the overall quote-order-asset process.

Quote-to-Order Explode Functionality

With asset-based ordering, when a quote is converted to an order, line items with a quantity greater than one can be *exploded*, so that multiple quantities of an item become individual line items. Each line item becomes an individual asset when the order is fulfilled.

You can turn the Explode functionality on or off, depending on your business needs. For more information, see .

Multiple Open Orders

Multiple orders may be in progress for a particular customer or even a particular service item at any given time.

One benefit of having multiple open orders is that when a customer places an order and then reconsiders and requests different options before the order has been fulfilled, both requests can be placed, tracked, and addressed appropriately.

Modify Order

A modify order is an order that modifies an asset. When a modify order is placed, it does not modify the asset listed in the customer's profile, because it has not been fulfilled yet. The customer profile is only changed when the order is fulfilled.

Auto Asset Button

You may see an Auto Asset button on the Orders screen. This button is used for demonstration purposes, to show how order line items can be converted into assets that display in the Service Items view of the customer's service profile.

In actual deployments, a workflow is used to create assets automatically from completed order line items, so this button is not used.

Action Codes

New action codes for line items on quotes and orders help to keep track of changes made through Modify Orders and Supplemental Orders. These codes are New, Modified, Existing, and Deleted. They appear next to line items on quotes and orders to show which items will be affected, and which will not.

Workflows and Business Services for Asset-Based Ordering

Siebel Customer Order Management uses workflows to specify what processes occur—and in what order—in asset-based ordering. When users complete work on a view, these workflows take them to the new view that they need next. For example, when an employee end user clicks the New button on the Installed Assets list, a workflow is launched that displays the Quote details screen and pre-defaults the account information and price list information.

There are two types of workflows in your Siebel application that control complex order management, as follows:

■ **Functional.** These workflows provide the business logic such as the setting of different action codes. These workflows are used by both the customer application and the employee application.

■ **User Interface.** These workflows control flow from view to view. On this level, the workflows do different things because the views in a Web site are different from the views in an employee application.

You can use Siebel Business Process Designer to modify workflows. You can:

■ Use predefined workflow processes to automate and simplify the order processes available to your end users and customers. For example, when an order is filled, a workflow process automatically creates assets from the items and adds them to the customer's service profile in the Accounts screen.

■ Customize the predefined workflow processes to match your business processes. For example, some organizations particularly those involved in selling to consumers may want to bypass the Quote step in the New order process and move immediately to an Order.

■ Create new workflows to match your own business processes.

For more information about Business Process Manager and how to use it, see *Siebel Business Process Designer Administration Guide*.

NOTE: It is very important that the professionals within your organization responsible for customizing the shipped workflow processes have received the required Business Process Designer training for successful implementation of customized workflows. The in-depth knowledge of this tool is a critical success factor.

For details about the workflows provided with Order Management, see Chapter 8, "Workflows for Asset-Based Ordering."

These workflows use business services to implement their logic. For information about Order Management business service methods, see Chapter 9, "Business Service Methods Reference."

Setting Up Order Management 2

This chapter describes how to set up Siebel Customer Order Management features. It provides details about tasks relate directly to quote and order processes, and cross-references to supporting tasks that are described in other documents.

This chapter covers the following topics:

- "Product Overview" on page 30

- "The Process of Setting Up Order Management" on page 31

- "Summary of Lists of Values to Update" on page 55

NOTE: Tasks required to integrate your Siebel application with back-office systems are not included in this chapter. For information about integration tasks, see Chapter 3, "Preparing for Integration."

Product Overview

Order management functionality is available in these modules:

■ Siebel Quotes provides quote entry

■ Siebel Orders provides order entry

■ Siebel Order Management includes quote and order entry, asset-based ordering, and additional order management functionality

Additional functionality that can be used with order management is available in these modules:

■ Siebel ePricer provides pricing factors and rules

■ Siebel eConfigurator allows you to create customizable products

■ Siebel eCatalog allows you to create catalogs

This chapter discusses pricing factors and customizable products, but these features are available in your Siebel application only if you have the appropriate modules.

The Process of Setting Up Order Management

There are some tasks that all users perform to set up order management, and there are some additional tasks that you may need to perform depending on your business model.

To set up order management, all users perform the following tasks:

1 "Setting Up Accounts and Contacts" on page 33. Accounts are used in many quote and order entry tasks, such as selecting the billing and shipping address. When you create accounts, enter the contacts associated with each account, which will be the contacts that are available to select in a quote or order for that account.

2 "Setting Up Salespeople" on page 34 Set up sales people as employees and use Sales Order views to associate them with teams. If you have Siebel Incentive Compensation, you can also use Incentive Compensation Administration views to assign them to compensation plans.

3 "Setting Up Products, Pricing, and Catalogs" on page 34. To make products available in quotes and orders, you must define products, define price lists that assign prices to products, create product catalogs, and make the catalogs available to users.

4 "Setting Up Shipping Information" on page 35. You can define shipping carriers, shipping methods, shipping terms, and set up shipment freight calculation.

5 "Setting Up Tax Calculations" on page 36. You can integrate your Siebel application with an external system to calculate taxes due on a quote or an order.

6 "Setting Up Payment Terms and Other Payment Factors" on page 38. You can customize payment terms, payment methods, accepted credit card types, and other payment-related factors. Credit card processing is handled through implementation with a third-party payment processing system.

7 "Setting Up Integration and Activating Workflows" on page 41. You must set up integration with third party applications used for checking credit. You must activate workflows used for integration of quotes and orders with back office applications. For information about setting up integration and activating workflows, see Chapter 3, "Preparing for Integration."

In addition, depending on your business model, you may have to perform some of the following tasks to complete setup of order management.

1 "Setting Up Inventory Locations" on page 41. If your business model allows orders to specify that products are shipped from a particular inventory location, you must set up inventory locations.

2 "Setting Up Order Types" on page 42. If you want to use different order types than the default types, you must set up order types.

3 "Defining Order Statuses" on page 43. If you want to use different statuses types than the default types, you must set up order statuses and use the state model to set up rules for modifying orders with each status.

4 "Creating Product Selection Templates" on page 44. You can create groupings of products that your users will frequently add to orders.

5 "Setting Up Activity Plan Templates" on page 45. You can create templates of activities that should be carried out when particular products are ordered. For example, you can indicate all the installation activities required for a particular order.

6 "Letting Users Create Quotes and Orders from Accounts and Contacts" on page 46. There are additional workflows you can activate to allow users to create quotes and orders from the Accounts and Contacts screens.

7 "Setting Up Availability to Promise" on page 46. You can integrate your Siebel application with a back-office system to check availability of certain products.

8 "Customizing the Sales, Quote, and Order Processes" on page 46. You can customize the processes that employee end users will follow to order products and services. You can use Siebel Business Processes to automate many of the steps in your business processes, and you can customize the predefined business processes.

9 "Setting Up Asset-Based Ordering" on page 50. If you want to use asset-based ordering, you must perform additional setup tasks.

Setting Up Accounts and Contacts

The way you set up accounts will affect how users enter shipping and payment information in quotes and orders.

When accounts have multiple locations, they can be set up in one of two ways:

■ **Single account for all addresses.** You can create one account and enter multiple addresses entered on the Bill To/Ship To view tab

■ **Separate accounts, one for each address.** When you set up separate accounts for each address, you must create an account hierarchy, where one account is the parent account for the other locations.

Consider which account structure is better for your business, so that you can ship to and bill customers correctly. You will want to consider how this is implemented in your back office, so that you can more easily keep information updated between the two systems.

The account structure setup you choose will impact the implementation of your organization's order management processes, as follows:

■ **Single account for all addresses.** The account will be the same in all places on the Payment and Fulfillment screens. You can select the appropriate addresses can be selected, as appropriate for billing and shipping. The address fields on quote and order default to the address specified as "primary" in the Addresses view tab for the account.

■ **Separate accounts, one for each address.** You can select different accounts as the he bill-to and ship-to entities on the Payment and Fulfillment screens in order to ship to those addresses.

The contacts that you associate with accounts determine the contacts that you can select in Quotes and Orders. Make sure that you attach the contacts to accounts that you want to have available to users when they create orders.

Use the Account screen to enter accounts and attach contacts to them.

For more information about entering accounts and their contacts, see *Siebel Call Center User Guide*.

Setting Up Salespeople

Before salespeople can create quotes or orders, you must enter the salespeople as employees. For more information about entering employees, see *Applications Administration Guide*.

If you use Siebel Incentive Compensation, you can specify who should receive compensation for an order. For more information, see *Siebel Incentive Compensation Administration Guide*.

Setting Up Products, Pricing, and Catalogs

Before employees can create quotes and orders, you must:

■ **Set up products.** Define the products that are being sold. If the products have attributes, you can set up a class system to manage the attributes before defining the products. If you have customizable products that have other products as their components, you must specify the components and design the selection pages that users will see.

For information about setting up products, see *Product Administration Guide*.

■ **Set up price lists.** Set up price lists and assign prices to products. You can create multiple price lists if you sell the same products to different customers at different prices. You can create discounts, such as volume discounts and discounts for bundles of products. If you have Siebel ePricer, you can create more advanced pricing rules using pricing models and pricing factors.

For information about setting up price lists, see *Pricing Administration Guide*.

■ **Set up product catalogs.** End users can select products for customers from product catalogs and add them to a quote or an order. When you create a catalog, you specify what products are included in it and arrange them in a hierarchy of categories. Once catalogs are set up, users can browse through categories to find products, and they can search for products using full-text search or parametric search.

For information about setting up and administering catalogs, see *Siebel eSales Administration Guide*.

■ **Assign catalogs to employees.** To assign a catalog to an employee, you associate the catalog with an access group that the user is a member of. An employee is a member of an access group, if the employee is associated with a position, organization, division, account, or user list that is a member of the access group. When displaying a list of products, for example, in parametric search, the employee will see only those products that are in catalogs that have been assigned to that employee.

For information about defining access groups, see *Security Guide for Siebel eBusiness Applications*.

Setting Up Shipping Information

To set up shipping information, you should review the default choices and make any additions and changes in the appropriate list of values. In addition, you should make sure the shipping charge calculation is set up correctly.

You define the following shipping information:

■ **Carriers.** This field specifies what carrier will be used to deliver items in an order. Out-of-the-box, the available carriers include Airborne, DHL, Emery, Federal Express, UPS, US Mail. Make sure the list of values contains the carriers you want to use. In the List of Values Administration view of the Application Administration screen, carriers are listed in records where the Type field has the value FS_CARRIER.

■ **Shipping methods.** The Shipping Method field is used primarily to identify how quickly the shipment will occur, and how long delivery will take. The shipping method impacts the shipment charges. Out-of-the-box, the available methods are Next Day, 2 Day Service, and Ground. You can add additional methods by adding them in the list of values. For example, you might want Air, Train, or Ship as a method. In the List of Values Administration view of the Application Administration screen, shipping methods are listed in records where the Type field has the value CARRIER_PRIORITY.

■ **Shipping terms.** The Shipping Terms field is used to specify the relationship between payment and shipping. Out of the box, the available shipping terms are Due, FOB, TBD, No charge. You can add additional terms by adding them in the list of values list. In the List of Values Administration view of the Application Administration screen, shipping terms are listed in records where the Type field has the value FREIGHT_TERMS.

■ **Shipment freight calculation.** The result of the shipment freight calculation shows in an order in the Shipping Charges field, in Line Items Totals form. Shipping is calculated at the line level, and is then rolled up for all line items and displayed in the Totals form.

For more information about changing lists of values, see *Applications Administration Guide*.

For information about how shipping charges are calculated and how to change them, see *Siebel eSales Administration Guide*.

Setting Up Tax Calculations

Tax calculations can either be done manually, or through the Tax Calculator business service, which makes a call to a third-party vendor.

Entering Taxes Manually

Users can enter tax information directly in the tax fields, in the Payments view in an order.

In the Payments form, the user will either enter the tax rate or will select a tax exemption code and tax exemption ID, if the customer indicates they are exempt from taxes.

If users enter tax information manually, the only required setup is to define the appropriate tax exempt codes in the list of values.

In the List of Values Administration view of the Application Administration screen, tax exempt codes are listed in records where the Type field has the value GLOBAL_TAX_EXEMPTION.

For information about changing lists of values, see *Applications Administration Guide*.

Using a Third-Party System to Calculate Taxes

You use an external third-party system to calculate taxes on quotes and orders. The Calculate Taxes step calls the Tax Calculator business service, which makes a call to the third-party application.

When using a third-party system, the end user should make sure that the ship-to addresses are correct and then click the Calculate Taxes button on the Line Items Totals form. The amount of the tax will appear on the Total form, and the tax rate will appear in the Payments form. Because ship-to addresses can vary for different line items in an order, the tax rate can also vary for different line items. (For details on the user's experience of this feature, see "Calculating Taxes" on page 123.)

NOTE: For customizable products, taxes may be calculated either on the individual components, or on the extended price for the customizable product. The method used is determined by the Tax Subcomponent check box in the Product Administration screen. For more information, see *Product Administration Guide*.

Tax exempt information can be entered in your Siebel application on the Payments view tab in a quote or order.

However, customers can also file their tax exempt information with a tax provider for validation. When the third-party tax system contains tax-exempt information, that information is updated when the user clicks Calculate Taxes.

If you want to hide the tax-exempt fields from users, you must customize the Payments form in Siebel Tools. There are three tax exempt fields: Tax Exempt Flag, Tax Exempt Reason, and Tax Exempt Certification ID.

For details about setting up and using a third-party taxation application, see *Siebel eSales Administration Guide*.

Setting Up Payment Terms and Other Payment Factors

When you set up order management, you should consider the following payment factors:

- "Defining Payment Terms" on page 38

- "Credit Card Processing" on page 39

- "Credit Card Authorization and Verifications" on page 39

- "Credit Card Types" on page 39

- "Defining New Methods of Payment" on page 40

- "Define a Mailing Address for Check Payment" on page 41

Defining Payment Terms

Payment terms are used to specify when payment is due, in relation to the order date or ship date. For example, payment terms might include terms such as Net 10, Net 20, Net 30, Net 60. Users select them on the Payments view tab of a quote or order.

To define a new payment term

1 From the application-level menu, choose View > Site Map > Application Administration > Payment Terms.

2 In the Payment Terms list, add a new record.

3 Enter a name for this payment term and complete appropriate fields to define the payment terms.

To change settings for current payment terms

1 From the application-level menu, choose View > Site Map > Application Administration > Payment Terms.

2 In the Payment Terms list, select the appropriate record and make the necessary changes.

Credit Card Processing

Credit card processing is done through integration with a third-party processing system. For details about how to set this up, see *Siebel eSales Administration Guide*.

NOTE: Integration for credit card processing is provided with Siebel Order Management. If you want to integrate with a back-office system to provide processing of other payment methods, you can set up new business services to provide this functionality. For more information, see *Siebel Tools Reference* and Siebel Tools Online Help

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Credit Card Authorization and Verifications

Your Siebel application comes preconfigured with business services for some third-party services. If you use a different third-party service, you may want to create special Business Services for card authorization and verification.

You can change the use of the following fields:

■ **Authorization Code.** The Authorization Code field is not preconfigured to populate automatically. If your back-office system sends an authorization code, you may want to create a business service to interface with Siebel Order Management.

■ **Card Verification #:** The credit card verification number is a four-digit unique identifier that is often printed on the back of a credit card. It is used to reduce fraud because only the person holding the card should know it.

NOTE: To avoid exposing sensitive data, when implementing credit card verification, consider how to clear the Card Verification # from your database.

Credit Card Types

Siebel Order Management provides these credit card types out-of-the-box: Visa, Mastercard, Discover, and American Express.

You can add more credit card types by entering them as values in the List of Values list. Add a record with the Type PAYMENT_TYPE CODE, and add a value in the Order field to associate it with a payment method.

In the Order field, the number range for credit cards is 10 to 20. Values 11 through 14 are preconfigured for Visa, Mastercard, Discover, and American Express. You can use a value between 15 and 19 to enter in the Order field for the new credit card, so all the credit cards appear together.

NOTE: If you need to add a payment type for a payment method other than credit card, use these value ranges in the Order field:

Check method: 20-29
Stored value method: 40-59

If you create another payment method which requires payment types, use the range 60-80 for the new method.

To add new credit card types

1 Navigate to Applications Administration > List of Values.

2 Create a new record in the List of Values form.

3 In the Type field, enter is PAYMENT_TYPE_CODE.

4 In the Order field, enter a value between 15 and 19 to associate this record with a payment method.

Defining New Methods of Payment

Siebel Order Management comes with these payment methods: cash, credit card, purchase order, stored value, wire transfer, and check. Each method has a predefined set of fields to support the information needed for this method of payment.

NOTE: The Orders screen allows more payment method information to be captured and displayed than the Quotes screen. For example, the stored value payment method is not available in a quote, and the fields available for the other methods are limited.

You can add more payment methods. To do so, you need to create an additional entry for the PAYMENT_METHOD Type in list of values administration, a new table, and an additional applet to support the method. You may also want to require that the user complete particular fields for each payment method. Required fields can be set in Siebel Tools.

Define a Mailing Address for Check Payment

Customers paying by check often need to know where to send the payment. A field in the Payment Detail form for check payments provides a convenient place to display this type of information, so the sales representative can communicate it to the customer. This field is labeled Check Mailing Address in the Payment Detail - Check form in the Order Entry - Payment view.

You can enter the information that should display in this field in Siebel Tools, in the Payments business component, in the user property Check Mailing Address.

Setting Up Inventory Locations

In some businesses, when users inquire about availability of a product, they can request a particular inventory location, and when products are reserved, they are promised from a particular source.

Inventory locations are used to identify where products are stored and the source from which the product will be fulfilled.

An inventory location may be a warehouse, a trunk, or a field office, or it may be virtual.

For more information about setting up inventory locations and working with inventory, see *Siebel Field Service Guide*.

Setting Up Integration and Activating Workflows

You must set up integration with third party applications used for checking credit. You must activate workflows used for integration of quotes and orders with back office applications.

For information about setting up integration and activating workflows, see Chapter 3, "Preparing for Integration."

Setting Up Order Types

Siebel Orders and Siebel Order Management initially define nine types of orders, as listed in Table 3 below.

You can define additional order types to meet your needs, or you can edit the existing list of values.

Table 3. Initial Types of Orders

Type of Order	Typical Use
Internal order	An order used to replenish stock or move inventory among inventory locations.
Purchase order	An order used to buy parts from external vendors.
RMA (Return Material Authorization) Advance Exchange	An order used to handle customer returns that require receiving and immediate shipping of exchange parts, before receiving the returned part.
RMA Repair Return	An order used to handle customer returns that require receiving, repairing, and shipping back to customers.
RMA Return	An order used for receiving inbound returns from customers.
Repair order	An order used for ordering, shipping, and receiving parts to be repaired by a third party.
Sales order	A customer order that is owned by, processed by, and credited to a sales business. Typically, selling new finished goods to customers, normally from manufacturing inventory.
Service order	An customer order that is owned by, processed by, and credited to a service business. Typically, a request from a customer for service on existing products, including replacement and repair of parts.
Web Order	A sales order created at a Web site or requested directly over the Internet.

Each order type is either a sales order or a service order. This is determined by the Type Code associated with it in the Data Administration screen, Order Type view.

Each order type has action types associated with it. Action types are used primarily in Siebel Field Service. For more information about action types, see *Siebel Field Service Guide*.

To define a new order type

1 Add the necessary order types to the List of Values list. In the List of Values List of the Application Administration screen, records for order types have FS_ORDER_TYPE in the Type field.

For more information about managing lists of values, see *Applications Administration Guide*.

2 From the application-level menu, select View > Site Map > Data Administration > Order Types.

3 In the Order Types list, add a new record.

4 In the Order Type field, select a value from the drop-down list.

Defining Order Statuses

Siebel Orders and Siebel Order Management come with a number of preconfigured order statuses. You can create additional statuses, if you need them, or edit the existing list of values.

See Table 6 on page 55 for the Type field in List of Values Administration that you use to work with this list of values.

For more information about managing lists of values, see *Applications Administration Guide*.

When you create a new order status, you can determine what fields can be changed when an order has that order status. Often these rules mirror back-office constraints. For example, Ship to Address cannot be changed once the order has been picked up or shipped. Similarly, order quantities and details cannot be changed once an order has been submitted.

To specify which fields can be changed depending on order status, you use the state model. For more information about working with state models, see *Siebel Business Process Designer Administration Guide*.

Creating Product Selection Templates

Product selection templates are combinations of products, including specific configuration of customizable products, that have been saved for easy reuse. They can then be added to a quote or order at once.

An administrator can set up product templates in advance and make them publicly available. In addition, individual users can create private templates of frequently-used products.

When you create a product template, it includes the following information about each line item: sequence, description, unit of measure, type, and associated attributes.

To create a product template, you define what products to include, the quantity, and the attributes that should be used as the default.

To set up an order template

1 From the application-level menu, select View > Site Map > Application Administration > Templates.

2 In the Product Template List, add a new record.

3 Enter a name and description for the template.

4 In the Product Template Item List, click the Add Items button to open the Pick Products dialog box.

5 In the Pick Products dialog box, follow these steps to define the products you want to include in the template:

   a Use the Query function to locate the products you want to include in this template.

   b For each product you want to include, enter a number in the Max Order Qty field to specify the maximum quantity that may be ordered at one time.

c For products with attributes, click the Attributes button and define the attributes to be set for the product.

> **NOTE:** You can also set and change attributes later. Attributes associated with an item are displayed in list below the Product Template Item List.

d In the Product Template Item List, select each customizable product, click Customize, make any desired changes, and click Done to return to the Product Template List view.

e When you are finished specifying products, click OK.

Setting Up Activity Plan Templates

In Siebel Order Management, activity templates are useful to itemize the activities that should occur after an order for a particular product is placed or filled. For example, when a product requires installation, you want to make arrangements for the installation when the order is placed.

Activity templates are typically created by an administrator, so that they are available when a sales administrator or call center agent creates an order.

The steps below describe how to create an activity template. For how to associate a template with an order, see "Associating an Activity Plan or Activity with an Order" on page 164.

To create an activity plan template

1 From the application-level menu, select View > Site Map > Application Administration > Activity Templates.

2 In the Activity Plan Templates list, add a new record.

3 In the Template form, complete the fields.

  a Enter a name for the template.

  b In the Type field, choose the type Order Entry - Line Items.

  c Enter a template description.

d In the Auto Trigger field, select the check box, if appropriate.

This check box provides the activities from this template to a sales stage, when the sales stage is set for an opportunity.

e Select the Public check box if the activity plan may be used by others not on your team.

4 Click the Activity Template Details view tab.

5 In the Activity Template Details list, add a new record for each required activity, choose an activity type, and then complete the other necessary fields.

Letting Users Create Quotes and Orders from Accounts and Contacts

There are workflows you may activate if you want users to be able to create quotes and orders from the Accounts screen and the Contacts screen.

For more information, see "Activating Workflows for Quotes and Orders" on page 65.

Setting Up Availability to Promise

You can integrate your Siebel application with a back-office system to check availability of certain products.

For more information, see "About Using Third-Party Product Availability Applications" on page 67.

Customizing the Sales, Quote, and Order Processes

You can customize the sales, quote and order process by using:

■ New or Modified Workflows

■ Configuration with Siebel Tools

New or Modified Workflows

Some actions in the Quote and Order screens are set up using Siebel Workflows, such as the following:

■ To allow users to create quotes and orders from the Account screen and the Contact screen, you enable a set of workflows.

■ To use asset-based ordering, you enable a set of workflows.

■ Some of the ASI-based functions that allow you to integrate with back-office systems also use workflows. For example, submitting an order activates a workflow, as does performing a credit check.

You can customize these workflows to carry out the specific processes required for your business. You can also create additional workflows as needed to support your business process.

Here are some examples of changes you might make to customize the order management process using new Siebel Workflows:

■ **Quote Verification.** By default, users can verify a quote manually by choosing the Verify menu option from the menu. You could create a Workflow that verifies quotes automatically.

■ **Approval Requirements.** Siebel quote and order screens include fields for required approvals which are used manually by default. For example, a salesperson might be required to get a supervisor's approval for orders above $500. Out-of-the-box, the salesperson would need to put a manager's name in the Approved By field. You could create a Workflow that would automatically route an order to the supervisor for approval when the amount exceeded $500. You would use a combination of Siebel Business Process Designer and Assignment Manager to route the approval to the appropriate supervisor.

■ **Customer Acknowledgements.** You can create Workflows to automatically send order confirmations to customers. When the status of an order changes, the Workflows sends the appropriate messages to the customer. Siebel eSales includes out-of-the-box workflows that send acknowledgements to customers, which you can use models to create similar workflows for use in order management. The eSales workflows are:

■ Send Order Accepted Email (eSales). Sent to all users who place an order successfully.

- Send Order Awaiting Approval Email (eSales). Sent to the purchasing manager for an account when an order with a status of Awaiting Approval needs to be reviewed.

- Send Order Failed Email (eSales). Sent to a user when an auction is silently closed and turned into an order, but the credit card used cannot be authorized.

- Send Order Rejected Email (eSales). Sent to a corporate user when the purchasing manager or delegated customer administrator has rejected that corporate user's order.

- Send Order Shipped Email (eSales). Sent to a user when that user's order has been shipped.

You can also customize Workflows that are shipped with the product, in order to add or remove steps or change the order in which steps are performed. For a reference to these Workflows, which will help you understand them so you can modify them, see Chapter 8, "Workflows for Asset-Based Ordering."

For more information about creating and customizing Workflows, see *Siebel Business Process Designer Administration Guide*.

Configuration with Siebel Tools

You can use Siebel Tools to configure Siebel screens and views to match the processes used in your company. For example, you can define the default view that users see when they log in, so that users start on the screen they use the most frequently. You can also add, remove, or change the names of fields

You also can use Siebel Tools to change user properties to customize some order management capabilities.

For more information about Siebel Tools, see *Siebel Tools Reference*.

Component Quantity Edits

Component quantity edits are an example of one possible user property change you might want to make in Siebel Customer Order Management.

Typically, a user changes the quantity of a component in the configuration session that starts after clicking the Customize button in the Line Items list. In this case, Siebel eConfigurator checks all configuration rules to make sure that the change in quantity is appropriate.

Your company can decide to allow changes to component quantities directly in the Line Items list in the Quote or Order. For this to occur, the user property Configuration ReadOnly Fields must be set in Siebel Tools.

When this user property has been set, the Qty field in line item for components of customizable products is editable. If the Qty field is read-only, then this user property has not been set.

Other User Properties in Order Management

Some other user properties that you might want to change to customize order management functionality are listed in Table 4.

Table 4. User Properties in Order Management

User Property	Buscomp or Applet	Function
Check Minimum and Maximum Price	Quote Item, Order Entry - Line Items, FS Agreement Item	Checks minimum and maximum price when making manual adjustments to line item.
Skip Loading Default Cfg Instance	Quote Item, Order Entry - Line Items, FS Agreement Item	Sets to 'Y' to skip the loading if the default configurable product instance when adding a new configurable product to a quote.
Spread Discount - Use Root Product Type	Quote Item, Order Entry - Line Items, FS Agreement Item	If set to 'Y' and spreading a discount by type, spreads on components if the root type is the type selected. Otherwise, spreads on the type of component only if the type of component itself matches the selected spread type.
Add Items Limit To Price List	Internal Product Popup	Limits the products that display in the Add Items dialog box to records contained within the price list.
Configuration ReadOnly Fields	Quote Item List Applet, Order Entry - Line Item List Applet, FS Agreement Item List Applet	Removes the entries for Quantity and Quantity Requested to make the quantity of configurable product components editable within the list applet.

Table 4. User Properties in Order Management

User Property	Buscomp or Applet	Function
Minimum CC Txn Amount	Payments BusComp	Sets the minimum amount payable by credit card when entering a payment line.
Minimum Cash Txn Amount	Payments BusComp	Sets the minimum amount payable by cash when entering a payment line.
Minimum Check Txn Amount	Payments BusComp	Sets the minimum amount payable by check when entering a payment line.
Minimum Purchase Txn Amount	Payments BusComp	Sets the minimum amount payable by purchase order when entering a payment line.
Minimum Stored Txn Amount	Payments BusComp	Sets the minimum amount payable by stored value when entering a payment line.
Minimum Wire Txn Amount	Payments BusComp	Sets the minimum amount payable by wire transfer when entering a payment line.
Check Mailing Address	Payments BusComp	Mailing address for check.

Setting Up Asset-Based Ordering

Asset-based ordering is available with the Siebel Customer Order Management module. Asset-based ordering has the following added features:

■ The Account Summary and Installed Asset views in the Accounts screen.

■ The following buttons that are specific to asset-based ordering:

  ■ In the Account Summary screen, New, Modify and Disconnect

  ■ In the Order screen, Submit and Auto Asset

■ In the Quote and Order Line Items view, Customize

NOTE: Note that the Submit button on the Order screen and the Customize button on the Quote and Order Line Items view also work when asset-based ordering is turned off. From the user's perspective, the action triggered by clicking these buttons is the same. However, when asset-based ordering is turned on, the buttons perform these actions by running a workflow.

To set up asset-based ordering, you must perform the following tasks:

1 Setting the Server Component Parameter. Set the server component parameter *Order Management - Enable Asset Based Ordering* to True

2 Making Desired Changes to the Asset-Based Ordering Workflows. If necessary, change the asset-based order workflows to reflect your business needs.

3 Activating the Workflows. Activate the asset-based ordering workflows in the Business Process Designer screen.

NOTE: In addition, you may want to use Siebel Tools to disable the Delta Quote and Delta Order buttons on the Line Item applets in the Quote and Order detail screens. These buttons provide a limited form of delta quote and delta order functionality, for use when asset-based ordering is not active. With asset-based orders, users should use the Account Summary view to create delta quotes and delta orders.

Setting the Server Component Parameter

The server component parameter *Order Management - Enable Asset Based Ordering* must be set to True in order to use the asset-based order workflows associated with the Configure and Submit buttons.

To set the server component parameter

1 Navigate to the Server Administration screen.

2 Select Components in the Show drop-down.

3 Query for the object manager for the application in which you want to use asset-based ordering. For example, you might query for Call Center Object Manager (ENU).

4 Click the Component Parameters view tab.

5 Query for the parameter *Order Management - Enable Asset Based Ordering*.

6 Set the Current Value to True and save by stepping off the record.

7 Perform Step 3 through Step 6 for the object manager for each application in which you want to use asset-based ordering.

8 Restart the object managers for which you made the change.

Making Desired Changes to the Asset-Based Ordering Workflows

You can adjust the behavior of asset-based ordering by making changing workflows.

All workflows for asset-based ordering begin with the characters SIS OM. You can access all of these workflows by querying for SIS OM* in the Business Process Administration screen > Workflow Processes view.

For more information about the asset-based ordering workflows, see:

■ Chapter 7, "Using Asset-Based Ordering" describes the user's view of how asset-based ordering functionality works by default.

■ Chapter 8, "Workflows for Asset-Based Ordering" describes the asset-based ordering workflows.

For information about customizing workflows, see *Siebel Business Process Designer Administration Guide*.

Activating the Workflows

You must activate the workflows that provide asset-based ordering features to make those features available. These are the workflows with names that begin with *SIS*.

To activate workflows

1 From the application level menu, choose View > Site Map > Siebel Business Process Administration > Workflow Processes.

2 In the Workflow Processes list, query for the workflows you want to activate.

NOTE: You can query on SIS* to find all of the asset-based ordering workflows.

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3 Activate workflows that have the status Inactive:

   a Select the Workflow record.

   b Click Revise.

      A copy of the workflow record with a status of In Progress is created and is automatically selected.

   c Click Activate.

4 When you are finished activating workflows, restart the server.

Turning On the Explode Capability

The explode capability ungroups multiple quantities of products when the user converts a quote to an order, so each product will become a separate asset. For example, when a customer buys twenty computers, the salesperson creates one line item in the quote for all twenty computers. When the salesperson converts the quote into an order, the order has twenty line items, one for each computer. Using asset-based ordering, an asset is automatically created for each computer.

Explode capability can be useful if:

■ You want track each order line item separately to capture unique data values (such as a serial number) for use in fulfillment or provisioning.

■ You want to track each instance of the product as a separate asset record.

By default, the explode capability is turned off. To turn on the explode capability, you must use Siebel Tools to change the parameters of the method CopyQuoteToOrder, which is associated with the Sales Order button. For more information about using Siebel Tools, see *Siebel Tools Reference*.

To turn on the explode capability

1 In Siebel Tools, navigate to the business component Order Entry - Orders, then to the control Sales Order button, and then to the method CopyQuoteToOrder.

2 For the method CopyQuoteToOrder, set the arguments shown in Table 5.

Table 5. Arguments to Turn On Explode Capability

Input Argument	Type	Value	Comments
Param 0	Literal	Y	Enable/Disable Explosion
Param 1	Literal	Quantity Requested	Explode on Field
Param 2	Literal	Convert To Asset Flag, Action Code	Condition Field Names
Param 3	Expression	'Y,' + LookupValue(DELTA_ACTION_ CODE","New")"	Condition Values

Summary of Lists of Values to Update

Many of the changes you will make while setting up order management are implemented by adding to or changing the items available in drop-down lists throughout the order management screens.

The lists of values that relate to order management are shown in Table 6. The third column shows the value of the Type field in the List Of Values Administration view that determines what values are included in each of these lists of values.

For more information about maintaining lists of values, see *Applications Administration Guide.*

Table 6. Lists of Values for Order Management

View	Field	Type Field in LOV Admin
More Info	Order Type	FS_ORDER_TYPE
	Order Status	FS_ORDER_STATUS
	Hold Reason	SAP_SO_HEADER_DELIV_BLOCK
	Return Reason	RETURN_REASON
	Priority	FS_INVLOC_ORDPRI
	Default Discount %	EST_HW_DISC
Line Items/Totals	Shipping Method	CARRIER_PRIORITY
	Shipping Terms	FREIGHT_TERMS
	Carrier	FS_CARRIER
Line Items/Line Detail	Shipping Method	CARRIER_PRIORITY
	Unit of Measure	UNIT_OF_MEASURE
	Hold Reason	SAP_SO_HEADER_DELIV_BLOCK
	Product Status	FS_PRODINVCAT_STATUS

Table 6. Lists of Values for Order Management

View	Field	Type Field in LOV Admin
Fulfillment	Available Status	ATP_STATUS
	Return Reason	RETURN_REASON
	Priority	FS_INVLOC_ORDPRI
	Time to Reserve Unit of Measure	PERIOD_UOM
Payments	Tax Exempt Reason	GLOBAL_TAX_EXEMPTION
Payment Detail	Payment Method	MMOP_METHOD_TYPE
	Payment Type	PAYMENT_TYPE_CODE
	Payment Status	MMOP_PAYMENT_STATUS

Preparing for Integration 3

This chapter describes the setup required to integrate Siebel's order management applications with back-office systems. This setup is required in order to send and receive information when end users submit quotes and orders, check the status of an order, request information about availability to promise order items, and check the credit status for a customer. All of these functions make use of Application Services Interfaces (ASIs).

This chapter covers the following topics:

■ "Integration Strategy" on page 58

■ "About Application Services Interfaces" on page 59

■ "Setting Up Quote and Order ASIs" on page 62

■ "About Using Third-Party Product Availability Applications" on page 67

■ "About Purchase Order Credit Checking Applications" on page 78

■ "ASI Workflows" on page 87

For information about integrating with and using a third-party taxation application, see *Siebel eSales Administration Guide*.

For more information about Application Services Interfaces, see *Application Services Interface Reference*.

Integration Strategy

If you integrate Siebel applications with back-office, accounting, and other systems, you will need to develop an integration strategy. The integration tasks you should consider depend on the business needs of your company. Some tasks you may want to consider are listed below.

- **Determine the system of record for each of the key data elements.** Some of the data elements you should consider are:

    - Item masters (product)

    - Configuration and pricing rules

    - Customer master

- **Decide how to replicate data.** You can either replicate data between your Siebel application and your back office application using batch replication at regular intervals (typically daily) or using real-time replication. If you use real-time replication, you must define a triggering event that causes data to be replicated on both systems. For example, you might define the triggering event to be a transaction such as entering a new customer or a new product. Then the replication would occur when the transaction is submitted. Alternatively, you might add a button to an applet that runs a workflow that triggers replication. Because Siebel applications save data when the user steps off the record, the event you define is not necessarily tied to when data is written to the database.

- **Define the points in your business process when you want to update information across systems.** You identify points in the business process when you should use ASIs to update information between your Siebel application and your back-office or a third-party system. For example, when the status of an order is updated in a back-office system, you might want the order status in your Siebel application to be updated automatically. If an end user of the Siebel application performs a query while accessing a new order, you could have the back-office system update the Siebel order in real-time. If your back-office system has the capability to do this, you can implement it using the Update Siebel Order ASI. However, if it is not feasible for your back-office system to provide this update in real-time, the end user can click a Get Status button on the user interface to request the updated order information.

About Application Services Interfaces

Siebel's Application Services Interfaces (ASIs) are predefined interfaces that allow the exchange of information between Siebel applications and external applications.

Several features of Siebel Order Management use ASIs:

■ **Availability to Promise.** Availability to promise (ATP) allows end users to inquire about whether an item is available. End users can specify a requested date, a specific source such as an inventory location, and preferred shipment methods that could impact the delivery time. End users can also reserve available products for a customer to make sure they will be available when the order is processed, and they can unreserve products if customers change their minds. When the user clicks the Inquire, Reserve, or Unreserve button in a quote or order, the business service sends a request to a back office fulfillment engine to determine whether the specified line items are available. For details about how to set up the Availability to Promise ASI, see "About Using Third-Party Product Availability Applications" on page 67. For details about the user's experience of using the ATP functionality, see "Checking Availability to Promise (ATP)" on page 124.

■ **Credit Check.** When a customer uses the purchase order payment option for a quote or an order, the end user can perform a credit check to make sure that the customer can make the purchase on credit. In an order, the user clicks the Credit Check button in the Payment view tab to perform the credit check. In a quote, credit check is performed as part of the verification process when the user chooses the Verify menu option. Both actions launch a workflow that first determines if credit check is applicable for the selected quote or order and then, if needed, sends a request to an external system to get the credit decision for that transaction. Typically, the external system that performs the credit check is the back-office order or credit management system. For details about how to set up the Credit Check ASI, see "About Purchase Order Credit Checking Applications" on page 78. For details about the users' experience of using the credit check functionality, see "Checking Credit for a Purchase Order" on page 140.

■ **Submit Order.** When users have finished defining an order for a customer and the customer has agreed to the price and provided payment information, the order is submitted to the back office. When the user clicks the Submit button, the Submit Order ASI workflow sends information about the order to the back office system. For details about setting up the ASIs used by this workflow, see "Setting Up Quote and Order ASIs" on page 62. For details about the user's experience of using the submit order functionality, see "Submitting an Order" on page 163.

■ **Submit Quote.** After a quote has been verified, the user can submit the quote to the back-office or any external system. When the user chooses the Submit menu option for a quote record from the menu on the Quote list, the Submit Quote ASI workflow sends the quote information to the external system and updates Siebel with the response from the external system. The external system might use the quote information for converting a quote to an order or for production planning. Additional configuration required for this can be made in the Siebel application as required to meet your company's business needs. For details about setting up the ASIs used by this workflow, see "Setting Up Quote and Order ASIs" on page 62.

■ **Query Order Status.** Typically, a company will receive information about the status of orders at regular intervals from the fulfillment system. However, when a sales person talks with a customer about the status of an order, they want to make sure that they present the most current information. In order to do so, they can click the Get Status button on an order. This calls the Get Order Status ASI workflow, which retrieves information from the back-office system. For details about setting up the ASIs used by this workflow, see "Setting Up Quote and Order ASIs" on page 62. For details about the user's experience of using the submit order functionality, see "Submitting an Order" on page 163.

■ **Updating Order Status.** When the status of an order is updated in a back-office system, it can replicate that information in the Siebel application to keep the two systems synchronized. This is done by using the Siebel Order ASI with a method of Update or Sync, and can be set up as a Web service. For details about using the Siebel Order ASI, see "Setting Up Quote and Order ASIs" on page 62.

Figure 4 shows the points in the order process where ASI integration occur.

Create, Submit, and Check Status Order Process with ASI Integration Points
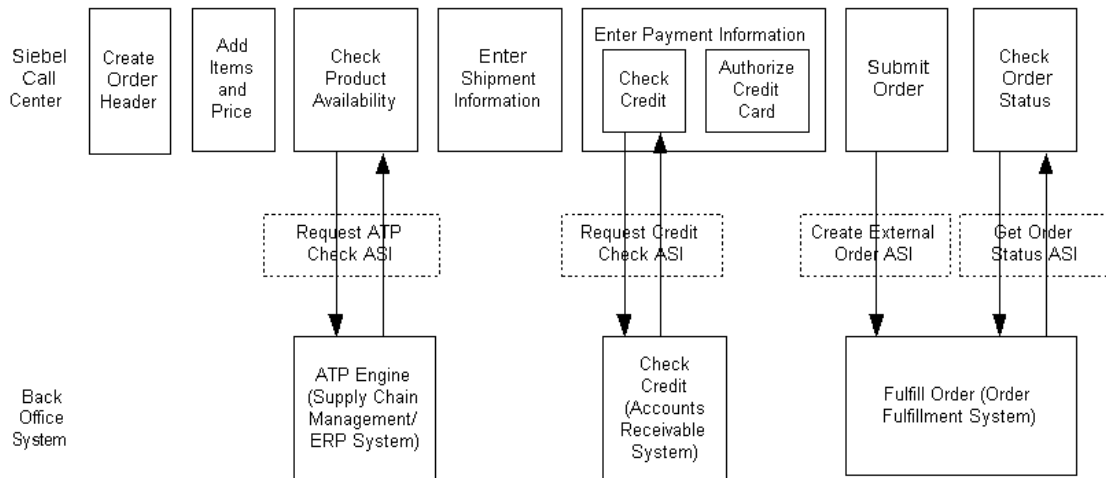
Figure 4. ASI Integration Points in the Ordering Process

You must set up the ASIs shipped with Siebel Order Management before they can be used. This chapter provides the procedures that you must perform to set up these ASIs. It also describes the ways that Siebel Order Management invokes ASIs, and documents the workflows that you may want to modify to change the ways that ASIs are invoked.

For general information about ASIs, see *Application Services Interface Reference: Siebel eBusiness Application Integration Volume VI.*

Setting Up Quote and Order ASIs

Two pairs of ASIs are used during these four order management processes:

■ Submitting orders

■ Importing quotes and orders

■ Updating quote and order status

■ Querying orders

These ASI pairs are:

■ Siebel Quote (inbound) and External Quote (outbound)

■ Siebel Order (inbound) and External Order (outbound)

To set up real-time submission of quotes and orders with your back-office system, you must:

■ Set up the Web services for Quote and Order ASIs

■ Activate Workflows

NOTE: If you want to add to or change the fields that are sent to the back-office system, you can customize the integration objects for each ASI. For more information, see *Application Services Interface Reference: Siebel eBusiness Application Integration Volume VI*.

Setting Up Web Services for Quote and Order ASIs

To set up the Web services, you must set up both outbound and inbound Web services for the Quote and Order ASIs. The procedures below show you the steps required for each of these.

To set up the outbound Order Web service

1 From the application level menu, choose View > Site Map > Web Service Administration > Outbound Web Service.

2 In the Outbound Web Service list, create a query to display the record with *External Order* in the Name field.

3 Verify that the fields in the Outbound Web Services list match those in the following table.

Namespace	Name	Status
http://siebel.com/asi/	External Order	Active

4 In the Service Ports list, click New, and enter the following values in the fields of the new record.

Field	Comments
Name	Enter a name for the port.
Port Type	Enter External Order.
Transport	Select from the drop-down list.
	If you want to set up testing, for example when you are customizing applets or extending the ASI, select Local Business Service.
Address	When you select a transport, the field will be populated with a template address. Edit the address based on where you are sending the data.
Binding	If a SOAP header is expected by the receiving application, select SOAP_RPC.

To set up the outbound Quote Web service

1 In the Outbound Web Service list, create a query to display the record with *External Quote* in the Name field.

2 Verify that the fields in the Outbound Web Services list match those in the following table.

Namespace	Name	Status
http://siebel.com/asi/	External Quote	Active

3 In the Service Ports list, review the information in the fields for the External Quote service port and make any changes required for your system.

To set up the inbound Order Web service

1 From Show drop-down list, select Inbound Web Service.

2 In the Inbound Web Service list, create a query to display the record *Siebel Order* in the Name field.

3 Verify that the fields in the Inbound Web Services list match those in the following table.

Namespace	Name	Status
http://siebel.com/asi/	Siebel Order	Active

4 In the Service Ports list, review the information in the fields for the Siebel Order service port and make any changes required for your system.

5 In the Operations list, review the information shown and make any changes required for your system.

To set up the inbound Quote Web service

1 From Show drop-down list, select Inbound Web Service.

2 In the Inbound Web Service list, create a query to display the record *Siebel Quote* in the Name field.

3 Verify that the fields in the Inbound Web Services list match those in the following table.

Namespace	Name	Status
http://siebel.com/asi/	Siebel Quote	Active

4 In the Service Ports list, review the information in the fields for the Siebel Quote service port and make any changes required for your system.

5 In the Operations list, review the information shown and make any changes required for your system.

Activating Workflows for Quotes and Orders

You must activate the following workflow processes used for real-time integration of quotes and orders:

■ Get Order Status ASI

■ Submit Order ASI

■ Submit Quote ASI

If you want users to be able to create quotes and orders from the Accounts screen and the Contacts screen, you must also activate the following workflows:

■ Account - New Order

■ Account - New Quote

■ Goto_Order

■ Goto_Quote

■ Contact - New Order

■ Contact - New Quote

To activate workflows used by Quote and Order ASIs

1 From the application level menu, choose View > Site Map > Siebel Business Process Administration > Workflow Processes.

2 In the Workflow Processes list, use a query to find the appropriate workflows. To find all processes where Name field has contains the word ASI, you can query on *ASI*.

3 Activate workflows that have the status Inactive:

a Select the Workflow record.

b Click Revise.

A copy of the workflow record with a status of In Progress is created and is automatically selected.

c Click Activate.

4 When you are finished activating workflows, restart the server.

About Using Third-Party Product Availability Applications

This section tells you how to set up the interface between Siebel and an external Availability to Promise (ATP) engine in order to provide customers with information about availability of products they wish to order.

Product availability information is stored in third-party ATP systems. When a customer clicks an inquire or reserve button, product availability information is passed to the Siebel application by a third-party product availability fulfillment engine, also known as an availability-to-promise (ATP) engine. Siebel Order Management displays whatever data the ATP engine returns.

Integration with the product availability fulfillment engine uses the business service named External ATP Check. In addition it uses a specific, prebuilt Application Services Interface (ASI) named ATP Check. Some configuration is required to set up this integration.

This section includes the following information:

- "Required Setup Procedures for Checking Availability"

    - "Checking the Availability Fulfillment Methods"

    - "Setting the ATP Action Parameter in the Quote and Order Business Components Properties"

    - "Verifying the External ATP Check Business Service User Properties"

    - "Configuring Web Services"

- "Optional Setup Procedures for Checking Availability"

    - "Preventing Rollup of Availability Information"

    - "Extending the ASI"

    - "Extension of Returned Data"

    - "Customization of UI Terms"

For more information about how to set up, use, and modify integrations based on ASIs, see *Application Services Interface Reference: Siebel eBusiness Application Integration Volume VI*.

For information about the end user's experience in using the availability-to-promise features, see "Checking Availability to Promise (ATP)" on page 124.

Required Setup Procedures for Checking Availability

To set up the use of third-party product availability-to-promise systems, you must perform the following tasks:

■   "Checking the Availability Fulfillment Methods"

■   "Setting the ATP Action Parameter in the Quote and Order Business Components Properties"

■   "Verifying the External ATP Check Business Service User Properties"

■   "Configuring Web Services"

Checking the Availability Fulfillment Methods

For the integration to work, you must check that your ATP engine supports the Inquire, Reserve, and Unreserve methods. If your ATP engine refers to these methods with different terms, you may need to do some configuration to map the method names.

Setting the ATP Action Parameter in the Quote and Order Business Components Properties

The product availability fulfillment integration is launched from a Quote or Order business component at either the header level or the line level. The Quote or Order business component defines the method to be used to invoke the ATP Check ASI. This method is one of those listed in Table 7 on page 69, depending on whether the user clicked a button to Inquire, Reserve, or Unreserve.

You must make sure that the value of the ATP Action Parameter in the user property defining the ATPInquireAll method in both the Quote and Order business components matches the command expected by the ATP engine.

The ATP Action parameters come preconfigured with the values shown in Table 7. If these values match the commands expected by your ATP engine, you do not need to make any changes to the ATP Action parameter. However, if your ATP engine expects different commands, you can change them in Siebel Tools.

Table 7. Preconfigured ATP Action Parameter Settings

User Interface Element	BusComp	Method Name	ATP Action
Inquire All button, Quote or Order header	Quote/Order Entry - Orders	ATPInquireAll	Inquire
Inquire button, Quote or Order Line Items list	Quote Item/Order Entry - Line Items	ATPInquire	Inquire
Reserve All button, Quote or Order header	Quote/Order Entry - Orders	ATPReserveAll	Reserve
Reserve button, Quote or Order Line Items list	Quote Item/Order Entry - Line Items	ATPReserve	Reserve
Unreserve All button, Quote or Order header	Quote/Order Entry - Orders	ATPUnReserveAll	Unreserve
Unreserve button, Quote or Order Line Items list	Quote Item/Order Entry - Line Items	ATPUnReserve	Unreserve

The following procedure shows you how to make changes to the ATP Action parameter for the method ATPInquireAll. You can use these as a model to make changes to any of the other ATP methods, as appropriate.

NOTE: If the middleware handles this mapping, then you do not need to change this ATP Action Parameter. For example, if the middleware knows that ATP Action = Inquire in your Siebel application, and that ATP Action = Check in your fulfillment engine, the middleware provides the mapping.

To set the business component user properties for the Quote business component

1 In Siebel Tools, select the Quote business component.

2 Select Business Component User Prop.

3 In the Value field, query for *ATP*.

This returns all of the Quote business component user properties that are related to the ATP functionality.

4 For the user property that includes the ATPInquireAll method, edit the ATP Action parameter so that it exactly matches the command expected by the ATP engine. The default value is Inquire.

To set the business component user properties for the Order business component

1 In Siebel Tools, select the Order business component.

2 Select Business Component User Prop.

3 In the Value field, query for *ATP*.

This returns all of the Order business component user properties that are related to the ATP functionality.

4 For the user property that includes the ATPInquireAll method, edit the ATP Action parameter so that it exactly matches the command expected by the ATP engine. The default value is Inquire.

Verifying the External ATP Check Business Service User Properties

You must verify the External ATP Check business service user properties.

To verify the External ATP Check business service user properties

1 In Siebel Tools, select the External ATP Check business service.

2 Select Business Service User Prop.

3 Verify that the Names and Values of the User Properties match those in the following table.

Name	Value
siebel_port_name	Default

Name	Value
siebel_web_service_name	External ATP Check
siebel_web_service_namespace	http://siebel.com/asi/

Configuring Web Services

Web services are used to direct the inbound and outbound messages to and from:

■ The third-party ATP engine

■ A demonstration script that can be used to test your integration setup

■ A middleware or integration server that will integrate with your fulfillment engine

You must make sure that the Web services are correctly configured.

To configure the Web services

1 In your Siebel application, navigate to the Web Services Administration screen.

2 From the Show drop-down list, select Outbound Web Services.

3 Select the row with External ATP Check in the Name field.

4 Verify that the fields in the Outbound Web Services list match those in the following table.

Namespace	Name	Status
http://siebel.com/asi/	External ATP Check	Active

5 In the Service Ports list, click New, and enter the following values in the fields of the new record.

Field	Comments
Name	Enter a name for the port.
Port Type	Enter External ATP Check.

Field	Comments
Transport	Select from the drop-down list.
	If you want to set up testing, for example when you are customizing applets or extending the ASI, select Local Business Service.
Address	When you select a transport, the field will be populated with a template address. Edit the address based on whether you are sending the data to middleware or the ATP engine.
	If you want to set up testing, for example when you are customizing applets or extending the ASI, enter ATP ASI Test. For more information, see "ATP ASI Testing Script" on page 72.
Binding	If a SOAP header is expected by the receiving application, select SOAP_RPC.
	If you are using ATP ASI Test, select Property Set.

For more information about configuring Web Services and setting up demonstration scripts, see *Integration Platform Technologies: Siebel eBusiness Application Integration Volume II*.

ATP ASI Testing Script

The ATP ASI test is a testing script that simulates a simple fulfillment engine. It writes the output and response to an XML file on the server machine. By default the script writes the output and the response to ${SIEBEL_HOME}/bin. For example: D:\Siebel\bin. It writes an output file called ATPOutput.xml. This file represents what you would be sending to your middleware or fulfillment engine. Then the script generates a real-time response and sends the XML back to the Web service. The XML response that is generated is written into a file called ATPFinished.xml, which you can see in the file system. This testing infrastructure allows you to analyze what will be sent to the middleware and what the Siebel application is expecting back, and allows you to test your user interface.

Optional Setup Procedures for Checking Availability

When setting up the use of third-party product availability-to-promise systems, you may want to perform the following tasks:

- "Preventing Rollup of Availability Information"

- "Extending the ASI"

- "Extension of Returned Data"

- "Customization of UI Terms"

Preventing Rollup of Availability Information

Product availability information is displayed for:

- The entire quote or order

- The quote or order line items

- The scheduled line items

The following information is preconfigured to roll up:

- Available status, date, and quantity are rolled up from the promised lines to the quote or order lines.

- Available status and date are rolled up from the quote or order lines to the quote or order header.

If your availability fulfillment engine only returns promised schedule lines and does not roll up this data to the line or the header, the out-of-the-box behavior will provide you with a rollup of the data.

If, however, your fulfillment engine already calculates this rollup, or if you do not want to roll up these fields, you may want to turn off this behavior.

Following are some examples of the preconfigured rollup of availability information:

- Dates: The latest date is rolled up at the parent level. For example, if line 1 has an available date of 7/15/02 and line 2 has an available date of 7/23/02, the available date for the order is set to 7/23/02.

■ Status: If all lines have an ATP status of Available, the order also has a status of Available. However, if one of the lines has a different status, the order status is kept blank.

■ Quantity: If Schedule line 1 has an availability quantity of 10, Schedule line 2 has an available quantity of 20, and both lines have the same ATP status of Available, then the quantity rolled up is the sum of both quantities (30).

NOTE: Rollup only occurs on quantity and date when the status of the promised line or the status of the line item is Available or Reserved.

To turn off computation of the availability summary date

1 In Siebel Tools, select the ATP business service.

2 Select Business Service User Prop.

3 Select the Rollup Availability user property, and change the value from Y to N.

Extending the ASI

If you want to extend the ASI, you must add fields to:

■ The External Integration object called ATP Check Interface

■ These Internal Integration objects:

  ■ ATP Check Interface Request - Quotes

  ■ ATP Check Interface Request - Orders

  ■ ATP Check Interface Response - Quotes

  ■ ATP Check Interface Response - Orders

This will create the necessary mapping between the ATP interface structure and the Siebel Quote and Order business components.

NOTE: If you make changes to these objects, the names of the fields in the Internal and External integration objects must match.

If you add a field, make sure that the names of the fields in the Internal and External integration objects match. For example, if you want to add the field Account DUNS# that maps on quote to Account DUNS#-quote and on order to Account DUNS#-order, you would do so as follows:

■ ATP Check Interface

Integration Component Field:

Name: Account DUNS#

External Name: < BLANK >

■ ATP Check Interface Request - Quotes

Integration Component Field:

Name: Account DUNS#

External Name: < your mapping of Account DUNS # to the Quotes Buscomp >

■ ATP Check Interface Request - Orders

Integration Component Field:

Name: Account DUNS#

External Name: < your mapping of Account DUNS # to the Orders Buscomp >

If this is a field that you do not want the fulfillment engine to be able to modify, such as Ship To Address Id, add the NoUpdate Field user property to the internal response integration objects, as follows:

■ ATP Check Interface Response - Quotes

Integration Component Field:

Name: Ship To Address Id

External Name: < your mapping of Ship To Address Id to the Quotes Buscomp >

Integration Component Field User Property:

Name: NoUpdate

Value: Y

■ ATP Check Interface Response - Orders

Integration Component Field:

Name: Ship To Address Id

External Name: < your mapping of Ship To Address Id to the Orders Buscomp >

Integration Component Field User Property:

Name: NoUpdate

Value: Y

For information about how to extend the integration object, see *Integration Platform Technologies: Siebel eBusiness Application Integration Volume II*.

Extension of Returned Data

For information about how to extend the data that is received from the third-party inventory management system, including data about products that are expected to be manufactured, see *Application Services Interface Reference: Siebel eBusiness Application Integration Volume VI*.

Customization of UI Terms

You may want to change the following terms in the user interface to more precisely reflect the type of data expected by, and returned by, your particular product availability fulfillment engine.

Requested Date. This could be either the date on which the customer wants to receive the product or the date on which the customer wants the seller to ship the product

Available Date. This could be either the date that the customer will receive the product or the date that the product will be shipped.

These two fields are designed to work together, reflecting parallel information.

About Purchase Order Credit Checking Applications

This section tells you how to set up the ability to check the credit standing of customers who want to pay with purchase orders.

Before an order for products or services can be completed through your Siebel application, your company may want to assess whether the customer is in good credit standing to make the purchase on credit. Different applications are used to perform credit checks depending on the method of payment.

■ For business customers paying with purchase orders, credit checks on the customer account are performed by a back-office, third-party accounts receivable or credit management application. This chapter describes how to set up these applications.

■ For customers paying with a credit card, credit checks are performed by a third-party payment application. This chapter does not include information about how to set up these applications. For more information about third-party payment applications, see *Siebel eSales Administration Guide.*

Third-party accounts receivable or credit management applications use logic to make a credit determination based on your company's previous history with the customer account and other credit data.

Integration with third-party credit checking applications uses a specific, pre-built Application Services Interface (ASI) named External Credit Check. Some configuration is required to set up this integration, but once set up, this functionality should not require any maintenance.

Credit checks are performed as part of the order process at the payment line level, when the user clicks the Credit Check button in an order, and as part of the quote process at the header level, when the user chooses the Verify menu option in a quote.

Two workflows directly control the process of checking the credit status of business accounts. These are:

■ Credit Check - Quotes

■ Credit Check - Orders

For more information about the quote and order process, including the details of these workflows, see "ASI Workflows" on page 87.

NOTE: Purchase order credit checks can also be made on a quote or order from a customer application, such as Siebel eSales. For information about how to set up a purchase order credit checking integration from a customer application, see *Siebel eSales Administration Guide*.

This section includes the following information:

- "Required Setup Procedures for Checking Credit"
    - "Verifying the External Credit Check ASI User Properties"
    - "Configuring Web Services"
    - "Activating the Workflow Processes"
- "Optional Setup Procedures for Checking Credit"
    - "Modifying the User Properties"
    - "Turning Off Credit Checking"
    - "Customizing When Credit Checks Are Performed"
    - "Changing the Credit Auto-Approval Limit For Accounts"
    - "Skipping Credit Checks For an Account"
    - "Restricting Which Employees Can Administer Credit Checking"
    - "Extending the ASI for Credit Check Interface Request"

For more information about to how to set up, use, and modify integrations based on ASIs, see *Application Services Interface Reference: Siebel eBusiness Application Integration Volume VI*.

Required Setup Procedures for Checking Credit

To set up the use of third-party credit check application, you must perform the following tasks:

- "Verifying the External Credit Check ASI User Properties"

- "Configuring Web Services"

- "Activating the Workflow Processes"

Verifying the External Credit Check ASI User Properties

You must verify the External Credit Check ASI user properties.

To verify the External Credit Check ASI user properties

1 In Siebel Tools, select the External Credit Check business service.

2 Select Business Service User Prop.

3 Verify that the Names and Values of the User Properties match those in the following table.

Name	Value
siebel_port_name	Default
siebel_web_service_name	External Credit Check
siebel_web_service_namespace	http://siebel.com/asi/

Configuring Web Services

Web services are used to direct the inbound and outbound messages to and from:

- The third-party credit checking application

- A demonstration script that can be used to test your integration setup

- A middleware or integration server that will integrate with your accounts receivable system

You must make sure that the Web services are correctly configured.

To configure the Web services

1 Navigate to the Web Services Administration screen.

2 From the Show drop-down list, select Outbound Web Services.

3 Select the row with External Credit Check in the Name field.

4 Verify that the fields in the Outbound Web Services list match those in the following table.

Namespace	Name	Status
http://siebel.com/asi/	External Credit Check	Active

5 In the Service Ports list, click New, and enter the following values in the fields of the new record.

Field	Comments
Name	Enter a name for the port.
Port Type	Enter External Credit Check.
Transport	Select from the drop-down list.
	If you want to set up testing, for example when you are customizing applets or extending the ASI, select Local Business Service.
Address	When you select a transport, the field will be populated with a template address. Edit the address based on whether you are sending the data to middleware, the Credit Check application, and so on.
	If you want to set up testing, enter Credit Check ASI Test.
Binding	If a SOAP header is expected by the receiving application, select SOAP_RPC.
	If you are using Credit Check ASI Test, select Property Set.

Activating the Workflow Processes

You must activate the following workflow processes:

■ Credit Check - Quotes

■ Credit Check - Orders

For information about activating workflows, see "Activating the Workflows" on page 52 and *Integration Platform Technologies: Siebel eBusiness Application Integration Volume II*.

For more information about configuring Web Services and setting up demonstration scripts, see *Integration Platform Technologies: Siebel eBusiness Application Integration Volume II*.

Optional Setup Procedures for Checking Credit

To set up the use of third-party product accounts receivable systems, you may want to perform the following tasks:

■ "Modifying the User Properties"

■ "Turning Off Credit Checking"

■ "Customizing When Credit Checks Are Performed"

■ "Changing the Credit Auto-Approval Limit For Accounts"

■ "Skipping Credit Checks For an Account"

■ "Restricting Which Employees Can Administer Credit Checking"

■ "Extending the ASI for Credit Check Interface Request"

NOTE: If you modify any lists of values such as order types or purchase order payment methods, be sure to review the workflows processes in Credit Check - Quotes and Credit Check - Orders to verify that the application logic to determine whether to call credit check is still correct.

Modifying the User Properties

You can modify the user properties for the credit checking integration to, for example, change what code represents an error. To do this, modify the user properties of the Credit Check Service business service using Siebel Tools.

Business Service > Credit Check Service (eSales)

Business Service User Properties

ERROR_CODE = < some other value >

Default error code is 3.

Turning Off Credit Checking

In a quote, credit checking is part of the verify functionality. You can turn it off by by changing the Credit Check user property in the Quotes business component. When the Credit Check user property is set to N instead of Y, the verify function will not perform the credit check.

You can also pick what workflow you want to call to execute the credit check by going to Business Component > Quote and changing the following Business Component User Properties:

■ For the Credit Check user property, change the value from Y to N.

■ For the Credit Check Workflow user property, change the value from Credit Check Quotes to the workflow you want to use.

In an order, the user performs the credit check by clicking the Credit Check button. To turn off credit check for orders, you can either modify the Credit Check - Order workflow or remove the button from the Payment Detail - Purchase Order applet.

Customizing When Credit Checks Are Performed

A credit check does not need to be performed on every quote or order that will be paid for with a purchase order. You can customize when a credit check is performed by modifying the Credit Check - Quotes workflow process and the Credit Check - Orders workflow process.

In the default credit check business processes, credit check will only be performed if all the following conditions apply:

■ Payment method is Purchase Order

■ The bill-to account's Skip Credit Check flag is Off

■ The purchase order amount is greater than the bill-to account's Credit Auto Approval Limit amount

In addition, credit check is not applicable for orders of type RMA and Internal Order, so it will be skipped.

CAUTION: If you decide to modify the Credit Check - Quotes workflow process, it is important to know that this workflow process is also used by Siebel eSales to create an order. For more information about the impact of this, see the section about this workflow process in *Siebel eSales Administration Guide*. If you want to have different workflows for Quotes and eSales, you will need to create an additional workflow.

Changing the Credit Auto-Approval Limit For Accounts

You can change the credit auto-approval limit for accounts in several different ways:

■ **Using Siebel Tools.** When your company wants to change the limit for all new accounts, you can change it in Siebel Tools.

NOTE: Making this change in Siebel Tools does not affect previously existing accounts.

■ **Using a batch eScript.** If you need to change the value for a large number of account records, you can do so with a batch eScript.

■ **Editing the Value for an Account.** To change the limit for a few accounts, you can manually editing the value of the Credit Auto Approval Limit for a specific account in the Account screen > Credit Profile view.

NOTE: Do not confuse the Credit Auto Approval Limit field with the PO Auto Approval Limit field.

Skipping Credit Checks For an Account

End users can skip automatic credit checking for particular accounts by changing the value of the Skip Credit Check field. This field is displayed in the Account screen > Credit Profile view. When this check box is checked, it indicates that credit checks should be skipped for the account.

Restricting Which Employees Can Administer Credit Checking

There are two ways to restrict which employees can administer credit checking on accounts:

■ Create a read-only version and a read-write version of the Account Detail - Credit Profile view. Give employees who should administer credit checking access to the read-write view. Give employees who should not administer credit checking access to the read-only view.

■ Add a rule or logic to restrict who can update fields related to credit checking. For example, only allow an account's primary sales representative to update these fields.

Extending the ASI for Credit Check Interface Request

If you want to extend the ASI, you must add fields to:

■ The following external and internal interfaces:

   ■ Credit Check Interface Response

   ■ Credit Check Interface Request

■ The following internal objects:

   ■ Credit Check Interface Request - Quote

   ■ Credit Check Interface Request - Order

This will create the necessary mapping between the Credit Check interface structure and the Siebel Quote and Order business components.

■ If you add a field, make sure that the names of the fields in the Internal and External integration objects match. For example, if you want to add the field Priority that maps on quote to Priority-quote and on order to Priority-order, you would do so as follows: Credit Check Interface Request

Integration Component Field:

Name: Priority

External Name: < BLANK >

■ Credit Check Interface Request - Quotes

Integration Component Field:

Name: Priority

External Name: < Mapping of Priority to the correct field on Quotes Buscomp >

■ Credit Check Interface Request - Orders

Integration Component Field:

Name: Priority

External Name: < Mapping of Priority to the correct field on Quotes Buscomp >

For information about how to extend the integration object, see *Integration Platform Technologies: Siebel eBusiness Application Integration Volume II*.

ASI Workflows

This section documents the workflow processes that are used to invoke the ASIs for quote and order processes. It is not necessary to modify these workflows, but you can modify them to suit your business model.

Get Order Status ASI

This workflow queries the outside system to retrieve the latest information on the order. It returns the new information and synchronizes the order on the current system.

■ Query Order By Id: Queries for the order on the current system using the object id. Returns an order property set containing all the order information.

■ Isolate Integration Id: In the next step, the workflow will use a query by example. Query by example will take the property set and look for an order with the same exact values for the fields in the property set. If the order has changed on the outside system, those values will no longer match. The workflow needs to query by a value that will not change, the integration id. Isolate Integration Id takes in a property set and removes all the fields, except the integration id.

■ External Order Proxy: Using the property set, which only has an integration id now, this step queries by example on the outside systems. Once it finds the order with that integration id, it returns an order property set containing all the order information.

■ Synchronize Order: Takes the order property set returned by the previous step and synchronizes it with the order in the current system.

Submit Order ASI

This workflow submits the order to the outside system to synchronize the information between the two systems.

■ Query Order By Id: Queries for the order on the current system using the object id. Returns an order property set containing all the order information.

■ External Order Proxy: Calls insert on the outside system, passing in the order property set. This step returns an order property set, which will contain any changes the outside system made to the order.

■ Synchronize Order: Takes the order property set returned by the previous step and synchronizes it with the order in the current system.

Submit Quote ASI

This workflow submits the quote to the outside system to synchronize the information between the two systems.

■ Query For Quote By Id: Queries for the quote on the current system using the object id. Returns a quote property set containing all the quote information.

■ External Quote Proxy: Calls insert on the outside system, passing in the quote property set. This step returns a quote property set, which will contain any changes the outside system made to the quote.

■ Synchronize Quote: Takes the quote property set returned by the previous step and synchronizes it with the quote in the current system.

Creating a Quote or Order   4

Quotes and orders are created using a similar process. The end user performs different procedures to start a quote or order. Then the end user performs the same procedures to add other information about either a quote or order.

This chapter describes the tasks for starting a quote and for starting an order. Then it describes the common tasks for creating both quotes and orders.

For more information about quotes, see Chapter 5, "Working with Quotes."

For more information about orders, see Chapter 6, "Working with Orders."

This chapter covers the following topics:

■ "Creating a Quote" on page 90

■ "Creating an Order" on page 94

■ "Common Tasks for Creating Quotes and Orders" on page 99

Creating a Quote

To create a quote, you perform the following tasks:

1 Create the Quote record in one of two ways:

- ■ "Starting a Quote." You can create a new quote record manually from a number of screens.

- ■ "Using Auto Quote from an Opportunity." Alternatively, you can create the new quote record by using Auto Quote from an opportunity.

2 "Performing Common Tasks." Because the remaining tasks for entering information about the quote are the same whether you are creating a quote or an order, they are covered in "Common Tasks for Creating Quotes and Orders" on page 99

3 "Verifying the Quote." When you have finished creating a quote, you should verify it to see if you have made any errors.

Starting a Quote

This section describes how to start a new quote from a number of screens:

- ■ If you start the quote from the account, contact, or opportunity screen, your Siebel application automatically copies the account, contact, or opportunity information into the quote. If a price list is associated with the account or opportunity, it is also entered.

- ■ If you start the quote using the Quotes screen, you must enter all this information manually.

For information about how to start a quote based on an existing asset, see Chapter 7, "Using Asset-Based Ordering."

For information about how to start a quote that will change an existing order, see "Creating a Delta Quote" on page 152.

To start a quote

1 Perform one of the following actions, depending on which screen you want to use to start the quote:

■ To start a quote from the Quotes screen, navigate to the Quotes screen.

■ To start a quote from an opportunity, navigate to the Opportunities screen, select the opportunity for which you want to generate a quote, and click the Quotes view tab.

■ To start a quote for a specific account, navigate to the Accounts screen, select the account for which you want to generate a quote, and click the Quotes view tab.

■ To start a quote for a specific contact, navigate to the Contacts screen, select the contact for which you want to generate a quote, and click the Quotes view tab.

2 In the Quotes list, add a new record. The following information is entered automatically in More Info form:

Field	Comments
Sales Rep	Your name is entered.
Quote #	A unique system-generated number assigned to the quote when it is created.
Revision	The number of revisions associated with the quote. When the quote is created, this value is 1.
Created	The date the quote was created. Your Siebel application automatically sets the value for an active quote to the Start Date + 30 days.
Active	A checkbox indicating whether the quote is active. When you create a quote, it is automatically marked as active. Note: The quote must be designated as active in order to attach files to it or otherwise update it.
Status	The initial status of the quote is In Progress. The status can be changed later, as the quote process continues. For example, if you convert the quote to an order, the status changes to Order Placed. Other statuses for the quote are defined by your company. Some of the statuses companies often use include Approved, Rejected, Expired, Placed, and Active.
Effective As Of	Defaults to the created date. You can change this, if appropriate.

Field	Comments
Effective Through	Defaults to the effective date plus 30 days. You can change this if the quote will be available for a different length of time.
Currency	Default currency for the quote.

3 Enter the following information in the new record and the More Info form:

Field	Comments
Name	Enter a name for the quote. If you do not enter a name, the quote number is assigned as the name.
Discount	(Optional.) Enter a default discount percentage to be applied to the line items you add to the quote. This discount will be used instead of any pricing rules associated with a price list. For more information, see "Applying a Manual Discount" on page 117.
Price List	Enter a price list to be used for the quote, if one is not assigned automatically through association with the account. Available price lists are restricted by the currency associated with this quote.
Opportunity	(Optional.) Select an opportunity associated with the quote. The account associated with opportunity is automatically inserted.
Account	Select the account with which the quote should be associated, if one has not been entered automatically.
Last Name and First Name	Select the contact for this quote, if one has not been entered automatically.
Due	(Optional.) Enter a due date for the quote.
Comments	Enter any comments about the quote.

Using Auto Quote from an Opportunity

If sales representatives are working with an opportunity where the products have already been specified, they can save time by using the Auto Quote button of the Opportunities screen to generate the quote.

Products are automatically copied from the opportunity to the quote if the Auto Quote check box for the product is selected. When end users create opportunities, they use the Product view of the Opportunity screen to specify products for the opportunity. When they add a product to this list, the Auto Quote check box is automatically selected, but they can exclude a product from a quote by clearing this check box.

To use Auto Quote

1 Navigate to the Opportunities screen.

2 In the Opportunities list, select the opportunity for which you want to generate a quote.

3 Click the Quotes view tab.

4 In the Quotes list, click Auto Quote.

   A new quote record appears. The products from the opportunity are copied into the quote.

5 Fill in the Name and Price List fields for the quote.

6 Optionally, drill down on the quote name to display the Quote Line Items view, where you can perform further work with the quote's products.

Performing Common Tasks

After starting the quote, you must enter all the information for it. Because the tasks for entering this information are the same whether you are creating a quote or an order, they are covered in "Common Tasks for Creating Quotes and Orders" on page 99.

Verifying the Quote

When you have finished creating a quote, you should verify it to see if you have made any errors.

You can also verify a quote while you are working with it. For example, you can verify the quote after changing it, to see if the change has introduced errors.

For information about how to verify a quote, see "Verifying a Quote" on page 147.

Creating an Order

This section describes how to create a new order that is not based on a quote.

If you have already created a quote, you should create the order by converting that quote to an order, rather than by using the procedures in this section. Then the order pulls in all the details from the quote, so you do not have to reenter these details. For more information, see "Converting a Quote to an Order" on page 158.

An advantage of creating an order that is based on a quote is that you can verify a quote to see if it has any errors. If you are creating a complex order that might have errors, you should do it by creating quote, verifying the quote, and then converting it to an order. For more information, see "Creating a Quote" on page 90.

To create an order that is not based on a quote, you perform the following tasks:

■ "Starting an Order". You can create a new order record from a number of screens.

■ "Performing Common Tasks". Because the remaining tasks for entering information about the order are the same whether you are creating a quote or an order, they are covered in "Common Tasks for Creating Quotes and Orders" on page 99.

■ "Submitting an Order". When the customer is ready to place the order, the end user submits the order. For more information, see "Submitting an Order" on page 163.

Starting an Order

This section describes how to start a new quote from a number of screens:

■ If you start the order from the Account, Service Request, Project, Contact, Campaign, or Contract screen, your Siebel application automatically copies information from that screen into the order.

■ If you start the order using the Orders screen, you must enter all this information manually.

For information about how to start an order based on an existing asset, see Chapter 7, "Using Asset-Based Ordering."

For information about how to start an order that will make changes to an existing asset, see "Creating a Delta Order" on page 171.

To start an order

1 Perform one of the following tasks, depending on which screen you want to start the order from:

■ To start an order from the Orders screen, navigate to the Orders screen, Sales Orders view.

■ To start an order for a particular account, navigate to the Accounts screen, select the account for which you want to generate an order, click the menu button, and then click New Order.

■ To start an order from a quote, service request, project, contact, campaign, or contract, navigate to the screen for the object, select the record with which the order will be associated, and click the Orders view tab.

2 In the Orders list, add a new record. The following information is added automatically:

Field	Comments
Order #	A unique system-generated number assigned to the order when the order is created.
Status	New orders are assigned the status Pending. The status can be changed later, as the order process continues. Some of the statuses companies often use for sales orders include Open, Awaiting Approval, Approved, Complete, Booked, In Transit, Shipped, and Cancelled.
Status as of Date	Initially, reflects the current date and time. When the status is changed, this field also updates to show the date and time when the status changed.
Priority	The priority of the order. New orders are assigned the priority Medium.
Order Date	The date the quote was created.

Field	Comments
Version	The version associated with the order. When the order is created, this value is typically 1. The number is incremented every time the order is revised. For details see "Revising an Order" on page 169.
State	The state of the order. For example: open, closed, pending. Note that this may not be the same as status.

3 In the Type field, select the type of order you are creating.

> **NOTE:** If you created the order from a contact, it is automatically created as a service order.

4 If you are in the Orders list at the bottom of the Accounts screen, Quotes screen, Service Request screen, or another screen, drill down on the order number to display the Order screen.

5 Click the Header Detail view tab.

6 In the Header Detail form, review any information that has been copied into the order, and make any necessary changes to it.

Field	Comments
Contact Last Name	Enter the contact for this order, if it has not been entered automatically.
Sold To Account	Enter the account to which this order will be sold, if it has not been entered automatically.
Sold To Address	Since an account may have more than one address associated with it, you can use this field to select the correct address for this order.
Team	Team with which the employee creating the order is associated. This is used to determine sales compensation. For more information, see *Siebel Incentive Compensation Administration Guide*.
Parent Order	The number of a parent order, if one is associated with this order.
Currency	The currency for the order.
Price List	Defaults to the price list associated with an account, if a price list is associated with an account. Price lists that can be assigned to this order are restricted by the currency.
Default Discount %	Enter a discount to be applied to line items instead of using pricing rules.
Requested Date	Enter the date requested by customer. Depending on your organization's process, this may be either the date the customer would like the products to be shipped, or the date the customer wishes to receive the order.

NOTE: Some of the information entered in the Header Detail form will be used as the default settings when you add line items. For example, the Default Discount % becomes the discount set for each line item. Changing it in the Header Detail does not affect the discount of current line items, but sets the discount for the next line items that you add. For additional information, see "Viewing and Recalculating Prices" on page 110.

7 Click the Line Item view tab.

8 In the Totals form, below the Line Item list, enter Shipping Method, Shipping Terms, and Carrier.

When you enter this information in the Totals form before adding line items, it will be the default for each line item.

Performing Common Tasks

After starting the order, you must enter all the information for the information. Because the tasks for entering this information are the same whether you are creating a quote or an order, they are covered in "Common Tasks for Creating Quotes and Orders" on page 99.

Submitting an Order

When the customer is ready to place the order, the end user submits the order. For more information, see "Submitting an Order" on page 163.

Common Tasks for Creating Quotes and Orders

After you have created either a quote or an order record, you must perform the common tasks described in this section to provide the remaining information required by the quote or order.

First, you must perform one of these two tasks:

■ "Creating a Quote" on page 90

■ "Creating an Order" on page 94

Then, to complete the quote or order, you perform the following tasks:

1 "Adding Products to a Quote or Order" on page 99

2 "Working With Line Items" on page 107

3 "Viewing and Recalculating Prices" on page 110

4 "Applying a Manual Discount" on page 117

5 "Adding Shipping Information" on page 121

6 "Calculating Shipping Charges" on page 122

7 "Calculating Taxes" on page 123

8 "Checking Availability to Promise (ATP)" on page 124

9 "Adding Payment Information" on page 128

Adding Products to a Quote or Order

Users add products to a quote or order as line items. They can do this in the following ways:

■ "Adding Multiple Items at One Time" on page 100

■ "Adding Items One at a Time" on page 100

■ "Browsing the Catalog to Add Line Items" on page 101

■ "Using Siebel eAdvisor to Add Line Items" on page 101

Adding Multiple Items at One Time

The Add Items feature allows an end user to add multiple items at one time and to specify the quantity and attributes for those items at the same time.

NOTE: Your company can set a flag in Siebel Tools to show only the products in the selected price list. For more information, see *Siebel Tools Reference*.

To add a product to a quote or order using Add Items

1 Navigate to the quote or order to which you want to add items.

2 In the Line Items list, click Add Items.

3 In the Pick Products dialog box, select the products to add to the quote.

   a Enter the quantity in the Order Qty field for the products you want to add and click Add.

   b To specify attributes for a product, click the Attributes button on the product row, complete the dialog, and click OK.

   c When you are finished specifying product quantity and attributes, click OK.

   The products appear in the Line Items list.

Adding Items One at a Time

The New Record menu option allows the user to enter one record at a time. This method is useful when the end user already knows the product name.

To add items one at a time

1 Navigate to the quote or order to which you want to add items.

2 In the Line Items list, click the menu button and then click New Record.

3 In the Line Items list, enter the product name in the Product field or click the select button in the Product field and select a product from the Pick Product dialog box.

4 Make any necessary changes to the quantity or attributes.

Browsing the Catalog to Add Line Items

While end users are creating quotes or orders, they can select products by browsing the product catalog. Some products may also have deals associated with them, which the end user can select to obtain special pricing for a customer.

NOTE: The Browse Catalog feature is only available if your company has purchased Siebel eCatalog. For more information, see *Siebel eSales Administration Guide*.

To browse the catalog to add line items

1 Navigate to the quote or order to which you want to add items.

2 In the Quote or Order header summary, click Browse Catalog.

3 In the Browse list, select each product to add by entering the quantity, and then click Add Item.

4 After you add the desired products, click View Details to return to the quote or order.

For more details about working with the Catalog, see *Siebel eSales Administration Guide*.

Using Siebel eAdvisor to Add Line Items

The Siebel eAdvisor is a needs analysis tool that helps customers find products that meet their needs. When a sales representative user starts eAdvisor, it presents a list of questions to help identify the appropriate solution for the customer. Based on the answers entered, eAdvisor displays a recommended product that can be added to a quote or order.

If a product has attributes, then the end user can make changes to the product.

For more information about Siebel eAdvisor, see *Siebel Interactive Designer Administration Guide*.

To use eAdvisor to add line items

1 Navigate to the quote or order to which you want to add items.

2 In the Order header summary, click Get Advice, or in the Quote header summary, click the menu button and then click Get Advice to launch an eAdvisor session.

3 Step through the needs analysis questions.

4 Make any additional changes you want to the line items via Siebel eConfigurator.

5 Click Add Items to add the product as a line item.

Using a Template to Add Line Items

Product selection templates are groups of products and attributes that have been saved for reuse. Some product selection templates are public, and are available to anyone using the Siebel application. Other product selection templates are private, and are available only to a specific user. Private templates are templates that an end user creates from an existing quote or order.

To add all the items in a template to the current quote or order

1 Navigate to the quote or order to which you want to add items.

2 In the Quote or Order header summary, click Select Templates.

3 In the Product Selection Templates dialog box, select the template you want to use and click OK.

The items and associated attributes are copied into the quote or order as line items. The end user can make any additional changes to the line items, such as selecting attributes or configuring a customizable product.

To add only some of the items in a template to the current quote or order

1 Navigate to the quote or order to which you want to add items.

2 In the Quote or Order header summary, click Select Templates.

3 In the Product Selection Template dialog box, drill down on the name of the template from which you want to select items.

The Product Template List appears, and the Product Template Item List shows all the products in this template.

4 Select the products you want to add to the current quote or order and click Add Selected Items.

The quote or order screen appears, and the items you selected appear in the Line Items list.

To create a private product template

1 Make sure the current quote or order contains the line items you want to save in the template.

2 In the Quote or Order header summary form, click the menu button and then click Save As Template.

3 In the Save As Template dialog box, enter a name for the template and click Save.

The items in the quote or order are saved as a private template.

To make changes to a private product template

1 Navigate to a quote or order.

2 In the Quote or Order header summary, click Select Template.

3 Drill down on the name of the template to which you want to make changes.

The Product Template List appears, and the Product Template Item List shows all the products in this template.

4 Add items, delete items, or customize the items shown, to make the desired changes.

Adding a Write-In Product

An end user can create a write-in product for items that are not included in the price list.

To add a write-in product

1 Navigate to the quote or order to which you want to add the product.

2 In the Line Items list, click the menu button and then click New Record.

    a In the Product field, click the Select button.

    b In the Pick Product dialog box, in the Product field, type *Write* and then click Go.

    c In the Pick Product dialog box, select Write-In Product and then click OK.

       The Part # and Qty fields are automatically populated.

3 Enter a product name and price.

    You can enter the price in the Discount Price or Discount Amount field.

4 (Optional.) As appropriate, modify the quantity.

Adding a Package of Line Items

The end user can use the Line Items list to create a group of products identified as a *package*. The *package price* is the rolled-up price of all the products in the group. If the end user discounts the price or changes the quantity of a product in the group, the price difference is automatically reflected in the net price and the extended price for the package. This is useful when the end user wants to give a price break to a customer based on the purchase of two or more items.

The end user first adds a line item that becomes the package container and then adds the components to the package.

To add the package container line item

1 Navigate to the quote or order to which you want to add the product.

2 In the Line Items list, click the menu button and then click New Record.

    a In the Product field, click the Select button.

    b In the Pick Product dialog box, query for the product name Package, select it, and click OK.

       In the Line Item list, Package appears in the Product field.

To add a product to a package

Once you have added the line item Package to a quote or order, you can add individual product items to the package.

1 Select the package line item, click the menu button and then click New Record.

A new line item row appears.

2 In the Product field, click the select button and in the Pick Products dialog box, select the first product you want to add to the package you just created.

NOTE: Only simple products can be added to the package as components. You cannot add customizable products or bundle products to a package.

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3 (Optional.) Modify the quantity and discounts for the product you just added. For information, see "Viewing and Recalculating Prices" on page 110.

4 Select the new product line item.

5 Indent the item:

- ■ If you are working in a quote, click the Indent button in the Line Item list.

- ■ If you are working in an order, click the menu button, and then click Indent.

The icon and number in the Sequence column change to reflect the addition of a product line item to the package.

To add more products to the package, repeat Step 1 through Step 4 for each item.

NOTE: In order to be added to a package, line items must be directly under the package item, so that you can indent them. If necessary, you can use the renumber feature to move items in the list, so that they appear below the Package item. For details, see "Renumbering Line Items" on page 107.

Adding a Service Product to a Quote or Order

Service products are generally associated with a physical product. For example, a warranty extension for a new computer would be set up as a service product.

When an end user adds a service product to a quote or order, the price of the service product is based on its list price plus a percentage based on a service method. The price, percentage, and service method are all specified in the price list for the service product. The service method specifies how the service price is calculated.

For example, if the list price of a service product is $100, the service method is Net Price (of the covered product) and the percentage is 10, then the price of the service will be $100 (its own list price) plus 10 percent of the net price of the product with which it is associated.

The methods for adding service products to a quote and to an order are different.

To add a service product to a quote

1 Navigate to the quote to which you want to add a service product.

2 Click the Line Items view tab.

3 In the Line Items list, select the line item for the covered product for which you want to add a service product and click Service.

4 In the Pick Sales Service Product dialog box, select the appropriate service product and click OK.

   The product is added to the Line Items list and the total price appears in the Totals form.

To add a service product to an order

1 Navigate to the order to which you want to add a service product.

2 Click the Line Items view tab.

3 In the Line Items list, add the product with which the service product will be associated.

4 In the Line Items list, add a record for the service product.

   a Click the menu button and click New Record.

   b In the Product field, enter the name of the of service product.

   The base price of the service product appears.

c In the Covered Product field for the service product, click the select button.

> **NOTE:** The Covered Product field can only be edited when the line item is a service product. For other products, this field is read-only.

d In the dialog box, select the physical product with which this service product is associated and click Add.

The price now reflects the service method and percentage, as well as the base price.

Working With Line Items

After adding products to a quote or order as line items, users may need to work with the line items in the following ways:

■ "Renumbering Line Items" on page 107

■ "Deleting a Line Item" on page 108

■ "Customizing a Product" on page 108

■ "Changing Component Quantities" on page 109

Renumbering Line Items

After end users have added all the line items for a quote, they can change the numbered sequence of the items. Items appear in this sequence in orders and reports, and a user may want to renumber them in a sequence that makes sense to a customer. For example, a customer might want a computer to appear at the top of the order, and the paper and toner to appear at the bottom.

To renumber line items

1 Navigate to the quote or order with which you want to work.

2 Click the Line Items view tab.

3 In the Line Items list, navigate through the columns until you see the Line column.

4 Select the Line field for items and renumber them as necessary.

5 Click the resort icon at the top of the Line column.

6 In the Line Item list, click the menu button and then click Renumber.

The line items appear in the updated sequence.

Deleting a Line Item

Sometimes an end user may need to delete a line item to remove a product from a quote or an order.

NOTE: To delete a component of a customizable product, the end user must do so in the configuration session. The end user cannot delete a component by deleting a record in the line items list, as described in the following procedure.

To delete line items

1 Navigate to the quote or order.

2 In the Line Items list, select the item.

3 Click the menu button, and then click Delete Record.

Customizing a Product

Some products that end users add to a quote or order can be customized. For instance, if a customer is interested in the computer products a company offers, the customer can select a computer system, but may also need to specify the type of monitor, hard drive, operating system, and so on. To create the quote or order, the end user first adds the computer system as a product line item, and then customizes it using Siebel eConfigurator.

The end user can tell when a product can be configured because the Customize button is enabled when the product record is selected. When a customizable product has components, the end user can expand the item to see the components included in the customizable product.

For more information about customizable products, see *Product Administration Guide*.

NOTE: The customize feature is only available if you have licensed Siebel eConfigurator.

To customize a product

1 Navigate to the quote or order that contains the product that you want to configure.

2 In the Line Items list, select the line item that contains the customizable product, or add a new record for a product that is configurable.

3 With the customizable product selected, click Customize to start a configuration session.

4 In the selection pages, check to see that the item is configured correctly and make any necessary or desired changes.

For information about how to customize the product in the configuration session, see *Product Administration Guide*.

5 If you working in a quote, click the menu button in the quote header and then click Verify.

NOTE: When you choose the Verify menu option in a quote, the quote is verified as complete or incomplete. Part of the verification process checks to see whether the customizable product is incomplete. If you removed an item from the customizable product that is part of the minimum configuration, you must click Configure again to launch another configuration session and add it back in.

Changing Component Quantities

A customer may want to order a different number of components than is set as the default in a customizable product.

Typically, end users change the quantity of a component in the configuration session that starts when they click the Customize button in the Line Items list. When an end user clicks Customize, Siebel eConfigurator checks all configuration rules to make sure that the change in quantity is appropriate.

Your company can decide to allow changes to component quantities directly in the Line Items list in the quote or order. For this to occur, a user property must be set in Siebel Tools. For more information, see "Configuration with Siebel Tools" on page 48.

When this user property has been set, the Qty field in line item for components of customizable products is editable. If the Qty field is read-only, then this user property has not been set.

Viewing and Recalculating Prices

The user may want to view the prices at many times while developing a quote and order.

Prices are recalculated automatically when the user performs certain actions. The user can also recalculate prices manually at any time, to see the latest price.

This section describes how the user can view and recalculate prices. It includes the following topics:

- "Factors That Impact Prices" on page 110

- "Price and Discount Fields in Quotes and Orders" on page 111

- "Viewing Deal Information" on page 115

- "When Prices Are Recalculated" on page 115

- "When To Manually Recalculate Prices" on page 116

Factors That Impact Prices

The prices for quotes and orders are based on:

- **Price list.** Determines the list price for each product and the promotional prices for products that have them. For information about setting up price lists, see *Pricing Administration Guide*.

■ **System-based pricing.** Price adjustments that are applied automatically, such as volume discounts, deals, and pricing factors associated with the account contacts. For information about setting up these price adjustments, see *Pricing Administration Guide*

NOTE: Advanced pricing rules, such as pricing factors, are available if you have Siebel ePricer.

■ **Manual discounts.** The sales representative can apply additional discounts manually. For information about manual discounts, see "Applying a Manual Discount" on page 117.

■ **Shipping charges.** determined by the shipping carrier and method indicated on the Fulfillment view tab for the quote or order. For information about shipping charges, see "Calculating Shipping Charges" on page 122.

■ **Taxes.** calculated on the final net price of the quote or order. For information about taxes, see "Calculating Taxes" on page 123.

Price and Discount Fields in Quotes and Orders

Price and discount fields are shown for:

■ Overall quote or order.

■ Individual line items.

Prices for the Overall Quote or Order

The Quote and Order header summaries show the total price for the quote or order, after all discounts.

The Quote header summary also shows the price list for the quote, and a default discount percentage to be applied to line items that the end user adds. For orders, these fields are on the Header Details view tab.

The Totals form at the bottom of the Quote Line Items view and the Order Line Items view show additional detail about the pricing and discounts for the overall quote or order.

Table 8 contains a description of the price and discount fields for the entire order.

Table 8. Price and Discount Fields for the Entire Order

Field	Comment
Discount (Percentage) or Default Discount	Shows a discount to be applied to items instead of any pricing rules. The discount entered here will be applied to items that are added to the quote or order after the discount is entered and to those that have already been added but do not have a pricing rule or line item discount associated with them. This value is entered as a percentage in the Quote header summary or the Order Header Details view tab. Although this discount is used instead of adjustments from price lists or pricing rules, it is used in combination with attribute-based pricing. This is called a manual discount.
	Entering a discount here selects the Keep Discount field for all items in the quote or order.
Products Net	Shows the net price of all product line items.
	Note: If a product does not have a product type set in Product Administration, the net price will not be included in the Products Net total, but it will still be included in the price shown in the Total field.
Services Net	Shows the net price of all service line items.
	In order for products to be identified as service products and included in this total, the product type must be set in Product Administration.
Training Net	Shows the net price of all training line items.
	In order for products to be identified as training products and included in this total, the product type must be set in Product Administration.
Total Item Start Price	The total start item price of all the line items, calculated by multiplying the quantity by the start price of each line item. (Start price is the list price or promotional price plus any attribute-based pricing adjustments.)
Total Item Discount	The total discount for all line items, based on discounts from price lists, pricing rules, volume discount, and additional discounts entered in the quote or order.
Total Item Net	The net price of all the items, after discounts.

Table 8. Price and Discount Fields for the Entire Order

Field	Comment
Adjustment	Any adjustment to the price for the quote or order. This amount is entered as a dollar figure and applied to the entire quote or order. (To apply an adjustment and spread it across line items in the quote or order, use the Spread Discount button instead of the Adjustment field.)
Shipping Charges	Charges for shipping, based on carrier and method, indicated in the Fulfillment view tab or the Totals form and calculated with the Calculate Shipping button on the Totals form.
Tax	Taxes on the items in the quote or order. Taxes are calculated with the Calculate Taxes button on the Totals form.
Total	Final total to be charged to the customer for the items in the quote or order. This amount appears in both the Totals form and in the header summary.
	Note: The amount shown in the Total field may not equal the amounts displayed in the Products Net, Services Net, and Training Net fields. If some products do not have product types associated with them in Product Administration, or if your company has created additional product types, the amounts shown in the Products Net, Services Net, and Training Net fields may not represent the prices for all of the line items in the quote or order.

Price and Discount Fields for Individual Line Items

The Line Items list and Line Item Detail form show the prices and discounts for individual line items.

Table 9 contains a description of the price and discount fields for individual line items for both quotes and orders.

Table 9. Price and Discount Fields for Individual Line Items

Field	Comment
Start Price	The price associated with the product in the price list, plus any attribute-based pricing adjustments. (Read-only)
Item Net Price	The price of the line item after discounts from pricing rules, volume discounts, or manual discounts. (Read-only)
Unit Net Price	The price of the line item (after discounts) plus the rollup of the item's components (after discounts). (Read-only)
Manual Discount	A discount for the line item can be entered in one of these three fields: **Discount Amount.** The amount to be discounted per unit, as a dollar figure. Applied to the Start Price. **Discount %.** The discount amount relative to the unit price, shown as a percentage. Applied to the Start Price. **Discount Price.** The total amount to be charged for the item, per unit. A value can only exist in one of these discount fields. When you enter an amount in one of these discount field, it replaces any entries in the other two discount fields. This discount is applied to the line item, overriding any adjustments from price lists or pricing rules, and replacing any default discount from the quote or order header.
Extended Price	Extended quantity times the start price, minus any discounts. This field appears in orders, but not in quotes. (Read-only)
Extended Net Price	Extended quantity times the unit net price. (Read-only)
Net Discount %	This field represents the net discount applied on the line as a percentage of the start price. (Read-only)
Non-Discounted Extended Price	The extended start price.
Current Discount	Description of the discount provided for the current quantity of this line item. For example: Buy 5-10, get 10% discount. (Read-only)

Table 9. Price and Discount Fields for Individual Line Items

Field	Comment
Next Discount	Description of the discount provided for the next level quantity of this line item. For example: Buy 11 to 20, get 20% discount. (Read-only)
Upsell	Message indicating the distance in units between the current quantity being ordered and the next minimum level break. For example: Buy 6 more and get a 20% discount.
Pricing Comment	If a pricing rule has been applied to this line item, any comments entered to explain that rule appear here. If more than one rule has been applied, you may see several comments. (Read-only)

Viewing Deal Information

When an end user access the Catalog to add products to a quote or order, the user may find deals available for specific products. An end user can make a deal available to a customer by selecting it in the catalog. The deal is then added to the line item in the quote or order, and listed on the Deals view tab.

For information about how deals are set up and implemented, see *Siebel Marketing Guide* and *Pricing Administration Guide*.

To view deals associated with a quote or order

1 Navigate to the quote or order.

2 Select the line item for which you want to review deals.

3 Click the Deals view tab.

The deals associated with the line item appear.

When Prices Are Recalculated

Prices in a quote or order are automatically recalculated:

■ Each time the end user adds an item to a quote or order

■ When the end user changes the quantity for a line item

■ When the end user changes the price list in the header

■ When the end user verifies a quote

■ When the end user adds a service product associated with a covered product

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NOTE: Line items are excluded from repricing when the Keep Discount field is selected. This field is selected when the end user applies a manual discount to the line item. For more information, see "Applying a Manual Discount" on page 117.

If a user wants a line item to be included in a repricing calculation, the user must be sure that the Keep Discount field is not checked.

When To Manually Recalculate Prices

At times when prices are not automatically recalculated, end users can manually reprice an individual line item or all line items.

End users should reprice individual line items when they have changed a parameter at the line level (other than product or quantity) that could affect price.

End users should reprice all line items when:

■ They want to have a bundle or aggregate-type pricing rule triggered.

■ They have changed a field on the quote or order that may affect the price. For example, changing the account might result in using different pricing factors that are associated with account.

To reprice an individual line item

1 Navigate to the quote or order.

2 In the Line Items list, select the line item.

3 In the Line Items list, click Menu, and then click Reprice.

To reprice all line items

1 Navigate to the quote or order.

2 For an order, in the Line Items list, click Reprice All.

3 For a quote, in the Line Items list, click Menu and then click Reprice All.

Applying a Manual Discount

End users can enter manual discounts for individual line items or for the entire quote or order. The end user can:

When a manual discount is entered, it overrides:

■ Promotions

■ Pricing factors

■ Volume discounts

Manual discounts do not override attribute-based pricing.

The end user can apply manual discount in the following ways:

■ "Applying a Default Discount to All Line Items" on page 117. Applies a default percentage discount to each line item as it is added it to the quote or order

■ "Applying a Manual Discount to an Individual Line Item" on page 118. Applies the discount to an individual line item.

■ "Applying a Manual Discount to an Entire Quote or Order" on page 119. Applies a discount to the quote or order total but does not apply any discount to line items.

■ "Spreading a Discount Across Line Items" on page 119. Applies a discount to the quote or order total and also applies this discount to the line items.

Applying a Default Discount to All Line Items

To apply a default percentage discount to all line items as they are added, there are different procedures for quotes and orders.

To apply a default discount to line items as you add them to a quote

1 Navigate to the Quotes screen, locate the quote with which you want to work, and drill down on the Name hyperlink for the quote.

2 In the Quote header summary, in the Discount field, select the discount (a percentage value) that you want to apply to the line items in the quote.

The percentage discount becomes the default for all new items that you add, and the Keep Discount check box will be selected for each line item.

3 Add the products that will receive this discount. For information about adding products, see "Adding Multiple Items at One Time" on page 100.

NOTE: If you change the default discount at the header level for either a quote or an order, the revised discount will be applied to any line items with which the default discount is associated. It will not be applied to any line items with which a pricing rule was associated before the default discount was initially set, and it will not be applied to any line items for which discounts were set at the line level.

To apply a header-level discount percentage to line items as you add them to an order

1 Navigate to the Orders screen, locate the order with which you want to work, and then click the Header Details view tab.

2 In the Header Details form, in the Default Discount % field, select the discount that you want to apply to the new line items in the order.

The percentage discount becomes the default discount for all items that you add, and the Keep Discount check box is selected for each line item.

3 Add the products that will receive this discount. For information about adding products, see "Adding Multiple Items at One Time" on page 100.

Applying a Manual Discount to an Individual Line Item

End users can also apply manual discounts to individual line items.

If an end user applies a manual discount percentage for a line item, the result overrides any default discount entered at the quote or order header level.

To apply a manual discount to an individual line item

1 Navigate to the quote or order with which you want to work.

2 In the Line Items list, select the line item to which you want to apply a discount.

> **NOTE:** You can also apply a manual discount to an individual component of a configurable product.

3 Click the Line Item Detail view tab, below the Line Items list.

4 In the Line Item Detail form, complete either the Discount %, Discount Amount, or Discount Price field. For more information about these fields, see "Price and Discount Fields for Individual Line Items" on page 114

5 Make sure that the Keep Discount checkbox is selected. (If you do not see this field, click the show more button.)

Applying a Manual Discount to an Entire Quote or Order
End users can also apply manual discounts to an entire quote or order.

> **NOTE:** This discount is not applied to individual line items. If you want to create a discount that is associated with line items, see "Spreading a Discount Across Line Items" on page 119.

To apply an adjustment to a quote or an order

1 Navigate to the quote or order with which you want to work.

2 In a quote or order view, click the Totals view tab, below the Line Items list.

3 In the Totals form, enter the amount of the adjustment in the Adjustment field.

The amount you enter is subtracted from the total price for the quote or order.

Spreading a Discount Across Line Items
Knowing the discount per line item is important both to assist in managing returns and for accurate accounting and reporting. However, for very large quotes and orders with a large number of line items, it is tedious to enter individual discounts for each line item.

An end user can enter a discount for the entire quote or order and spread it across all line items, or across line items of a particular type (products, services, or training):

- The end user enters the total price at which the quote or order is to be offered.

- This price is spread across the line items, in proportion to the extended start price for each line item.

- The discount amount is calculated for each line item by finding the difference between the start price and the unit net price.

NOTE: When the end user enters a spread discount, it replaces any previous discounts, including line item discounts that have the Keep Discount check box checked. However, it does honor minimum and maximum prices for the line item, if specified in the price list.

To spread a manual discount across all line items

1 Navigate to the quote or order with which you want to work.

2 In the Totals form, click Spread Discount.

The Spread Discount dialog shows the current total.

3 If you want the discount to be spread across only line items of a particular type (product, service, or training), uncheck the All Lines field in the Spread Discount dialog box and then select the type of items to which the spread should be applied.

4 In the Target Total field, enter the price you want the order to total and click Spread.

Your Siebel application performs the spread and enters unit net price and discount amount for each line item. If the line items previously had individual discounts, they are overridden by this spread. The Keep Discount box is automatically checked.

Adding Shipping Information

End users specify the following shipping information for a quote or order:

■ Ship-to information, including account name, contact name, and address.

■ Shipping method, terms, and carrier, which are factor in shipment cost.

■ Whether all the items should be shipped at the same time (Shipping Complete).

■ Whether all the items should be delivered at one time (Single Delivery).

When a user is working with a quote, the user specifies one shipping address for the entire quote. When a user is working with an order, the user can specify different shipping addresses for individual line items.

NOTE: If you want different line items on an order to be shipped to different locations, see "To specify different ship-to addresses for different line items in an order" on page 122.

To add shipping information to a quote or an order

1 Navigate to the quote or order with which you want to work.

2 Click the Fulfillment view tab.

The Ship To Account, Site, Contact, and Address are automatically populated based on the account information.

3 Change the default shipping information, if necessary, and fill in the Fulfillment form. Some fields are described in the following table.

Field	Comments
Shipping Method	Required. The method by which products should be shipped.
Shipment Terms	Required. The terms for shipment.
Carrier	Required. The carrier to be used for shipping.

Common Tasks for Creating Quotes and Orders

Field	Comments
Ship Complete	Check this box to indicate that all items in the order should be shipped together.
Single Delivery	Chick this box to indicate that all items in the order should be delivered at one time.

4 (Optional.) Enter a Requested Date and Source if desired. For more information, see "Checking Availability to Promise (ATP)" on page 124.

To specify different ship-to addresses for different line items in an order

1 Navigate to the order for which you want to specify ship-to information.

2 Click the Line Items view tab and select the line item of interest.

3 Click the Line Detail view tab, below the Line Items list.

A default ship to address appears, based on the address entered in the Fulfillment view tab.

4 For any line item which you want to have a different shipping address, enter a Ship To Last Name and Address in the Line Details form.

Calculating Shipping Charges

Shipping charges depend on the shipping method and carrier used.

The end user should enter shipping information before calculating shipping charges. For information, see "Adding Shipping Information" on page 121.

To calculate shipping charges

1 Navigate to the quote or order with which you want to work.

2 Click the Fulfillment view tab.

3 Select the Shipping Method and Carrier.

4 Click the Line Items view tab.

5 In the Totals subview, click the Calculate Shipping button.

The shipping charge is calculated and appears in the Totals form.

Calculating Taxes

If you do not have third-party software to calculate taxes, an end user can enter tax rates manually.

If your Siebel application has been integrated with third-party tax, an end user can use the Calculate Taxes button to determine taxes and insert them in a quote or order. If your application is not integrated with third-party tax software, the end user can enter a tax rate manually.

If a customer is tax exempt, an end user can indicate that on the Payments view tab. Select the Tax Exempt Flag field and enter a reason and tax exempt certification ID.

For customizable products, taxes may be calculated either on the individual components, or on the extended price for the customizable product. The method used is determined through the Product Administration screen.

NOTE: If you change items or prices in the quote or order, be sure to recalculate the taxes when you are finished.

To calculate taxes by entering a tax rate manually

1 Navigate to the quote or order with which you want to work.

2 Click the Payment tab and check the Tax Rate field. If a rate is not yet assigned, click Select and assign the appropriate tax rate.

NOTE: In a quote, click the Show More button to see the Tax Rate field.

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3 Click the Totals view tab to see the taxes.

To calculate taxes using third-party tax software

1 Navigate to the quote or order with which you want to work.

2 Make sure the ship-to address is accurate.

The ship-to address is used by third-party tax software when determining the tax rate. When line items in an order have different ship-to addresses, different tax rates may apply to the line items. For information about entering ship-to information, see "Adding Shipping Information" on page 121.

3 Click the Totals view tab and in the Totals form click Calculate Taxes.

The tax on the items appears in the Tax field on the Totals form.

Checking Availability to Promise (ATP)

Your Siebel application can check with your back-office software to determine the availability of products in a quote or order, so that an end user can confirm availability for a customer. Using this feature, an end user can request delivery by a particular date, inquire about availability, and then reserve the items. An end user can also request that items be shipped from a particular source, such as a warehouse or other inventory location. If a customer decides they do not need all of the items, the end user can also unreserve items from the quote or order.

NOTE: Your Siebel application must be set up to make special calls to your back-office system in order to use this functionality. For details, see "About Using Third-Party Product Availability Applications" on page 67

An end user can specify a requested date and source for the entire quote or order, or for individual line items. The end user can also request that certain items be shipped together, or that all items be shipped together.

To check availability and reserve items in a quote or order

1 Navigate to the quote or order for which you want to check availability.

2 Click the Fulfillment view tab.

3 In the Fulfillment form, enter any requested information that applies for the entire quote or order. The following table shows some of the fields you may want to set.

Field	Comments
Requested Date	The date you would like the items delivered. When entered in the fulfillment form, this date is for the entire quote or order; it will be copied onto each line item. Leave this field blank to request the earliest possible date.
Ship Complete	Check this field to indicate that the order needs to be shipped complete or not at all. All line items are assigned the number one in the Package field.
Source	Use this field to request that the items in the quote or order be shipped from a particular source. Leave this field blank to indicate that any source is OK. This source will be copied to each line item.
Single Delivery	Use this field to indicate that all line items in the order should be shipped from a single source and have a single delivery date.

4 Make any changes to the requested information for individual line items. The following table shows some fields you might want to change.

Field	Comments
Requested Quantity	Defaults to the quantity of the line item being ordered.
Requested Date	Leave this field blank to request the earliest possible date.

Field	Comments
Source	Use this field to request that information be shipped from a particular source. Leave this field blank to indicate that any source is OK.
Package	Use this field to indicate items that should be treated as one package and use the same delivery requirements. For example, if you have five items in an order, but primarily care that three items be shipped and delivered together, you would enter the same number in the Package column of each of those three records. If you check the Ship Complete field, a one is entered in the Package field for each item, indicating that the entire quote or order is one package.

5 Check availability for individual line items or for all line items.

- To check availability for an individual item, select the line item in the Line Items list below the Fulfillment form, and then click Inquire.

- To check availability for all items at once, in the Fulfillment form, click Inquire All.

Your Siebel application checks with your back-office system to determine availability for the line item, and the fulfillment engine returns information to the Promised Schedule Lines list.

6 If appropriate, reserve individual items or all items.

- To reserve individual items, in the Line Items list below the Fulfillment form, select the items and click Reserve.

■ To reserve all items at once, in the Fulfillment form, click Reserve All.

Your Siebel application sends a reservation request to your back-office system and the fulfillment engine returns an indication that the items are promised to the Promised Schedule Lines list.

NOTE: You can reserve items without having previously inquired about them.

When a line item is reserved, the requested quantity, date, and source are read-only. If you need to make a change to any of those settings, you must unreserve the items first.

Unreserving Items in a Quote or Order

If a customer no longer wants items they previously reserved, the end user can unreserve items in a quote or order.

To unreserve items in the quote or order

1 Navigate to the quote or order with which you want to work.

2 Click the Fulfillment view tab.

3 In the Line Items list, select the items which you want to unreserve and click Unreserve.

4 If you want to unreserve all items in the quote or order, click Unreserve All.

Splitting Line Items To Accommodate Different Requested Dates

A customer ordering a large quantity of the same item may want to request delivery of part of the order at two or more different times. In this case, the end user can split the line item, assigning quantities and requested dates to each new line. To split a line item, the end user enters two or more records in the Requested Schedule Lines and specifies the quantity and dates for each.

To split a line item across requested dates

1 In the Line Items list under the Fulfillment form, select the line item that you want to split.

2 In the Requested Schedule Lines list, click New and enter the requested date and quantity for the first batch.

3 Add another record in the Requested Schedule Lines list for the second batch.

4 Continue to add records until you have the appropriate number of delivery requests. Make sure that the total quantity matches the quantity in the Line Items list.

Adding Payment Information

End users enter billing and payment information in the Payments view tab of a quote or order.

In a quote, payment information is entered in one Payment form.

In an order, additional forms and fields are provided. The Order Payment form contains some general fields related to payment, such as bill-to and pay-to information, and payment terms. Specific information about payments are recorded in the Payment Lines list, below the Payment form, and in the Payment Details form, below the Payment Lines list.

Siebel Order Management provides these payment methods: credit card, purchase order, check, money wire, cash, and stored value. Your company may add other payment methods through list-of-values administration.

A customer may use one or more methods of payment for an order. In a quote, only one payment method can be indicated. If the customer wants to use multiple methods, the end user can specify them after the quote becomes an order.

Because the amount of payment detail that can be entered is different for quotes than for orders, separate sets of instructions are provided below.

To enter payment information for a quote

1 Navigate to the quote for which you want to enter payment information.

2 Click the Payment view tab.

3 In the Payment Method field, select the method to be used.

4 Complete any necessary fields related to the payment method:

- For a purchase order or billing number, enter the number in the Purchase Order # field, or select Pending if the customer does not yet have a PO number.

- For a credit card, complete these fields: Credit Card Type, Credit Card Number: Cardholder's Name, Expiration Month, and Expiration Year.

5 If payment terms are appropriate for this quote, in the Payment Terms field, click the select button, highlight the payment terms for this quote, and then click OK.

Your company's business process will determine when payment terms should be used.

To enter payment information for an order

1 Navigate to the order for which you want to enter payment information.

2 Click the Payments view tab.

3 If payment terms are appropriate for this order, in the Payment Terms field, click the select button, highlight the payment terms for this order, and then click OK.

Your company's business process will determine when payment terms should be used.

4 In the Payment Lines list, below the Payment form, click the New button to add a payment line item.

For the first payment line, the total amount of the order is copied into the Transaction Amount field.

NOTE: If this order was created from a quote which included payment information, that information appears as a payment line item.

5 If the customer will use more than one payment method, change the amount in the Transaction Amount field to the amount for this first payment method.

6 In the Payment Method field, select the method for the transaction amount.

The default payment method is Credit Card.

7 In the Payment Detail form below the Payment Lines list, complete additional fields for the selected payment method. For details about important fields for each payment type, see "Payment Fields for Payment Methods" on page 131. The required fields for each method are listed in the following table:

Payment Method	Required Information
Credit card	In the Payment Type field, select the type of credit card.
	Complete these additional fields: Credit Card Number: Card Holder, Expiration Month, Expiration Year, and Billing Address.
Purchase order	In the Purchase Order # field, enter the number.
Check	In the Payment Type field, select the type of check.
Stored value	In the Payment Type field, select the type of credit.
Cash	No additional information required.
Wire transfer	No additional information required.

8 For credit card and purchase order payments, check the customer's credit.

■ For a purchase order payment, click Credit Check.

■ For a credit card payment, click Authorize.

> **NOTE:** For sales orders, you will typically use Authorize before placing the order. Then later, after the order has been filled, you may return and click Settle. When creating field service orders or cash and carry orders, you may want to use Authorize and Settle instead of Authorize at the time of order.

9 Review the Payment Status field and select a status, if appropriate.

You may return to change this field later, for example, after receipt of a check. For details about changing the payment status, see "Changing the Status of a Payment" on page 138.

For each additional payment method, repeat Step 4 through Step 9. When you add another payment method, the transaction amount will default to the remaining amount not yet associated with a payment method.

Payment Fields for Payment Methods

Each payment method requires different information. When an end user adds a payment method to an order, the Payment Details form below the Payment Lines list shows the appropriate fields for that payment method.

The available buttons on the form also change, to reflect the appropriate actions for that payment type. For example, a cash payment does not need to be authorized or settled, while a credit card payment does.

The tables below list important fields for each of the payment methods.

- Checks - Table 10 on page 132

- Credit Cards - Table 11 on page 133

- Purchase Orders - Table 12 on page 134

- Wire Transfers - Table 13 on page 136

■ Stored Values - Table 14 on page 137

Table 10. Payment Detail Fields for Checks

Important Fields	Description
Transaction Amount	Amount for the individual payment transaction.
Payment Method	Check
Payment Type	Type of check being used: Personal, Corporate, or Cashiers.
Check Number	The identifying check number.
Date of Birth	The customer's date of birth.
Checking Account Number	The bank account number for the check.
ABA Code	The American Banking Association code for the bank on the check.
Social Security #	The customer's social security number.
Drivers License State	The state in which the customer has a drivers license.
Drivers License #	The customer's drivers license number.
Bill To Account Name and Address	Name and address of the account being billed for this payment line item. Defaults from the Payment form.
Authorization Code	Code indicating that authorization of the check has been given.
Authorization Date	Date authorization was given for the check. May be entered manually or configured to be entered automatically.
Check Mailing Address	Your company's mailing address, to tell the customer where to mail the check.
Payment Status	Defaults to Pending Receipt of Check Receipt. Change this after the check has been received and deposited, and funds received.

Table 11. Payment Detail Fields for Credit Cards

Important Fields	Description
Transaction Amount	Amount for the individual payment transaction.
Payment Method	Credit Card
Payment Type	The type of credit card. Out-of-the-box, available types are Visa, MasterCard, Discover, and American Express.
Credit Card #	The credit card number.
Expiration Month	The month the credit card expires.
Expiration Year	The year the credit card expires.
Issuing Bank	The name of the bank that issued the card.
Issuing Bank Phone Number	The phone number for the bank that issued the card.
Credit Card Holder	Name of the person on the credit card.
Billing Address, City, State, Zip	Address fields for the person responsible for this payment line item. Defaults to the account's bill-to address.
Payment Status	After you click Authorize or Authorize and Settle, the credit card authorization process returns one of these values as the status: **Authorized.** Indicates the credit card payment for the transaction amount entered has been approved. **AVS Failed.** Indicates that the address entered for the customer did not match the address in the Address Verification System (AVS). **Card Verification Declined.** Indicates this payment was declined because the card could not be verified. **Charged.** Indicates the charge was authorized and has been charged. **Declined.** Indicates authorization was declined. **Need Verbal Authorization.** Indicates that the bank must call the owner of the card for authorization. **Referral.** Neither approved nor declined. The bank needs to research something related to authorizing this payment.

Common Tasks for Creating Quotes and Orders

Table 11. Payment Detail Fields for Credit Cards

Important Fields	Description
Authorization Code	Code returned when the transaction was authorized.
Authorization Date	Date the transaction was authorized.
AVS Code	Code provided by the Address Verification System (AVS) to indicate the address for the credit card was verified.
Customer Code	For a corporate customer, a code verifying that the credit card may be used.
Card Verification #	This is a four digit unique identifier that is often printed on the back of a credit card. It is used to reduce fraud because only the person holding the card should know it.
	This field should be deleted after the number is submitted for authorization.
Merchant ID	Your company's identifying number. If more than one Merchant ID is available, the correct ID for this payment can be selected from drop-down list.

Table 12. Payment Detail Fields for Purchase Orders

Important Fields	Description
Transaction Amount	Amount for the individual payment transaction.
Payment Method	Purchase Order
Purchase Order #	Number of the purchase order. May display Pending if the order was created from a quote which had Pending as the PO#.
Payment Type	For a purchase order, the payment type is Payment.
Payment Status	Status of the payment. Defaults to Pending Check Receipt. Change this after the funds have been received.
Credit Status	Status information returned from the back office after a credit check is done by clicking Check Credit.
Credit Status As Of	Date the credit check status information was returned.

Table 12. Payment Detail Fields for Purchase Orders

Important Fields	Description
Credit Check Message	Message text returned with the credit status.
Bill To Account	Name of the account responsible for this payment line item.
Bill To Address	Address of the account to be used in relation to this payment line item.
Approval Date	Date that the purchase order payment was approved.
Approved By	The name of the person who authorized the purchase order.
Authorization Code	Code returned when the payment was authorized.
Authorization Date	Date the payment was authorized. May be the date the funds appear in the account.
Payment Comments	Any comments appropriate for this payment.

Table 13. Payment Detail Fields for Wire Transfers

Important Fields	Description
Transaction Amount	Amount for the individual payment transaction.
Payment Method	Wire Transfer
Originating Bank	The bank sending the transfer.
Branch Bank Address, City, State, Zip	The address of the bank sending the transfer of funds.
Bank Routing #	Routing number for the bank.
Payment Account #	Wire transfer account number.
Date of birth	The customer's date of birth.
Bill To Account Name	Name of the account responsible for this payment line item.
Contact Name	Person to contact in relation to this payment line item.
Contact Phone	Phone number for the contact.
ABA Code	The American Banking Association code for the bank on the check.
Social Security #	The customer's social security number.
Authorization Code	Code returned when the payment was authorized.
Authorization Date	Date the payment was authorized. May be the date you see the funds in the account.
Payment Status	Status of the payment. Defaults to Pending Check Receipt.
Drivers License #	The customer's drivers license number.
Drivers License State	The state in which the customer is licensed to drive.

Table 14. Payment Detail Fields for Stored Value

Important Fields	Description
Transaction Amount	Amount for the individual payment transaction.
Payment Method	Stored Value
Payment Type	Type of stored value. Preconfigured values are Gift Certificate and In-Store Credit
Payment Status	Status of the payment. Defaults to Pending Check Receipt.
Contact Name	Contact name associated with the stored value.
Payment Account #	Number of the account that will provide the payment of the stored value.
Account Name	Name of the account with which the payment is associated. Defaults to the bill-to account.
Authorization Code	Code returned when the payment was authorized.
Authorization Date	Date the payment was authorized. May be the date you see the funds in the account.

Approving a Payment

Depending on how your company has set up payments, certain payment methods may require approvals before they can be accepted.

The initial payment status is set to pending. A user with approval capabilities will then need to change the status to approved.

NOTE: Approving a payment is not the same as authorizing a payment. Authorization performs a credit check through a back-office system.

To approve a payment

1 Navigate to the quote or order for which payment needs to be approved.

2 Click the Payment view tab.

3 In the Payment Lines list, select the purchase order payment to approve.

4 In the Payment Detail form, below the Payment Lines list, enter your name in the Approved By field and enter today's date in the Approval Date field.

Changing the Status of a Payment

The status assigned to a payment may be set automatically in some cases (such as when a credit card is authorized), but needs to be set manually in others. For example, when the payment method is a check, the initial status is set to Pending Check Receipt. After a company receives funds for the check, an end user can manually change the status of the payment transaction to Authorized, for example.

Your company may also create business processes that automatically update the status under certain circumstances.

Table 15 lists the possible payment statuses and explains when they are likely to be used.

Table 15. Payment Statuses

Status	Comment
New	Payment information was sent, but confirmation of receipt from the back-office system was not received. The message may not have been received.
Authorized	The payment has been authorized.
Declined	The payment has been declined.
Charged	The payment has been charged to a credit card.
Refunded	The payment has been refunded to the customer.
Reversed	The payment shown was previously charged to a credit card, and that charge has been reversed; a credit for the same amount was sent to the credit card.
Referral	Payment has been held by the bank until they can gather additional information.
Pending Check Receipt	A check, purchase order, or wire transfer has been received. Receipt of the payment has not yet occurred.

Table 15. Payment Statuses

Status	Comment
AVS Failed	Indicates that the address entered for the customer did not match the address in the Address Verification System (AVS). Typically used with credit card payments
Card Verification Declined	A third-party authorization system was not able to verify the credit card.
Need Verbal Authorization	This payment needs to be verbally authorized by the credit card company.

To change the status of a payment

1 Navigate to the quote or order for which the payment status needs to be changed.

2 Click the Payment view tab.

3 In the Payment Lines list, select the payment for which you want to change the status.

4 In the Payment Detail form, below the Payment Lines list, select the appropriate status in the Payment Status field.

Viewing Payments

With Siebel Customer Order Management, end users can review payments by account, type, status, and other important metrics. This can be a quick way to review a number of payments at once. This can be helpful when your company's payment system is down.

To review information about a number of payments at once

1 Navigate to the Payments screen.

2 Query to display the particular payments you are interested in.

3 To see history for a particular payment, highlight it in the Payments list, and review the information in the Payment History tab, below the Payment Detail form.

Checking Credit for a Purchase Order

An end user can check a customer's credit when the payment method is a purchase order.

The end user can also check credit when payment is via credit card. For information, see "Authorizing and Settling Credit Card Payments" on page 140.

To check credit for a purchase order

1 Navigate to the quote or order which you are working.

2 Click the Payment view tab.

3 If necessary, enter the purchase order information.

4 In the Payment form, click Credit Check.

Your Siebel application sends an authorization request to your back office or financial system to confirm whether the purchase order is valid and the payment can be authorized.

The back-office system returns information to three fields: Credit Status, Credit Status As Of, and Credit Check Message.

Authorizing and Settling Credit Card Payments

In an order, an end user can check authorization of payment by credit card and can then settle the payment, to collect the amount authorized.

The end user can also check credit for purchase orders. For information, see "Checking Credit for a Purchase Order" on page 140.

For credit card authorization to be available, your Siebel application must have implemented integration with another payment processor. For more information, see *Siebel eSales Administration Guide*.

NOTE: The user can authorize and settle credit card payments only in orders. You can use Siebel Tools to make authorization available in quotes also: you must expose the Authorize button in the Payment view of the Quotes screen.

To authorize and settle a credit card payment in an order

1 Navigate to the order with which you are working.

2 Click the Payments view tab.

3 If necessary, add a Payment Line and enter the credit card payment information, or select the payment line containing the credit card payment.

4 Perform one of the following:

■ To authorize the credit card payment, in the Payment Detail - Credit Card form, click Authorize.

■ To settle a payment that has previously been authorized, click Settle.

■ To authorize and settle a credit card payment at the same time, click Authorize and Settle.

Your Siebel application sends an authorization request to a third-party payment processing system to confirm whether the payment can be authorized, and settled, if appropriate.

NOTE: When the end user clicks Authorize or Authorize and Settle, credit check calls a payment processing system to approve the transaction. Sometimes an error will be returned, or the payment will be rejected. When this occurs, the end user can use the status and any error message returned to determine the appropriate course of action.

Authorizing a Credit Card Payment Manually

When the credit check of a credit card payment returns the Payment status Declined or Referred, the end user will need to assess the reason the payment has not been approved. If the end user determines that the payment is good, he or she can manually authorize the payment. In such a case, the end user should obtain an authorization code verbally from the credit card company.

To manually authorize a credit card payment

1 Navigate to the order with which you want to work.

2 Click the Payments view tab and select the credit card payment line with the Payment Status of Declined or Referred.

3 In the Authorization Code field, enter the authorization code.

4 When you are prompted to confirm the change to the order, click Yes.

Your Siebel application accepts the new entry and the credit status on the line item is changed to Authorized. A note is displayed in the Payment History with the change request date and requestor. This manually entered code will be used to validate the order approval with the bank during settlement processes.

Checking Payment History

It is important to be able to explain to customers all of the transactions that relate to their payment method. An end user can see all transactions against a specific payment line by checking the payment history. For example, if a credit card is authorized manually, that action will be noted in the history, along with the date and requestor.

The specific changes that are recorded in the payment history are determined by settings your company makes in the Application Administration screen > Audit Trail view. For complete information about setting up Audit Trail, see *Applications Administration Guide*.

To check payment history

1 Navigate to the order for which you want to check payment history.

2 Click the Payments view tab.

3 In the Payment Lines list, below the Payments form, select the payment for which you want to see history information.

4 Click Payment History.

The Payment History dialog box appears, listing information about changes to the payment item.

Entering Refunds

An end user can enter a refund of a credit card payment for a customer, when appropriate. Refunds are given after a settlement of a payment has occurred and funds have been transferred.

To enter a refund

1 Navigate to the order for which you want to enter a refund.

2 Click the Payments view tab.

3 In the Payment Lines list, below the Payments form, select the credit card payment for which you want to enter a refund.

Click Refund.

This chapter describes how end users work with existing quotes. For information about creating a new quote, see Chapter 4, "Creating a Quote or Order."

A quote is an offer to a customer for specific products and services at a specific price. Quotes can be generated by end users such as call center agents, sales representatives, and sales administrators. The quote may include products and services (configured to show the customer-selected attributes), effective dates, price lists, any discounts by line item and by account, and the price per item.

The Quote Header Summary

A Quote header summary appears at the top of each Quote detail screen. The header summary contains key information fields, and remains present on the screen as the end user accesses the various view tabs to enter and review information during the quote process. Figure 5 shows an example of the Quote header summary.

Figure 5. Quote Header Summary

Topics in this Chapter

This chapter covers the following topics:

- "Updating an Opportunity from a Quote" on page 149

- "Including Quote Items in a Forecast" on page 149

- "Accessing An Existing Quote" on page 151

- "Creating a Delta Quote" on page 152

- "Creating Quote Favorites for Reuse" on page 154

- "Revising a Quote" on page 157

- "Converting a Quote to an Order" on page 158

- "Converting a Quote to an Agreement" on page 159

- "Displaying Charts to Analyze Quotes" on page 160

Verifying a Quote

Your company may request that end users verify a quote manually, or the verification process may be handled automatically through a customized workflow process. End users should check with the application administrator to find out how the verification process is handled for your company.

When an end user verifies a quote manually, quote verification performs the following:

■ Verifies that the price list is valid. This includes checking that:

   ■ The price list exists in the dialog box

   ■ The price list starts before the quote's start date and ends after the quote's end date (if the quote start date and end date exist)

■ Verifies that the products within the line items are valid. This includes checking that:

   ■ The product exists in the dialog box

   ■ The product starts before the quote's start date and ends after the quote's end date (if the quote start date and end date exist)

   ■ The product has valid attributes

   ■ The product has the correct list price

■ Checks to see if a configurable product has been added. If it has, verifies that all required components are included

■ Verifies that the discount amount of the quote does not exceed the quote's total list price

■ Checks credit status, if a purchase order has been entered as a payment type

To verify a quote manually

1 Navigate to the quote you want to verify.

2 In the Quotes list or the Quote header summary, click the menu button and then click Verify.

Your Siebel application checks the validity of the products, price lists, and totals shown in the quote. When verification is complete, you will see a message. Any problems in the quote are detailed.

Updating an Opportunity from a Quote

When a quote is associated with an opportunity, an end user may want to update the opportunity with any new quote information. It is important to keep opportunity information updated with quote information in order to maintain accurate forecasts and charts. When an end user updates the opportunity, information is updated in the Products and Revenues tab.

To update an opportunity from a quote

1 Navigate to the Quotes screen > All Quotes view.

2 In the Quotes list, select the quote, click the menu button and then click Update Opportunity.

NOTE: The Update Opportunity menu option is also available from the menu in the Quote header summary at the top of a quote detail view.

Including Quote Items in a Forecast

When an end user updates an opportunity from a quote, one piece of information that is sent is whether a product is forecastable. The default setting for this in the quote is determined by a setting in Product Administration. By default, in Product Administration, components of customizable products and product bundles are marked as forecastable, unless explicitly changed. Simple products are marked as forecastable and cannot be changed in Product Administration. Components of bundles are marked as not forecastable by default, but can be changed to forecastable.

If end users want to make sure that a product in a quote will be forecastable, they can review the setting in the quote, and mark it as forecastable if necessary. The Forecastable field is available on the Line Item Detail subview.

To mark items in a quote as forecastable

1 Navigate to the Quotes screen > All Quotes view and create a quote.

2 Click the Line Items view tab and add the appropriate products and services as line items.

3 In the Line Item Detail subview, click the show more button.

4 In the Line Items list, select the item you want to check, and make sure that the Forecastable check box is selected. Repeat this step for each product you want to check.

5 When you are finished working on the quote, update the opportunity. For details, see "Updating an Opportunity from a Quote" on page 149.

Accessing An Existing Quote

When an end user wants to review an existing quote or make changes to it, the end user can access the quote from a number of different places in your Siebel application. The procedures in this documentation primarily describe accessing quotes from the Quotes screen, but end users can also access quotes from an opportunity, from an account, from a contact, or from a service request.

To access an existing quote

1 Navigate to one of the following screens:

- Quotes > All Quotes

- Opportunities > All Opportunities

- Accounts > All Accounts

- Service Requests > All Service Requests

- Contacts > All Contacts

2 Click the Quotes view tab. (Not necessary if you are already on the Quotes screen.)

3 In the Quotes list, drill down on the quote name.

The Line Items list and Totals subview appear, displaying details of the quote.

The end user can now make additions or changes to the quote, if it is still in progress, or the end user can revise the existing quote, if appropriate. For more information, see Chapter 4, "Creating a Quote or Order" or "Revising a Quote" on page 157.

Creating a Delta Quote

When a customer has purchased a customizable product that has attributes and features that can be modified, an end user can create a quote to add to or modify those items. For example, if sales representatives sold a company several hundred computers, they could have many different specifications for drive capacity, memory, and other attributes that the customer might want to modify throughout the product's lifetime.

Once purchased, products are listed within your Siebel application as customer assets. When the sales rep creates a quote that modifies an asset, it is referred to as a *delta quote*. Using the computer example described above, the end user could provide a delta quote to the customer company for additional memory. The end user would create a quote and select the customer's customizable asset—in this case, the computer model. Then the end user would configure the asset by adding or removing items and saving your changes. By creating the quote from the asset, the end user is assured that the memory that is selected will work with the installed computer.

The following procedure describes one way of creating a delta quote. If you have the Siebel Order Management module, end users have additional, simplified ways of creating asset-based quotes. For more information, see Chapter 7, "Using Asset-Based Ordering."

To create a delta quote

1 Navigate to the Quotes screen and create a quote for the appropriate customer account.

2 Click the Line Items view tab, click the menu button, and then click Delta Quote.

   The Customizable Asset dialog box appears, displaying all customizable product assets that the are listed for the customer.

3 Locate the asset you want to add to the quote and click OK.

4 Highlight the customizable asset and click the Customize button in the Line Items list.

   This starts a configuration session. The configuration of the customizable asset displays in the session's selection pages.

5 Revise the configuration of the customizable asset by making selections and click Done to return to the Quote list.

The revised configuration displays in the Quotes screen, Line Items list.

Only the items changed during configuration have a price. Unchanged items have no price associated with them.

All the items in the revised asset receive a status when they are copied to the quote after a configuration session. The status tells you whether the item was changed during the configuration session. The following table describes the delta statuses.

Delta Status	Comments
Existing	All items that were not changed. These items display no price.
New	All items that have been added or for which the quantity increased. If the quantity of an item increased, the original quantity is shown with a status of Existing. A second entry in the quote shows the increase, has a status of New, and displays a price.
Deleted	All items that were removed or decreased in quantity. If the quantity of an item is reduced, the new quantity is displayed with a status of Existing. A second entry in the quote shows the reduction and has a status of Deleted. For example, if a component has been eliminated from the configurable product, and another component has taken its place, the former component would be marked Deleted.
Modified	All items for which attribute settings have changed. All items with a status of Modified are priced as new items.

NOTE: The Delta Status field is on the Line Item Detail form, below the Line Items list in the Quote detail screen. You may need to click the show more button in the Line Item Detail form in order to see the Delta Status field.

Creating Quote Favorites for Reuse

A *favorite* is a particular product with a specific set of attributes, or a particular configuration of a customizable product or package that an end user has created in a quote and wants to reuse at another time for another quote. For instance, a sales rep might notice that there are several common configurations for the PC computer system that the sales rep sells. Rather than customize these manually for every quote, the sales person can create one and save it, and then reuse it the next time she needs to produce a similar quote.

Similarly, if the sales representative has created a specific product package, the sales representative can save it to use again. For more information about packages see "Adding a Package of Line Items" on page 104.

A favorite can contain only one line item, although that item may be a customizable product.

A sales rep who wants to save and reuse a combination of line items in another quote, or in an order, can create a product selection template. For more information, see "Creating Product Selection Templates" on page 44.

To save a favorite

1 Navigate to the Quotes screen > All Quotes view.

2 In the Quotes list, locate the quote you want to work with and drill down on the Name hyperlink.

3 Highlight the line item you want to save and review it to make sure it contains the information you want to save.

4 In the Line Items view, click the menu button and then click Save as Favorite.

5 In the Save as Favorites dialog box, enter a name.

NOTE: If you want other users to be able to use this favorite, clear the Save as a Personal Favorite checkbox.

6 In the Favorites dialog box, click Save.

Using a Favorite in a Quote

After the Favorite has been created, the end user can use it by selecting Favorites Manager from the menu.

To use a favorite in a quote

1 Navigate to the Quotes screen > All Quotes view and create a new quote.

2 Click the Line Items view tab.

3 Click the menu button and then click Favorites Manager.

4 In the Favorites dialog box, select the favorite you want and click Start from Favorite.

The products from the favorite are copied into the quote.

5 Make any additional changes you want to the quote.

Deleting a Favorite

In order to be able to delete a public favorite, you must use Siebel Tools to set up a Favorites Administrator. For more information about Siebel Tools, see *Siebel Tools Reference*.

NOTE: This procedure gives you high-level instructions for setting up a Favorites Administrator. You should not do this unless you understand how to use Siebel Tools.

To set up a Favorites Administrator

1 In Siebel Tools, lock the project *Cfg Favorites*.

2 Select the buscomp *Cfg Favorites Quote Item*.

3 Create a user property *Cfg Favorites Administrator*.

  a d) Set Name = Cfg Favorites Administrator

  b e) Set Value = < your setup's login name > (for example: SADMIN)

4 Compile the SRF file, apply it to the server, and restart the server so it takes effect.

Now, anyone who logs in as the Favorites Administrator can delete a public favorite.

Revising a Quote

End users can make changes to an initial quote to keep it updated with the appropriate products, price lists, discounts, and so forth. During negotiations with a customer, an end user can add or delete products from a quote and compare features and price.

The Revise feature allows an end user to revise your original quote. Revising a quote creates a new quote record with the same quote number. The versions are distinguished by a revision number. All revisions of a quote appear in the quote list.

NOTE: Making changes to a quote does not automatically create a revised quote. If the end user wants to keep the original quote and have a revision, the user must complete the steps in the following procedure to create a revised quote.

To revise a quote

1 Navigate to the Quotes screen > All Quotes view.

2 In the Quotes list, select the quote you want to revise.

3 Click Revise.

   A new quote, with the same quote number is created.

4 Revise the information in the quote form, the line items, or other information as needed.

   In the Quotes screen you will see both the original quote and the revised quote. You can verify which one is the revision by looking in the Revision column.

NOTE: When the end user revises a quote, the original quote becomes inactive and read-only.

Converting a Quote to an Order

When a customer agrees to purchase the items on a quote, an end user can convert the quote to an order.

To convert a quote to an order

1 Navigate to the Quotes screen.

2 In the Quotes list, locate the quote you want to work with and drill down on the Name hyperlink.

3 Review the line items and related details and make sure they contain the correct information.

4 Click the Orders view tab.

5 Click either Sales Order or Service Order, depending on the type of order you want to create from this quote.

An order is created from the quote, and appears in the Orders list.

6 To work with the order, drill down on the order number.

The Order Screen, Line Items view appears.

Converting a Quote to an Agreement

Rather than converting a quote to an order, you can convert a quote to an agreement. There are a number of reasons that you would create an agreement from a quote:

■ To create recurring service contracts that identify terms and conditions, including service level agreements and payment terms.

■ To create of pricing contracts that identify sets of products and services and associated pricing for future purchases.

For more information about agreements, see *Siebel Field Service Guide*.

To convert a quote to an agreement

1 Navigate to the Quotes screen.

2 In the Quotes list, locate the quote you want to work with and drill down on the Name hyperlink.

3 Review the line items and related details and make sure they contain the correct information.

4 Click the Agreements view tab.

5 Click AutoContract.

An agreement is created from the quote, and appears in the Agreements list.

6 To work with the agreement, drill down on the agreement number.

The Agreements Screen, Line Items view appears.

Displaying Charts to Analyze Quotes

You can use the following charts to analyze quotes:

■ **Account Analysis.** Shows the number of quotes for each account.

■ **Account Discount Analysis.** Shows the average discount for the quotes for each account.

■ **Rep Discount Analysis.** Shows the average discount for the quotes for each sales representative.

■ **Status Analysis by Rep.** Shows the status of the quotes for each sales representative. Typical statuses are In Progress, Approved, Accepted, Order Placed.

NOTE: The charts analyze all quotes displayed in the Quotes list. It does not matter which quote is selected when you click the Charts view tab. You may display My Quotes view, My Team's Quotes View or All Quotes view before creating a chart. You may also use a query to limit which quotes are displayed in the list and included in the chart.

To display charts analyzing quotes

1 Navigate to the Quotes screen.

2 Optionally, use a query to display only the quotes in the Quote list that you want to be included in the chart.

3 Click the Charts view tab.

4 In the Show drop-down list, select the type of chart you want to view.

5 To view different types of chart, such as pie charts and horizontal bar charts, select the chart type from the other drop-down list and click Go.

6 If you are viewing the Status Analysis by Rep chart, you can use the By drop-down list to display the result either by sales representative or by status.

Working with Orders   6

This chapter describes how end users work with existing orders. For information about creating a new order, see Chapter 4, "Creating a Quote or Order."

An order is a commitment on the part of the customer to purchase products and services at a specific price. Orders can be generated by sales people from quotes, or may be created directly by call center agents and sales administrators. Orders can be created and placed all at once, or developed in stages as the customer clarifies the configuration of the items, requests availability, payment information, shipping information, and other details. When the order is complete, the end user submits it.

After the order is placed, a call center agent can monitor the order, proactively informing the customer of order status and delivery information. In the case of a customer inquiry, an agent can use the Get Status business service to obtain the latest information and determine the status of the order, if the order is being processed by the back office. In the event that post-order service is required, service requests and returns can be created against the order.

Orders are identified as either sales orders or service orders. Sales orders are generally for new products, while service orders are used to support service parts processing, including part locator, repair depot, and so forth.

End users work with sales orders and service orders in very similar ways, however some features are specific to each type. This chapter focuses primarily on sales orders. For details about working with service orders, see *Siebel Field Service Guide*.

If your company purchased Siebel Incentive Compensation, end users can specify who should receive compensation for an order in the Sales Credit Assignment view tab. For more information, see *Siebel Incentive Compensation Administration Guide*.

Order Header Summary and Header

Basic information about an order is contained in three forms: the More Info form, Header Details, and the Order header summary.

The More Info form details the information shown in the Orders list, and includes fields that end users may want to use to help identify or locate a particular order, such as account and contact information, order number, requested date, and the order total.

When an end user drills down on a particular order, the user sees an Order header summary at the top of each Order detail screen. This header summary repeats some of the key summary information about an order that the user may want to have in view while working with the various details of an order. For example, the end user can continue to see the total, status, and requested date while entering line items, shipping information, and payment details.

The Header Details form contains information that is applicable to the entire order. Some of the fields in the Header Details form are used to default the corresponding values for the order line items when an end user adds them. For example, end users can set a default discount to be applied to line items as they add them. This minimizes the entry the end user has to do for individual items in large orders. However, end users can still override this with discounts to some or all individual line items, as they add them.

Topics in this Chapter

This chapter covers the following topics:

Accessing An Existing Order

An end user can access an existing order from most of the same places the user can create an order.

To access an existing order

1 Navigate to one of the following screens:

- Orders > All Sales Orders

- Accounts > All Accounts

- Service Requests > All Service Requests

- Contacts > All Contacts

- Agreements > All Agreements

2 If necessary, in the main screen you are working with, click the Orders view tab.

3 In the Orders list, drill down on the order number.

The Line Items list and Totals subview appear, displaying details of the order.

4 The end user can now continue to work with the order.

Submitting an Order

After the end user has completed the information for an order, the user submits it. Submitting the order sends the order to the manufacturing system or warehouse system for fulfillment.

Submitting the order typically sets the status to Booked.

Before end users submit an order, they may want to check to make sure it has an Active status, current dates, a valid price list, and that any customizable products have been configured appropriately.

To submit an order

1 Navigate to the order that you want to submit.

2 In the Order header summary, click Submit.

If your company has configured an approval process, the order is evaluated by assignment manager rules, and is routed to a manager for approval, if appropriate. If the order meets any approval rules, the order is validated and submitted to your back office system for fulfillment.

Associating an Activity Plan or Activity with an Order

Individual activities or activity plans (collections of activities) can be associated with one or more line items in your order.

Activities are tasks that should be performed after the order has been finalized and submitted. For example, when a customer purchases an item that needs to be installed, an activity template might list all of the activities that need to occur to support that installation. When that template is added to the line item, the activities from it are assigned to the appropriate people, and will appear in their activity lists.

Typically the administrator sets up activity templates in advance so that end users can add them to items in an order. End users can also add individual activities. For information on setting up activity templates, see "Setting Up Activity Plan Templates" on page 45.

To associate an activity plan template with a line item

1 Navigate to the order with which want to associate an activity plan.

2 Select the line item that requires activities.

3 Click the Activity Plans view tab.

4 In the Activity Plans list, click New.

Today's date is assigned as the planned start date for the activities. You can change it, if required.

5 Select the appropriate activity plan template from the Templates drop-down list.

You see the activities associated with the template in the Activities list.

6 Click the Activity view tab.

7 In the Activity list, make any appropriate adjustments to the activities.

If an employee's name is indicated in the activity, the activity will display for that person when the person goes to the My Activities view.

To add an individual activity to a line item

1 Navigate to the order with which you want to associate an activity plan.

2 Select the line item that requires activities.

3 Click the Activity view tab.

4 Click New to add a new record.

The activity type defaults to Appointment.

5 Complete the fields to define the activity.

Approving An Order

Some orders will require approval. If your company has configured an approval process as part of its order management process, an order may be automatically flagged for approval based on price. A typical configuration of this might cause the status to be changed to Awaiting Approval and the Approver's name to be inserted in the Approved by field when the sales representative clicks Submit.

For example, if an end user has authority to place orders for $1,000, and a customer wants to order merchandise totalling $1,200, the order needs to be approved before it can be submitted.

The steps below describe the steps an end user might take to approve an order when that user is the approver. The exact steps may vary, depending on your company's configuration of this process.

To approve an order

1 Navigate to the Orders screen > All Orders view.

2 Sort the list of orders by status and scroll the list, if necessary, to bring orders with the status Awaiting Approval into view.

3 Review the order to make sure it meets your approval.

4 When you are ready to approve the order, click the More Info view tab and check the Approved field. If necessary, enter today's date in the Approved Date field.

Monitoring an Order

After an order has been submitted, an end user can monitor it by:

■ Checking the Status of Order Fulfillment and Shipping. The end user can do this to make sure that it is being handled appropriately and to provide customers with information about order status and delivery.

■ Checking the Order History. The end user can co this to see when the status changed and who made the change.

Checking the Status of Order Fulfillment and Shipping

An end user can check the status of an order for a customer. The end user may want to obtain order status from other applications.

To check the order status

1 Navigate to the order you want to check.

2 In the Order header summary, click Get Status.

If your order management process is integrated with a back office system, the Status field is updated with the current information.

3 Click the Fulfillment view tab and review the information in the Line Items list, below the Fulfillment form.

4 Click the Shipment view tab.

The Shipment list and the Shipment Details form below the list provide current details about the order.

Checking the Order History

An end user can see when the status of the order changed, and who made the change, by checking the information in the Audit Trail for the order. The specific changes that are recorded in the Audit Trail are determined by settings your company makes in the Application Administration screen. For complete information about setting up Audit Trail, see *Applications Administration Guide*.

To check the order history

1 Navigate to the order for which you want to check history.

2 Click the Audit Trail view tab.

You see the list of status changes in the Audit Trail list.

Revising an Order

An end user can edit or revise a customer's original order. This is useful when adding or deleting products, and can also be used if an order has expired. Revising an order creates a new version of the same order. Revising helps an end user keep track of changes as the order evolves.

When an end user revises an order, the status field is automatically set to Pending.

NOTE: When an end user revises an order, the original order becomes inactive and read-only.

To revise an order

1 Navigate to the order you want to revise.

2 In the Orders list or in the Order header summary, click the menu button and then click Revise.

A new version of the order is created, with the same order number.

3 Make the required changes to the order—add or remove line items, change attributes, or make additional changes.

4 In the Order header summary, click Submit.

Processing a Return

When a customer needs to return part of an order, the end user can base the return on the original order.

NOTE: Some companies use service requests to create return orders. For more information, see *Siebel Call Center User Guide*.

To process a return

1 Navigate to the order for which a return needs to be processed.

2 In the Order header summary, click the menu button and click Copy Record.

3 In the new order, change the Order Type to the appropriate return type—RMA Return, RMA Advanced Exchange, or RMA Repair Return.

4 In the Line Items list, delete the items that are not being returned from the Order line items list.

5 In the Order header summary, click Submit.

Creating a Delta Order

When a customer has purchased a customizable product that has attributes and features that can be modified, an end user can create an order to add to or modify those items. For instance, if a sales representative sold a company several hundred computers, there could be many different specifications for drive capacity, memory, and other attributes that the customer might want to modify throughout the product's lifetime.

Once purchased, products are listed within a Siebel application as customer assets. When an end user creates an order that modifies an asset, it is referred to as a delta order.

Using the computer example described above, the sales representative could provide a delta order to the customer company for additional memory. The sales representative would create an order and select the customer's customizable asset—in this case, the computer model. Then the sales representative would configure the asset by adding or removing items and saving your changes. By creating the order from the asset, the sales representative is assured that the memory that is selected will work with the installed computer.

The following procedure describes one way of creating a delta order. If you have the Siebel Order Management module and are using asset-based ordering, end users have additional, simplified ways of creating asset-based quotes and orders. For more information, see Chapter 7, "Using Asset-Based Ordering."

To create a delta order

1 Navigate to the Orders screen and create an order for the appropriate customer account.

2 Click the Line Items view tab and click Delta Order.

The Customizable Asset dialog box appears, displaying all customizable product assets that the are listed for the customer.

3 Locate the asset you want to add to the order and click OK.

4 Highlight the customizable asset and click the Customize button in the Line Items list.

This starts a configuration session. The configuration of the customizable asset displays in the session's selection pages.

5 Revise the configuration of the customizable asset by making selections and click Done to return to the Line Items list.

The revised configuration displays in the Orders screen, Line Items list.

Only the items changed during configuration have a price. Unchanged items have no price associated with them.

Using Asset-Based Ordering 7

This chapter describes how end users, such as salespeople and customer service representatives (CSRs), work with quotes and orders using asset-based ordering.

End users create quotes and orders when customers want to:

- Order products or services for the first time. The user must open a new account for the potential customer, and then create a quote and order.

- Change existing products or services, including deactivatingservices. The user must work with existing information in the database to create a quote and order.

A quote includes instructions (actions) with enough information to generate a price.

The procedures in this chapter use the Account Summary view as their starting point, because it is a central point for viewing information about an account and initiating many order management tasks.

The Account Summary view is part of the Order Processing module. If you have not licensed the Order Processing module, employee end users can start from one of the other screens that allow access to quotes and orders, such as the Quotes screen and Orders screen.

For more information about how employees work with quotes and orders, see *Siebel Sales User Guide*.

Business Scenario for Asset-Based Ordering

This scenario provides an example of a process performed by customer service representatives (CSRs) in a telecommunications company. Your company may follow a different process according to its business requirements.

During a typical day in a customer service organization, a group of CSRs responds to customer phone calls to generate quotes and sales orders.

If the caller is new, the CSR creates an account and adds the caller to the database. If the caller is an existing contact, the CSR searches the database to display the contact's record.

Then the CSR launches eAdvisor to help understand the customer's needs. For example, if the caller asks questions about your company's product, the CSR can access a summary of product features, literature about the company, and its competitors.

If the conversation leads to a potential sale, the CSR will create a quote and fax, email, or mail it to the caller. The caller can use the quote to get approval to place the order.

The information collected during the call is permanently stored, associated with the contact's record.

When the caller contacts the CSR to place the order, the CSR reviews the quote and converts the quote to an order. Any changes to the product and pricing definitions since the quote was saved are displayed in the quote the CSR views.

The CSR enters any additional information required for the order and submits the order. A new Order record is created. After the order has been fulfilled, trackable items become assets, and appear in the Account Summary view for this customer.

At a later date, the customer may contact the CSR to add or delete items from the order. The order may be pending or in another status, such as complete. In either case, the CSR can generate a quote and order to change the initial order.

Creating a Quote

End users can use the procedure below to create a quote for an existing customer. This quote will add a new service or product.

To create a quote

1 Navigate to the Accounts screen, select the appropriate account, and click the Account Summary view tab.

The Account Summary view appears.

2 In the Installed Asset list, click New.

The Quote form and Line Item list appear.

NOTE: If there is already an active quote for this account, it is shown. If there is not already an active quote, a blank new quote appears.

In the Quote form, the Status field displays In Progress and the Quote # field displays a unique number generated by the system. The Quote Name field also displays this unique number, which you may change to a quote name.

3 In the Line Items list, click Add Items.

4 In the Pick Products dialog box, select the items that the customer wants, and click OK.

The Action field for the line items you added displays Add. For products and services that are customizable, the Customize button is available.

5 To customize an item, select it in the Line Items list and click Customize.

An eConfigurator session launches and displays selection pages.

6 Make the selections that the customer wants, and click Done.

The Quote Line Items list appears with the quote.

Some fields in the Line Items list and the Totals form below it are described in the following table:

Field	Comments
Item Net Price	The price of the line item after discounts from pricing rules, volume discounts, or manual discounts. (Read-only)
Net Discount%	The percentage of the start price that the discount equals. If a discount was entered in either Discount Amount or Discount Price, this percentage is calculated based on the discount entered and the start price. (Read-only}
Extended Net Price	Quantity times the unit net price. (Read-only)
Discount Amount	The amount to be discounted per unit, as a dollar figure.
Discount%	The discount amount relative to the unit price, shown as a percentage.
Discount Price	The total amount to be charged for the item, per unit.
Non-Discount Extended Price	The extended start price.

Creating a Quote That Modifies an Asset

Employee end users can use the procedure below to create a quote that is based on an asset. For example, a customer has five phone lines installed as part of a small business service product. The customer calls and wants to add additional phone lines. You would use the existing service item as the basis for a new quote that adds additional phone lines.

To modify an installed asset

1 Navigate to the Accounts screen, select the appropriate account, and click the Account Summary view tab.

   The Account Summary view appears.

2 In the Installed Asset list, select the service item you want to modify.

3 Click Modify.

   Siebel eConfigurator displays the current configuration of the item, adjusted for any open orders.

4 In the eConfigurator selection pages, modify the configuration by adding or deleting items or by changing item attribute values.

5 When you are finished modifying the configuration, click Done in the selection pages.

   The Quote form appears and the changes you made are shown in the Line Items list.

6 In the Line Items list, verify that items display correctly and have the correct action codes.

   The configuration displayed in the quote is a composite of the asset as it is currently installed and adjustments to the asset requested in open orders.

7 Click Profile to return to the Account Summary view.

Editing Quote Line Items

End users may need to edit line items when creating a new quote, or when returning to an existing quote.

Use the procedure below to do one of the following:

■ Edit line item details for a simple product, for example if you want to change the attributes.

■ Configure or reconfigure a customizable product in a quote an end user is creating in the Quotes screen. If a customer asset exists, eConfigurator selection pages display the asset adjusted for any open orders.

■ Edit the configuration of a customizable product in a quote created by modifying an asset or deactivating an installed asset.

To edit quote line items

1 Navigate to the Accounts screen, select the appropriate account, and click the Account Summary view tab.

The Account Summary view appears.

2 In the Quotes list, click on the desired Quote Number.

The Quote form appears, displaying details of the quote.

3 In the Line Items list, select the line item that you want to edit and change the values of the fields directly in the line item.

The action code of the line item will be changed to Modified. See Chapter 9, "Business Service Methods Reference" for more information about action codes.

To retain manual discounts, click the Keep Discount check box in the Line Item Detail form.

4 To customize an item, select a customizable product in the Line Items list.

The Customize button becomes active.

5 Click Customize.

An eConfigurator session launches and displays selection pages, which the current configuration of the customer asset adjusted for any open orders.

6 Modify the configuration of the customizable product or service as needed and click Done.

The revised configuration displays in Line Items.

Updating an Opportunity From a Quote

End users may need to update an opportunity with the potential revenue from a quote. This will keep managers current with the potential revenue and may impact their decisions.

To transfer revenue from a quote to an opportunity

1 Navigate to the Quotes screen and select the desired quote.

2 If you want to review the opportunity, perform the following steps:

    a In the Quote list, drill down on the name in the Opportunity column.

    b Review the information about the opportunity, and when you are finished, return to the Quotes screen.

3 Click the Line Items view tab.

4 In the Line Items list, verify that the quote line items and prices are correct.

5 When you are satisfied the entries are correct, click Update Opportunity.

Converting Quotes to Orders

After a customer agrees to the details of a quote, the employee end user can follow the procedure below to convert a quote into an order.

To convert a quote to an order

1 Navigate to the Accounts screen, select the appropriate account, and click the Account Summary view tab.

The Account Summary view appears.

2 In the Quotes list, drill down on the desired Quote Number.

The Quote form appears, displaying details of the quote.

3 Click the Orders view tab.

4 In the Orders list, click Sales Order.

The quote is converted to an order and appears in the Orders list.

Editing Order Line Items

Employee end users can edit the configuration of customizable products in pending orders by use the procedure below. A customer asset does not need not be associated with the order.

If the order an end user is changing is a modification to a customer asset, all open orders are applied to the asset before it is displayed in the eConfigurator selection pages.

To edit order line Items

1 Navigate to the Accounts screen, select the appropriate account, and click the Account Summary view tab.

The Account Summary view appears.

2 In the Orders list, drill down on the desired Order #.

The Sales Order form and Line Items list appear, displaying details of the order.

3 In the Line Items list, select the line item you want to modify.

4 In the order's Status field, make sure the status is Open or Pending.

If the status is Complete, the order has been fulfilled. If the customer wants to make a change to a completed order, you must create a new order or revise an existing order. To create a new order, which you must do when modifying an installed customer asset, see "Modifying the Service Profile" on page 188. To revise an existing order, see "Revising a Submitted Order" on page 185.

5 Select the line item that you want to edit and change the values of the fields directly in the line item.

The action code of the line item will is changed Update. For more information about action codes, see Chapter 9, "Business Service Methods Reference."

6 To change the configuration of an item, select the line item you want to edit and click Customize.

An eConfigurator session launches and displays selection pages.

7 Modify the configuration of the product or service as needed, and click Done.

The revised configuration appears in the Line Items list. The Revision field displays the version of the order, which is incremented when the order is revised to create a supplemental order.

Submitting an Order

Employee end users can use the following procedure to submit an order.

To submit an order

1 Navigate to the Accounts screen, select the appropriate account, and click the Account Summary view tab.

   The Account Summary view appears.

2 In the Orders list, drill down on the desired Order #.

   The Sales Order form and Line Items list appear displaying details of the order.

3 In the Sales Order form, click Submit.

   The Status changes to Open for the order and for any line items that were previously pending.

Revising a Submitted Order

Employee end users may need to revise an order that has been submitted. It must be revised before it can be changed and resubmitted. This is also called a *Supplemental* order. The procedure below describes how end users can do this to open orders.

To revise a submitted order

1 Navigate to the Accounts screen, select the appropriate account, and click the Account Summary view tab.

   The Account Summary view appears.

2 In the Orders list, drill down on the desired order number of the open order.

   The Sales Order form and Line Items list appear, displaying details of the order.

3 In the Sales Order form, click Revise.

4 In the Line Items list, select the line item you want to modify.

5 To change the configuration of a line item, select the item and click Customize.

   An eConfigurator session launches and displays selection pages. The selection pages display the current configuration of the customer asset adjusted for any open orders.

6 Modify the configuration of the customizable product or service as needed and click Done.

7 In the Sales Order form, click Submit.

   The Status changes to Open for the order and any line items that were previously pending.

The integrator is responsible for extending the Submit Order Process workflow to do both of the following:

■ Compare the before and after versions of the order.

■ Interact with the service fulfillment system to cancel, update, rollback, or accelerate the order line items.

If a user changes the action codes manually in the line item, it changes the effect on the previous order as shown in the table below. For more information about action codes, see Chapter 9, "Business Service Methods Reference."

Original Action	Status	New Action	Effect
Existing	All	Existing	No effect
Existing	All	Modified	Updates service item
Existing	All	Deleted	Deletes service item
Existing	All	New	No effect
New	Complete	Existing	No effect
New	Complete	Modified	Updates service item
New	Complete	Deleted	Deletes service item
New	Complete	New	No effect
New	Complete	Existing	No effect
New	Complete	Modified	No effect
New	Complete	Deleted	No effect
New	Complete	New	Adds service item
Modified	All	Existing	No effect
Modified	All	Modified	Updates service item
Modified	All	Deleted	Deletes service item
Modified	All	New	No effect
Deleted	Complete	Existing	No effect
Deleted	Complete	Modified	No effect
Deleted	Complete	Deleted	No effect
Deleted	Complete	New	Adds service item with same configuration
Deleted	Complete	Existing	No effect

Original Action	Status	New Action	Effect
Deleted	Complete	Modified	Updates service item
Deleted	Complete	Deleted	Deletes service item
Deleted	Complete	New	No effect

Modifying the Service Profile

Employee end users use the Account Summary to access the service profile and invoke the processes above. End users can also access an account's service profile in the Billing Item and Installed Asset views.

NOTE: There is an Accounts view labeled Service Profile, but it is used primarily in Field Service. It does not display the customer's service profile as it is used in asset-based ordering.

There are several ways to modify the service profile of a customer:

■ Create a quote for a new item. See "Creating a Quote" on page 175.

■ Create a quote that modifies an existing item. See "Creating a Quote That Modifies an Asset" on page 177.

■ Create a quote to disconnect an item. See "Deactivating an Installed Asset" on page 190.

If a quote is generated by any of these methods, the service profile will be updated when the quote and subsequent order are fulfilled. This is typically done in one of two ways:

■ From an external order management system. For more information on how this is done, see "Applying an Order to the Service Profile" on page 205.

■ From an external system that maintains service profiles. In this case Siebel EIM sends a replication of the customer's profile to the Siebel application. For more information about EIM, see *Siebel Enterprise Integration Manager Administration Guide*.

Out of the box an Auto-Asset button can be used to update the service profile from a completed Order. However, when one of the two methods above is implemented, the integrator usually removes the Auto-Asset button. If the Auto-Asset button has not been removed, the end user can use the following procedure.

To modify the service profile using Auto-Asset

1 Navigate to the Orders screen, and select Sales Orders from the Show drop-down.

2 In the Orders list, drill down on the desired order number of an order that has been submitted.

3 In the Line Items list, set the status of the line items to Complete.

4 Click Auto-Asset.

NOTE: Auto-Asset must be invoked once for each root level product in the Order.

5 Navigate to the Account Summary view for the Service Account associated with the line items.

The completed order line items will be reflected in the service profile.

Deactivating an Installed Asset

Employee end users can use the procedure below to create a quote that discontinues an existing customer service.

To deactivate a service item

1 Navigate to the Accounts screen, select the appropriate account, and click the Account Summary view tab.

The Account Summary view appears.

2 In Installed Asset or Billing Items, select the service item you want to disconnect, and click Deactivate.

The Quotes form appears. The Line Items list shows the items that will be disconnected.

3 Verify that the service items you want to disconnect display an action code of Delete.

4 Convert the quote to an order and submit it. For more information, see "Converting Quotes to Orders" on page 181.

Workflows for Asset-Based Ordering   8

This chapter explains the Siebel workflows used for asset-based ordering. Workflows are a central feature of asset-based ordering. They automate the business processes associated with managing accounts, quotes, orders, and assets.

You can modify these workflows to suit your own business model using Siebel Business Process Designer. For more information, see *Siebel Business Process Designer Administration Guide*.

In this chapter, the workflows are grouped in sections that correspond to the business processes that they automate. Each section describes a workflow process and may describe one or more subprocesses that are called by the main process. These are grouped together to shows how the process and its subprocesses are related to each other.

Many of these processes and subprocesses use business service methods that are specific to asset-based ordering. The descriptions of workflows include tables listing the names of any methods they call. For information about these methods, see Chapter 9, "Business Service Methods Reference."

All of the application workflows that are specific to asset-based ordering are listed in Table 16.

NOTE: Some workflows in this list and the following sections may not be relevant to your application services.

Table 16. Employee Application Workflows

Workflow	Comments
"SIS OM Edit Delta Quote Line Item" on page 194	Applies active and unprocessed orders to the asset associated with the selected line item and displays the asset in the Product Configurator view. The user makes changes to define the newly requested state and clicks the Done button. The workflow writes the delta of the previous and current states of the asset to the current quote as one or more line items.
"SIS OM Quote To Order Workflow - PMT" on page 197	Creates an order that is associated with the current quote. It copies the line items from the quote to the order and sets the quote's status to Order Placed.
"SIS OM Edit Service Order Line Item" on page 199	Applies active and unprocessed orders to the asset associated with the selected line item and displays the asset in the Product Configurator view. The user makes changes to define the newly requested state and clicks the Done button. The workflow then writes the delta of the previous and current states of the asset to the current order as one or more line items.
"SIS OM Submit Order Process" on page 202	Checks that account information exists. Fills the order header with the account information, and fills the line items with the service account and billing account information. Then it sets the status of the order and the line items to Open.
"SIS OM Auto Select Order Billing and Service Accounts" on page 203	If the service and billing accounts have not been specified for an order and the accounts can be uniquely identified, this workflow fills these fields.
"SIS OM Apply Completed Service Order Line Item to Service Profile" on page 205	Creates assets from completed order line items or modifies a current asset.
"SIS OM New Products & Services Process" on page 209	Displays the active quote, if there is one, or a newly created quote in the Quote Detail view. The user can add line items to add and configure a new asset.
"SIS OM Auto Select Quote Billing and Service Accounts" on page 210	If the service and billing accounts have not been specified for a quote and the accounts can be uniquely identified, this workflow fills these fields.
"SIS OM Profile Process" on page 212	Makes the current quote the active quote. It then displays the Billing Items or Service Items view for the account associated with the current quote.

Table 16. Employee Application Workflows

Workflow	Comments
"SIS OM Go to Products and Services Sub-Process" on page 213	Displays the Billing Items or Service Items view, depending on the type of account associated with the current quote.
"SIS OM Modify Products & Services Process" on page 214	Determines whether there is an active quote for the current account. If there is no active quote, it creates a new quote. It generates a quote line item to update the selected asset. If the product is a customizable product, the workflow displays the service item in eConfigurator with all related open orders applied to it. Otherwise, it displays the Quote Detail view.
"SIS OM Active Quote Sub-Process" on page 216	Determines whether the user has an active quote for the current account.
"SIS OM Edit Complex Asset Workflow" on page 218	Applies the open and pending orders related to the selected asset and displays the requested state in the Product Configurator view. After the user makes the changes that specify the newly requested state, the workflow writes the delta of the two requested states as quote line items and adds them to the active quote.
"SIS OM Go to Quote Detail View Sub-Process" on page 220	Displays the Quote Detail view.
"SIS OM Disconnect Products & Services Process" on page 221	Identifies an active quote for the current account. Then it generates a quote line item to disconnect the selected asset and displays the Quote Detail view.
"SIS OM Disconnect Asset Sub-process" on page 223	Applies the open and pending orders related to the selected asset to get its requested state. Then it creates quote line items to disconnect the selected asset in that state. It adds these line items to the active quote.

Editing Quote Line Items

This workflow allows a user to edit the line items of quotes that result from modifying or disconnecting service items. It consists of the workflow process:

■ SIS OM Edit Delta Quote Line Item

SIS OM Edit Delta Quote Line Item

This workflow applies active and unprocessed orders to the asset associated with the selected line item and displays the asset in the Product Configurator view. The user makes changes to define the newly requested state and clicks the Done button. The workflow writes the delta of the current and requested states of the asset to the current quote as 1 or more line items. This workflow is shown in Figure 6.

A user initiates this workflow by clicking Customize in the Quote Detail view.
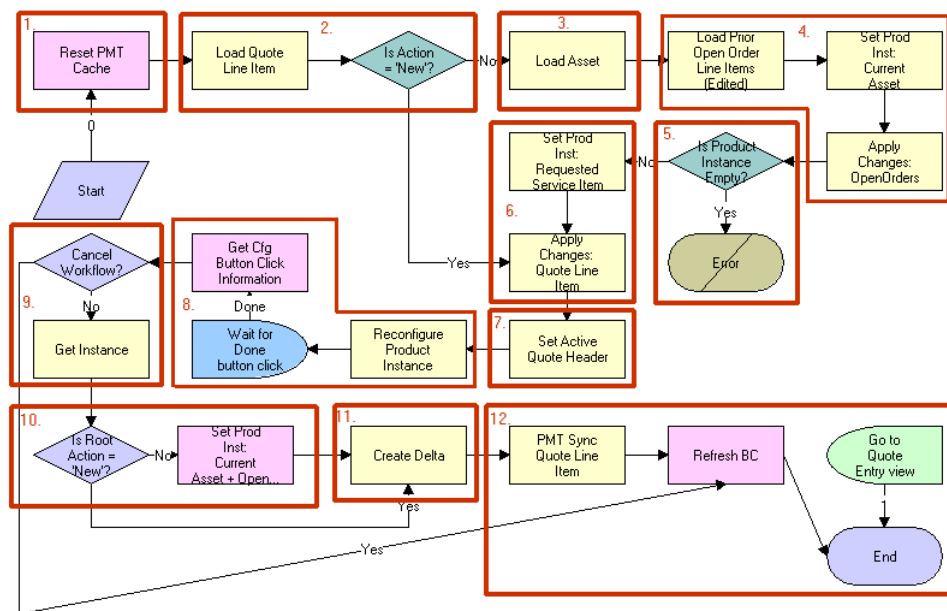
Figure 6. SIS OM Edit Delta Quote Line Item Workflow

Workflow Description. This workflow does the following:

1 Clears business service cache of existing product instances.

2 Checks the action code of the top-level component of the order line item. If the action code is New, then goes to .

3 If the action code is not New, reads the asset associated with the selected quote line item from the database. Components with a status of Inactive are excluded.

4 Retrieves all prior active and unprocessed orders that relate to the asset and applies them to generate the requested future state of the asset.

5 If one of the active and unprocessed orders disconnects the top-level component, the resulting asset is empty. The workflow displays the following error message: "A request has already been made to disconnect this service item." The workflow stops.

6 Applies the current quote line item to the asset.

7 Stores the quote header so that line items can be added to it.

8 Displays the currently requested state of the asset in the Product Configurator view. The user makes the required changes and clicks the Done or Cancel button.

9 If the user clicks the Cancel button, the workflow is terminated. If the user clicks the Done button, the newly requested state is retrieved from the Configurator.

10 If the action code of the root item is not New, caches the previously requested state of the asset to be used as an input to Delta.

11 Generates the delta of the following as 1 or more quote line items:

■ The requested state of the asset before the current order line item was applied.

■ The state of the asset after the user has reconfigured it.

12 Writes the quote line item to the database and refreshes the view.

Associated Business Service Methods. The following table shows the steps in this workflow that call business service methods.

Workflow Step	Business Service Method Called
Reset PMT Cache	Reset
Set Asset Header	Set Output Header
Load Prior Open Order Line Items (Edited)	Find Orders
Set Product Inst: Current Asset	Set Product Instance
Apply Changes: OpenOrders	Apply
Set Asset Header2	Set Output Header
Set Prod Inst: Requested Service Item	Set Product Instance
Apply Changes: Delta Quote Line Item	Apply
Set Active Order Header	Set Output Header
Reconfigure Product Instance	Reconfigure Product Instance
Get Configure Button Click Information	Get Configure Button Click Information
Get Instance	Get Product Instance
Create Delta	Delta
PMT Sync Quote Line Item	Synchronize
Refresh View	Refresh View

Converting a Quote to an Order

This workflow allows a user to convert a sales quote to a sales order. It consists of the workflow process:

■ SIS OM Quote To Order Workflow

SIS OM Quote To Order Workflow - PMT

This workflow creates an order that is associated with the current quote. It copies the line items from the quote to the order and sets the quote's status to Order Placed. This workflow is shown in Figure 7.

NOTE: The appearance of this workflow in your application may be slightly different from the illustration.

A user initiates this workflow by choosing the Sales Order button or menu option in the Quote Orders view.
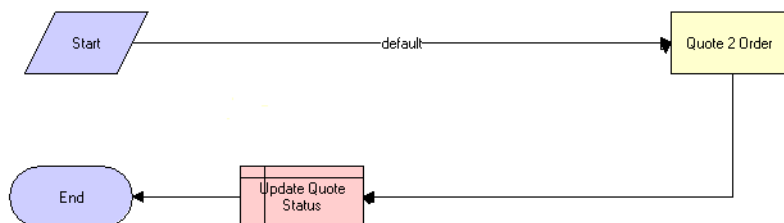
Figure 7. SIS OM Quote To Order Workflow

Workflow Description. This workflow does the following:

1 Converts a quote to an order.

The new order has all the line items and attributes of the quote. If any line item has a quantity greater than 1, the workflow creates multiple copies of the line item, each with a quantity of 1.

2 Set the status of the quote to Order Placed.The new order has all the line items and attributes of the quote.

Associated Business Service Methods. The following table shows the steps in this workflow that call business service methods.

Workflow Step	Business Service Method Called
Quote 2 Order	Invoke BC Method

Editing Order Line Items

This workflow allows a user to edit order line items. It consists of the workflow process:

■ SIS OM Edit Service Order Line Item

SIS OM Edit Service Order Line Item

This workflow applies active and unprocessed orders to the asset associated with the selected line item and displays the asset in the Product Configurator view. The user makes changes to define the newly requested state and clicks the Done button. The workflow then writes the delta of the current and requested states of the asset to the current order as 1 or more line items. This workflow is shown in Figure 8.

A user initiates this workflow by clicking the Customize button in the Order Detail view.
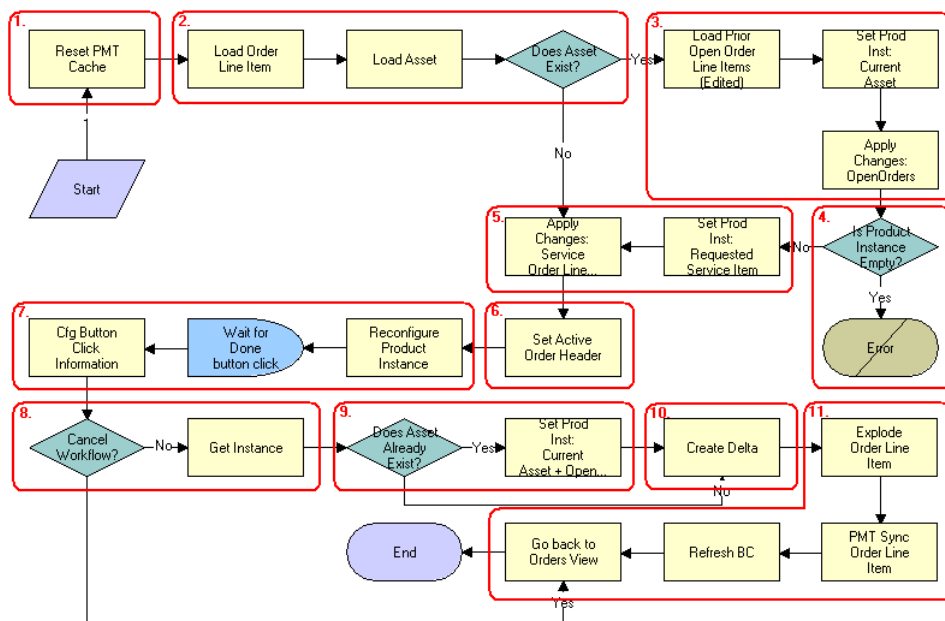
**Figure 8. SIS OM Edit Service Order Line Item Workflow**

Workflow Description. This workflow does the following:

1 Clears the business service cache of existing product instances.

2 Loads the asset associated with the current order line item, if it exists.

Checks the action code of the top-level component of the order line item. If the action code is New, then go to Step 5.

3 Retrieves all prior active and unprocessed orders related to the asset and applies them to generate the requested future state of the asset.

4 If one of the active and unprocessed orders disconnects the top-level component, the resulting asset is empty. The workflow displays the following error message: "A request has already been made to disconnect this service item." The workflow stops.

5 Applies the current order line item to the asset.

6 Stores the order header so that line items can be added to it.

7 Displays the currently requested state of the asset in the Product Configurator view. The user makes the required changes and clicks the Done or Cancel button.

8 If the user clicks the Cancel button the workflow is terminated. If the user clicks the Done button, the newly requested state is retrieved from the Configurator.

9 If the action code of the root item is not New, the workflow processing caches the previously requested state of the asset to be used as an input to Delta.

10 Generates the delta of the following as one or more order line items:

■ The requested state of the asset before the current order line item was applied.

■ The state of the asset after the user has reconfigured it.

11 Explodes (ungroups) any order line item that has a quantity of more than 1 into multiple line items, each with a quantity of 1. Writes the order line item to the database and refreshes the view.

NOTE: This step does not control the quantity of the line items, but only works with the quantity it has been given. The user specifies order line item quantities in eConfigurator.

Associated Business Service Methods. The following table shows the steps in this workflow that call business service methods.

Workflow Step	Business Service Method Called
Load Prior Open Order Line Items (Edited)	Find Orders
Set Product Inst: Current Asset	Set Product Instance
Set Asset Header	Set Output Header
Apply Changes: OpenOrders	Apply
Set Prod Inst: Requested Service Item	Set Product Instance
Set Asset Header2	Set Output Header
Apply Changes: Service Order Line …	Apply
Set Active Order Header	Set Output Header
Create Delta	Delta
Explode Order Line Item	Explode
PMT Sync Order Line Item	Synchronize
Reconfigure Product Instance	Reconfigure Product Instance
Get Instance	Get Product Instance
Reset PMT Cache	Reset
Get Configure Button Click Information	Get Configure Button Click Information
Refresh Business Component	Refresh Business Component
Go back to Orders View	Go to View

Submitting an Order

This group of workflows allows a user to submit an order, which signals the provisioning system that the order is ready to be provisioned. It consists of the workflow process and nested subprocess:

■ SIS OM Submit Order Process

    ■ SIS OM Auto Select Order Billing and Service Accounts

SIS OM Submit Order Process

This workflow checks that account information exists. It fills the order header with the account information, and fills the line items with the service account and billing account information. Then it sets the status of the order and the line items to Open. Because only orders that do not have a status of Open can be submitted, this prevents the order from being submitted again. This workflow is shown in Figure 9 on page 202.

A user initiates this workflow by clicking the Submit button on the order header form in the Order Entry views.
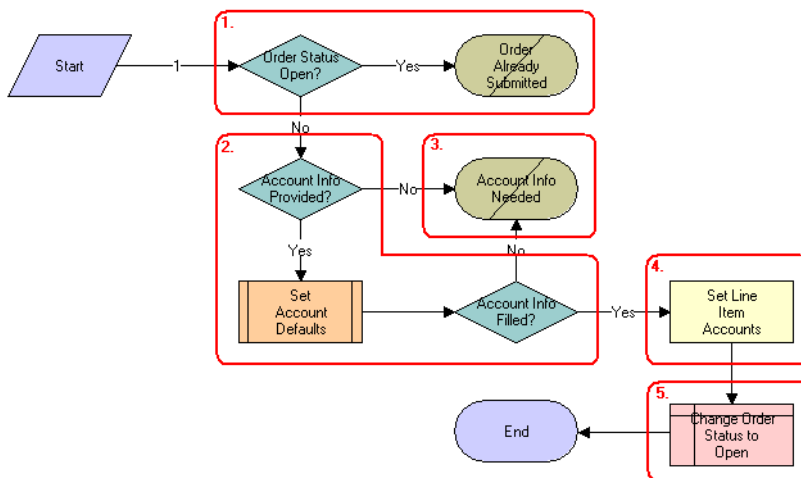
Figure 9. SIS OM Submit Order Process Workflow

Workflow Description. This workflow does the following:

1 Checks that the order status is not Open.

If the order has a status of Open, it cannot be submitted, because it has already been submitted.

2 Fills the order header with the account information.

If the service and billing accounts have not been specified in the order header and the workflow can identify the accounts, it automatically fills them in. See "SIS OM Auto Select Order Billing and Service Accounts" on page 203.

3 For unidentified accounts that the workflow cannot identify, displays an error message requesting that the user specify the accounts.

4 Propagates the account information to the line items and sets the status of each Pending line item to Open.

5 Sets the status of the order to Open.

SIS OM Auto Select Order Billing and Service Accounts

If the service and billing accounts have not been specified for an order and the accounts can be uniquely identified, this workflow fills these fields. This workflow is shown in Figure 10.

The SIS OM Submit Order Process initiates this workflow.
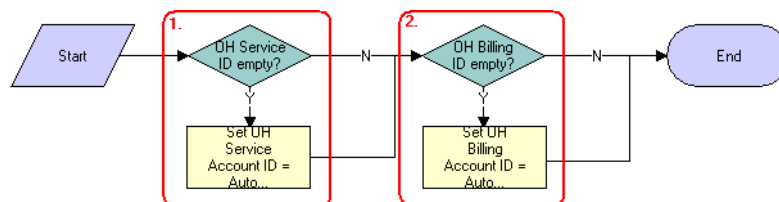
Figure 10. SIS OM Auto Select Order Billing and Service Accounts Workflow

1 The service account is checked in the order header. If it is empty, the service account is set to be the same as the order's customer account.

2 The billing account is checked in the order header. If it is empty, the billing account is set to be the same as the order's customer account.

Associated Business Service Methods. The following table shows the steps in this workflow that call business service methods.

Workflow Step	Business Service Method Called
Set OH Service Account Id = OH …	SetLIAccounts
Set OH Service Account ID = Auto …	SetLIAccounts
Set OH Billing Account Id = OH …	SetLIAccounts
Set OH Billing Account ID = Auto …	SetLIAccounts

Applying an Order to the Service Profile

This workflow applies a completed order line item to the current account's service profile. It consists of the workflow process:

■ SIS OM Apply Completed Service Order Line Item to Service Profile

SIS OM Apply Completed Service Order Line Item to Service Profile

This workflow creates assets from completed order line items or modifies a current asset. It therefore maintains the account's service profile, which consists of its associated assets. If there are multiple accounts in an account hierarchy, service items are applied to the service account. This workflow is shown in Figure 11 on page 206.

NOTE: You must develop an order synchronization workflow that updates the status of order line items in your Siebel application when your company's external order management system completes all or part of an order. After it updates all the order items, the order synchronization workflow must call this workflow to apply the completed changes to the customer's service profile, which is stored as a series of assets. You can disable this workflow if an external system maintains service profiles.

By default, a user initiates this workflow by clicking the Auto-Asset button in the Order Entry - Order Line Items view.

NOTE: The Auto-Asset button is designed for testing and demonstration purposes, not for actual end use. It is recommended that you configure your Siebel application to call this workflow as a subprocess of the order synchronization workflow mentioned previously.
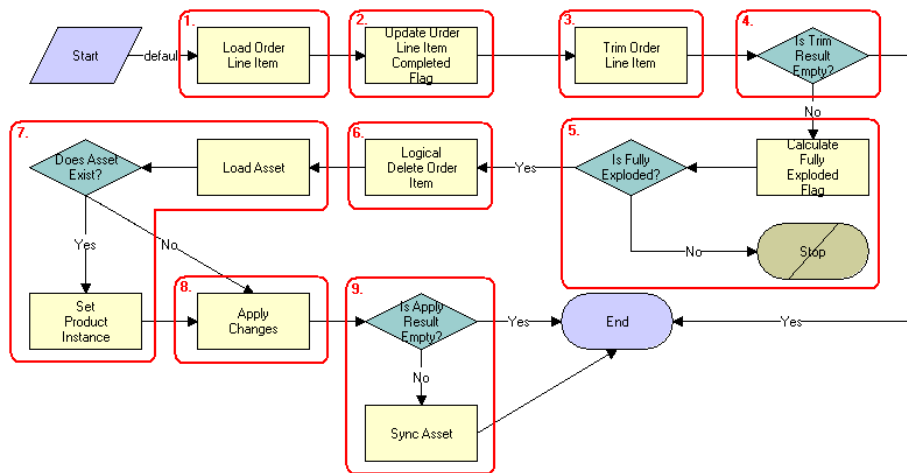
Figure 11. SIS OM Apply Completed Service Order Line Item to Service Profile Workflow

Workflow Description. This workflow does the following:

1 Loads the selected order line item from the database.

2 Updates the Order Item Processed flag.

The workflow updates the Order Item Processed flag of the topmost order line item. The workflow sets this flag to Y if all line items have a status of Complete, Failed, or -. Other workflows use this flag to determine whether a line item remains Open and should be applied to the current service profile to generate a requested future state.

3 Applies the Trim method.

Trim eliminates any incomplete or failed changes from the order line item. It eliminates line items whose products are not tracked as assets, line items whose status is not Complete, and line items whose action code is Existing. This causes the service profile to reflect the true state of the assets.

4 Checks whether line items exist.

If Trim has eliminated all line items, the workflow stops. Otherwise, the workflow continues.

5 Checks the quantity of each line item.

The workflow checks whether all line items have a quantity of 1. At this point, all line items with a quantity greater than 1 should have been *exploded* into separate line items. The workflow stops if an item has not been exploded. You must provide error-handling logic or otherwise make sure that this situation cannot occur.

6 Converts Delete actions into Modified actions.

The Logical Delete step converts Delete actions into Modified actions and sets the status to Inactive. This step supports the maintenance of a history of disconnected services.

7 Loads the service profile from the database.

If the order line item is a change to an existing item, the workflow loads the corresponding service profile, or asset, from the database.

8 Applies the order line item to the asset.

If the asset does not already exist, the workflow creates a new asset.

9 Checks whether the asset is empty.

If, as a result of applying the changes, the asset is empty, the workflow stops. Otherwise, the workflow writes the asset to the database.

Associated Business Service Methods. The following table shows the steps in this workflow that call business service methods.

Workflow Step	Business Service Method Called
Trim Order Line Item	Trim
Calculate Fully Exploded Flag	Is Fully Exploded
Update Order Line Item Completed Flag	Update Order Line Item Completed Flag
Logical Delete Order Item	Logical Delete
Set Product Instance	Set Product Instance
Apply Changes	Apply

Modifying the Service Profile

This group of workflows allows a user to modify a service profile by requesting new service items. It consists of the workflow process and nested subprocesses:

■ SIS OM New Products & Services Process

■ SIS OM Active Quote Subprocess

■ SIS OM Auto Select Quote Billing and Service Accounts

■ SIS OM Go to Quote Detail View

SIS OM New Products & Services Process

This workflow displays the active quote, if there is one, or a newly created quote in the Quote Detail view. The user can then add line items, add or delete an asset, or change the attributes of the asset. This workflow is shown in Figure 12 on page 209.

A user initiates this workflow by clicking the New button in the Account screen's Service Items view, Billing Items view, or Customer Portal view.
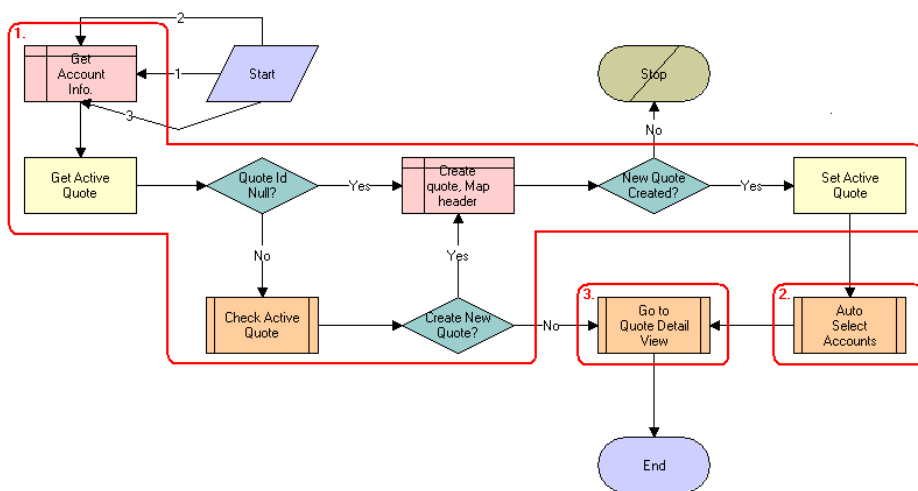
Figure 12. SIS OM New Products & Services Process Workflow

Workflow Description. This workflow does the following:

1 Retrieves the active quote.

The workflow retrieves the active quote from the session. If there is no active quote, a new quote is created and set as the active quote. If there is an active quote, the Check Active Quote subprocess checks that the quote is associated with the same customer account as the asset being modified, and that the quote has a status of In Progress. See "SIS OM Active Quote Sub-Process" on page 216. If the quote does not meet these criteria, the workflow creates a new quote and sets it as the active quote.

2 Designates the billing and service accounts.

If the billing account and the service account have not been specified for the Quote header, they are automatically filled. See "SIS OM Auto Select Quote Billing and Service Accounts" on page 210.

3 Displays the active quote in the Quote Detail view. See "SIS OM Go to Quote Detail View Sub-Process" on page 220.

SIS OM Auto Select Quote Billing and Service Accounts

If the service and billing accounts have not been specified for a quote and the accounts can be uniquely identified, this workflow fills these fields. This workflow is shown in Figure 13.

The SIS OM New Products & Services Process initiates this workflow.
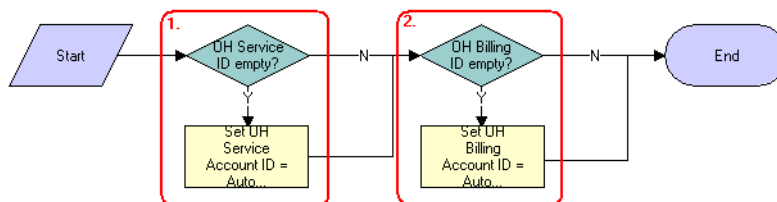
Figure 13. SIS OM Auto Select Quote Billing and Service Accounts Workflow

Workflow Description. This workflow does the following:

1 The service account is checked in the order header. If it is empty, the service account is set to be the same as the order's customer account.

2 The billing account is checked in the order header. If it is empty, the billing account is set to be the same as the order's customer account.

Redisplaying the Service Profile

This workflow navigates to the current account's service profile (Service Items or Billing Items view), which displays only the account's active assets. It consists of the workflow process and nested subprocess:

■ SIS OM Profile Process

    ■ SIS OM Go to Products and Services Subprocess

SIS OM Profile Process

This workflow makes the current quote the active quote. It then displays the Billing Items or Service Items view for the account associated with the current quote. This workflow is shown in Figure 14.

A user initiates this workflow by clicking the Profile button in the Quote Details view.
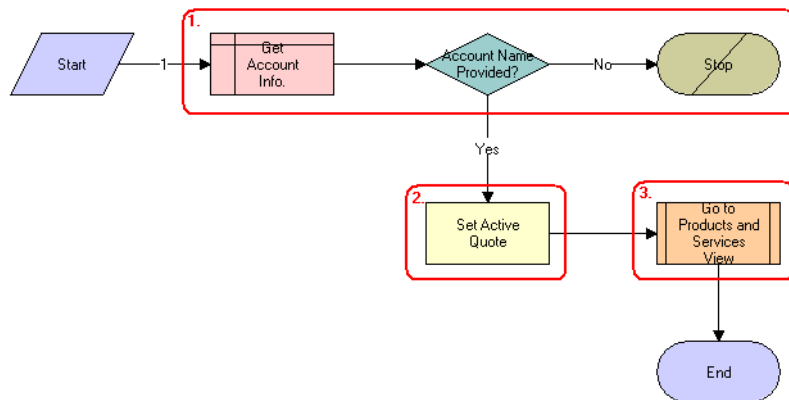
Figure 14. SIS OM Go to Products and Services Sub-Process Workflow

Workflow Description. This workflow does the following:

1 Displays an error message and stops if the quote header does not specify an account.

2 Sets the current quote as the active quote.

3 Displays the Service Items or Billing Items view, depending on the type of account. See "SIS OM Go to Products and Services Sub-Process" on page 213.

Associated Business Service Methods. The following table shows the step in this workflow that calls a business service method.

Workflow Step	Business Service Method Called
Set Active Quote	Set Profile Attribute

SIS OM Go to Products and Services Sub-Process

Displays the Billing Items or Service Items view, depending on the type of account associated with the current quote. This workflow is shown in Figure 15.

The SIS OM Profile Process initiates this workflow.
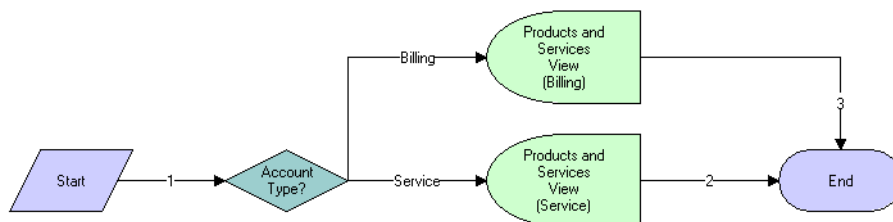
Figure 15. SIS OM Go to Products and Services Sub-Process Workflow

Workflow Description. This workflow does the following:

■ If the account is a billing account, displays the Billing Items view.

■ If the account is not a billing account, displays the Service Items view.

Modifying a Service Item

This group of workflows allows a user to modify a service item. It consists of the workflow process and nested subprocesses:

■ SIS OM Modify Products & Services Process

    ■ SIS OM Active Quote Sub-Process

    ■ SIS OM Edit Complex Asset Workflow

    ■ SIS OM Go to Quote Detail View Sub-Process

SIS OM Modify Products & Services Process

This workflow determines whether there is an active quote for the current account. If there is no active quote, it creates a new quote. It generates a quote line item to update the selected asset. If the product is a customizable product, the workflow displays the service item in eConfigurator with all related open orders applied to it. Otherwise, it displays the Quote Detail view. This workflow is shown in .

A user initiates this workflow by clicking the Modify button in the Accounts screen's Service Items view, Billing Items view, or Customer Portal view.
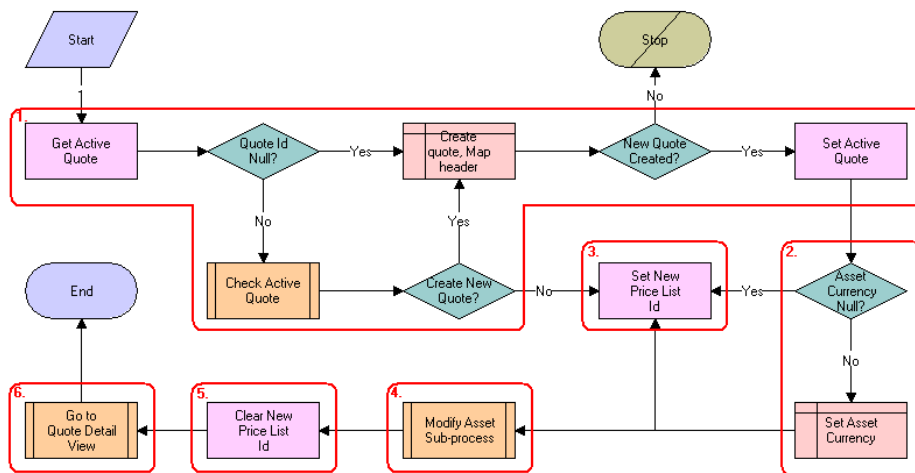
Figure 16. SIS OM Modify Products & Services Process Workflow

Workflow Description. This workflow does the following:

1 Retrieves the active quote from the session.

If there is no active quote, a new quote is created and set as the active quote. If there is an active quote, the Check Active Quote subprocess determines whether the quote is associated with the same customer account as the asset being modified, and whether the quote has a status of In Progress. See "SIS OM Active Quote Sub-Process" on page 216. If the quote does not meet these criteria, a new quote is created and set as active.

2 Checks currency and assigns one, if necessary.

If Currency is Null, the workflow proceeds to Step 3 on page 215 without doing any processing. If Currency is not Null, the workflow sets the quote's currency to the same currency as that of the associated asset.

3 Store the price list associated with the service item in a profile attribute to be used during the configuration session.

4 Make changes as requested by user.

The Modify Asset Sub-Process allows the user to make changes to the currently requested state of the asset. See "SIS OM Edit Complex Asset Workflow" on page 218.

5 Removes the price list from the profile attribute.

6 Displays active quote.

The Go to Quote Detail View Sub-Process displays the active quote in the Quote Detail view. See "SIS OM Go to Quote Detail View Sub-Process" on page 220.

Associated Business Service Methods. The following table shows the steps in this workflow that call business service methods.

Workflow Step	Business Service Method Called
Get Active Quote	Get Profile Attribute
Set Active Quote	Set Profile Attribute
Set New Price List Id	Set Profile Attribute
Clear New Price List Id	Set Profile Attribute

SIS OM Active Quote Sub-Process

This workflow determines whether the user has an active quote for the current account. The workflow has two process properties that are set by the calling workflow: the Row ID of the customer account associated with the asset and the Row ID of the active quote. This workflow is shown in Figure 17.

The SIS OM Modify Products & Services Process and the SIS OM Disconnect
Products & Services Process initiate this workflow.
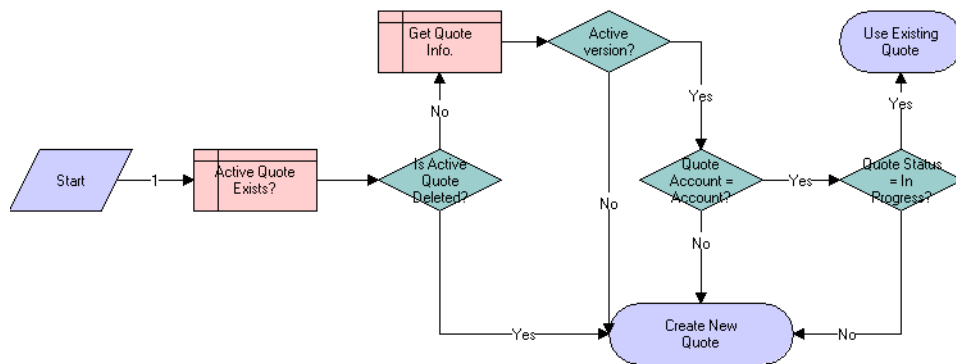
Figure 17. SIS OM Active Quote Sub-Process Workflow

Workflow Description. This workflow retrieves the Account ID and Status associated
with the active quote. The workflow then returns a process property used later to
determine whether to create a new quote or to use the existing one. If the process
property is Y, the workflow creates a new quote. If it is N, the workflow uses an
existing quote.

■ If the active quote has been deleted, or if the quote's Active flag is set to N, then
the workflow sets the value of the process property to Y.

■ If the customer account associated with the quote is not the same as the
customer account associated with the asset, the workflow sets the value of the
process property to Y.

■ If the customer account associated with the quote is the same as the customer
account associated with the asset, the workflow checks the status of the quote.

   ■ If the status is not In Progress, the workflow sets the value of the process
   property to Y.

   ■ If the status of the quote is In Progress, the workflow sets the value of the
   process property to N.

SIS OM Edit Complex Asset Workflow

This workflow applies the open and pending orders related to the selected asset and displays the requested state in the Product Configurator view. After the user makes the changes that specify the newly requested state, the workflow writes the delta of the two requested states as quote line items and adds them to the active quote. This workflow is shown in Figure 18.

The SIS OM Modify Products & Services Process initiates this workflow.
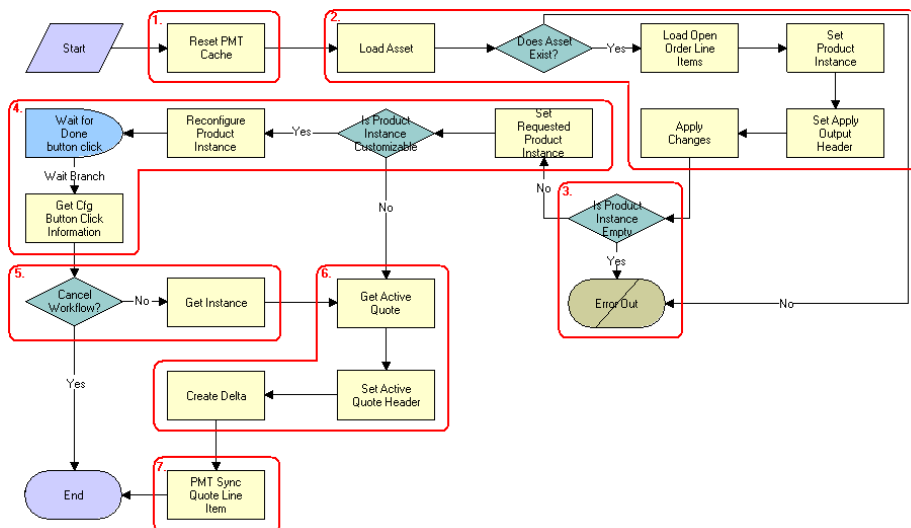
Figure 18. SIS OM Edit Complex Asset Workflow

Workflow Description. This workflow does the following:

1 Clears the business service cache of existing product instances.

2 Reads the asset from the database.

Only components that do not have a status of Inactive are included. The changes specified by all the open and pending orders related to the asset are applied to it to re-create the state of the service product as the customer has requested.

3 Determines whether an open or pending order disconnects the root component.

If one of the open or pending orders disconnects the root component, then the workflow returns an empty asset and displays an error message.

4 Tests for a customizable asset.

If the asset is customizable, it is displayed in the Product Configurator view, where the user can make changes to it. If the asset is not customizable, it goes directly to Step 6.

5 If the user clicks the Cancel button, the workflow is terminated. If the user clicks the Done button, the newly requested state is retrieved from the Configurator.

6 Updates the active quote.

The workflow retrieves the active quote. The delta of the previously requested state of the asset and the newly requested state of the asset are added as line items.

7 Saves the quote to the database.

Associated Business Service Methods. The following table shows the steps in this workflow that call business service methods.

Workflow Step	Business Service Method Called
Load Open Order Line Items	Find Orders
Set Product Instance	Set Product Instance
Set Apply Output Header	Set Output Header
Apply Changes	Apply
Set Requested Product Instance	Set Product Instance
Create Delta	Delta
Reconfigure Product Instance	Reconfigure Complex Asset
Get Instance	Get Complex Asset
PMT Sync Quote Line Items	Synchronize

Workflow Step	Business Service Method Called
Reset PMT	Reset
Get Configure Button Click Information	Get Configure Button Click Information

SIS OM Go to Quote Detail View Sub-Process

This workflow displays the Quote Detail view.

The SIS OM New Products & Service Process, the SIS OM Modify Products & Service Process, and the SIS OM Disconnect Products & Services Process initiate this workflow. This workflow is shown in Figure 19.
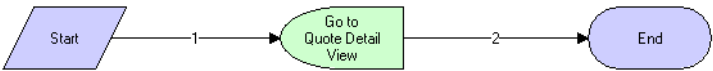
Figure 19. SIS OM Go to Quote Detail View Sub-Process Workflow

Disconnecting a Service Item

This group of workflows allows a user to disconnect a service. It consists of the workflow process and nested subprocesses:

- SIS OM Disconnect Products & Services Process

    - SIS OM Active Quote Subprocess

    - SIS OM Disconnect Asset Subprocess

    - SIS OM Go to Quote Detail View

SIS OM Disconnect Products & Services Process

This workflow identifies an active quote for the current account. Then it generates a quote line item to disconnect the selected asset and displays the Quote Detail view. This workflow is shown in Figure 20.

A user initiates this workflow by clicking the Modify button in the Accounts screen's Service Items view, Billing Items view, or Customer Portal view.
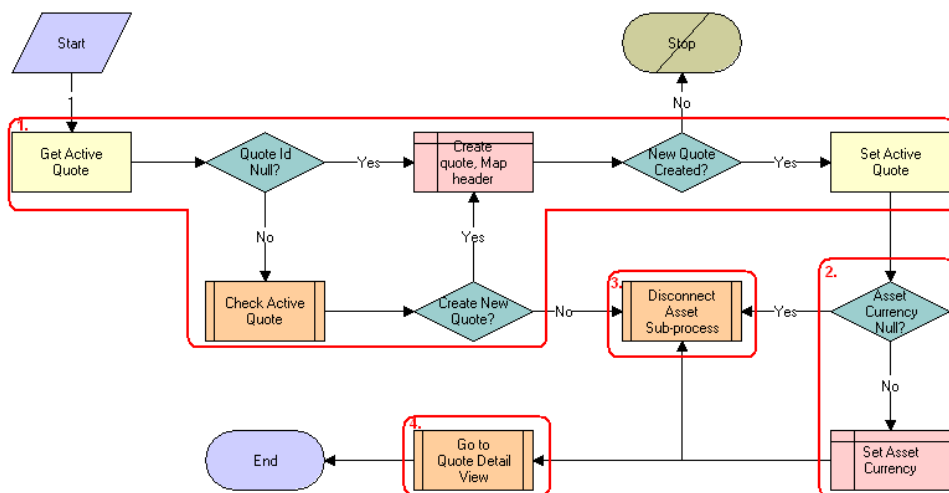
Figure 20. SIS OM Disconnect Products & Services Process Workflow

Workflow Description. This workflow does the following:

1 Retrieves the active quote from the session.

If there is no active quote, the workflow creates a new quote and sets it as the active quote. If there is an active quote, the Check Active Quote subprocess determines whether the quote is associated with the same customer account as the asset being modified, and whether the quote has a status of In Progress. See "SIS OM Active Quote Sub-Process" on page 216. If the active quote does not meet these criteria, the workflow creates a new quote and sets it as the active quote.

2 Identifies the currency.

If Currency is Null, the workflow proceeds to Step 3 without doing any processing. If Currency is not Null, the workflow sets the quote's currency to the same currency as that of the associated asset.

3 Allows the user to disconnect the asset.

The workflow gets the asset's current state and then creates quote line items to disconnect the asset in that state. See "SIS OM Disconnect Asset Sub-process" on page 223.

4 Displays the active quote.

The workflow displays the active quote in the Quote Detail view. See "SIS OM Go to Quote Detail View Sub-Process" on page 220.

Associated Business Service Methods. The following table shows the steps in this workflow that call business service methods.

Workflow Step	Business Service Method Called
Get Active Quote	Get Profile Attribute
Set Active Quote	Set Profile Attribute

SIS OM Disconnect Asset Sub-process

This workflow applies the open and pending orders related to the selected asset to get its requested state. Then it creates quote line items to disconnect the selected asset in that state. It adds these line items to the active quote. This workflow is shown in Figure 21.

The SIS OM Disconnect Products & Services Process initiates this workflow.
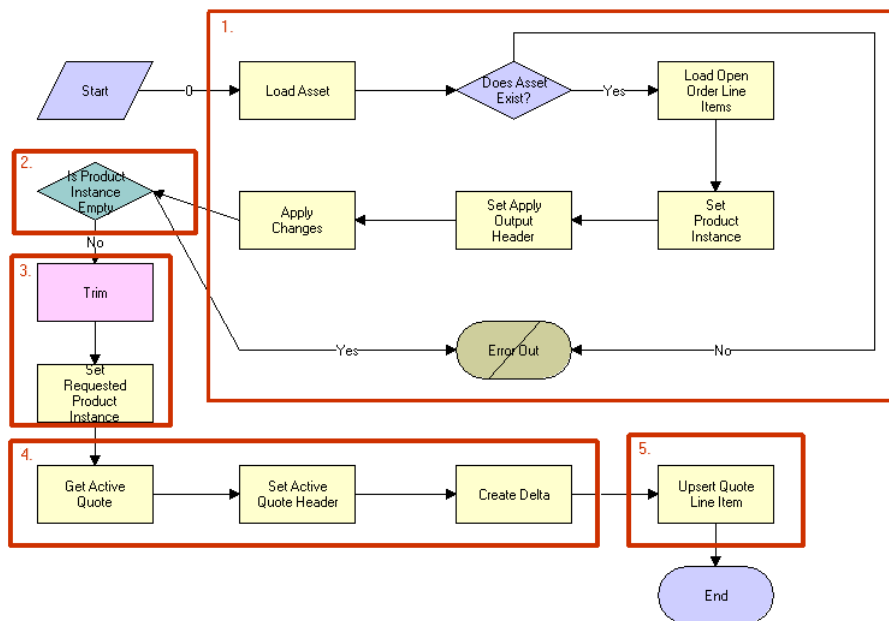
Figure 21. SIS OM Disconnect Asset Sub-process Workflow

Workflow Description. This workflow does the following:

1 Reads the asset from the database.

The workflow includes only components that do not have a status of Inactive. The workflow looks for all the orders with a status of Open or Pending that are related to the selected asset. The workflow applies the changes specified by those orders. This recreates the state of the service product as the user has requested it.

2 Displays an error message if the asset is empty.

If one of the open or pending orders disconnects the root component, the result is an empty asset. In this case, the workflow displays an error message.

3 Trims the product instance to remove items that are not tracked as assets.

4 Retrieves the active quote.

The workflow generates the delta of the requested state of the asset and the future empty state of the asset. This creates line items to disconnect the asset. The workflow adds these line items to the active quote.

5 Saves the quote to the database.

Associated Business Service Methods. The following table shows the steps in this workflow that call business service methods.

Workflow Step	Business Service Method Called
Load Open Order Line Items	Find Orders
Set Product Instance	Set Product Instance
Set Apply Output Header	Set Output Header
Apply Changes	Apply
Set Requested Product Instance	Set Product Instance
Create Delta	Delta
Trim	Trim

Business Service Methods Reference 9

This chapter is a reference that explains the methods developed for the following business services:

Generally, a business service:

- Defines reusable business logic that can be executed within the Object Manager

- Can be a built-in service that is defined in Siebel Tools or a run-time service that is defined in the Siebel client application by administrators

- Can be based on the CSSService Class (standard business service) or on specialized classes (specialized business service)

  NOTE: Specialized business services are used only by internal Siebel Engineering personnel. Customers should not use specialized business services unless their behavior is specifically documented.

- Can be configured by properties or scripts (written in Siebel VB or Siebel eScript)

- Can be used for generic code libraries that are called from other scripts

- Are used as building blocks in the Siebel Application Integration framework

- Can be referred to by commands associated with a menu item or toolbar button

Product Manipulation Toolkit Business Service Methods

The Product Manipulation Toolkit (PMT) business service is a set of methods that can be linked to implement order processing workflows. These workflows maintain the service profile as orders are provisioned.

The two primary methods in this toolkit are:

■ **Delta.** Creates a Quote or Order that defines the changes required to convert the initial state of an Asset into the final state of an Asset.

■ **Apply.** Applies changes defined in Quotes and Orders to an Asset, putting the Asset into a new state.

The toolkit also provides a number of methods to support Delta and Apply.

This section begins with a description of "User Properties used by PMT Methods" on page 229.

Then this section describes all the methods that the PMT business service calls, which are summarized in Table 17.

Table 17. PMT Methods

Method	Comment
Delta on page 232	Generates the actions necessary to change an existing customizable product (asset) into a new customizable product. The set of actions can be written to a quote or an order.
Apply on page 245	Applies changes defined by a Sales order line item to a customizable asset.
Trim on page 257	Eliminates line items from a delta quote or delta order if they do not meet the requirements specified in the input arguments. This action produces a new trimmed quote or order. The method determines which changes in a customizable order item to apply to the service profile stored in Assets.

Table 17. PMT Methods

Method	Comment
Explode on page 262	Creates multiple instances of a product. The number of instances is determined by the value of the field defined by the ExplodeOnField argument. For each new instance, the value of ExplodeOnField is set to 1. An existing instance is considered for explosion only if it meets the conditions specified by ConditionFieldNames and ConditionValues.
Explode Siebel Object on page 266	Functions like Explode except that it also loads the SiebelMessage integration object from the Siebel database with a specified business component and synchronizes it back to the database after the explosion.
Find Orders on page 268	Given the asset integration Id of a root line item, this method finds all instances of order items that have the same asset integration Id. The order header, matching line item, its child items and attributes are returned as part of the output. Other lines item in the same order header with a different integration Ids are not returned.
Logical Delete on page 269	Converts any item of a product instance that has a Delete action code to an Modified action code and an Inactive status. Logical Delete only works with a product instance of the Order type. In other words, the Integration Object passed in the SiebelMessage is based on the Order Entry business object.
Assign New Service IDs on page 270	Assigns a service point Id, associated with a specified premise, to each item of the input complex object where the service point type matches the service type of the product.
Convert Product Instance on page 271	Converts a product instance of one type to another; for example, quote to order.
Get Instance on page 273	Gets a complex product instance from the Product Configurator.
Get Profile Attribute on page 273	Returns the value of the specified attribute of the user profile.

Table 17. PMT Methods

Method	Comment
Is Fully Exploded on page 274	Checks a product instance to determine if an explode operation is required, based upon the value specified by ExplodeOnField. If the field value is greater than 1 for any component of the product instance, the method returns N. Otherwise, the method returns Y.
Is Module Licensed on page 275	Determines whether or not the specified module is licensed.
Merge on page 275	Merges the components of one integration object (product instance) under the header of another integration object.
Quote To Revenue on page 276	Generates revenue line items for each line item in a quote that matches the criteria specified by the input conditions. The line items are associated with the opportunity from which the quote was created.
Reconfigure Product Instance on page 281	Displays the asset that was passed to the Product Configurator as input, in the Configurator UI.
Reset on page 283	Clears out all cached product instances.
Retrieve Next Object From List on page 283	Given a hierarchical integration object with multiple root components at the second level, this method returns an integration object that contains the header, one root component, its children and their attributes.
Set Action on page 284	Sets the Action Code field of all items in the hierarchy of a given product instance to the specified value.
Set Exception Error Message on page 285	Called from the workflow to get the localized error message text that is associated with the input error code.
Set Field Value on page 286	Sets a specified field to the given values for all items in the product instance that meet an optional condition.
Set Multiple Field Values on page 287	Sets specified fields to the given values for all items in the product instance.
Set Output Header on page 288	Caches the output header that will be used by the Apply and Delta methods.
Set Product Instance on page 288	Caches a product instance that will be used as an input arguments for Apply and Delta methods.

Table 17. PMT Methods

Method	Comment
Set Profile Attribute on page 289	Assigns values to attributes in a user profile.
Synchronize on page 289	Synchronizes product instance to the database. Optionally, this method also reprices the instance after it is synchronized by calling the Pricing Manager Reprice/ RepriceAll. This method calls the EAI Siebel Adapter Execute method to synchronize or upsert.
Update Multi Object List on page 291	After a root integration component is stripped from the integration object, this method (in conjunction with Retrieve Next Object From List) returns the resulting integration object.
Update Order Line Item Completed Flag on page 291	Sets the Order Item Processed Flag of the root order line item to Y, if its status and that of all its child items is Complete, Rejected, or '-'.
Get Cfg Button Click Information on page 292	Notifies when a user has clicked Cancel or Done in the Complex Product view.
Refresh Business Component on page 292	Reexecutes all instances of the specific buscomp to get data from the database.
Invoke BC Method on page 293	Allows a business component-based method to be invoked from a workflow. Acts as a bridge to pass the business component name and method name, along with the parameters, and returns the value required from the workflow to the specified business component

User Properties used by PMT Methods

The following user properties are used by PMT methods:

■ **Asset Integration Object Name**. Name of the integration object that is based upon the Asset business object.

■ **Attribute Integration Component Name**. Name of the integration component that is based on the extended attribute business component. For example, Quote Item XA is a line item's extended attribute. This value should be the same for all three integration objects: asset, quote, and order.

■ **Attribute Item Map**. Used by the Convert Product Instance, Delta, and Apply methods to map Asset, Quote, and Order attribute fields. It allows the methods to transform one data type (Asset, Quote, or Order) to another data type (Asset, Quote, or Order).

Syntax: Name = Src Int Obj Name.Src Int Comp Name:Dest Int Obj Name.Dest Int Comp Name Map #

Value = [Src Field]:[Dst Field]

Example:

   Name = SIS OM Quote.XA:SIS OM Order.XA Map 20

   Value = [Name]:[Name]

■ **Delta Line Item Compare Field**. Used by the Delta method to determine which Asset line item fields are compared to determine if two line items are different.

Syntax: Delta Line Item Compare Field = [Asset line item Integration Field]:[Quote/Order line item Integration object field]

■ **Delta XA Compare Field**. Used by the Delta method to determine which Asset Line Item's attribute fields are compared to determine if two line item's attributes are different.

Delta Line Item Compare Field = [Asset line item Integration Field]:[Quote/Order line item Integration object field]

Example: If an Order line item's Account Id field is mapped to the Asset Line item's Owner Account Id, PMT user property Quote Integration Object Name is set to SISOM Order, and user property Asset Integration Object name is set to SIS OM Asset, the following user property is created:

   SIS OM Order Line Item:SIS OM Asset Line Map 20 [Account Id]:[Owner Account Id]

■ **Header Integration Component Name**. Name of the integration component that is based on header business components. A Quote is a header of a Quote, an Order is a header of an Order, and so on. This value should be the same for all three integration objects: asset, quote, and order.

■ **Header Map**. Similar to the Attribute Item Map except that this user property maps header fields.

Syntax: Name = Src Int Obj Name.Src Int Comp Name:Dest Int Obj Name.Dest Int Comp Name Map #

Value = [Src Field]:[Dst Field]

■ **Line Item Integration Component Name**. Name of the integration component that is based on line item business components. Quote Item is a line item component, Order Item is a line item component, and so on. This value should be the same for all three integration objects: asset, quote, and order.

■ **Line Item Map**. Similar to the Attribute Item Map except that this user property maps line item fields.

Syntax: Name = Src Int Obj Name.Src Int Comp Name:Dest Int Obj Name.Dest Int Comp Name Map #

Value = [Src Field]:[Dst Field]

Example: If an Order line item's Account Id field is mapped to the Asset Line item's Owner Account Id, PMT user property Order Integration Object Name is set to SIS OM Order, and user property Asset Integration Object name is set to SIS OM Asset, the following user property is created:

Name = SIS OM Order.Line Item:SIS OM Asset.Line Item Map 20

Value = [Account Id]:[Owner Account Id]

■ **Order Integration Object Name**. Name of the integration object that is based on an Order business object.

■ **Quote Integration Object Name**. Name of the integration object that is based on a Quote business object.

■ **Workflow Product Configuration View**. Specifies which view the Product Configurator is to use when PMT method Reconfigure Product Instance is invoked.

NOTE: The name of the view must be added to both the Application Admin > Views and Application Admin > Responsibilities views in the Siebel client.

Syntax: SIS OM Reconfigure Complex Product View Name: Account

SIS OM Complex Product Runtime Instance View - Account

Delta

This is one of the Product Manipulation Toolkit Business Service Methods.

It generates the actions necessary to change an existing customizable product (asset) into a new customizable product. The set of actions can be written to a quote or an order.

Delta compares two complex assets (original and modified) and returns a quote or order. The return contains line items that specify the actions required to change the asset from the original state to the final state.

NOTE: An update occurs if a field in the product or any of its attributes changes. The list of fields being compared is defined in Asset > Quote > Order Data Flow. This list of fields is configurable to support customer extensions to the database.

Arguments *SiebelMessage*

[in] Hierarchical property set containing the final Asset (output returned from call to PMT business service method Reconfigure Product Instance).

SiebelMessage

[out] Hierarchical property set containing a quote or order header, complex line items, and attributes.

Returns Property Set containing the complex quote or order.

Remarks   Because Delta is used frequently, you may be able to use the additional information about the method presented below.

User Properties

The Delta method uses the following user properties:

■ Asset Integration Object Name

■ Quote Integration Object Name

■ Order Integration Object Name

■ Delta Line Item Compare Field

■ Delta XA Compare Field

■ Line Item Map

■ Attribute Item Map

■ Workflow Product Configurator View

For descriptions of these user properties, see "User Properties used by PMT Methods" on page 229.

Before Invocation

Before Delta is invoked, the system must call two other methods:

■ Set Product Instance

   Saves the original asset's configuration before the Product Configurator is called. For more information, see "Reconfigure Product Instance" on page 281.

■ Set Output Header

   Saves the quote or order header that will be the Delta output. If a line item or attribute is associated with the Quote-Order property set, it is stripped from the property set returned by the Delta method. Later, when the returned Quote-Order is synchronized, the system determines whether to maintain or delete the line items that were associated with the quote or order before the call to Delta. For more information, see the Siebel eAI Adapter manual. For more information, see "Set Output Header" on page 288.

Processing

During Delta processing, the method:

- Compares the before and after images to determine the correct action codes for output.

- Passes all fields in the new customizable asset through to the delta quote or delta order. This includes all custom fields.

Delta compares a user-configurable set of fields. This includes the parent component ID to make sure that changes to the customizable product structure are reflected as an update.

Increasing Quantities of an Asset Component

If the user edits a customizable asset and increases the quantity of an existing component, the result is two line items. The first line item represents the original asset. The second line item adds new copies of that asset. If the original line item is changed, the Delta action is Modified or NULL.

Action Field in the Quote and Order Attribute Tables

Delta logic populates an Action field in the quote attribute and order attribute tables. This field allows order provisioning logic to determine which of the attributes of a service product has changed.

For example, a delta quote can be represented as shown in Figure 22:
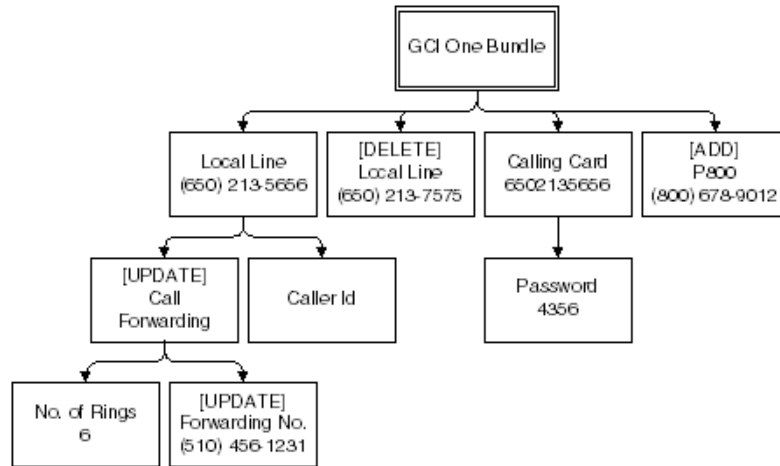
Figure 22. Action on Attribute Method Example

In this example, the call forwarding number changed but the number of rings did not.

Action Codes Reset Upon Delta Line Item or Attribute Changes

When a delta-enabled field in a line item changes (because of direct user input or a process such as repricing) or an attribute of a line item changes, the action code is automatically set.

This is shown in Table 18.

Table 18. Line Item Action Code Transitions

Original Action	New Action
Existing	Modified
New	New
Modified	Modified
Deleted	Deleted

NOTE: The customer should make the Action field Read-Only to avoid possible violations of configuration rules that could be caused by changing the action code of a line item.

Service Item Unique Keys (Asset Integration Id)

The Delta and Apply method operations depend upon the unique keys to each service item. Typically, the unique key is an invariable combination of fields in the service item record. Because no combination of user-entered fields is certain to be unique or invariable, the Siebel application provides a hidden Asset Integration Id field that stores a unique identifier for each service item.

The asset integration ID links the service item to the quotes and orders that modify it. On creation of a quote to add a new service item a new asset integration ID is generated from the row ID of the quote line item The quote is converted to an order at which time a new asset integration ID is generated from the row ID of the order line item. This occurs only if the action code of the quote line item is 'Add' to enforce uniqueness if multiple orders are created from the same quote.

When the completed order is converted into an asset the asset integration ID is copied from the order line item to asset. When the asset is subsequently modified (Modify or Disconnect) the asset integration ID is copied to the quote and order line items.

Action Types

Each action types is implemented as a soft-coded list of values. This soft coding supports a multilingual user interface and allows for industry specific terminology. The action types supported by the Siebel application are listed in Table 19.

Table 19. Action Types

Action Type	Comments
New	
Modified	
Deleted	
Existing	No action

Examples   **Generating a Delta Quote to Update an Asset**

The following example shows how this method generates a delta quote to update an asset.

1 A configuration session starts with the GCI One Bundle in the state shown in the following diagram.
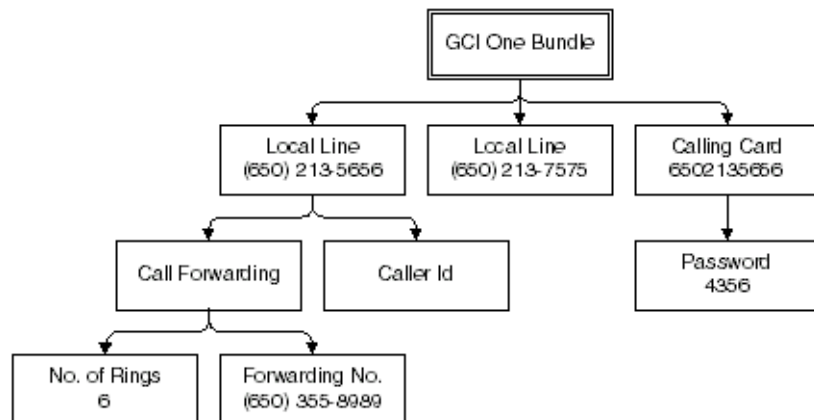
2 A CSR updates the customizable asset.
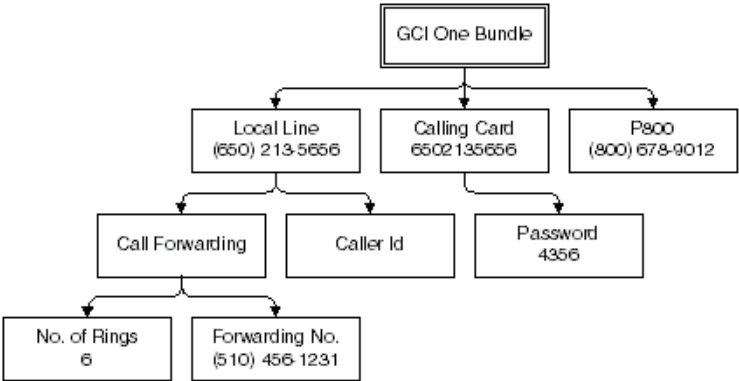
3 The Delta method generates the delta quote shown in the following diagram.
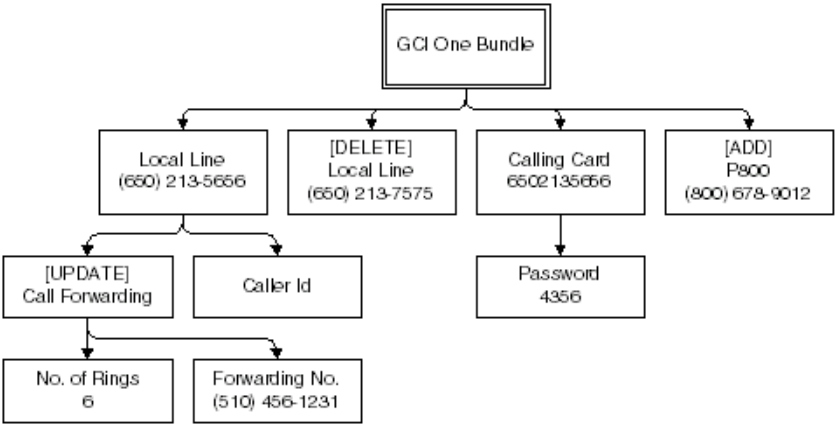
Generating a Delta Quote to Add a New Asset

The following example shows how this method generates a delta quote to add a new asset.

1 A configuration session starts with no existing asset. The user configures a new customizable product.
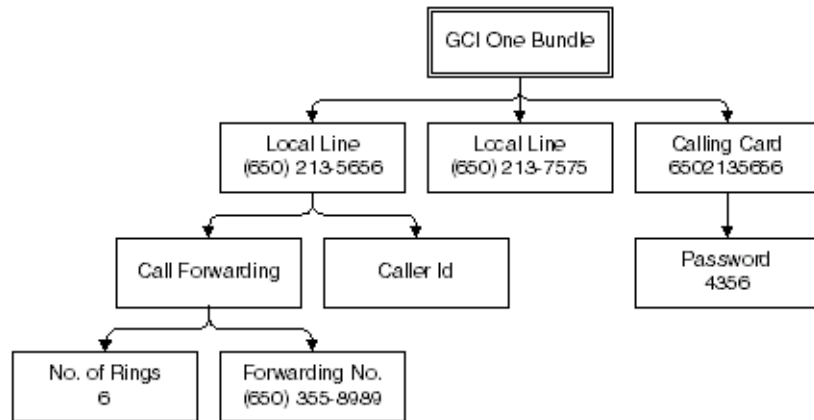
2 The Delta method generates the following delta quote.

Generating a Delta Quote to Disconnect an Asset

The following example shows how this method generates a delta quote to disconnect an asset.

1 The user selects a customizable asset in the service profile view.
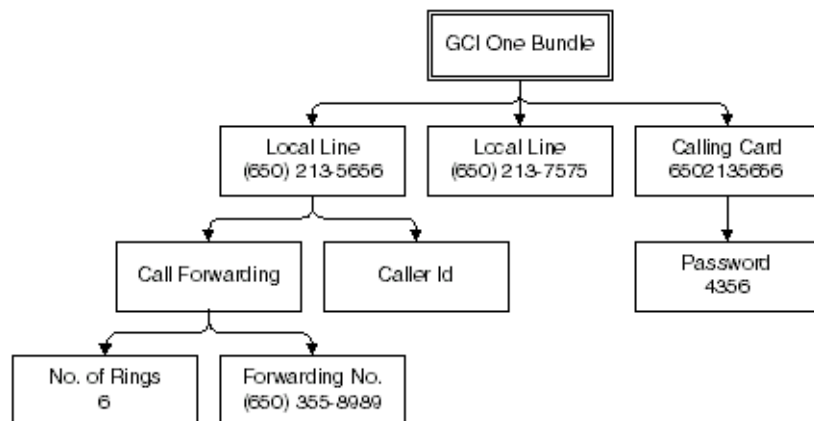
2 The user clicks Disconnect.

A workflow runs Delta with the current state of the customizable asset and an empty customizable asset as input arguments. The resultant delta quote is shown below.
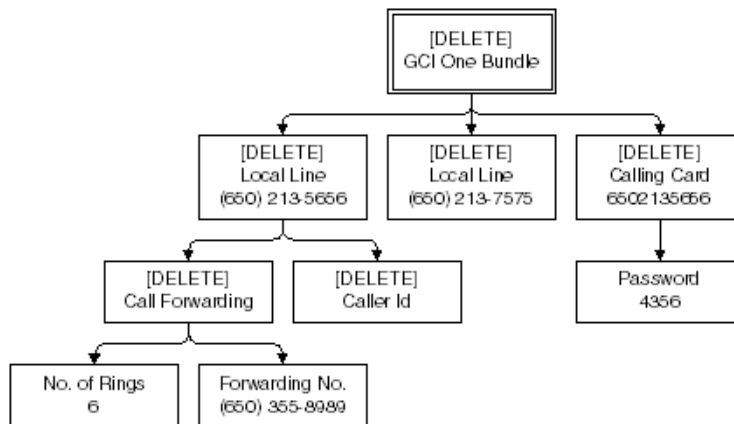
Generating a Delta Property Set to Add More Assets

The following example shows how this method generates a delta property set to add additional copies of an asset.

1 The user selects a customizable asset in the service profile view.
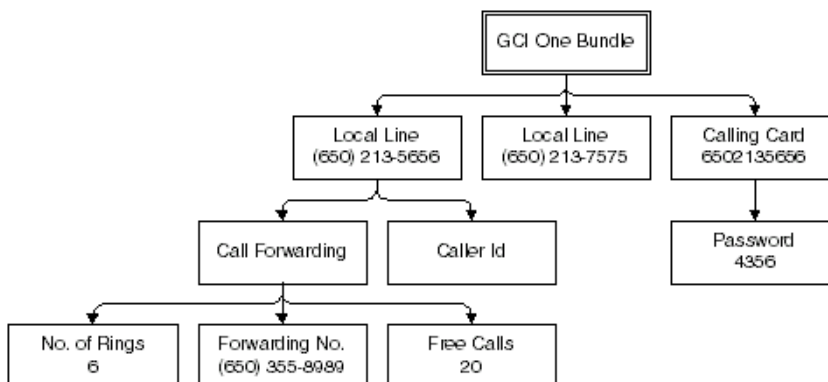
2 The user makes various changes including changing the quantity of Calling Card from one to three.
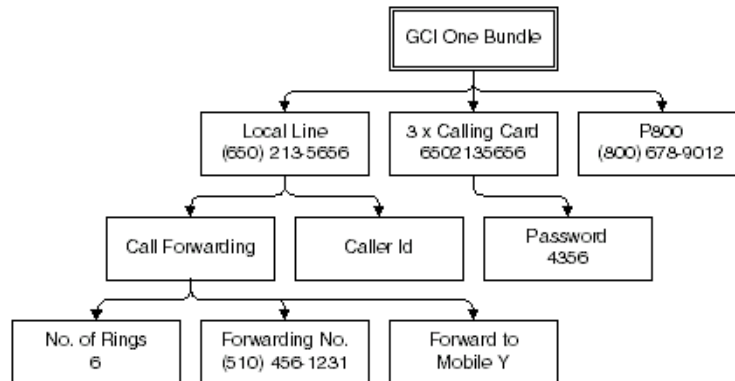
3 Delta generates the following delta property set. The calling card record is split out into the original, unchanged asset and an action to add the new copies of the original calling card.
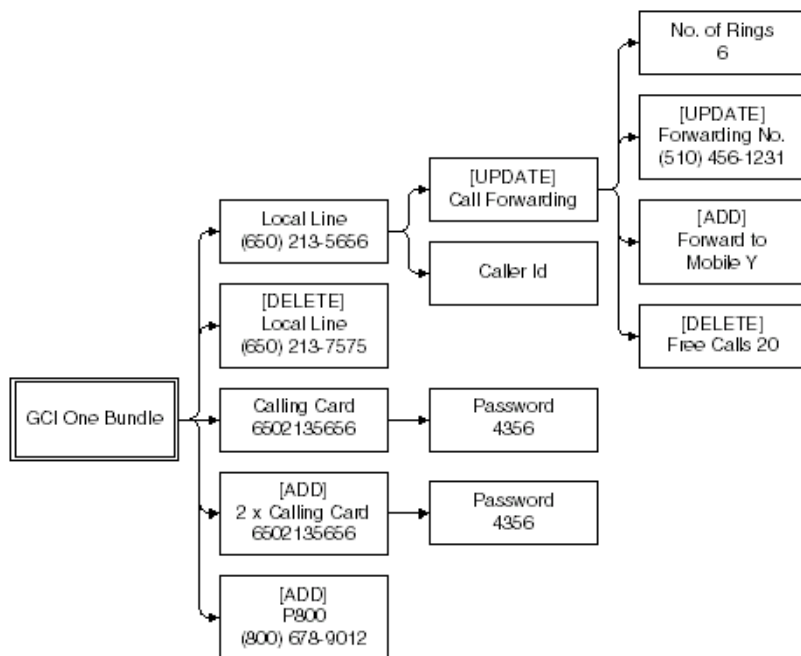
Identifying Changes in Product Structure

The following example shows how this method is used to change a product structure.

1 The user selects a customizable product in the customer profile view.
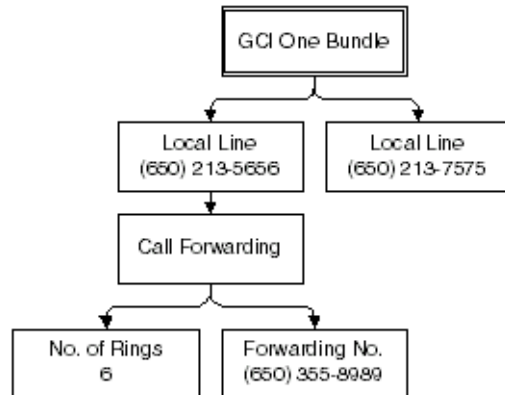
2 Since this asset was created, the customizable product structure has changed to group all features beneath a Feature Package component. When the product is loaded into the Configurator, it is relinked and displayed the following way.
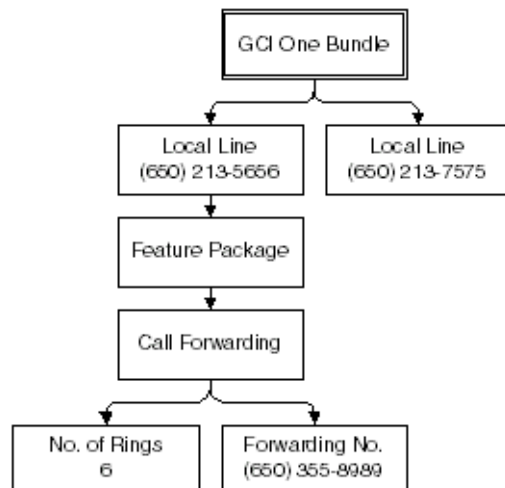
3 When the new structure is saved, Delta identifies the new Feature Package component and marks the Call Forwarding feature for update because its parent has changed.
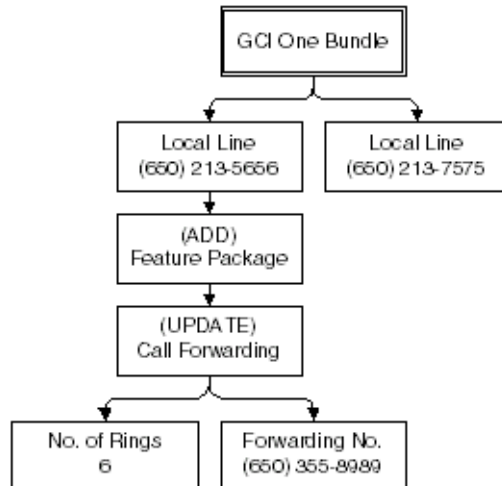
See Also: Methods "Apply" on page 245, "Trim" on page 257, "Explode" on page 262, "Reconfigure Product Instance" on page 281, "Set Output Header" on page 288, and "Set Product Instance" on page 288 and workflows "SIS OM Edit Delta Quote Line Item" on page 194, "SIS OM Edit Service Order Line Item" on page 199, "SIS OM Edit Complex Asset Workflow" on page 218, "SIS OM Disconnect Asset Sub-process" on page 223.

Apply

This is one of the Product Manipulation Toolkit Business Service Methods.

It applies changes defined by a Sales order line item to a customizable asset. This method uses, as a base, an asset that is cached as a result of a call to set the Product Instance and optionally, a header (asset, quote, or order), passed in during the Set Output Header.

Arguments   *OpenOrders*

[in] Output result of a call to Business Service Find Orders. (Optional)

For more information, see "Remarks" on page 246.

NOTE: Either OpenOrders or SiebelMessage is acceptable as input but not both.

SiebelMessage

[in] Contains a single complex Open Order or an Open Quote Line Item. (Optional)

NOTE: Either SiebelMessage or OpenOrders is acceptable as input but not both.

SiebelMessage

[out] Output asset image representing a future configurable asset.

Is Apply Result Empty

[out] Y if all the line items are removed from the result, or if the information supplied to create an asset is insufficient information.

NOTE: Either SiebelMessage or Is Apply Result Empty is returned as output but not both.

Returns   An asset PropertySet that represents the original input asset plus the changes defined in the input quote or order line item.

Remarks   **Input Arguments**

To meet its requirements as a general-purpose tool for processing throughout the
Asset-Quote-Order life cycle, the Apply method can accept a variety of arguments
as input. All input parameters are optional to a varying degree, and the combination
of parameters will be determined by the data present and the desired operation.

Apply handles four possible input parameters:

■ OpenOrders [input] PropertySet representing a series of Open Orders

OpenOrders can be passed as one of two arguments directly in the Apply method
invocation. When a single OpenOrders is to be processed, this argument can be
supplied through a standard SiebelMessage PropertySet, obtained through a call
to a standard Siebel Adapter. It can be either an Order or a Quote subtype (Quote
only on Modify Quote Workflows).

When more than one Open Order is involved in creating the Output Asset,
OpenOrders is supplied by a multiple hierarchy OpenOrders type, obtained by
invoking the Find Orders Business Service method. Apply checks for the
presence of OpenOrders first, and only looks for the single-order SiebelMessage
if OpenOrders was not supplied. If both are supplied, only OpenOrders is
processed. If neither is supplied and Input Asset is supplied, the Apply method
passes the Input Asset PropertySet back as the Output Asset PropertySet.

■ SiebelMessage [input] PropertySet

This input represents a single Open Order. See the description above.

■ Asset [input] PropertySet

This argument is passed through the method invocations before Apply is
invoked. The Input Asset PropertySet is the base Asset upon which all changes
from Open Orders are applied. When supplied, it is passed into the Business
Service through a separate invocation of SetProductInstance immediately prior
to the Apply method invocation. If no Assets related to the Open Orders being
applied, the call to SetProductInstance is skipped.

■ Header[output] PropertySet

This argument is passed through the method invocations before Apply is invoked. Ordinarily, the Output Header normally is not supplied. However, if it is supplied, it is passed into the Business Service by a separate invocation of SetOutputHeader immediately before Apply is invoked.

Under most operating conditions, Apply determines the contents of the Output Header from the Input Asset or the Input Orders. However, when the Output Header is supplied, it is passed into the Business Service by a separate invocation of SetOutputHeader immediately before Apply is invoked. The Output Header can be a SiebelMessage PropertySet of type Asset, Order or Quote. It can be either an empty header without subordinate data or a fully formed hierarchy with associated child item data. When child item data is carried with the Output Header, the child item data is ignored.

Generally, the Output Header gives the Apply method specific data to create an update Output Header for later synchronization by a Siebel Adapter. It should be used only if the Output Header that results from Input Asset or the Input Open Order processing is insufficient for resynchronization.

It is also possible (and occasionally valid) to invoke Apply without passing any arguments at all. If no input is specified at all, Apply returns a value of Y in the Is Apply Result Empty Process Property. This result is also returned when the resulting Asset contains only a header, but no items.

Creating a hybrid asset order

Apply creates a hybrid asset-order to simulate the future configuration of a complex product. Taking an asset representing a complex product as input, Apply overlays all unprocessed items and attributes of that product from all its open orders onto the asset. Because the asset's items and attributes are already provisioned, their action codes will carry the internationalized equivalent of the *(blank) value.

Service Item Unique Keys

The Apply and Delta method operations depend upon the unique keys to each service item. For more information, see the description of Delta on page 232.

Apply assumes that the asset used as a base on which to apply open orders was set using Set Product Instance. If no asset is supplied, either the first Open Order or the single (SiebelMessage) Open Quote or Order will be used as the basis for creating a new complex asset. If neither asset nor Open Order is supplied, the method returns an Empty result.

Exception Handling

Apply handles all service quote or sales order actions even if they include possible conflicts. For example, if a service quote line item instructs the method to modify a service item that is already disconnected, Apply logic ignores the service quote line item. The exception conditions handled by Apply are listed below.

Apply is executed in two steps:

1 SetProductInstance (Asset PropSet)

This action initializes internal structures and stores the passed PropertySets that are the result of an earlier invocation of Siebel EAI Adapters. Because a business service is limited to a single hierarchy per invocation, the PMT business service is invoked twice to pass both PropertySets.

NOTE: The Asset PropertySet is assumed to be a single hierarchy representing a single complex item, keyed by the integration ID for the root of the complex item.

2 Apply (OpenOrders PropSet)

This action does the following:

- Retrieves the Asset PropertySet from its internal storage (established by calling Set Product Instance) and instantiates the output complex object from it.

- Instantiates a complex object from the OpenOrders PropertySet input parameter.

- Iterates through the OpenOrder PropertySet, applying each item in turn, repeating for each open order in ascending chronological sequence.

- Whenever the hierarchical structure is altered, Apply fixes the output hierarchy to reflect the OpenOrder.

■ Returns the output property set.

NOTE: The OpenOrders PropertySet is assumed to be one of a Null hierarchy, a single hierarchy representing one complex item, or a container of iterations of a complex item, each representing a change over time. The integration ID for the root of the complex item is the key for the item.

The Apply method handles the exception conditions listed in the following table.

Exception	Action	Reason
Instruction to add an item that already exists.	Ignores the add instruction. Attributes and the price are not updates.	The instruction is outdated. Therefore, the attributes are unreliable.
Instruction to update an item that no longer exists.	Ignores the update instruction.	The instruction is outdated. It cannot be performed.
Instruction to delete an item that no longer exists.	Ignores the delete instruction.	The action has already occurred.
Instruction to do nothing to an item that does not exist.	No action.	A sequencing problem may have occurred.

Examples   **Add, Update, Delete a Complex Order**

The following example shows how this method applies add, update, and delete instructions on an order to an existing asset.

1 Start with a customizable asset.
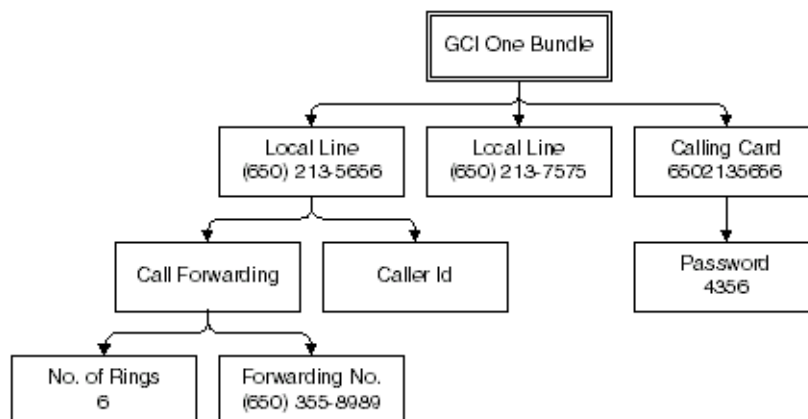
2 Apply a delta order.
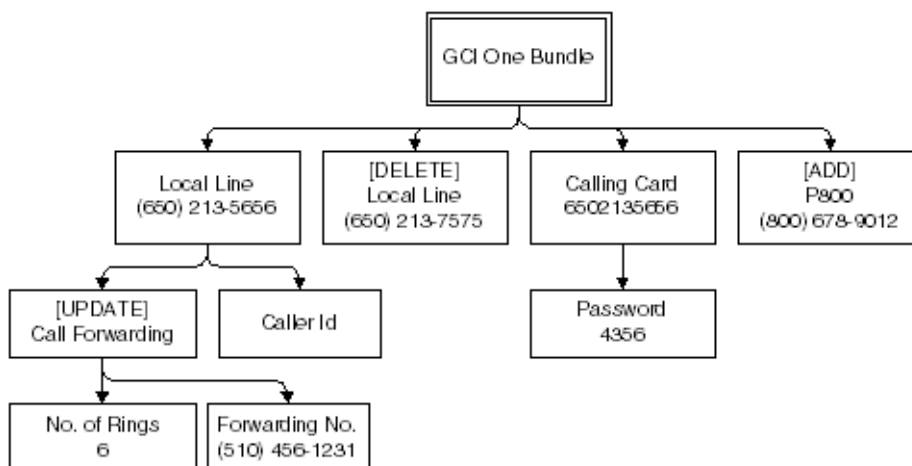
For more information, see "Delta" on page 232.

3 A new customizable asset is created.
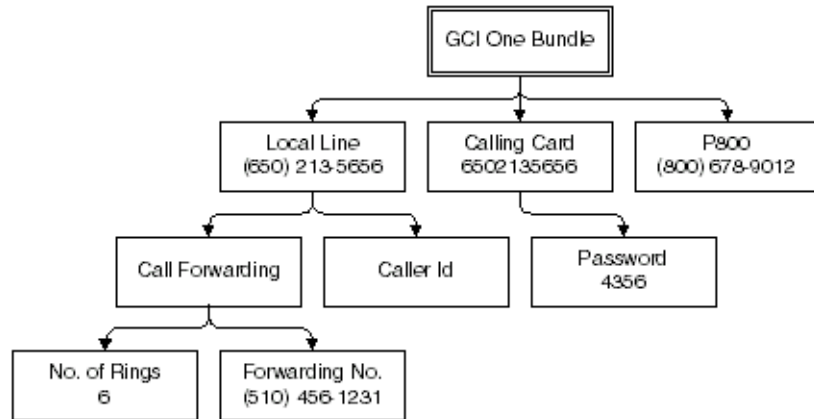
Process a new installation

The following example shows how this method is used to process a new installation.

1 Start with no asset.

2 Apply a new installation.
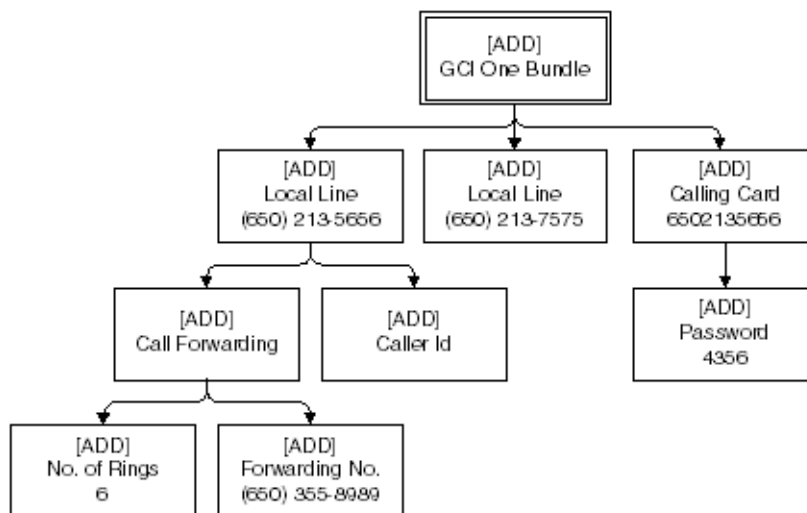
3 A new customizable asset is created.
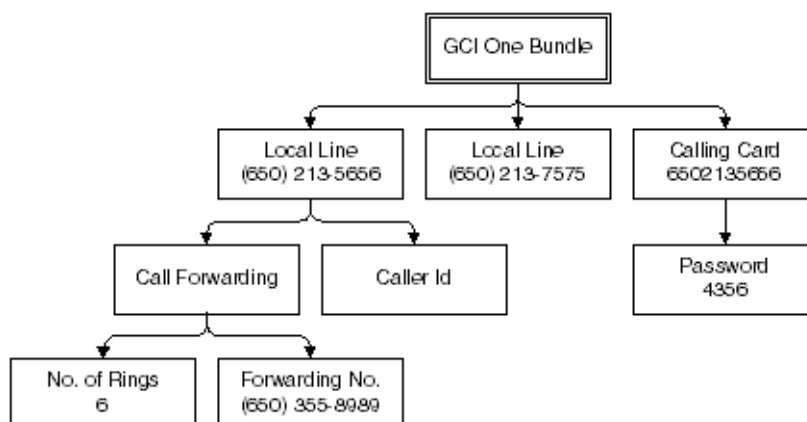
Ignores Instructions to Process Absent Items

The following example shows how this method is used to process a delta quote that includes an update to an absent item.

1 Start with a customizable asset from an external profile management system.
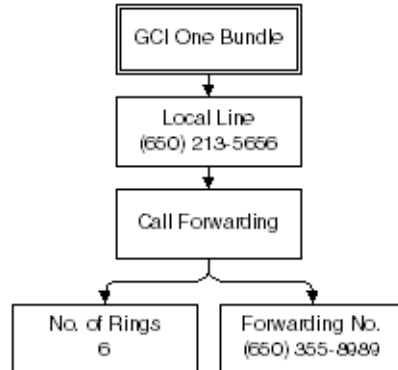
2 Apply a delta quote that was generated a week before.
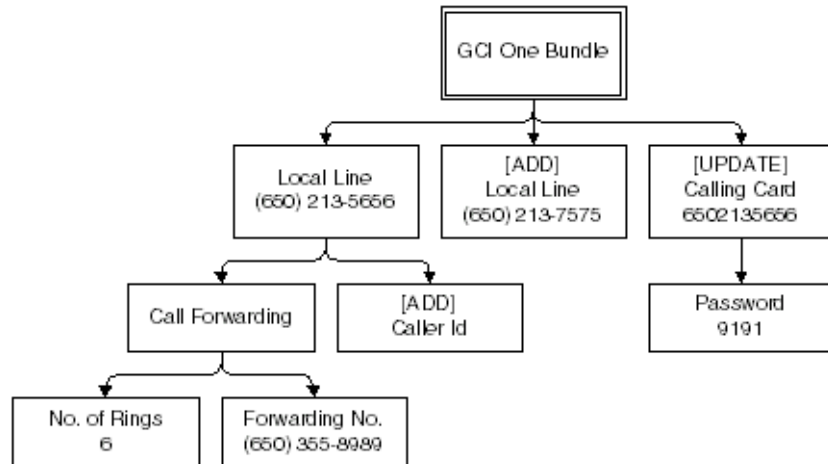
NOTE: The calling card referred to in the delta quote was removed from the profile after the quote was created. The [UPDATE] Calling Card branch is ignored.

3 The Apply method ignores updates to the service item that no longer exists, but successfully executes the remaining changes.

```
                    ┌─────────────────┐
                    │  GCI One Bundle │
                    └─────────────────┘
              ┌──────────┴──────────┐
    ┌──────────────────┐   ┌──────────────────┐
    │   Local Line     │   │   Local Line     │
    │  (650) 213-5656  │   │  (650) 213-7575  │
    └──────────────────┘   └──────────────────┘
        ┌──────┴──────┐
  ┌──────────────┐  ┌──────────────┐
  │ Call Forwarding │  │   Caller Id  │
  └──────────────┘  └──────────────┘
     ┌────┴─────┐
 ┌──────────────┐  ┌──────────────────┐
 │ No. of Rings │  │  Forwarding No.  │
 │      6       │  │  (650) 355-8989  │
 └──────────────┘  └──────────────────┘
```
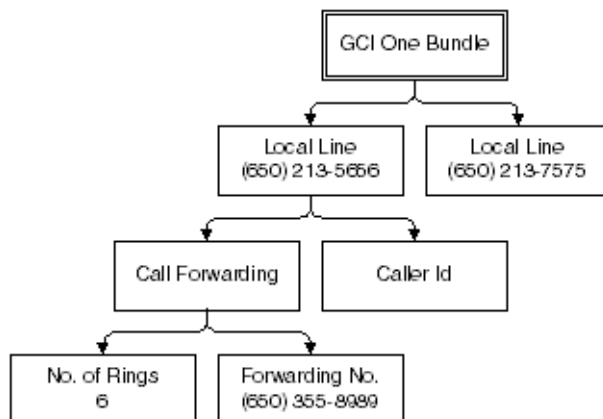
Ignores Instructions to Add an Already Existing Item

The following example shows how this method is used to process a delta quote that contains an invalid add instruction.

1 Start with a customizable asset from an external profile management system.

```
                    ┌─────────────────┐
                    │  GCI One Bundle │
                    └─────────────────┘
              ┌──────────┴──────────┐
    ┌──────────────────┐   ┌──────────────────┐
    │   Local Line     │   │   Local Line     │
    │  (650) 213-5656  │   │  (650) 213-7575  │
    └──────────────────┘   └──────────────────┘
        │
  ┌──────────────┐
  │ Call Forwarding │
  └──────────────┘
     ┌────┴─────┐
 ┌──────────────┐  ┌──────────────────┐
 │ No. of Rings │  │  Forwarding No.  │
 │      6       │  │  (650) 355-8989  │
 └──────────────┘  └──────────────────┘
```
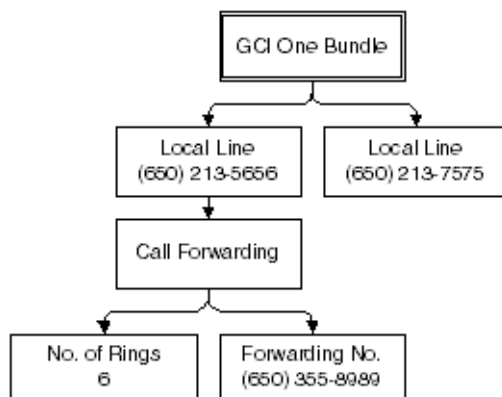
2 Apply a delta quote that was generated a week before.

> **NOTE:** The second local line, (650) 213-7575, already exists in the service profile. It was provisioned by an external system user.

3 Apply ignores add commands where the service item already exists and successfully executes the remaining changes.

Process Instructions to Update the Parent of a Component

The following example shows how this method is used to process a delta quote that updates the parent component.
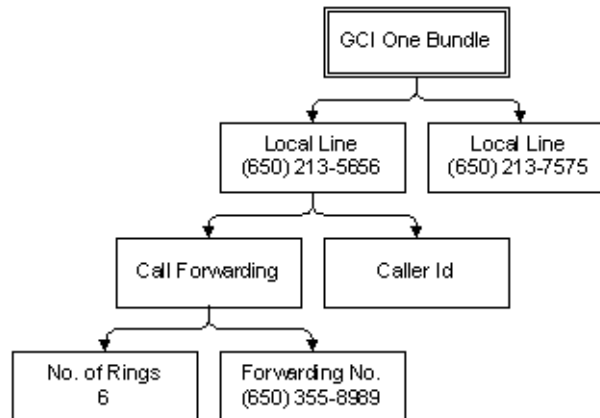
1 Start with a customizable asset in the old product format.

```
                    ┌─────────────────┐
                    │  GCI One Bundle │
                    └─────────────────┘
                       │          │
              ┌────────────────┐  ┌────────────────┐
              │  Local Line    │  │  Local Line    │
              │ (650) 213-5656 │  │ (650) 213-7575 │
              └────────────────┘  └────────────────┘
                       │
              ┌────────────────┐
              │ Call Forwarding│
              └────────────────┘
                  │        │
        ┌──────────────┐  ┌────────────────┐
        │ No. of Rings │  │ Forwarding No. │
        │      6       │  │ (650) 355-8989 │
        └──────────────┘  └────────────────┘
```
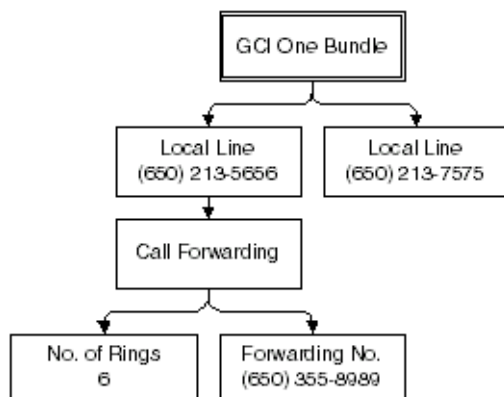
2 Apply a delta order that updates the parent component of the Call Forwarding feature.

```
                    ┌─────────────────┐
                    │  GCI One Bundle │
                    └─────────────────┘
                       │          │
              ┌────────────────┐  ┌────────────────┐
              │  Local Line    │  │  Local Line    │
              │ (650) 213-5656 │  │ (650) 213-7575 │
              └────────────────┘  └────────────────┘
                       │
              ┌────────────────┐
              │     (ADD)      │
              │ Feature Package│
              └────────────────┘
                       │
              ┌────────────────┐
              │   (UPDATE)     │
              │ Call Forwarding│
              └────────────────┘
                  │        │
        ┌──────────────┐  ┌────────────────┐
        │ No. of Rings │  │ Forwarding No. │
        │      6       │  │ (650) 355-8989 │
        └──────────────┘  └────────────────┘
```
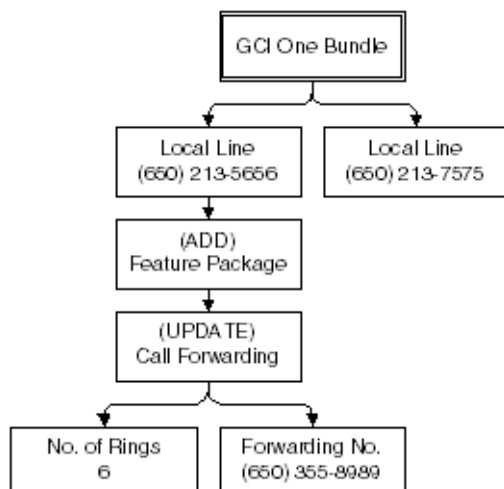
3 The Apply method adds the Feature Package product beneath the local line and re-attaches the existing Call Forwarding feature to the Feature Package.
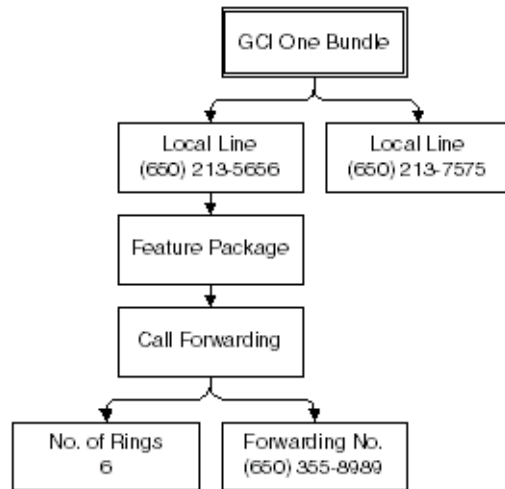
See Also   Methods "Delta" on page 232, "Trim" on page 257, "Explode" on page 262, and "Set Product Instance" on page 288 and workflows "SIS OM Edit Delta Quote Line Item" on page 194, "SIS OM Edit Service Order Line Item" on page 199, "SIS OM Apply Completed Service Order Line Item to Service Profile" on page 205, "SIS OM Edit Complex Asset Workflow" on page 218, "SIS OM Disconnect Products & Services Process" on page 221.

Trim

This is one of the Product Manipulation Toolkit Business Service Methods.

It eliminates line items from a delta quote or delta order based on a soft coded rule or Keep Specification. This method is used, in the Order to Asset workflow, to identify changes in an order item that are ready to apply to the service profile stored in Assets.

For a line item to be kept in the product instance hierarchy, KeepSpec must be TRUE for that line item. All children of the line item will also be removed if the parent is removed.

Arguments *KeepSpec*

[in] A Boolean expression based on fields in the current line item. If the line item is to be retained, KeepSpec must return True. (Required)

ObjectId

[in] Row Id of the root line item that is used to load the hierarchy if a SiebelMessage is not passed in. (Optional)

SiebelMessage

[in] Hierarchy to be used if an Object Id is not supplied. (Optional)

SiebelMessage

[out] Resulting product instance.

Is Trim Result Empty

[out] Y or N value. Y if all line items are removed in the result. Otherwise, N.

Returns Removes selected line items from the product instance.

Remarks If the KeepSpec input is TRUE for a line item, it is kept in the product instance hierarchy. If not, it is eliminated. All children of the line item are removed if the parent is removed.

When Trim is called, the method starts at the top-most item in the product hierarchy and works recursively down through its children. If the KeepSpec evaluates to TRUE for a line item, it is kept in the product instance hierarchy. If not, it and all of its children are eliminated. For example, the KeepSpec for the Order to Asset workflow is:

```
((([Status] = LookupValue('FS_ORDER_STATUS', 'Complete')) OR ([Action Code] =
LookupValue('DELTA_ACTION_CODE', 'Existing'))) AND ([Convert To Asset Flag] = 'Y')
```

Examples **Trimming Pending and Failed Items**

The following example shows how this method is used to eliminate pending and failed items.

1 A new installation is partially complete.
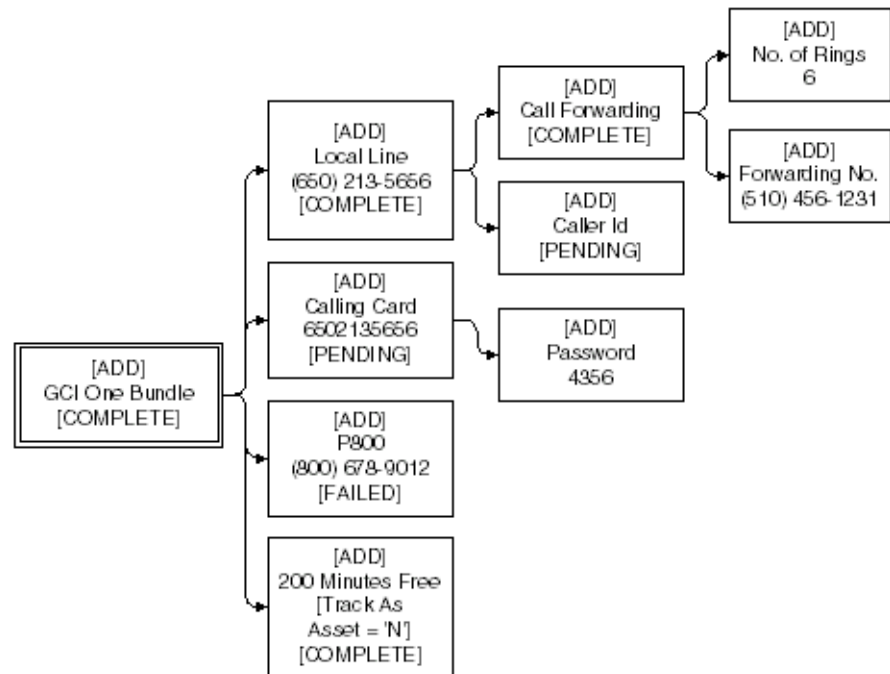
2 Trim eliminates all Pending and Failed items. It also eliminates the 200 Minutes Free product because that product has Track As Asset = N.

```
┌─────────────────┐
│     [ADD]       │
│  GCI One Bundle │
│   [COMPLETE]    │
└────────┬────────┘
         │
┌────────▼────────┐
│     [ADD]       │
│   Local Line    │
│ (650) 213-5656  │
│   [COMPLETE]    │
└────────┬────────┘
         │
┌────────▼────────┐
│     [ADD]       │
│ Call Forwarding │
│   [COMPLETE]    │
└────────┬────────┘
    ┌────┴────┐
┌───▼────┐ ┌──▼──────────┐
│ [ADD]  │ │   [ADD]     │
│No. of  │ │Forwarding No.│
│Rings 6 │ │(510) 456-1231│
└────────┘ └─────────────┘
```
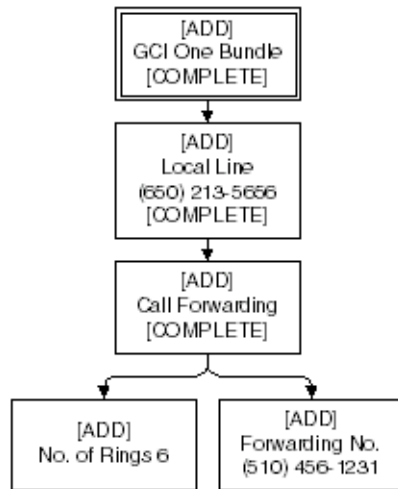
Trimming Orphaned Items

If an item fails to meet the KeepSpec criteria, this method removes all of its children. The following example shows this situation.

1 A user starts a new installation in which a parent item is Pending and a child item is Complete.

```
          ┌─────────────────┐
          │ [ADD]           │
          │ GCI One Bundle  │
          │ [COMPLETE]      │
          └────────┬────────┘
                   │
          ┌────────┴────────┐
          │ [ADD]           │
          │ Local Line      │
          │ (650) 213-5656  │
          │ [PENDING]       │
          └────────┬────────┘
             ┌──────┴───────────┐
   ┌─────────┴────────┐  ┌──────┴──────────┐
   │ [ADD]            │  │ [ADD]           │
   │ Call Forwarding  │  │ Caller Id       │
   │ [COMPLETE]       │  │ [COMPLETE]      │
   └─────────┬────────┘  └─────────────────┘
      ┌──────┴──────────┐
┌─────┴─────────┐ ┌─────┴──────────┐
│ [ADD]         │ │ [ADD]          │
│ No. of Rings  │ │ Forwarding No. │
│ 6             │ │ (510) 456-1231 │
└───────────────┘ └────────────────┘
```
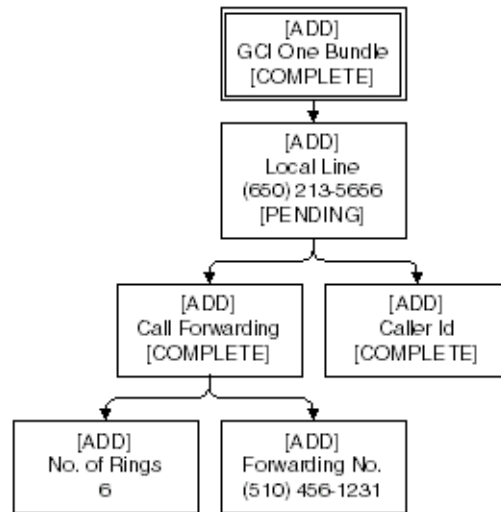
2 Trim eliminates all Pending or Failed items and their children, Complete or not.

```
┌─────────────────┐
│ [ADD]           │
│ GCI One Bundle  │
│ [COMPLETE]      │
└─────────────────┘
```
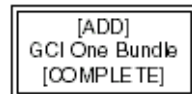
See Also   Methods "Delta" on page 232 and "Apply" on page 245 and workflow "SIS OM Apply Completed Service Order Line Item to Service Profile" on page 205.

Explode

This is one of the Product Manipulation Toolkit Business Service Methods.

It creates multiple instances of a product. The number of instances is determined by the value of the field specified by the ExplodeOnField argument. For each new instance, the value of ExplodeOnField is set to 1. An existing instance is considered for explosion only if it meets the conditions specified by ConditionFieldNames and ConditionValues.

NOTE: Explode works for a quantity set at any level of the product hierarchy.

To exclude fields from being copied from the existing instance to the new instance, add user properties to the SIS OM PMT Business Service. You can use the ExclusionFieldsUserPropertyTag input argument to identify the User Properties series used for this purpose.

Arguments   *RootItemId*

> [in] Root Item Id. Only the subcomponents of the root line item with a Row Id specified by the RootItemId are considered for Explode. (Optional)

ExplodeOnField

> [in] Value of the field specified by ExplodeOnField determines the number of instances created by Explode. For each new instance, the value of the ExplodeOnField is set to 1. (Required)

ConditionFieldNames

> [in] Comma separated list of component field names. An existing instance is exploded only if the conditions specified by ConditionFieldNames and ConditionValues are met. (Optional)

ConditionValues

> [in] Comma separated list of condition values. Standard Siebel expressions (such as LookupValue) are supported. An existing instance is exploded only if the conditions specified by ConditionFieldNames and ConditionValues are met. (Optional)

ExclusionFieldsUserPropertyTag

[in] Name of the series of user properties that identify fields to exclude when the object instance is copied. The user property name is configurable and specified by ExclusionFieldsUserPropertyTag. (Optional)

SiebelMessage

[in] Product instance to be exploded. (Required)

SiebelMessage

[out] Product instance (integration object) representing the exploded business component. (Required)

Is Exploded

[out] Status flag (Y or N) which indicates whether the SiebelMessage has been exploded or not. (Optional)

Returns   Product set containing multiple copies of the original component.

Remarks   Explode copies any product component whose quantity > 1. It creates multiple copies, each with quantity = 1. By default, products with the Convert to Asset flag set to N are ignored. This method inputs and outputs a property set containing product changes.

A user configurable list identifies fields that are excluded during the copy. For example, a user would not create multiple copies of a unique identifier such as a telephone number.

Excluded Fields

All fields, including prices, are copied as is into each new instance of the service item except the following columns that can not be copied, by default:

- Asset Integration Id

- Conflict Id

- Created

- Sequence Number

- Updated

- Id

- Integration Id

- Quantity

- Service Point Id

- Extended Quantity

User Properties

This method uses the default user properties listed below to define a list of
integration component fields that are not copied when the parent integration object
is exploded.

- Exclude From Explode.SIS OM Order.Line Item 11 to Exclude From Explode.SIS
  OM Order.Line Item 20

- Exclude From Explode.SIS OM Quote.Line Item 1 to Exclude From Explode.SIS
  OM Quote.Line Item 10

The general format for all these user properties is:

  < User Prop Name > . < Integration Object Name > . < Integration Component
  Name > #

Examples   **Copying Components Whose Quantity Exceeds 1**

The following example shows this method creates multiple copies of a component.

1 Start with an order to add multiple Calling Cards as part of a GCI One Bundle.

2 Explode copies all components with quantity > 1. For example:
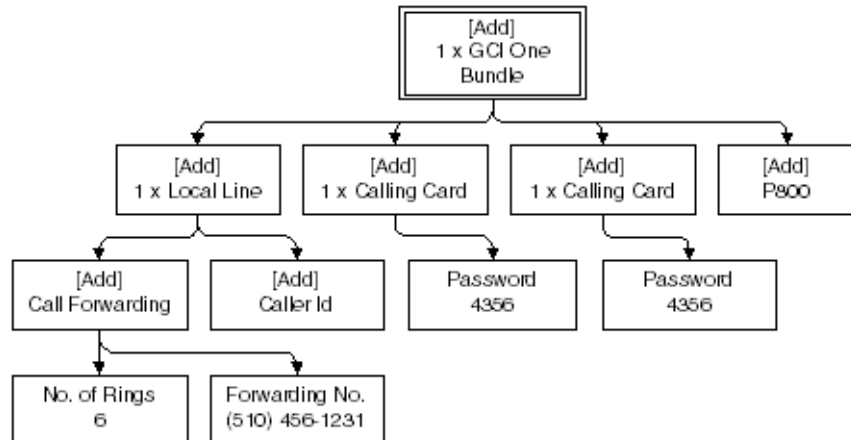
See Also   Methods "Delta" on page 232, "Apply" on page 245, "Trim" on page 257, "Explode Siebel Object" on page 266, and "Is Fully Exploded" on page 274 and workflows "SIS OM Quote To Order Workflow - PMT" on page 197, and "SIS OM Edit Service Order Line Item" on page 199.

Explode Siebel Object

This is one of the Product Manipulation Toolkit Business Service Methods.

It functions like Explode except that it also loads the SiebelMessage integration object from the Siebel database with a specified business component and synchronizes it back to the database after the explosion.

Arguments   *IntObjectName*

[in] Name of the integration object representing the business component that will be exploded. (Required)

PrimaryRowId

[in] Siebel object row ID of the business component that will be exploded. (Required)

RootItemId

[in] Root Item Id. Only the subcomponents of the root line item specified by the RootItemId are considered for Explode. (Optional)

ExplodeOnField

[in] Value of the field specified by ExplodeOnField determines the number of instances created by Explode. For each new instance, the value of the ExplodeOnField is set to 1. (Required)

ConditionFieldNames

[in] Comma separated list of integration field names. An existing instance is exploded only if the conditions specified by ConditionFieldNames and ConditionValues are met.

ConditionValues

[in] Comma separated list of condition values. Standard Siebel expressions (such as LookupValue) are supported in each comma separated value. An existing instance is exploded only if the conditions specified by ConditionFieldNames and ConditionValues are met.

ExclusionFieldsUserPropertyTag

[in] Name of the series of user properties that identify fields to exclude when the object instance is copied. The user property name is configurable and specified by ExclusionFieldsUserPropertyTag. (Optional)

SiebelMessage

[out] Product instance (integration object) representing the exploded business component. (Optional)

Is Exploded

[out] Status flag (Y or N) which indicates whether the SiebelMessage has been exploded or not. (Optional)

Remarks   **User Properties**

This method has the following default user properties:

■ Exclude From Explode.SIS OM Order.Line Item 11 to Exclude From Explode.SIS OM Order.Line Item 20

■ Exclude From Explode.SIS OM Quote.Line Item 1 to Exclude From Explode.SIS OM Quote.Line Item 10

See Also   Methods "Explode" on page 262 and "Is Fully Exploded" on page 274.

Find Orders

This is one of the Product Manipulation Toolkit Business Service Methods.

Given the asset integration ID of a root line item, this method finds all instances of order items that have the same integration ID. The order header, matching line item, its child items and attributes are returned as part of the output. Any other line item in the same order header that does not have a matching integration ID will not be returned.

Arguments   *Asset Integration Id*

[in] Root asset integration ID that is used to open order items to an asset. (Required)

Search Spec

[in] Additional search specification used to look for open orders. This is a business component search spec that will be applied to the 'Order Entry - Line Item (Asset Based) BC. (Optional)

Sort Order Item By

[in] Comma separated list of field names. Each field name is optionally followed by the string (DESCENDING). For example, Last Name (DESCENDING), First Name. This forces the method to sort the order line item it locates by the given field names. (Optional)

Open Orders

[out] A single hierarchy of type OpenOrders that has child hierarchies for each open order that is found.

See Also   Workflows "SIS OM Edit Delta Quote Line Item" on page 194, "SIS OM Edit Service Order Line Item" on page 199, "SIS OM Edit Complex Asset Workflow" on page 218, "SIS OM Disconnect Products & Services Process" on page 221.

Logical Delete

This is one of the Product Manipulation Toolkit Business Service Methods.

It converts any item of a product instance that has a Delete action code to an Modified action code and an Inactive status. Logical Delete only works with a product instance of the Order type. In other words, the Integration Object passed in the SiebelMessage is based on the Order Entry business object.

Arguments   *ObjectId*

[in] ID of the object to be loaded. If this optional argument is provided, the SiebelMessage argument is ignored. (Optional)

SiebelMessage

[in] Primary argument if there is no Object Id. This must be an Order type input. (Required)

SiebelMessage

[out] Result of the logical delete.

Remarks   This method takes a complex object as input. It goes through the hierarchy of the complex object and changes all Delete action codes to Modified. Then, it sets the status of the associated line items to Inactive.

See Also   Workflow "SIS OM Apply Completed Service Order Line Item to Service Profile" on page 205.

Assign New Service IDs

This is one of the Product Manipulation Toolkit Business Service Methods.

It assigns a service point ID, associated with a specified premise, to each item of the input complex product for which the service type of the service point matches the service type of the product.

If a free service point is not available for a product component, a service point is not assigned to it. On the other hand, if multiple service point IDs are available for the same service type, the system will pick one of them randomly.

Arguments   *Premise AddressId*

[in] Row Id of the address to which services are moving. (Required)

SiebelMessage

[in] Service Point Ids are set for this product instance. (Required)

SiebelMessage

[out] Product instance with the newly assigned service point IDs. (Required)

Returns   New service point IDs.

Remarks   **User Properties**

This method uses the following user properties:

- Line Item Integration Object Service Account Id Field Name

- Line Item Integration Object Service Point Id Field Name

- Line Item Integration Object Service Type Field Name

- Service Point BC Address Id Field Name

- Service Point BC Owner Account Id Field Name

- Service Point BC Service Point Id Field Name

- Service Point BC Service Type Field Name

■ Service Point Business Component Name

■ Service Point Business Object Name

Convert Product Instance

This is one of the Product Manipulation Toolkit Business Service Methods.

It converts a product instance of one type to another; for example, quote to order.

Arguments   *Output Object Type*

[in] The input product instance to be converted to this type. (Required)

Object Id

[in] ID of the object to be converted. If Object Id is specified Input, Input Object Type must also be specified. (Optional)

Input Object Type

[in] Type of the input product instance. (Only required if Object Id is specified)

SiebelMessage

[in] Product instance to be converted. Not required if Object Id and Input Object Type are specified. (Optional)

Generate New Item Integration Id

[in] If the line item's action code is New (Y or N value), this argument forces the system to generate a new unique ID for the Asset Integration Id field. (Optional)

NOTE: The Integration Id and the Service Id are not the same thing. The Integration Id is the internal unique identifier. The Service Id is a free text field that the user may use for telephone numbers, and so on.

Upsert Result

[in] Insert and synchronize the resulting product instance back to the database (Y or N value). (Optional)

SiebelMessage

[out] Product instance to be converted. Not required if the Object Id and Input Object Type are specified.

Returns   Product type change.

Remarks   This method uses the mapping of integration component fields as user properties. The name has the following format:

Source Int Obj Name.Source Int Comp Name:Dest Int Obj Name.Dest Int Comp Name Map #

The user property value format is:

[Src FieldName]:[Dest Field Name]

NOTE: Src Field Name must be unique for each group of user property mappings.

See Also   Method "Assign New Service IDs" on page 270 and the workflow "SIS OM Quote To Order Workflow - PMT" on page 197.

Get Instance

This is one of the Product Manipulation Toolkit Business Service Methods.

It gets a complex product instance from the Product Configurator.

Arguments   *Object Id*

[in] Key used to return the preloaded complex asset. The argument Instance Id returned by the Reconfigure Product Instance method is passed here.

Instance Id

[out] Passed to this method as output from Reconfigure Product Instance, this key is used to return a complex asset that was loaded into the Product Configurator when Reconfigure Product Instance was invoked.

SiebelMessage

[out] Message.

Returns   Complex product instance.

See Also   Method "Set Multiple Field Values" on page 287.

Get Profile Attribute

This is one of the Product Manipulation Toolkit Business Service Methods.

It returns the value of the specified attribute of the user profile.

Arguments   *Profile Attribute Name*

[in] Name of the user profile attribute to be retrieved.(Required)

Profile Attribute Value

[out] Value of the profile attribute. This value is NULL if the attribute is not set. (Required)

Returns   Value of the user profile attribute.

See Also   Method "Set Profile Attribute" on page 289 and workflows "SIS OM Modify Products & Services Process" on page 214 and "SIS OM Disconnect Products & Services Process" on page 221.

Is Fully Exploded

This is one of the Product Manipulation Toolkit Business Service Methods.

It checks a product instance to determine if an explode operation is required, based upon the value specified by ExplodeOnField. If the field value is greater than one for any component of the product instance, the method returns N. Otherwise, the method returns Y.

Arguments   *RootItemId*

[in] If supplied, only subcomponents of the root item specified by RootItemId are considered for Explode processing. (Optional)

ExplodeOnField

[in] Field (name) that is checked to determine whether explosion is necessary. (Required)

ConditionFieldNames

[in] Comma separated list of integration component field names. (Optional)

ConditionValues

[in] Comma separated list of values. Standard Siebel expressions (such as LookupValue) are supported in each comma separated value. (Optional)

SiebelMessage

[in] Product instance to be checked for explode processing. (Required)

Result

[out] Y or N flag indicating whether the input SiebelMessage has been exploded or not. (Required)

Returns   Y or N.

Remarks   Primarily used in the Apply Completed Service Order Line Item to Service Profile workflow, this method double checks to determine if the service order line items created from the Siebel database (earlier in the workflow) have been fully exploded or not. In other words, it determines whether all line items and the subcomponents were previously processed by the Explode method.

See Also   Methods "Explode" on page 262 and "Explode Siebel Object" on page 266 and workflow "SIS OM Apply Completed Service Order Line Item to Service Profile" on page 205.

Is Module Licensed

This is one of the Product Manipulation Toolkit Business Service Methods.

It determines whether or not the specified module is licensed.

Arguments   *Module Name*

[in] Name of the module being checked. (Required)

Result

[out] Y if the module is licensed; otherwise N.

Returns   Y (module licensed) or N (module not licensed).

See Also   Method "ViewCart" on page 304.

Merge

This is one of the Product Manipulation Toolkit Business Service Methods.

It merges the components of one integration object (product instance) under the header of another integration object.

NOTE: Before this method is called, Set Product Instance must be called to cache the target product instance.

Arguments   *SiebelMessage*

[in] Source product instance to be merged. (Required)

SiebelMessage

[out] Merged product instances. (Required)

Returns   A single product instance containing the merged assets.

Remarks   This method receives two property sets as input, each containing a complex object with hierarchical assets, quotes, or order items. It copies all the line items from the source complex object to the target (cached) complex object. The target object's header information (quote or order headers) are retained. The merged complex object is returned in an output argument property set.

See Also   Method "Set Product Instance" on page 288.

Quote To Revenue

This is one of the Product Manipulation Toolkit Business Service Methods.

It generates revenue line items for each line item in a quote that matches the criteria specified by the input conditions. The line items are associated with the opportunity from which the quote was created.

Arguments   *SiebelMessage*

[in] Contains a product instance hierarchy.

RootItemId

[in] Root item ID.

ConditionFieldNames

[in] Names of fields whose value must equal that specified by ConditionValues. In these cases, the quote line item will be converted to a revenue line item. In the SIS OM Update Revenue workflow, the condition fields are action code, price type and extended amount.

ConditionValues

> [in] Values that fields must have to satisfy the condition. In the SIS OM Update Revenue workflow, the action code must be New or Modified, price type must be One-Time or Recurring, and extended amount must be non-zero.

ExcludedFieldsUserPropertyTag

> [in] User properties tag identifying fields that should not be copied from the quote line item to the revenue line item.

Returns Revenue line items.

Remarks The following discussions list user properties associated with this method. They also indicate how the method adds revenue and determines: revenue amount, revenue dates, number of revenue items, frequency of revenue line items, annually recurring charges, quarterly recurring charges, monthly recurring charges, weekly recurring charges, and daily recurring charges.

User Properties

This method used the following user properties:

■ **Quote To Revenue.Quote Item.Due Date Field**. Quote Line Item business component field that determine the first date on which revenue will be added. Out of the box, this the quote line item is due date.

■ **Quote To Revenue.Quote Item.Amount Field**. Quote Line Item business component field used as the revenue amount. Out of the box this is the extended amount.

■ **Quote To Revenue.Quote Item.Item Price Field**. Quote Line Item business component field containing the item price.

■ **Quote To Revenue.Quote Item.Price Type Field**. Quote Line Item business component field containing the price type.

■ **Quote To Revenue.Quote Item.Unit of Measure Field**. Quote Line Item business component containing the unit of measure.

■ **Quote To Revenue.Quote Item.Occurence Field**. Quote Line Item business component field containing the number of revenue occurrences.

■ **Quote To Revenue.Quote Item.Extended Quantity Field**. Quote Line Item business component field containing the extended quantity.

■ **Quote To Revenue.Quote Item.Description Field**. Quote Line Item business component field containing the description.

■ **Quote To Revenue.Quote Item.Product Id Field**. Quote Line Item business component field containing the product Id.

■ **Quote To Revenue.Revenue.Quantity Field**. Revenue business component field containing the quantity.

■ **Quote To Revenue.Revenue.Quotable Field**. Revenue business component field indicating whether the revenue is quotable.

■ **Quote To Revenue.Revenue.Date Field**. Revenue business component field containing the revenue date.

■ **Quote To Revenue.Revenue.Price Field**. Revenue business component field containing the product price.

■ **Quote To Revenue.Revenue.Revenue Field**. Revenue business component field containing the revenue.

■ **Quote To Revenue.Revenue.Description Field**. Revenue business component field containing the description.

■ **Quote To Revenue.Revenue.Product Id Field**. Revenue business component field containing the product Id.

Adding Revenue

This method:

■ Adds revenue only for quote line items with an New or Modified action code. Quote line items '-', and Delete action codes are ignored.

■ Adds revenue only for quote line items that have an extended amount not equal to zero.

  Negative extended amounts are added to revenue.

■ Adds revenue only for price types that are one-time and recurring. It is not calculated for usage.

■ Adds revenue on a per product component basis (per quote line item).

Determining Revenue Amount

This method:

■ Uses a user property to define the Quote Item business component field that is used for the revenue amount. The default is the Extended Amount field.

■ Uses the value of this field as the revenue amount for all periods.

Determining Revenue Dates

This method:

■ Uses a user property to define the Quote Item business component field that, in turn, is used to calculate the first revenue date. The default is the Due Date field.

Determining Number of Revenue Items

The forecast number of revenue occurrences for a product is defined in product administration. When a quote line item is created the number of forecast revenue occurrences is copied from the product into the quote line item. There, it can be overridden through the UI or by configuration.

This method:

■ Adds revenue for products with one time price types once on the due date of the quote line item, regardless of the number of occurrences defined.

■ Adds revenue for products with recurring price types as many times as the number of occurrences.

Determining Frequency of Revenue Line Items

This method:

■ Adds revenue as it occurs (weekly, monthly, quarterly or annually) instead of grouping it into monthly totals.

■ Adds the first revenue, for any quote line item, on the due date plus one UoM.

The following UoMs that are allowed: Per Year, Per Month, Per Quarter, Per Week, and Per Day.

Determining Annually Recurring Charges

This method:

■ Adds revenue on the same day every year, starting on the end date of the first period. For example, if the due date is 7/11/01, the default date of the first billing cycle is 7/11/02 and revenue is added for 7/11/02, 7/11/03 and so on, for as many occurrences as the quote line item specifies.

If the end date of the first period falls on the 2/29, the revenue date for non-leap years is 2/28.

Determining Quarterly Recurring Charges

This method:

■ Adds revenue on the same day every three months, starting on the date of the first billing cycle, the default value of which is 3 months after the quote line item due date. For example, if the due date is 7/11/01, revenue is added for 10/11/01, 1/11/02, 4/11/02, 7/11/01 and so on, for as many occurrences as product specifies.

If the end date of the first period falls on the 29th, 30th or 31st of a month, the revenue date for months that have fewer days is the last day of the same month.

Determining Monthly Recurring Charges

This method:

■ Adds revenue on the same day every month, starting on the date of the first billing cycle which defaults to one month after the quote line item due date. For example, if the due date is 7/11/01, revenue is added for 8/11/01, 9/11/01 and so on, for as many occurrences as the product specifies.

If the due date falls on the 29th, 30th or 31st of a month, the revenue date for months with fewer days is the last day of the same month.

Determining Weekly Recurring Charges

This method:

■ Adds revenue every 7 days starting on the date of the first billing cycle which defaults to 7 days after the quote line item due date. For example, if the due date is 7/11/01, revenue is added for 7/18/01, 7/25/01, 8/1/01 and so on, for as many occurrences as the product specifies.

Determining Daily Recurring Charges

The method:

■ Adds revenue every day, starting on the date of the first billing cycle which defaults to one day after the quote line item due date. For example, if the due date is 7/11/01, revenue is added for 7/12/01, 7/13/01, 7/14/01 and so on, for as many occurrences as the product specifies.

Reconfigure Product Instance

This is one of the Product Manipulation Toolkit Business Service Methods.

It displays, in the Configurator UI, the asset that was passed to the Product Configurator as input.

NOTE: This method does not return the asset updated by Product Configurator. Instead an event occurs for the primary business component when the Done button is clicked. At that time, you can invoke the Get Instance method to obtain the updated asset from the Product Configurator.

Arguments   *Complex Product*

[in] This product instance, based on Asset, is used as input to the Configurator.

Row Id

[in] Row Id of the Asset.

Event Name

[in] Name of the event that is triggered when the user clicks the Done button.

Primary Business Component Name

[in] Name of the primary business component of the business object associated with the workflow that calls this method. This business component receives the event specified by Event Name.

Pricing Business object

[in] Name of the business object to be used for pricing.

Price List Id

[in] ID of the price list to be used.

Currency Code

[in] Currency code.

Exchange Date

[in] Date of the exchange.

Instance Id

[out] Returned key. This output can be passed (as input) to the Get Instance method to return a complex asset, loaded into the Product Configurator.

Returns   Product Configurator display of the reconfigured complex asset.

Remarks   **User Properties**

This method applies the user properties listed below.

NOTE: This view must use the same business object as the workflow that invokes the Reconfigure Product Instance method.

■ Asset Integration Object Name:

Name of Integration Object based on Asset business components.

■ Complex Product Runtime View Name

Name of view for Product Configurator UI.

Getting an Updated Asset

This method does not return the Asset updated by the Product Configurator. Instead, an event occurs for the primary business components, passed as parameters to this method, when the Product Configurator's Done button is clicked. At that time, the system can call PMT business service method Get Complex Asset to obtain the updated Asset from the Product Configurator.

See Also   Method "Get Instance" on page 273 and workflows "SIS OM Edit Delta Quote Line Item" on page 194, "SIS OM Edit Service Order Line Item" on page 199, and "SIS OM Edit Complex Asset Workflow" on page 218.

Reset

This is one of the Product Manipulation Toolkit Business Service Methods.

It clears out all cached product instances.

Arguments   None

Returns   There are no cached products.

Remarks   This method has no input or output arguments.

See Also   Method "Set Action" on page 284.

Retrieve Next Object From List

This is one of the Product Manipulation Toolkit Business Service Methods.

Given a hierarchical integration object with multiple root components at the second level (for example, Asset), this method returns an integration object that contains the header, one root component, its children and their attributes.

Arguments   *SiebelMessage*

[in] Integration object containing multiple root integration components that are to be worked on. (Required)

Remaining Number of Objects

[out] Number of root integration components left in the input integration object. (Required)

SiebelMessage

[out] New instance of the integration object containing the next root integration component along with the same header from the input integration object instance. (Required)

Object Id

[out] Row Id of the business component that corresponds to the retrieved root integration component. (Optional)

Integration Id

[out] Integration Id of the business component that corresponds to the retrieved root integration component. (Optional)

Remarks   This method can be called multiple times with the same input argument, each time it returns the next root component. And, it is used in conjunction with Update Multi Object List to form a loop control mechanism.

See Also   Methods "Convert Product Instance" on page 271, "Get Instance" on page 273 and particularly, "Update Multi Object List" on page 291.

Set Action

This is one of the Product Manipulation Toolkit Business Service Methods.

It sets the Action Code field of all items in the hierarchy of a given product instance to the specified value.

Arguments   *Action Code*

[in] Set the action codes of all line items in the hierarchy SiebelMessage to this value. (Required)

SiebelMessage

[in] Product instance whose action code will be updated. (Required)

SiebelMessage

[out] Updated product instance.

Returns   Newly set action codes.

Remarks   This method takes a property set containing a complex item as input along with an action code parameter. It goes through the complex item and sets the action code to the value of the action code argument.

See Also   Methods "Set Exception Error Message" on page 285, "Set Field Value" on page 286, "Set Multiple Field Values" on page 287, "Set Output Header" on page 288, "Set Product Instance" on page 288, and "Set Profile Attribute" on page 289.

Set Exception Error Message

This is one of the Product Manipulation Toolkit Business Service Methods.

It is called from the workflow to get the localized error message text that is associated with the input error code.

Arguments   *Error Code*

[in] Error code defined in the repository. (Required)

Error Message

[out] Localized error message text. (Required)

Remarks   Dependencies

Strings corresponding to the supplied Error Code must be defined in the Siebel Database. The seven predefined error messages are defined in the Siebel repository with the message key prefixed with IDS_SISOM_ERR_MOVEWF.

See Also   Methods "Set Action" on page 284, "Set Field Value" on page 286, "Set Multiple Field Values" on page 287, "Set Output Header" on page 288, "Set Product Instance" on page 288, and "Set Profile Attribute" on page 289.

Set Field Value

This is one of the Product Manipulation Toolkit Business Service Methods.

It is used optionally to configure conditions so that updates are only run on the subset of items in the hierarchy that satisfy the conditions.

Arguments   *Field Name*

[in] Name of the field to be changed. (Required)

SiebelMessage

[in] Product instance. (Required)

Value

[in] Literal. (Required)

ConditionFieldNames

[in] Comma separated list of integration component field names. (Optional)

ConditionValues

[in] Comma separated list of values. Standard Siebel expressions (such as LookupValue) are supported. (Optional)

SiebelMessage

[out] Updated product instance. (Required)

Returns   New field values.

Remarks   As input, this method receives one property set containing a complex object and two strings representing a field name and field value. The method goes through the line items hierarchy of the comp[lex object wrapped by the property set, and for each item that satisfies the optional conditions, locates the named field of each line item, and sets it to the value provided.

See Also   Methods "Set Action" on page 284, "Set Exception Error Message" on page 285, "Set Multiple Field Values" on page 287, "Set Output Header" on page 288, "Set Product Instance" on page 288, and "Set Profile Attribute" on page 289.

Set Multiple Field Values

This is one of the Product Manipulation Toolkit Business Service Methods.

It sets specified fields to the given values for all items in the product instance.

Arguments   *Field Names*

[in] Comma separated list of names of fields whose values are to be set. (Required)

Values

[in] Comma separated list of values to which the fields are set. (Required)

SiebelMessage

[in] Product instance hierarchy whose field values are to be set. (Required)

ConditionFieldNames

[in] Comma separated list of integration component field names. (Optional)

ConditionValues

[in] Comma separated list of values. Standard Siebel expressions (such as LookupValue) are supported. (Optional)

SiebelMessage

[out] Updated product instance. (Required)

Returns   Product instance with updated field values.

See Also   Methods "Set Action" on page 284, "Set Exception Error Message" on page 285, "Set Field Value" on page 286, "Set Output Header" on page 288, "Set Product Instance" on page 288, and "Set Profile Attribute" on page 289.

Set Output Header

This is one of the Product Manipulation Toolkit Business Service Methods.

It caches the output header that will be used by the Delta method.

Arguments   *SiebelMessage*

[in] Product instance containing the header to be used for the Delta method output.

Returns   Cached output header.

See Also   Methods "Delta" on page 232, "Set Action" on page 284, "Set Field Value" on page 286, "Set Multiple Field Values" on page 287, "Set Product Instance" on page 288, and "Set Profile Attribute" on page 289 and workflows "SIS OM Edit Delta Quote Line Item" on page 194, "SIS OM Edit Service Order Line Item" on page 199, "SIS OM Edit Complex Asset Workflow" on page 218, "SIS OM Disconnect Products & Services Process" on page 221.

Set Product Instance

This is one of the Product Manipulation Toolkit Business Service Methods.

It caches a product instance that will be used as an input arguments for Apply and Delta methods.

Arguments   *SiebelMessage*

[in] Product instance being saved. (Required)

Returns   Cached product instance.

See Also   Methods "Delta" on page 232, "Apply" on page 245, "Set Action" on page 284, "Set Field Value" on page 286, "Set Multiple Field Values" on page 287, "Set Output Header" on page 288, and "Set Profile Attribute" on page 289 and workflows "SIS OM Edit Delta Quote Line Item" on page 194, "SIS OM Edit Service Order Line Item" on page 199, "SIS OM Apply Completed Service Order Line Item to Service Profile" on page 205, "SIS OM Edit Complex Asset Workflow" on page 218, "SIS OM Disconnect Products & Services Process" on page 221.

Set Profile Attribute

This is one of the Product Manipulation Toolkit Business Service Methods.

It assigns values to attributes in a user profile.

Arguments   *Profile Attribute Name*

[in] Name of the attribute being set.(Required)

Profile Attribute Value

[in] Value to which the attribute will be set. A NULL value clears the attribute. (Required)

Returns   New attribute values.

See Also   Methods "Set Action" on page 284, "Set Field Value" on page 286, "Set Multiple Field Values" on page 287, "Set Output Header" on page 288, and "Set Product Instance" on page 288 and workflows "SIS OM Go to Products and Services Sub-Process" on page 213, "SIS OM Modify Products & Services Process" on page 214, "SIS OM Go to Products and Services Sub-Process" on page 213, "SIS OM Modify Products & Services Process" on page 214, and "SIS OM Disconnect Products & Services Process" on page 221.

Synchronize

This is one of the Product Manipulation Toolkit Business Service Methods.

It synchronizes product instance to the database. Optionally, this method also reprices the instance after it is synchronized by calling the Pricing Manager Reprice-RepriceAll. This method calls the EAI Siebel Adapter Upsert method to synchronize.

Arguments   *Message Id*

[in] Passed through to the EAI Siebel Adapter Upsert method. (Optional)

PrimaryRowId

[in] Row Id of the business component to be synchronized. (Required)

Reprice

[in] Y/N flag indicating whether to reprice or not. (Optional)

RootItemId

[in] If this input is given, only reprice the root line item with a Siebel Object Row Id that corresponds to this RootItemId and any new line items that were created from it after anExplode operation. (Optional)

SiebelMessage

[in] Product instance to be synchronized.

StatusObject

[in] Passed through to EAI Siebel Adapter Upsert method. (Optional)

SiebelMessage

[out] Synchronized product instance.

Returns   Synchronized product instance.

Remarks   This method is used when the object to be synchronized has modified quantity or price fields, requiring a repricing. It is primarily used after Explode.

See Also   Methods "Explode" on page 262 and "Update Order Line Item Completed Flag" on page 291 and workflows "SIS OM Edit Delta Quote Line Item" on page 194, "SIS OM Edit Service Order Line Item" on page 199, and "SIS OM Edit Complex Asset Workflow" on page 218.

Update Multi Object List

This is one of the Product Manipulation Toolkit Business Service Methods.

After a root integration component and its children are stripped from the integration object, this method (in conjunction with Retrieve Next Object From List) returns the resulting integration object.

Arguments   *SiebelMessage*

[out] Integration object with some root integration components removed. (Required)

Returns   New integration object.

Remarks   This method is used in conjunction with Retrieve Next Object From List to form a loop control mechanism.

See Also   Method "Retrieve Next Object From List" on page 283.

Update Order Line Item Completed Flag

This is one of the Product Manipulation Toolkit Business Service Methods.

It sets the Order Item Processed Flag of the root order line item to Y, if its status and that of all its child items is Complete, Rejected, or '-'.

NOTE: This method only works with product instance of type Order.

Arguments   *SiebelMessage*

[in] Product instance being updated. (Required)

Synchronize

[in] Defaults to N. (Optional)

Update Order Items

[in] Comma separated list of row IDs for line items that were updated by this method.

Returns   Order Item Processed Flag set to Y or N.

See Also   Method "Synchronize" on page 289 and workflow "SIS OM Apply Completed Service Order Line Item to Service Profile" on page 205.

Get Cfg Button Click Information

This is one of the Product Manipulation Toolkit Business Service Methods.

It is used to notify if a user clicks on the Cancel or Done button from Complex Product View.

Business Object: (Required) Name of business that Business Component belongs to.

Argument: Input

None.

Output

Result: Required field. It will have either "Cancel" or "Done" string based on what button user clicked.

Refresh Business Component

This is one of the Product Manipulation Toolkit Business Service Methods.

It reexecutes all instance of the specific buscomp to get data from the database.

Argument   *Business Object Name*

[in] Name of business the buscomp belongs to.

Business Component Name

[in] Name of the buscomp you want to refresh with data from database.

Refresh Result

[out] Either 'Fail', 'NoRefresh', or 'Succeed'. 'Fail' means the method could not refresh because of insufficient input argument. 'NoRefresh' means the method did not find any instance of the specified buscomp. 'Succeed' means it refreshed at lease one instance of the specified buscomp. (Optional)

Invoke BC Method

This is one of the Product Manipulation Toolkit Business Service Methods.

This is a generic method that allows one to invoke a Business Component-based method from Workflow. A Business Service method is invoked from a workflow by default. This method acts as a bridge to allow one to pass in the Business Component name and the method name, along with the parameters and return value required from Workflow to the Business Component specified.

Arguments   *BC Name*

[in] A string to specify the name of Business Component on which you want to invoke its method. (Required)

Method Name

[in] A string to specify the name of the method in the specified Business Component that you want to invoke. (Required)

Param 0

[in] A string to pass in the first argument to the method. (Optional)

Param 1

[in] A string to pass in the second argument to the method. (Optional)

Param 2

[in] A string to pass in the third argument to the method. (Optional)

Param 3

[in] A string to pass in the fourth argument to the method. (Optional)

Return Property Name

[out] A string to pass out the output of the method. (Optional)

NOTE: You can find the preconfigured usage of this method in the SIS OM Quote to Order Workflow.

Order Entry Toolkit Business Service Methods

The Order Entry Toolkit (OET) business service is a set of methods that allow order management processes to be implemented in eSales workflows. The business service includes methods to manipulate the user's account information, validate payment information, and navigate to eSales views. These methods summarized in Table 20.

Table 20. EOT Methods

Method	Comment
CreateAccount on page 296	Creates a new account, associates it with the User and associates specified addresses to that account. The method also sets a specified field in the Quote BC, if it is required.
CreateOrder on page 297	Converts a quote to an order.
GetBCCount on page 298	Gets the number of rows and first row ID in a BC for the input Search Spec. If Parent and Child BC names are provided, the search spec is applied to the Parent BC. If no Parent BC is provided, the Search Spec in applied to the one input BC.
GotoView on page 299	Navigates to the view specified in the input argument.
SelectPrimary on page 299	Selects a record in the picklist into a field.
SetLIAccounts on page 300	Rolls down the Service and Billing Account field values from the Quote or Order Header to the line items, if the value is NULL.
SubmitOrder on page 301	Submits the Pending Order by changing the Order Header and Line Items status to Open. Optionally, sets the Order Id to a defined (user property) Profile Attribute.
ValidatePayment on page 302	Validates the payment method, verifying that only one payment method at a time is specified for a quote.
ValidateQuote on page 303	Sets the Invalid Flag for all line items that have a base price = 0 except those that have an Action Code = Delete.
ViewCart on page 304	Navigates to the CME Shopping Cart if licensed; otherwise, to the standard Shopping Cart.

CreateAccount

This is one of the Order Entry Toolkit Business Service Methods.

It creates a new account, associates it to the user and associates specified addresses to that account. The method also sets a specified field in the Quote BC, if it is required.

Arguments *Account Name*

[in] Name of the new account. (Required)

Account Type

[in] Type of new account. (Required)

Address Id 1

[in] ID of an existing address associated with the new account. (Optional)

Address Id 2

[in] ID of an existing address associated with the new account. (Optional)

You can add more Address Id's by incrementing the number.

Quote Account Field

[in] Quote business component field to be populated with the Account Id. (Optional)

New Account Id

[out] Row Id of the newly created account.

Returns Row Id of new account.

Remarks **User Properties**

This method uses the following user properties:

■ CreateAccount: Account BC Name

Name of the business component that is used to create the new account. Default = Account.

■ CreateAccount: Account and Address Intersection BC Name

Name of the business component based on the Account-Address Intersection table that is used to associate addresses to the new account. Default = Com Account Address Intersection.

■ CreateAccount: Intersection Account Field Name

Account foreign key field in the intersection business component. Default = Account Id.

■ CreateAccount: Intersection Address Field Name

Address foreign key in the intersection business component. Default = Address Id.

This method invokes AssociateAccountToUser method in the CUT Account Administration Toolkit Service business service.

See Also   Methods "GetBCCount" on page 298 and "ValidatePayment" on page 302.

CreateOrder

This is one of the Order Entry Toolkit Business Service Methods.

It converts a quote to an order.

Arguments   *Quote Id*

[in] Quote identifier. (Required)

Return Error Code

[in] Direction to return an error code. (Optional)

Order Id

[out] Order identifier. (Optional)

Error Message

[out] Error message. (Optional)

Returns   A new Order.

Remarks   **Dependencies**

This method first invokes the Shopping Service's CreateOrder Method, and then it invokes SubmitOrder.

GetBCCount

This is one of the Order Entry Toolkit Business Service Methods.

It gets the number of rows and first row ID in a BC for the input Search Spec. If Parent and Child BC names are provided, the search spec is applied to the Parent BC. If no Parent BC is provided, the Search Spec in applied to the one input BC.

Arguments   *BC Name*

[in] Name of the business component whose rows will be counted. (Required)

BC SearchSpec

[in] Free text search specification. (Optional)

BusObj Name

[in] The business components belongs to this business object. If a BusObj Name is not specified, the business service business object is used. (Optional)

Parent BC Name

[in] Name of the parent business component to which the search criteria is applied. (Optional)

Field Name

[in] Field name to be used as additional input for the search specification. (Optional)

Field Value

[in] Value to be used as additional input for the search specification. (Optional)

Count

[out] Number of rows. (Optional)

First RowId

[out] First rowId of the rows. (Optional)

Returns   Number of rows and first rowId.

See Also   Method "CreateAccount" on page 296.

GotoView

This is one of the Order Entry Toolkit Business Service Methods.

It navigates to the View specified in the input argument.

Arguments   *View*

[in] Name of the view to navigate to. (Required)

SelectPrimary

This is one of the Order Entry Toolkit Business Service Methods.

It selects a record in the picklist into a field.

Arguments   *PickList Field*

[in] Name of the picklist field. (Required)

Primary Row Id

[in] Primary rowId (Optional)

Primary ID Field

[in] Name of the field that stores the primary Id. Not required if Primary Row Id
is specified. (Optional)

Business Component Name

[in] Name of the business component to which the field belongs. (Optional)

IntersectionTable Field

[in] Name of the field in the intersection table that stores the primary Id. (Optional)

Execute BusComp at Finish

[in] TRUE if Base BC is executed after this operation; otherwise, FALSE. The default is TRUE (case sensitive). (Optional)

ReturnVal

[out] Success or Fail.

Returns   Success or Fail.

SetLIAccounts

This is one of the Order Entry Toolkit Business Service Methods.

It rolls down the Service and Billing Account field values from the Quote or Order Header to the line items, if the value is NULL.

Arguments   *Parent BC Name*

[in] Parent BC name. (Required)

Parent Row Id

[in] Parent row Id. (Required)

Line Item BC Name

[in] Line item BC name. (Required)

Returns   New line item values.

See Also   Method "GetBCCount" on page 298 and workflows "SIS OM Auto Select Order Billing and Service Accounts" on page 203 and "SIS OM Auto Select Quote Billing and Service Accounts" on page 210.

SubmitOrder

This is one of the Order Entry Toolkit Business Service Methods.

It submits the Pending Order by changing the Order Header and Line Items status to Open. Optionally, it sets the Order Id to a defined (user property) Profile Attribute.

Arguments   *Order Id*

[in] Order identifier. (Required)

Parent Fieldmap LHS

[in] LHS value of the field map used by user properties for field names in the Parent business component. (Optional)

Parent Fieldmap RHS

[in] RHS value of the field map used by user properties for field values in the Parent business component. (Optional)

Line Item Fieldmap LHS

[in] LHS value of the field map uses by user properties for field names in the Line Item business component. (Optional)

Line Item Fieldmap RHS

[in] RHS value of the field map uses by user properties for field names in the Line Item business component. (Optional)

Return Error Code

[in] Direction to return an error code. (Optional)

Error Message

[out] Error message. (Optional)

Remarks   **User Properties**

The following user properties are associated with this method:

- Order Field|Value FieldMap X—Field map value. See the next user property definition.

- Order Item Field|Value FieldMap X—Field map value.

  Numbers starting from 1 and increments of 1 should replace X. The last FieldMap should have a value of End.

- SubmitOrder: Order Header Buscomp—Default = Order Entry - Order.

- SubmitOrder: Line Item Buscomp—Default = Order Entry - Line Items.

- SubmitOrder: Line Item Set Field Condition. Default is Status = FS_ORDER_STATUS Pending.

ValidatePayment

This is one of the Order Entry Toolkit Business Service Methods.

It validates the payment method, verifying that only one payment method at a time is specified for a quote.

Arguments   *Bill To Account*

[in] The account whose payment is being validated. (Required)

Credit Card Number

[in] Credit card number associated with the account. (Required)

Credit Card Type

[in] Type of credit card associated with the account. (Required)

Expiration Month

[in] Expiration month of the credit card. (Required)

Expiration Year

[in] Expiration year of the credit card. (Required)

PO Number

[in] PO number for the account. (Optional)

Return Error Code

[in] Direction to return an error code. (Optional)

Error Message

[out] Error message. (Required)

Returns   Error messages.

See Also   Method "CreateAccount" on page 296.

ValidateQuote

This is one of the Order Entry Toolkit Business Service Methods.

It sets the Invalid Flag for all line items that have a base price = 0 except those that have an Action Code = Delete.

Arguments   *Quote Id*

[in] Quote identifier. (Required)

Return Error Code

[in] Direction to return an error code. (Optional)

Invalid

[out] Indicates an invalid quote. (Optional)

Error Message

[out] Error message. (Optional)

ReturnVal

[out] Indicates that the quote is valid. (Optional)

Remarks   **Dependency**

Invokes the Shopping Service's ValidateQuote method.

ViewCart

This is one of the Order Entry Toolkit Business Service Methods.

It navigates to the CME Shopping Cart if licensed; otherwise, to the standard Shopping Cart.

Arguments   No input or output arguments.

Remarks   The following user properties may be specified for the Shopping Service:

■ Module Name

Licensed Module Name. Default = CME eSales.

■ Default Shopping Cart View

Name of the view to display if a module is not specified or if the module is specified but not licensed. Default = Current Quote View (eSales).

■ Licensed Shopping Cart View

Name of the view to display if the module identified by module name is licensed. Default = CUT Current Quote View (eSales).

See Also   Method "ValidatePayment" on page 302.

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