

# **Selling and Fulfillment Foundation**

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## **Pricing Concepts Guide**

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***Sterling Commerce***  
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# Contents

Pricing Service Overview . . . . .	5
Price Lists . . . . .	5
Price List Lines . . . . .	5
Price List Line Item Effectivity Dates . . . . .	7
Price List Status . . . . .	8
Pricing Precision . . . . .	8
Bulk Updates on a Price List . . . . .	9
Maintaining and Customizing Price Lists . . . . .	9
Price List Inheritance . . . . .	10
Making Price Lists Sharable . . . . .	10
Pricing Rules and Coupons . . . . .	11
Pricing Rules . . . . .	11
Coupons . . . . .	12
Order Pricing Examples . . . . .	13
Pricing Rule and Coupon Assignment to Customer Attributes . . . . .	14
Mapping of Pricing Rule or Coupon Adjustment to Charges . . . . .	14
Price List Assignment . . . . .	15
Price List Assignment to Customers . . . . .	15
Price List Assignment to Customer Attributes . . . . .	16
Price List Assignment to Customer Versus Customer Attributes . . . . .	16
Pricing Bundles . . . . .	17
Discount Distribution on an Order . . . . .	17
Manual Adjustments . . . . .	18
Price Locking . . . . .	19
Shipping Charge Calculation . . . . .	19
Price Matching . . . . .	20
Order Pricing Overview . . . . .	21
What Triggers Order Pricing . . . . .	21
Configuration Rules for Pricing Orders . . . . .	21
Data Selection Criteria for Pricing Orders . . . . .	22
Bundle Pricing . . . . .	23



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## Pricing Service Overview

The Pricing Service is a component of Selling and Fulfillment Foundation. It acts as a hub for every pricing calculation that occurs. Even if pricing data is passed to a third party, the data funnels back through the Pricing Service before being passed to the consuming application.

The Pricing Service provides the ability to store and maintain all pricing data at the Pricing Organization. An organization can be defined as a Pricing Organization and maintain its own pricing data, or an organization can specify a Pricing Organization of its choice.

The Pricing Service provides the ability to define price lists, maintain prices for each product, define quantity tiers, and assign price lists directly to customers or indirectly to customer attributes. It uses price lists, pricing rules, and customer assignments to manage customers' access to products and appropriate prices. For example, the Pricing Organization can define prices based on criteria such as the quantity of items ordered, the importance of the customer, the region where the item is sold, and the time period during which the item is sold. Price lists and pricing rules are defined and managed by the Pricing Organization. The assignment of customers or customer attributes to a price list or pricing rule is defined and managed by the Enterprise.

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## Price Lists

A price list is a list that defines pricing for specific items or SKUs. It consists of header information and a list of products and their list prices. The header information contains the name, description, currency, effectivity dates, and status of the price list. Each price list must have a currency assigned to it, and the price list can have a status of active or inactive. The price list lines associate products with a list price and show positive or negative adjustments. Each price list has zero or more quantity tiers and its associated list price.

A price list can be *inherited* from a master price list, and additional percentage or absolute adjustments can be defined for the child price list. For more information about inheriting price lists, see the section entitled Price List Inheritance.

A price list can be assigned to all the registered users of an Enterprise, anonymous users, or all B2B customers. In addition, a price list can be assigned to one or more customer attributes. For example, you can assign a price list to a region, such as Boston, or to a customer level, such as a Gold customer.

Price lists can be administered through the Business Center application.

## Price List Lines

Each price list line in a price list associates a product with a list price.

The difference between list price, unit price, and line price is as follows:

- ◆ The list price is the price specified in the price list. The list price does not consider volume discounts, special pricing rules, or anything else that may affect the price.
- ◆ The unit price is the calculated price of the item after a percentage or absolute adjustment has been applied to the list price.

- ◆ The line price is the price for a given line item. The line price depends upon the list price, quantity ordered, and pricing rules.

For example, the following table shows that MXWS-1000 has a list price of \$10.00. A -\$2.00 adjustment is applied to the list price, resulting in a calculated unit price of \$8.00. The line quantity ordered for MXWS-1000 is 100, resulting in a line price of \$800.00.

Product ID	List Price	Absolute Adjustment	Unit Price	Quantity Ordered	Line Price
MXWS-1000	\$10.00	-\$2.00	\$8.00	100	\$800.00

Each list price can have positive or negative adjustments associated to that price. The adjustments are usually discounts, and can be a percentage adjustment (such as, 10%) or an absolute adjustment (such as, \$10.00). For example, you can have a price list containing several MXWS products, and you can apply adjustments to some or all of the list prices. As shown in the following table:

- ◆ A -5% adjustment is applied to the \$100.00 list price of MXWS-2000, resulting in a unit price of \$95.00. A quantity of 2 is ordered, resulting in a line price of \$190.00.
- ◆ A -\$10.00 adjustment is applied to the \$120.00 list price of MXWS-3000, resulting in a unit price of \$110.00. A quantity of 3 is ordered, resulting in a line price of \$330.00.
- ◆ No adjustment is applied to MXWS-4000. The list price and the unit price are the same. A quantity of 2 is ordered, resulting in a line price of \$260.00.

Product ID	List Price	Adjustment	Unit Price	Quantity Ordered	Line Price
MXWS-2000	\$100.00	-5%	\$95.00	2	\$190.00
MXWS-3000	\$120.00	-\$10.00	\$110.00	3	\$330.00
MXWS-4000	\$130.00	None	\$130.00	2	\$260.00

You can specify quantity tiers for items in a price list. With quantity tiered pricing, either absolute or percentage adjustments are applied to the list price depending on the quantity ordered. For example, you can have quantity tiers for order boundaries between 10 and 19, 20 and 29, and 30 or greater. Generally, the greater the quantity ordered, the greater the absolute or percentage discount. When the order quantity falls within one of these boundaries, an absolute or percentage adjustment is applied to the list price. If the quantity falls outside of the specified boundaries, an adjustment is not applied and the price defaults to the base list price.

For example, you can set up quantity tiered pricing, as follows:

- ◆ Percentage adjustments for product MXWS-1100  
If the customer orders between 10 and 99 of item MXWS-1100, a -10% adjustment is applied to the list price. If the customer orders between 100 and 199 of item MXWS-1100, a -15% adjustment is applied to the list price. If the customer orders 200 or more of item MXWS-1100, a -20% adjustment is applied to the list price. If the customer orders less than 10 of item MXWS-1100, it defaults to the base list price.

◆ Absolute adjustments for product RDMS-1100

If the customer orders between 10 and 99 of item RDMS-1100, a -\$1.00 adjustment is applied to the list price. If the customer orders between 100 and 199 of item RDMS-1100, a -\$2.00 adjustment is applied to the list price. If the customer orders 200 or more of item RDMS-1100, a -\$3.00 adjustment is applied to the list price. If the customer orders less than 10 of item RDMS-110, it defaults to the base list price.

The following table illustrates these examples.

Product ID	List Price	Quantity Ordered	Percentage Adjustment	Absolute Adjustment	Unit Price	Line Price
MXWS-1100	\$10.00	50	-10%		\$9.00	\$450.00
MXWS-1100	\$10.00	150	-15%		\$8.50	\$1,275.00
MXWS-1100	\$10.00	200	-20%		\$8.00	\$1,600.00
MXWS-1100	\$10.00	5	None		\$10.00	\$50.00
RDMS-1100	\$10.00	50		-\$1.00	\$9.00	\$450.00
RDMS-1100	\$10.00	150		-\$2.00	\$8.00	\$1,200.00
RDMS-1100	\$10.00	200		-\$3.00	\$7.00	\$1,400.00
RDMS-1100	\$10.00	5		None	\$10.00	\$50.00

Effectivity dates can also be specified for items in a price list. For more information about effectivity dates, see the section entitled Price List Line Item Effectivity Dates.

## Price List Line Item Effectivity Dates

You can set effectivity dates at the line item level. By default, the price of a line item is effective for the effective period of the price list. You can also specify a special price for a particular period at the line item level by overriding the price list effectivity dates with other effectivity dates. This means that the same product ID can have more than one entry with varying prices in the same price list. In that case, the system uses the lowest value of the effective prices.

For example, suppose that a price list is effective from 12/01/2009 through 12/01/2010. One product ID, ProductID1, has three entries in the price list:

- ◆ One entry defines a price of \$35.00. The entry does not define effectivity dates, so its effectivity dates are the same as the price list effectivity dates.
- ◆ The second entry defines a price of \$25.00 and has effectivity dates from 02/01/2010 to 08/01/2010.
- ◆ The third entry defines a price of \$30.00 and is effective from 01/01/2010 to 10/01/2010.

The following table provides prices for ProductID1 on various dates.

<b>Date</b>	<b>Price</b>
11/15/2009	Price not available from this price list. The price list is not effective.
12/02/2009	\$35.00: Only the first entry is effective.
01/03/2010	\$30.00: The first and third entries are effective, and the third provides the lowest price.
05/16/2010	\$25.00: All three entries are effective, and the second provides the lowest price.
09/20/2010	\$30.00: The first and third entries are effective, and the third provides the lowest price.
11/02/2010	\$35.00: Only the first entry is effective.

## Price List Status

A price list can be in either an Active status or Inactive status. A price list has an effect on the prices of the items in it only if the price list is in the Active status. A pricing organization user can assign a price list that is in the Inactive status to a customer, but that price list will have no impact on the price applied to the customer's orders until it is activated. A pricing organization user can change the status of a price list in order to activate or deactivate the price list.

In addition to a price list having a status of Active or Inactive, price list lines within a price list can have a status of Active or Inactive. The following table provides scenarios of how the status of a price list and price list lines determines when prices are pulled from the price list.

<b>If:</b>	<b>Then:</b>
The price list is Active and the price list lines are Active	All prices can be pulled from the price list and applied to a customer's order.
The price list is Active and the price list lines are Inactive	Only prices for items that have a price list line as Active can be pulled from the price list and applied to a customer's order.
The price list is Inactive and the price list lines are Active	Prices cannot be pulled from the price list and applied to a customer's order.
The price list is Inactive and the price list lines are Inactive	Prices cannot be pulled from the price list and applied to a customer's order.

## Pricing Precision

Calculated prices are rounded to a fixed number of decimal places. Consider how many decimal places you need to store and display before you create your price lists. For example, you may need to set the unit price of some products to four decimal places.

The precision to which prices display is set during implementation of Selling and Fulfillment Foundation. You can set system-level rules that control the precision of unit prices and total prices. By default, unit price precision is six decimal places, and total price precision is two decimal places.

**Note:** Sterling Distributed Order Management supports a maximum of six decimal places for unit prices and a maximum of two decimal places for total prices. If the maximum values are exceeded, truncation and rounding issues can occur.

Unit price precision should always be greater than or equal to total price precision, otherwise a loss of pricing precision will occur on total prices. For example, if you set the unit price precision to 2 and the total price precision to 3, your order total prices will have only 2 instead of 3 decimal places because calculated order total prices are based on the unit price.

## Bulk Updates on a Price List

Price lists contain the prices of products in the catalog, and the catalog often contains millions of items. If the data needs to be updated, it would not be efficient or cost-effective to update each item individually. The Pricing Service, however, provides the capability to perform bulk operations on items or a category of items with a reasonable response time. The following are some of the bulk operations that you can perform on items or a category of items:

- ◆ Delete all the price list lines from the price list.
- ◆ Add all the items from the catalog to the price list.
- ◆ Add a percentage adjustment (for example, 5%) or an absolute adjustment (for example, \$5.00) to all list prices.

## Maintaining and Customizing Price Lists

You can use the Pricing Service to deliver prices to targeted customers. To do this, you create price lists that are specific to customers or customer attributes, and then you associate the price lists with the targeted customers. The Pricing Service calculates the *lowest* price for the product based on the active price lists associated with the customer or customer attributes. You can use multiple price lists to offer different prices to different customers.

When you create a price list, you select the products to be assigned to the list, and then you set the unit prices for those products within the context of the price list. You must also set a currency, a status (active or inactive), and a start and end date (effectivity dates) for each price list. The start and end dates define the range during which a price list is applicable. If the current date is not within this range, the price list will not be used for any price calculations that are done for the current date. You can temporarily change a price list's status to inactive while updating pricing information. When changes are complete, you can change the status to active. If a price list status is active and the current date is within the price list's effectivity dates, then any change made by a pricing administrator takes effect immediately.

A customer cannot purchase a product unless that product has been assigned to at least one active price list that is associated with that customer.

## Price List Inheritance

One price list can *inherit* the items and price information from another price list. When a price list has one or more dependent price lists inheriting the price information from it, that price list is called a master price list.

Some organizations maintain a master price list from which inherited price lists are created to give certain discounts or charges to a specific customer or group of customers. For example, if an organization has three divisions to cater to customers in three different regions, the organization can create one master price list where the prices of all the items are defined, and three dependent price lists which inherit the items and price information from the master price list. A pricing organization user can either increase or decrease the prices that the dependent price list inherits from a master price list by a percentage, a fixed amount, or both a percentage and fixed amount.

When a price list is inherited from a master price list, the inherited price list inherits all the products and their list prices, any percentage or absolute adjustments, effectivity dates, and the status and currency of the master price list. However, the inherited price list does *not* inherit the assignments. A pricing organization user can then define additional percentage or absolute adjustments to the unit prices in the inherited price list. For example, if you have an inherited price list for a region in which you want to charge higher prices, you may want to define that all prices in this inherited price list are increased by \$5.00, 5%, or by both \$5.00 and 5%.

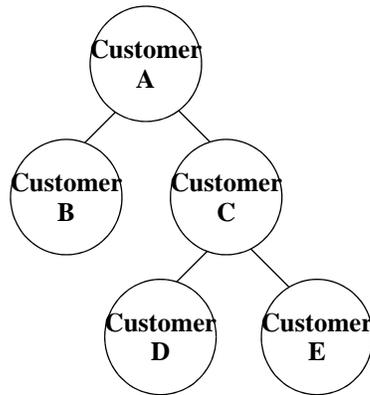
**Note:** If you create a new price list that is inherited from a master price list, the inherited price list cannot define new price list lines. In addition, only one level of inheritance is allowed.

You can also create a new price list from an existing price list by *copying* it. When you *copy* a price list, with the exception of assignments, everything is copied to the new price list including the products and their list prices, any percentage or absolute adjustments, effectivity dates, and the status and currency of the price list. However, significant maintenance may be required if you need to keep these price lists synchronized. For example, when you make changes to one price list, such as adding an item or updating the price of an item, you need to make those same changes to all of the copied price lists. If you need to keep price lists synchronized, use the price list *inheritance* feature rather than *copying* a price list.

## Making Price Lists Sharable

If one of your customers is a parent in a hierarchy of customers, you can assign price lists to the parent so that those price lists are automatically assigned to any customers below the parent in the hierarchy. For example, in the following figure, Customer A is parent to Customer B and Customer C. Customer C is parent to Customer D and Customer E. If you assign a price list to Customer A and mark that price list as

sharable, the system automatically assigns that price list to Customer B and Customer C, as well as to Customer D and Customer E.



You can specifically assign that price list to the child customer and mark that price list as sharable. This ensures that the price list is assigned to the child (and to its children) even if the assignment is removed from the parent.

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## Pricing Rules and Coupons

In addition to managing prices for products using price lists, you can manage prices using pricing rules and coupons. Pricing rules and coupons manage special offers, discounts, and charges at either the order level or the line level.

Pricing rules and coupons can be administered through the Business Center application.

### Pricing Rules

A pricing rule defines a set of conditions and actions: when the condition of a rule is satisfied, the corresponding action is taken. For example, you can set a bulk discount rule to specify that an item should sell for less if the customer buys more than a specified number of the product. In the case of order rules, these actions result in pricing adjustments, which can be either discounts or charges. For item quantity rules, conditions are evaluated on the basis of item IDs or on the item attributes (features).

The status of a pricing rule can be active or inactive. A pricing rule will be applied only if it is in the active state and if it is effective at the time the pricing is performed.

Each order rule is one of the following types:

- ◆ **Combination:** These rules are used to adjust the price of a target item ID if a certain combination of source item IDs is in the order. The rule is only applied if the target item ID is already in the order. Combination rules can give a discount to either a single target item, all target items, or each combination of trigger items. They can require that certain quantities of item IDs are present: for example, buy five PCs and get a printer free.

- ◆ **Item Quantity:** These rules provide the ability to specify quantity tiered pricing for items. You can specify what price an item should sell for if the customer buys more than a specified number of the product. You can specify the item by ID, or you can use item attributes (features) to select the items to which the rule applies.

The item quantity rule can give a percentage or absolute adjustment on a single target item or all target items. For example, a rule can state that if a customer buys 10 or more of a target item, a 5% adjustment is applied to all of the target items.

- ◆ **Order Total:** These rules take an action if the total value of the order (before shipping and tax) falls in a range. Typically, the action is to reduce the order total by a percentage discount or by an absolute value specified in the currency of the rule. For example, a rule can state that if the order is over \$25, a 10% adjustment is applied to the order.
- ◆ **Shipping Charge Order Total:** These rules provide discounts on shipping charges based upon the order total. Discounts can be a fixed amount, a percentage, or a flat fee shipping charge. For example, a rule can state that if the order is over \$25, a \$5 discount is applied to the shipping charge.
- ◆ **Item Shipping Surcharge:** These rules operate at the line item level to associate a shipping surcharge with items with a specified feature.

For example, suppose that you want to charge an additional flat fee for shipping oversized items, such as refrigerators. You can create an item attribute type (feature type) called Oversized, and then create an Oversized: refrigerators item attribute (feature) and associate it with all the refrigerators. When you create the item shipping surcharge rule, you attach the surcharge by selecting the Oversized: refrigerators feature.

When the rule applies to a product in the order, the system multiplies the surcharge by the quantity of the item being purchased and adds the resulting amount to the shipping adjustment.

**Note:** You cannot use derived, computed, or reference attributes in pricing rules.

After you create a pricing rule, you need to assign it to a certain set of customers. For example, you could assign the pricing rule to only Gold customers.

## Coupons

Coupons are a type of pricing rule, but are slightly different from the preceding pricing rules. The pricing rules described previously apply to all orders, and customers do not have to do anything to have them modify the prices that they see in their orders. By contrast, coupons modify the prices of items in orders only if customers actively add the coupons to their orders. Another difference is that pricing rules can be applied to one or more target items, whereas coupons can be applied to only one target item. For example, an item quantity rule can apply a percentage or absolute adjustment on a single item or all target items, whereas a coupon can apply the adjustment on only one target item.

Coupons are of the following types:

- ◆ **Combination:** A combination coupon adjusts the price of a target item ID if a certain combination of source item IDs is in the order. The coupon is only applied if the target item ID is already in the order. A combination coupon can have one target item, many items, and one action. It can require that certain quantities of item IDs are present; for example, buy two televisions and get a free DVD player.
- ◆ **Item Quantity:** An item quantity coupon adjusts the price of an item if the customer buys more than a specified number of the product. An item quantity coupon can give a percentage or absolute

adjustment on a single target item, and it can have one or more actions. For example: buy between 5 and 10 DVDs and get a 10% discount; buy 11 or more DVDs and get a 15% discount.

- ◆ **Order Total:** An order total coupon takes an action if the total value of the order (before shipping and tax) falls in a range. Typically, the action is to reduce the order total by a percentage or absolute discount. An order total coupon can have one target item and one or more actions. For example: if the order total is between \$100 and \$200, get a 10% discount on the order total; if the order total is greater than \$200, get a 15% discount on the order total.
- ◆ **Shipping Charge Order Total:** A shipping charge order total coupon applies a discount on the shipping charge based upon the order total. The discount can be a fixed amount, a percentage, or a flat fee shipping charge. A shipping charge order total coupon can have one target item, many target attributes, and one or more actions. For example: if the order total is between \$100 and \$200, the shipping charge is discounted by 10%; if the order total is greater than \$200, the shipping charge is discounted by 15%.

A customer can add one or more coupons to an order. The coupon affects the price of items in the order only if the customer and order meet the constraints defined for the coupon. When the pricing rules are applied, the rule associated with the coupon is also applied and, if it is valid for that order, the rule modifies a line item price in the same way as other pricing rules.

You can set a flag on a coupon to indicate that the coupon is an exclusive coupon. The following rules govern the application of exclusive coupons in an order:

- ◆ Either a single exclusive coupon or multiple non-exclusive coupons can be applied to the coupon target.
- ◆ An item-targeted exclusive coupon does not conflict with any order-level coupon.
- ◆ An order-level exclusive coupon does not conflict with any item-targeted coupon.
- ◆ An item-targeted exclusive coupon is exclusive with another item-targeted coupon only if the targets are the same, and vice versa.
- ◆ An order total exclusive coupon is exclusive with any other order total coupon, and vice versa.
- ◆ If more than one exclusive coupon is specified on an order, only the first exclusive coupon is applied to the order.

The Pricing Service provides management APIs for pricing rules, coupons, and price lists. For more information, see the *<Italic>Selling and Fulfillment Foundation: Javadocs*.

## Order Pricing Examples

If a customer adds a coupon to an order, the rule associated with the coupon can apply an adjustment (discount or charge) to a line item. For example:

- ◆ Buy one, get one free  
If you buy two of an item, the second item is free.
- ◆ Special offer for Gold distributors  
If you buy more than \$1,000.00 worth of items, you get 10% off. If you are a customer user contact who belongs to a customer with a relationship type of “distributor”, your customer level is “Gold”, and your order total (before tax and shipping) is greater than \$1,000.00, then the order total is reduced by 10%.

- ◆ Orders over \$150.00 qualify for free shipping

If you buy products totaling \$150.00 or more, shipping charges are waived.

You can define some pricing rules using item attributes. For example, if you buy any wireless-ready laptop, you get a free carry case. Any order containing a laptop that has the wireless-ready feature satisfies this rule.

## Pricing Rule and Coupon Assignment to Customer Attributes

You can assign a pricing rule or a coupon to one or more sets of customer attributes, such as vertical, relationship type, customer level, and region. Vertical indicates which industry a customer belongs to, such as Education or Government. Relationship type indicates whether a customer is a reseller, distributor, a contract manufacturer, and so forth. Customer level indicates tiered values representing a customer's status, such as Gold, Platinum, or Silver. Region indicates a defined geographic territory.

For example, you can assign a pricing rule or a coupon as follows:

- ◆ If you want to assign a pricing rule or coupon to customers in the Boston area, you can assign it to the attribute `region=Boston`.
- ◆ If you want to assign a pricing rule or coupon to customers serving the educational market, you can assign it to the attribute `vertical=Education`.
- ◆ If you want to assign a pricing rule or coupon to gold-level customers, you can assign it to the attribute `customer level=Gold`.
- ◆ If you want to assign a pricing rule or coupon to customers who are resellers, you can assign it to the attribute `relationship type=Reseller`.

You can also assign a pricing rule or coupon to several customer attributes, such as all gold-level customers in the Boston area who are serving the educational market. For example, you can assign a pricing rule to the attributes `region=Boston`, `vertical=Education`, and `customer level=Gold`.

The behavior of assigning pricing rules and coupons to customer attributes is similar to that of assigning price lists to customer attributes, except that all the rules or coupons under the region hierarchy are applicable. The best matched region does not make sense in the case of rules; all the rules applicable for the U.S. region are also applicable for the East coast region or West coast region.

Generally, you assign rules to specific regions rather than hierarchically defining rules based on regions. The assignment of customer attributes to a pricing rule or coupon also happens at the Enterprise level.

Given a customer, pricing rules that are assigned explicitly to that customer and the pricing rules assigned based on customer attributes are used. There is no precedence as in price list selection.

## Mapping of Pricing Rule or Coupon Adjustment to Charges

Order Management stores the adjustments that are generated as part of a pricing call using a Charge Category and Charge Name combination. The Pricing Service returns these attributes during the pricing call based on the data configured on each rule action. When multiple pricing rules are applicable, adjustments from the pricing rule actions are applied cumulatively.

The pricing module uses the charge category and charge name, as follows:

1. The pricing module uses only the charge category and charge names that are defined within the Pricing Organization and for the document type Sales Order (0001 only).
2. Every pricing rule can also be associated with a charge category and charge name that is defined within the Pricing Organization.
  - ◆ A pricing rule generating a charge (percentage or absolute) cannot have a charge name that is defined as a discount only.
  - ◆ A pricing rule generating a discount (percentage or absolute) cannot have a charge name that is defined as billable only.
  - ◆ A pricing rule giving a flat fee discount cannot have a charge name that is defined as billable only. It should always be a discount.

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## Price List Assignment

After you create a price list, you need to make it available to customers. You can assign the price list to specific customers or to customer attributes.

Three financial rules in Distributed Order Management can be enabled at the Enterprise level:

- ◆ **Use The Price List Assigned To The Closest Customer In The Hierarchy**
- ◆ **Use The Price List Assigned To The Exact Or Closest Region In The Region Hierarchy**
- ◆ **Exclude Attribute Assignments Of A Price List If Direct Assignments Exist**

Price list assignments can be administered through the Business Center application.

## Price List Assignment to Customers

The assignment of price lists to customers occurs at the Enterprise level, where the customer data resides.

Customers are of the following types:

- ◆ Business customers (B2B)
- ◆ Consumer customers (B2C) or registered users
- ◆ Anonymous users

You can assign a price list to all the registered users of an Enterprise, anonymous users, or all B2B customers.

You can also assign a price list to a specific business customer (B2B) and share the price list with that customer's child customers. If you do not assign a price list to a specific customer, the price list is assigned to all customers.

You can have a hierarchy of customers where each customer in the hierarchy shares its price lists with its child customers. When you enable the **Use The Price List Assigned To The Closest Customer In The Hierarchy** rule, the following behavior occurs. If a price list is assigned directly to a customer, that price

list is used. If a price list is not assigned directly to a customer, the price list assigned to the parent customer is used. If a price list is not assigned to that parent customer, then the price list of the next customer up the hierarchy is used.

## Price List Assignment to Customer Attributes

You can assign price lists to one or more customer attributes, such as vertical, relationship type, customer level, and region. For example:

- ◆ If you want to assign a particular price list to customers in the Boston area, you can assign the price list to the attribute `region=Boston`.
- ◆ If you want to assign a particular price list to customers serving the educational market, you can assign the price list to the attribute `vertical=Education`.
- ◆ If you want to assign a particular price list to gold-level customers, you can assign the price list to the attribute `customer level=Gold`.
- ◆ If you want to assign a particular price list to customer who are resellers, you can assign the price list to the attribute `relationship type=Reseller`.

You can also assign a particular price list to several customer attributes, such as all gold-level customers in the Boston area who are serving the educational market. For example, you can assign a price list to the attributes `region=Boston`, `vertical=Education`, and `customer level=Gold`.

You can define additional attributes according to your business requirements. You assign price lists to attributes at the Enterprise level, where customer attributes data resides.

The Pricing Service uses the **Use The Price List Assigned To The Exact Or Closest Region In The Region Hierarchy** rule, defined at the Enterprise level, to determine the most specific region price list to use for pricing. If the rule is not set, the Pricing Service considers all price lists from the region hierarchy. For example, assume that Customer A is assigned two price lists; one price list is assigned by the customer's region (such as Massachusetts), and the other price list is assigned by the customer's type (such as Gold member). When this rule is turned on, it uses the price list assigned by region, even if the price is higher. In addition, it uses the price list that is closest in the hierarchy.

## Price List Assignment to Customer Versus Customer Attributes

For a B2B customer, the price lists that are assigned directly to that customer and the price lists that are assigned based on customer attributes are used for price determination.

Price list assignment behavior can be modified to pick price lists that are assigned to the customer or to any customer up the hierarchy; if no such assignment exists, the price list is picked based on the customer attributes. This behavior is controlled at the Enterprise level by the **Exclude Attribute Assignments Of A Price List If Direct Assignments Exist** rule. It gives precedence to the assignments based on the customer over the assignments based on customer attributes.

---

## Pricing Bundles

A bundle is a package containing both products and services. It is composed of a bundle parent and one or more child lines. The child lines can be either products, services, or other bundles.

The bundle parent is treated like any other order line as far as pricing is concerned. The line total is calculated like any other line. The order total includes the bundle parent as well as any components. A bundle can have a unit price, charges, and taxes like any other line.

There is an **IsLinePriceForInformationOnly** attribute at the order line level that can suppress a line's price so that it is excluded from the order total. If you want to have a price for a line but do not want to include it in the order total, set this attribute for the component. For bundles, if a component's price is included in the package itself but you want to store the individual line's price in case of cancellation or a return, you may set the attribute on the line. In order to reflect the special price of a bundle, you may choose to set attributes for the components so that the price of the component is not reflected in the total price of the order.

The following table shows an example of a bedroom package bundle and its components.

Bedroom Package	Line Total Amount	Price for Information Only
Bedroom Package (Bundle)	\$500	
Dresser	\$200	Y
Nightstand	\$100	Y
Bed Set Package (Bundle)	\$300	Y

Under normal circumstances, the order total would be the sum of all lines, which in this case is \$1,100. Instead, if the order should be priced differently based on the bundle parent, and you do not want the component-level price to be included in the invoice, you can set an attribute at the component level during order creation. For more information about these attributes, see the *Selling and Fulfillment Foundation: Javadocs*.

---

## Discount Distribution on an Order

Pricing rules and coupons that result in a discount or charge being applied to an order can be set up to distribute the adjustments in different ways. The discount distribution happens at two levels:

◆ Distribution of header adjustment to lines

Order-level pricing rules have a flag to set whether or not to distribute pricing adjustments to line items. Header-level adjustments are distributed to line items based on weighted average by price.

The ability to choose distribution at the line item level accommodates legacy systems that may not be able to store adjustments at the order level, but instead store adjustments at the line item level. Such systems might use the shipping adjustments generated for an order to measure business throughput. The preferred method for such systems might be to distribute order total discounts.

◆ Distribution of adjustment among lines of same products

Consider discounts generated as part of rules and coupons. For example, consider a combination rule “Buy 3 of Item1 and get 10% off on an Item1” applied to the order shown in the following table.

SKU	Unit Price	Quantity	Discounts	Line Price
Item1	45.00	2	4.50	85.50
Item1	45.00	1	0	45.00

The discount of \$4.50 can be applied to either line; the line with the quantity of 2 or the line with the quantity of 1.

However, some systems may want to distribute such discounts across all items, making it easier for the accounting system to keep track of the discount at the line level. The distribution of discounts across the lines is controlled at the Pricing Organization level using the **Distribute non-uniform item adjustment across the lines of the same item** rule. When the rule is enabled, the discount for the preceding order would appear as shown in the following table.

SKU	Unit Price	Quantity	Discounts	Line Price
Item1	45.00	2	3.00	87.00
Item1	45.00	1	1.50	43.50

**Note:** The **Distribute non-uniform item adjustment across the lines of the same item** rule is applicable only when the pricing rule adjustment applies to one target item. The rule is *not* applicable when the pricing rule adjustment applies to all target items, such as “Purchase a TV and get 10% off all cables”.

## Manual Adjustments

The Pricing Service provides the ability for a Field Sales representative or a CSR to manually adjust the price of a line total or an order total during the creation or modification of an order. The adjustment can be a discount or an additional charge. For example:

- ◆ In a quote scenario, a CSR can manually add a discount to a line based on the negotiation between the buyer and seller.
- ◆ If a customer is not satisfied or has had a bad experience with any of the services that were provided, a Field Sales representative or CSR can appease the customer by manually applying a discount to the order total.

---

## Price Locking

You can set a price lock on a line's unit price. The price lock freezes the unit price, which protects the unit price from being repriced when it passes through the Pricing Service. Locking of prices is used by the Applications Manager and price match scenarios. The Pricing Service does not determine the unit price again from the price list for such locked lines.

**Note:** You can *set* a unit price for an item only if the **IsPriceLocked** flag is set to "Y"; otherwise, the Pricing Service *calculates* the unit price for the item.

Coupons and some pricing rules can still be applied to price locked lines, unless the flag **IgnoreOnPriceLock** is set to "Y" for the coupon or pricing rule. For example, suppose item "A1" is price locked, and you have a coupon that gives a 10% discount if a quantity of 10 or more of item "A1" is ordered. If the customer orders 10 of item "A1", the 10% discount will be applied to the "A1" line item, unless the flag **IgnoreOnPriceLock** is set to "Y" for the coupon rule.

---

## Shipping Charge Calculation

A user exit is invoked during the `getOrderPrice` API call to get the shipping charge. Shipping charge calculation logic is externalized. The user exit is invoked if implemented, even if the shipping charge is passed in the input. If the shipping user exit is not implemented, it uses the shipping charge provided by the caller of the API.

The following types of shipping rules govern shipping charge discounts and surcharges:

- ◆ **Shipping Charge Order Total:** These rules provide discounts on shipping charges based upon order total. Discounts can be a fixed amount, a percentage, or a flat fee shipping charge. You can attach the Shipping Charge Order Total rule to customer segments, and specify the shipping types, products, or product categories.
- ◆ **Item Shipping Surcharge:** These rules operate at the line item level to associate a shipping surcharge with items that have a specified feature. Surcharges apply only to items that are shippable and are not flagged for in-store pickup.

For example, suppose that you want to charge an additional flat fee for shipping oversized items such as refrigerators. You can create a feature type called **Oversized**, then create an **Oversized: refrigerators** feature and associate it with all the refrigerators. When you create the item shipping surcharge rule, you attach the surcharge by selecting the **Oversized: refrigerators** feature.

When the rule applies to a product in the order, the system multiplies the surcharge by the quantity of the product being purchased and adds the resulting amount to the shipping charge.

The shipping charge must never be less than zero.

---

## Price Matching

A customer may discover that another retailer is selling the same items that the customer ordered, but at a lesser price. In such situations, the user can investigate the customer's claims and price match the items, if necessary. After an order line is price matched, the order line's unit price for that item is locked.

For additional information about price matching, see the *Sterling Call Center and Store: Implementation Guide*.

---

## Order Pricing Overview

The Pricing Service acts as a hub for every order pricing calculation. Even if pricing data is passed to a third party, the data funnels back through the Pricing Service before being passed to the consuming application.

When pricing or repricing is triggered for an order, the Pricing Service is called to determine the price that is applied to the order. This price is based on price lists, pricing rules, and customer assignments.

---

## What Triggers Order Pricing

Pricing (or repricing) is triggered for an order when you add a line, change prices, or change the following values:

- ◆ Billing address
- ◆ Carrier service code
- ◆ Buyer or seller organization
- ◆ Currency
- ◆ Promotions

For order lines, pricing is triggered when you cancel a line or change the following values:

- ◆ Line charges and unit price
- ◆ Delivery method
- ◆ Quantity

Pricing behavior for orders an order lines is configurable through rules in Distributed Order Management according to the needs of your Pricing Organization.

---

## Configuration Rules for Pricing Orders

Several configuration rules determine pricing behavior.

You can configure the following pricing rules in Distributed Order Management:

- ◆ Which date to use for pricing - whether to use the current date or the order date for pricing.

This rule is located in the Distributed Order Management Applications Manager. If the PricingDateUE is implemented, the value this user exit returns is used regardless of the rule.

- ◆ Name of the shipping charge adjustment field - defines the charge category and charge name that represent the shipping charge.

This is either a customer-defined shipping charge field or the default that comes with the Selling and Fulfillment Foundation, Release 8.5. This rule is located in the Distributed Order Management Applications Manager.

- ◆ Use deprecated pricing functionality - installation rule used after upgrade to specify whether to use the integrated Pricing Service offered in the Selling and Fulfillment Foundation, Release 8.5, or the legacy Pricing Service (deprecated functionality) from the previous version.

By default, the deprecated pricing functionality is in effect after upgrade to Release 8.5. If you uncheck this box after upgrade to enable the Pricing Service for Release 8.5, be sure to define your pricing configuration rules in the Distributed Order Management Applications Manager and convert your price lists as described in the *Business Center: Pricing Administration Guide*.

---

## Data Selection Criteria for Pricing Orders

Prices and price adjustments for lines on an order are determined by data that is passed to the Pricing Service. The Pricing Service uses the following types of data to price orders:

- ◆ Pricing Date

For confirmed orders, a pricing rule can be configured to determine whether the Pricing Service uses the current date or the order date for pricing orders. For draft orders, the Pricing Service uses the current date.

- ◆ Address

The Pricing Service uses an address on the order to determine prices for items on the order. The address used is determined by the type of customer on the order.

- ◆ For B2B customers, the Sold To address on the order is used. If a Sold To address is not specified, the Bill To address is used.
- ◆ For all other customers, the Bill To address on the order is used.

- ◆ Customer Attributes

The Pricing Service uses the customer's attributes to determine prices for items on the order. Customer attributes include Vertical, Relationship Type, and Customer Level, and are tied to pricing rules and price lists. For example, if the customer on the order has a Customer Level=Gold, the Pricing Service uses the price list and pricing rules that are assigned to Customer Level=Gold.

If a customer is not specified on the order, the Pricing Service will not consider customer attributes to determine pricing.

For additional information about the data selection criteria for pricing orders, see the *Selling and Fulfillment Foundation: Javadocs*.

---

## Bundle Pricing

You can set Item catalog pricing for bundles to compute in one of three ways:

- ◆ Parent Level Pricing, where the bundle price is determined by the parent price. For example:

<b>Living room seating arrangement</b>	<b>\$2800.00</b>
Sofa 3 seats	\$0.00 (included)
Lounge chair	\$0.00 (included)
Ottoman	\$0.00 (included)
Coffee table	\$0.00 (included)
<b>Total</b>	<b>\$2800.00</b>

- ◆ Component Level Pricing, where the sum of the components determines the bundle price. For example:

<b>Living room seating arrangement</b>	<b>\$0.00</b>
Sofa 3 seats	\$1820.00
Lounge chair	\$1100.00
Ottoman	\$50.00
Coffee table	\$80.00
<b>Total</b>	<b>\$3050.00</b>

- ◆ Mixed Parent and Component Level Pricing, where the sum of both the parent and the components determines the bundle price. For example:

<b>LWL Notebook A38</b>	<b>\$470.00</b>
2GB Memory	\$0.00 (included)
60 GB HDD	\$0.00 (included)
Docking Station	\$120.00
3-year Service Plan	\$200.00
<b>Total</b>	<b>\$790.00</b>

This bundle pricing strategy can be defined per bundle item in the Item Administration catalog.



## A

adjustments  
manual 18

## B

bundles  
pricing 17

## C

combination pricing rule 11  
coupons 12  
    combination pricing rule 12  
    item quantity pricing rule 12  
    order total pricing rule 13  
    shipping charge order total pricing rule 13  
customer attributes  
    assigning coupons to 14  
    assigning pricing rule to 14  
    customer level 14  
    region 14  
    relationship type 14  
    vertical 14

## D

discount distribution on an order 17

## E

effectivity dates 7  
examples  
    order pricing 13  
    price list line item effectivity dates 8  
    pricing 20  
    quantity tiered pricing 6

## I

item quantity pricing rule 12

item shipping surcharge pricing rule 12  
item shipping surcharge rules 19

## L

line price 6  
list price 5

## M

manual adjustments 18

## O

order pricing  
    examples 13  
order total pricing rule 12

## P

price adjustment  
    absolute 6  
    percentage 6  
price list assignment 15  
    to customer attributes 16  
    to customer versus customer attributes 16  
    to customers 15  
price lists 5  
    bulk updates on 9  
    inheritance 9  
    maintaining and customizing 9  
    making price lists sharable 10  
price locking 19  
price matching 20  
pricing bundles 17  
pricing examples 20  
pricing precision 8  
pricing rules  
    combination 11

- item quantity 12
- item shipping surcharge 12, 19
- order total 12
- shipping charge order total 12, 19

pricing rules and coupons 11

- assignment to customer attributes 14
- mapping to charges 14

Pricing Service 5

## **Q**

quantity tiers 6

## **S**

shipping charge calculation 19

shipping charge order total pricing rule 12

shipping charge order total rules 19

## **U**

unit price 5