IBM

WebSphere Commerce V7 Feature Pack 5

WebSphere Commerce and Sterling Commerce pricing integration

WebSphere software

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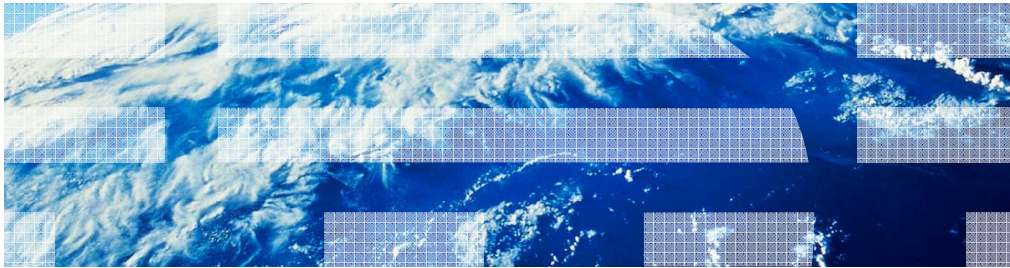
This presentation provides an overview of the WebSphere Commerce and Sterling Commerce pricing integration in WebSphere Commerce V7.0 Feature Pack 5.

Agenda

- Pricing integration introduction
- Pricing integration components view and data flow
- Enhancements for GetEntitledPrice component service
- Pricing tool enhancements

Websphere Commerce and Sterling Commerce pricing integration

This presentation starts with a pricing integration introduction, such as what the pricing integration is about, and what the main features it provides. It then explains, from the component and data flow standpoint, how the pricing is integrated. The details about GetEntitledPrice component service enhancement are also discussed. Last the WebSphere Commerce Management Center Pricing tool enhancements are introduced.

Introduction

- What is the pricing integration about
  – Enable Sterling OMS foundation and applications to call WebSphere Commerce pricing service **GetEntitledPrice** to get **catalog entry's** entitled offer price
- When does Sterling need to call Commerce pricing service
 – Sterling call center initiates a pricing request, for example: search or view an item
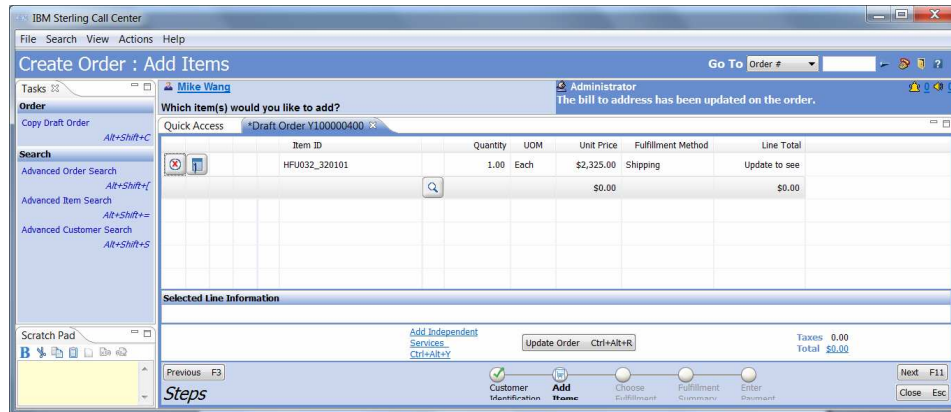
The Feature Pack 5 solution for WebSphere Commerce and Sterling Order Management Systems (OMS) integration enables shoppers to place an order from Sterling's Call Center. To create an order from Sterling Call Center, Sterling must have the ability to get catalog entry prices, same as the WebSphere Commerce storefront does.

In Feature Pack 5, all the pricing related data is managed by WebSphere Commerce. WebSphere Commerce exposes its pricing service, so that Sterling can call it to get catalog entry entitled prices. The pricing service is called when a customer service representative (CSR) at the Sterling Call Center initiates a pricing request, for example, search an item or view item information.

The screen capture on the slide is the Sterling Call Center UI for creating a new order. After a CSR enters an item ID, Sterling sends a pricing request to WebSphere Commerce for the shopper, and displays the price on the UI.

Components involved for pricing integration
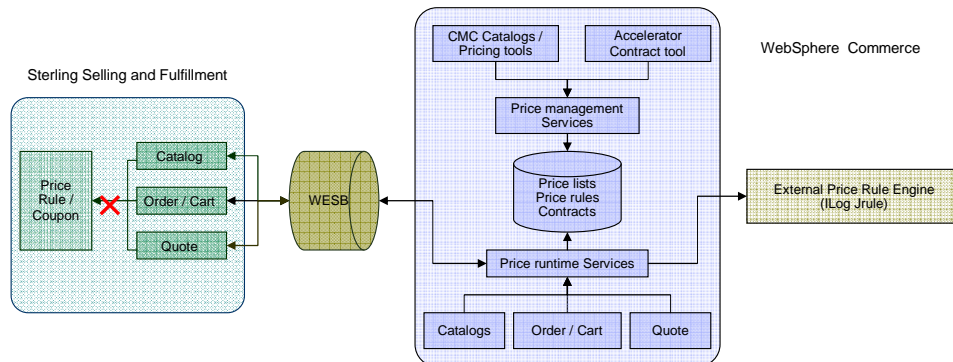
- All pricing related data is stored in WebSphere Commerce database
  - Price list
  - Price rule
- Sterling pricing module is turned off
- WebSphere Commerce pricing service is used by both WebSphere Commerce and Sterling OMS
- Sterling OMS calls WebSphere Commerce **GetEntitledPrice** to get catalog entries prices
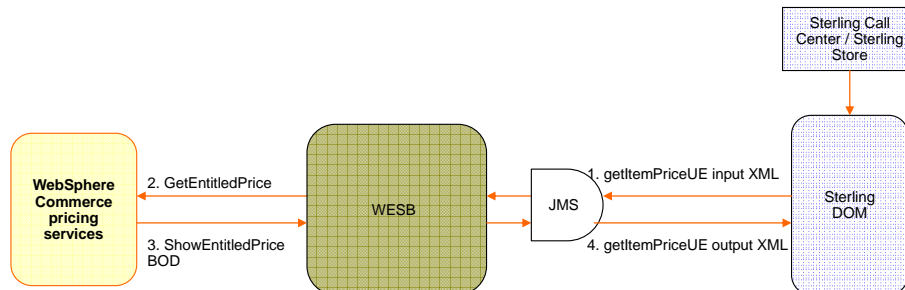
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This slide shows you how the pricing is integrated from the component view. In Feature Pack 5, all the pricing data, such as price rules, price lists and price entries, are stored in WebSphere Commerce database and managed by WebSphere Commerce Management Center Pricing tool. The Sterling pricing module is turned off in the integration environment. WebSphere Commerce provides pricing service to the Sterling applications in all pricing related transactions.

Integration data flow

- Sterling getItemPriceUE sends input XML to the JMS queue
- WebSphere Enterprise Service Bus maps the imput XML to the WebSphere Commerce GetEntitledPrice BOD
- GetEntitledPrice invokes the WebSphere Commerce Pricing Engine, returns price through ShowEntitledPrice BOD
- The ShowEntitledPriceBOD is mapped to the SCWC_getItemPriceUE output XML

This slide shows how the pricing is integrated from the data flow perspective.

When Sterling makes a price request, such as searching an item or viewing an item, Sterling invokes its getItemPriceUE user exit. This user exit sends input XMLs to a JMS queue. In the WebSphere Enterprise Service Bus mediation module, the input XML is mapped to the WebSphere Commerce GetEntitledPrice BOD. The WebSphere Commerce inbound service GetEntitledPrice is invoked to pick up the BOD in the JMS queue, and WebSphere Commerce Pricing Engine is called to calculate the catalog entry prices. The Pricing calculation is returned through the ShowEntitledPrice BOD. ShowEntitledPrice BOD is mapped to the SCWC_getItemPriceUE output XML, and the prices are returned to Sterling application.

Enhancements for GetEntitledPrice

- WebSphere Commerce pricing service GetEntitledPrice is enhanced to meet the requirements of the integration
  - Support contract ID as option parameter
  - Support pricing date parameter
  - Support range prices
  - Support pre-built kit and static kit

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The GetEntitledPrice component service is provided in WebSphere Commerce Feature Pack 2 and 3. It is used by WebSphere Commerce subsystems, such as storefront, catalog, search and order subsystems, to get an items entitled price.

In Feature Pack 5 release, GetEntitledPrice component service has been enhanced so that it can be used by Sterling to get item prices from WebSphere Commerce. The contract ID input parameter has been changed from a mandatory parameter to an optional parameter. A new input parameter, pricing date, is added so that the service can return prices based on a specific date. The range prices are supported, so that if Sterling does not provide an item quantity when it calls this service, the service returns range prices for that item. The service now also supports the return of pre-built kit price and static kit prices.

Enhancements for GetEntitledPrice - contractId

- GetEntitledPrice **contractId** parameter is changed from mandatory to optional
  - Contract ID is a mandatory parameter before Feature Pack 5
  - Sterling applications do not recognize WebSphere Commerce contract
  - Sterling does not pass contractId when calling WebSphere Commerce pricing service
  - With Feature Pack 5 WebSphere Commerce returns the best (lowest) price if a customer has multiple contracts in WebSphere Commerce
    - Business-to-consumer stores - the default contract price is returned
    - Business-to-business stores - best price from all entitled contracts is returned

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Before Feature Pack 5 the GetEntitledPrice contractId parameter is mandatory. Also, Sterling UI, business object, and business logic persistence layer do not recognize a WebSphere Commerce contract. When Sterling makes a price request to WebSphere Commerce, Sterling is not able to send the contract identifier to WebSphere Commerce. In Feature Pack 5, GetEntitledPrice service is changed to make this contractId an optional parameter. Now, when Sterling Commerce calls GetEntitledPrice service, since no contractId is passed, WebSphere Commerce now always returns the best price for a shopper. For business-to-consumer stores, the default contract price is returned. For business-to-business stores, the lowest price for all eligible contracts is returned.

Enhancements for GetEntitledPrice - date time support

- GetEntitledPrice service is enhanced to accept date as an optional parameter
  – Allows Sterling to re-price the order

Websphere Commerce and Sterling Commerce pricing integration

Before Feature Pack 5, WebSphere Commerce pricing service did not calculate the price for a past date. The WebSphere Commerce pricing engine did not support the logic between price and date.

For sterling integration, there is a need to get an item price for a certain date and time. For example, a shopper submitted an order from an online store, later he calls the Sterling Call Center and asks to update an item's quantity in his order. Between the date the shopper submitted the order and the date he called Sterling Call Center, the item's price might have been changed. Sterling Call Center might want to get the price for the date the order was submitted, rather than the price for the date the shopper made the call. In Feature Pack 5, GetEntitledPrice service is enhanced to accept a date as an optional parameter, which allows Sterling to pass the date and time to get the pricing information for that item.

Enhanced GetEntitledPrice service

Access Profile	Action Expression	Service provided	New for FEP5 ?
IBM_Store_EntitledPrice_All IBM_Store_EntitledPrice_RangePrice_All	/EntitledPrice[((CatalogEntryIdentifier[UniqueID=] and ContractIdentifier[UniqueID=] and UnitPrice[Price[@currency=] and (Quantity= and Quantity[@uom=])])]	Get the price by contract ID and catalog entry ID.	N
	/EntitledPrice[((CatalogEntryIdentifier[ExternalIdentifier[PartNumber=]] and ContractIdentifier[UniqueID=] and UnitPrice[Price[@currency=] and (Quantity= and Quantity[@uom=])])]	Get the price by conract ID and catalog entry part number	N
	/EntitledPrice[((CatalogEntryIdentifier[UniqueID=] and PricingDate= and UnitPrice[Price[@currency=] and (Quantity= and Quantity[@uom=])])]	Get the price by catalog entry ID (and optional pricing date). Contract ID is resolved by service according to context.	Y
	/EntitledPrice[((CatalogEntryIdentifier[UniqueID=] and UnitPrice[Price[@currency=] and (Quantity= and Quantity[@uom=])])]		
	/EntitledPrice[((CatalogEntryIdentifier[ExternalIdentifier[PartNumber=]] and PricingDate= and UnitPrice[Price[@currency=] and (Quantity= and Quantity[@uom=])])]	Get the price by catalog entry part number (and optional pricing date). Contract ID is resolved by service according to context	Y
	/EntitledPrice[((CatalogEntryIdentifier[ExternalIdentifier[PartNumber=]] and UnitPrice[Price[@currency=] and (Quantity= and Quantity[@uom=])])]		

This table shows Access profiles and the Action Expression for GetEntitledPrice web service. You can see that in the Feature Pack 5 you do not have to provide the ContractIdentifier parameter in the action expression, and the PricingDate is added as an action expression. You can go to the information center for detailed information on the GetEntitledPrice service, a link is provided in the reference slide.
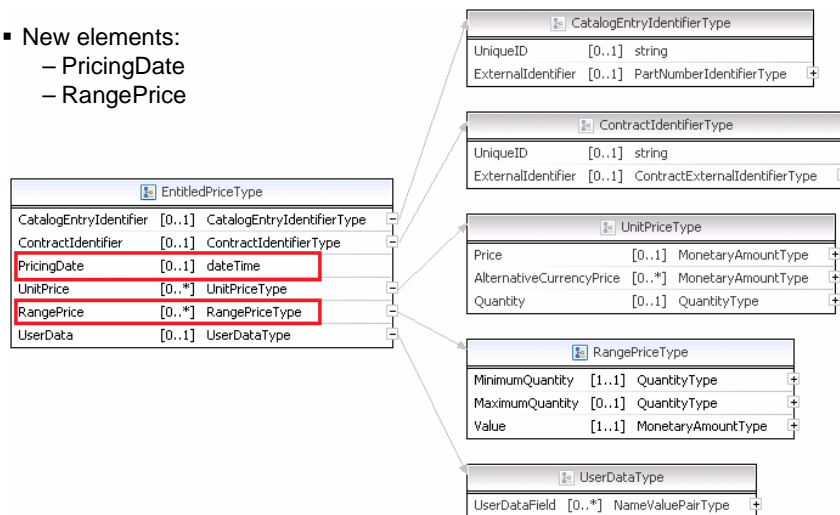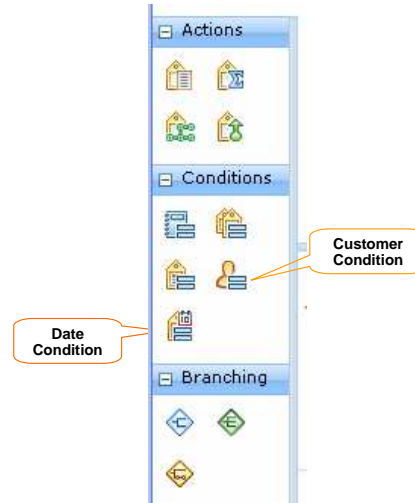
The slide shows the new EntitledPrice noun for Feature Pack 5. To support the pricing date and range price, two new elements have been added into the noun. For pricing, there are now two elements: UnitPrice and RangePrice. The UnitPrice is a price for a fixed quantity, but different monetary, RangePrice is for different quantities and different monetary.

Enhancements for pricing engine conditions

- Three new conditions of Pricing tool:
  – Date condition
  – Customer segments condition
  – Buyer organizations condition

Customer Condition

Date Condition

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In order to support the pricing data and time, the Management Center Pricing tool is enhanced in this release with a new date condition. This condition supports a date related branch and path.

Customer segments condition and Buyer organizations condition are two other new sub-conditions in Feature Pack 5. These two conditions are grouped into Customer Condition. All three of the new conditions are generic, you do not have to have a Sterling integrated environment in order to use them. They are covered in more detail in the next few slides.

Pricing tool enhancement - Date condition

- Allow business
  users to define a
  price rule based on
  date and time

branch 1

Condition Branch
First path for
which a condition
is met

Date Condition
Start date:
2012/01/23
12:00 AM, End
date:
2012/01/31

Date Condition

*Start date 2012/01/23 📅 12:00 AM 🕐 Eastern Time

End date 2012/01/31 📅 11:59 PM 🕐 Eastern Time

Days effective ⓘ ○ Every day of the week
                 ◉ Selected days of the week

☐ Sunday ☑ Monday ☐ Tuesday ☑ Wednesday ☐ Thursday ☑ Friday ☐ Saturday

Time of day effective ⓘ ○ All day
                        ◉ During a specified time

Start Time 09:00 AM 🕐 Eastern Time

End Time 09:00 PM 🕐 Eastern Time

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The Date condition defines when a price rule path is effective. You can define the start date, end date, the days in the week, and the time of day in a date condition. The date and time defined in a price rule is your WebSphere Commerce server's system time.

Pricing tool enhancement - Customer segment condition

- Member groups and Customer segments are both supported

The Member group condition is supported for price rules, but Member group does not support the Customer segments condition programmatically. To use the member group, business users have to manually add a unique identifier for the group. Feature Pack 5 now supports customer segments as shown here using the customer condition. You can use a marketing activity dynamically and add customers into a customer segment. You can use the utility view to search for customer segments and add them into the Customer Condition.

Pricing tool enhancement – Buyer organizations condition

- Before Feature Pack 5, Organization ID must be manually added into the price rule
- Buyer organizations can be found by using utility view search

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Same as with customer segments, before feature pack 5 if you use the organization condition in price rule, you have to manually enter the organization ID into the price rule. Sometimes you might need IT's help to find the organization's ID. In Feature Pack 5, Buyer organizations condition is now supported with the Customer Condition. You can use Management Center Utility View to search for the buyer organizations and drag them into the price rule builder.

Summary

- Pricing integration architecture
- GetEntitledPrice component service enhancement
- WebSphere Commerce Management Center Pricing tool enhancements

During this presentation, WebSphere Commerce and Sterling Commerce pricing integration architecture was introduced. The GetEntitledPrice component service enhancements and WebSphere Commerce Management Center Pricing tool enhancements were also discussed.

Reference

- GetEntitledPrice service
  http://publib.boulder.ibm.com/infocenter/wchelp/v7r0m0/topic/com.ibm.commerce.services.doc/Price/EntitledPrice/noun.htm

- Sterling Selling and Fulfillment Suite V9.2 information center

  http://pic.dhe.ibm.com/infocenter/ssfs/v9r2/index.jsp

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This slide contains some useful references for understanding the pricing integration solution.

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