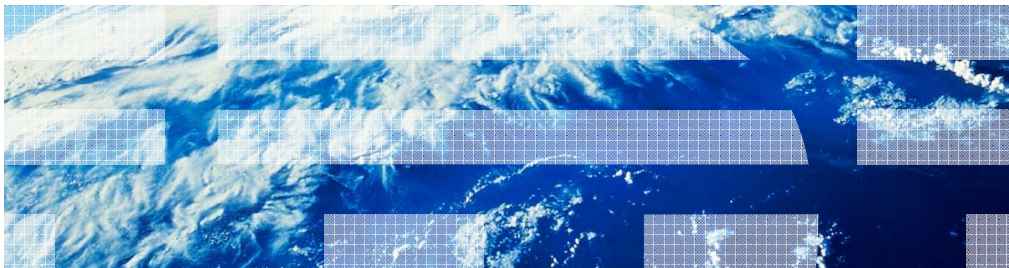


WebSphere Commerce V7 Feature Pack 2

Catalog filter overview



This presentation provides an overview of the catalog filter solution in WebSphere Commerce V7 Feature Pack 2. You should have a general knowledge of the features in WebSphere Commerce V7 before viewing this presentation.

Agenda

- Overview
- Feature enablement and configuration
- Creating catalog filters
- Product entitlement and contracts
- Customization
- Troubleshooting
- Limitations

This presentation will start with an overview of the solution, and will go over the required feature enablement and configuration steps. The presentation will then show how to create and use filters in contracts. The presentation will end with customization, troubleshooting and limitations considerations.

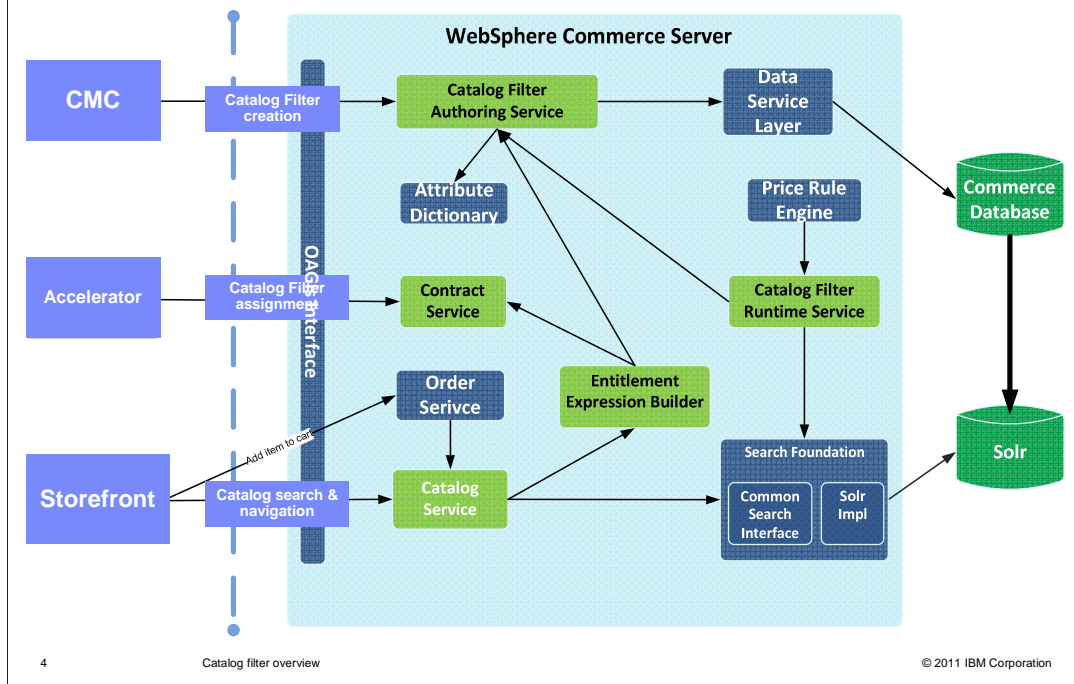
Overview

- Improved capabilities and supports reusability across stores and contracts
- Business users can create catalog filters based on categories, catalog entries, product properties and attribute dictionary attributes conditions
- E-site managers can assign catalog filters to e-site stores
- Business-to-business sales managers can assign catalog filters to default or buyer contracts
- Leverage search solution to provide fast and dynamic catalog filtering

You can use the Catalog Filter and Pricing tool to filter your catalog to a specific set of catalog entries. You can do this by specifying which categories, catalog entries, attribute dictionary attributes, and catalog entry properties to include or exclude from the catalog filter. Use catalog filters for your product entitlement, that is, to entitle customers to a subset of your catalog. Catalog filters can also be used as one of the price rules conditions when determining the prices for the set of catalog entries your customers are entitled to.

Managing your catalog filters within Management Center provides you with many business benefits. The benefits include supports reusability across stores and contracts. It provides a more flexible filtering criteria that supports including or excluding by categories, catalog entries, attributes in the attribute dictionary, and catalog entry properties. It supports search engine-based dynamic catalog filtering, based on Solr search solution. And uses the Solr search framework to provide a fast and dynamic catalog filtering.

Overview of catalog filter architecture



This is a graphical representation of the catalog filter architecture. The creation of filters will now be in the Management Center, however, the assignment of catalog filters to contracts and stores will still be in Accelerator. This is mainly because the contract framework is still in Accelerator in feature pack 2, so the assignment needs to happen there. The catalog filter runtime will provide the search foundation of the search expression for product entitlement. Catalog filter runtime will build up the search expression based on foundation's search index. The price rule engine will also use catalog filter to check whether some catalog entries are qualified by the specified catalog filter. Finally, the order component can use catalog filter to check for entitlement of a catalog entry against the contract before adding it to shopping cart.

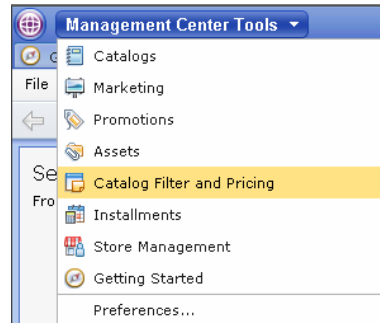
Comparison between catalog filter tools

WebSphere Commerce Accelerator Catalog Filter Tool	Management Center Catalog Filter and Pricing Tool
<ul style="list-style-type: none"> ▪ Catalog filter only defined within the contract model ▪ Cannot be reused across stores and contracts 	<ul style="list-style-type: none"> ▪ Catalog filter is independent from the contract model ▪ Can be reused across stores and contracts
<ul style="list-style-type: none"> ▪ Lacks flexible filtering criteria ▪ Only supports including or excluding categories or SKUs on the catalog hierarchy tree 	<ul style="list-style-type: none"> ▪ Flexible filtering criteria ▪ Supports including or excluding categories, products, product properties, and attributes from the catalog
<ul style="list-style-type: none"> ▪ Filtering result is based on a flattened product set which is hard to synchronize 	<ul style="list-style-type: none"> ▪ Supports search engine based dynamic catalog filtering ▪ Simplifies catalog maintenance

Many of the existing challenges of the catalog filter tool in Accelerator has been mitigated in the new catalog filter implementation. The existing catalog filter tool in Accelerator is tightly coupled with contract model, and cannot be reused across stores and contracts. It lacked flexibility on filtering criteria, only supporting inclusion and exclusion on Category or SKU on a catalog hierarchy tree. The filtering result was based on prebuilt product set model (flattened into catalog entries) which is not dynamic. The new solution will address all the existing challenges, allowing creation of flexible and reusable catalog filters in Management Center. The separation of catalog filter from contract model promotes reuse across stores. The new catalog filter also supports flexible filtering criteria based on product properties and attributes leveraging the search solution to provide fast and dynamic catalog filtering.

New features

- Creating catalog filters
 - Catalog Filter and Pricing tool
 - Category-based criteria
 - Category-based criteria with conditions
 - Properties
 - Attribute dictionary attributes
 - Catalog entry-based criteria
 - Upload catalog filters
- Using catalog filters and product entitlement
 - Business-to-business
 - Default contract
 - Base contract
 - Customer contract
 - E-site
 - Business-to-business
 - Business-to-consumer
 - Business-to-consumer
 - Default contract



When creating catalog filters, you can combine one or more filtering criteria to achieve your business goals. You can include or exclude categories from your catalog. If you include a category, any catalog entry and child category under this category is included, unless you explicitly exclude the catalog entry or category. You can apply conditions on the categories that are added to your catalog filter. The condition can be composed of attribute dictionary attributes or catalog entry properties. You can include or exclude catalog entries from your catalog. The catalog entry-based criteria takes higher precedence over the other filtering criteria.

Using catalog filters you can allow different customers to view and purchase different catalog entries on different stores by assigning catalog filters to contracts. When you assign catalog filters to a contract, the customers shopping under the contract can browse, search for, and purchase the catalog entries defined in the catalog filter. For example, in a business-to-business model, you can create catalog filters, and then assign different catalog filters to each business contract. The customers shopping under the specific contract only can see the catalog entries they are entitled to.

Pre-requisites

This next section will discuss the required steps to configure and use this solution.

Feature enablement and configuration

- Install V7 Fix pack 2 and Feature Pack 2
- Enable the Foundation and Management Center feature
- Publish stores and corresponding enhancement SARs
- Search Configuration
- Search Enablement
 - Product entitlement
 - Enable storefront for Search
 - Enable search-based navigation flow
 - Product sensitive policies (such as use in Price Rules)
 - Enable storefront for Search
- By default, all stores have store default filter created and assigned

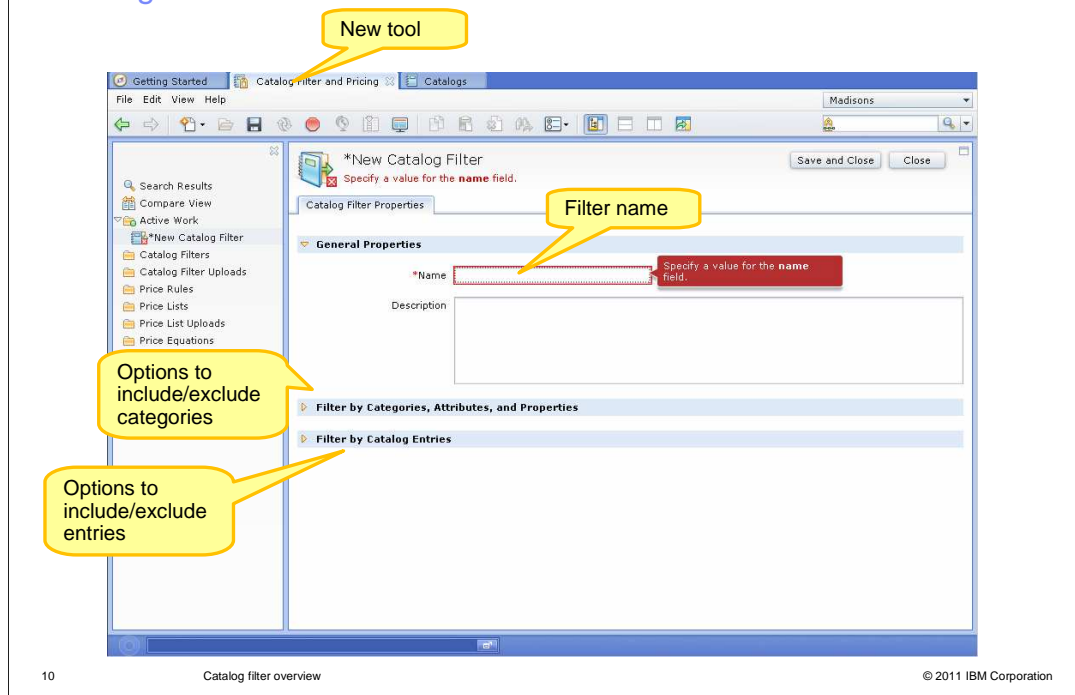
Here are the required steps for feature enablement and configuration in order to use the new catalog filter solution in Feature Pack 2. In order to use the new catalog filter solution, you need to first install V7 fix pack 2 and feature pack 2. You will also need to enable the foundation and management center feature and publish required stores and corresponding enhancement SAR files. You also need to configure search for the store you want to use filters for.

You will need to enable a new search based navigation flow for product entitlement to take effect. If you are only using catalog filtering in price rules, where you need product sensitive policies that is not related to product entitlement, then you do not need to enable this flow. In that case, just enabling search for the specific store is enough. Another change is all stores will have a default contract with a default catalog filter. This default filter basically includes all catalog entries.

Creating catalog filters

The next slides show how to create catalog filters.

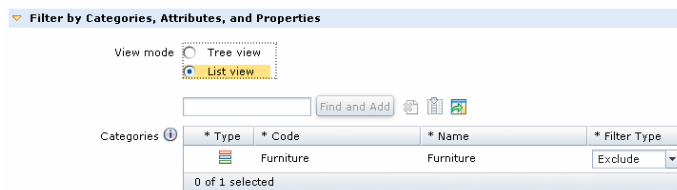
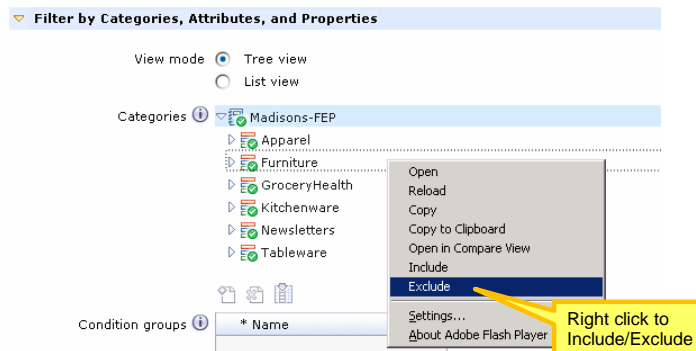
Catalog filter creation – new tool



The Catalog Filter and Pricing tool is a Management Center tool that you can use to filter your catalog to a specific set of catalog entries. You can access it from the Management Center tools drop down. Sellers, Sales Managers, and Account Representatives can use the tool's flexible features to implement pricing strategies that meet the site's business needs over time and to filter your catalog for product and price entitlement. Create the filter by clicking on the New Catalog Filter and Pricing icon, and you will see the properties page where you can enter the name of the filter along with a description.

Creating catalog filters based on categories

- Two view modes
 - List view
 - Tree view (default)
- Child category rules will override parent category
- States:
 - Include
 - Exclude
 - Cancel Settings



When creating catalog filters based on categories, there are two view modes. The tree view is the default view, for you to intuitively see the navigation structure of all the categories. You can also toggle to look at the same results in list view. For each category, you have the option to include, exclude, and clear or cancel the settings.

Also note that, by default, all categories are implicitly included by default - or if you are working with an e-site, it is same settings as the asset store you are inheriting from. More specific child category rules will override parent category rules. For example, if you exclude the entire catalog, but include the furniture category, then it will override the parent exclusion.

Creating catalog based filters – condition groups

- To apply a condition on a category in your catalog filter:
 - Add a category to the catalog filter
 - Define a condition group
 - Specify one or more attribute dictionary attributes or catalog entry property conditions within the condition group
- A category can contain:
 - One or more condition groups
 - Each condition group can contain one or more attribute dictionary attribute and property condition
- Filter includes or excludes products that meet the condition

The screenshot displays the 'Catalog filter overview' interface. It is divided into two main sections:

Condition groups: This section shows a single condition group named 'CG02'. It includes a search icon, a refresh icon, and a list icon. The group name is entered in a text field, and it indicates '1 of 1 selected'.

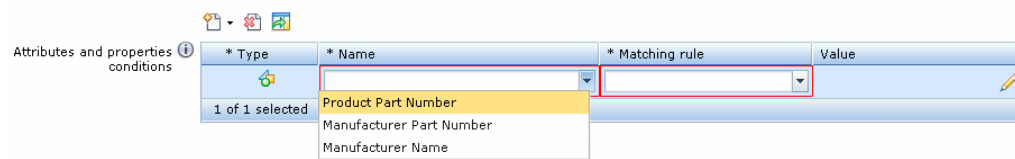
Attributes and properties conditions: This section shows a table of conditions for the selected group. It includes a search icon, a refresh icon, and a list icon. The table has four columns: * Type, * Name, * Matching rule, and Value. One condition is listed: 'Manufacturer Name' with a matching rule of 'equals' and a value of 'Maplewear'. It also indicates '1 of 1 selected'.

At the bottom left, the page number '12' is visible. At the bottom center, the text 'Catalog filter overview' is present. At the bottom right, the copyright notice '© 2011 IBM Corporation' is displayed.

Conditions are used to make category inclusion and exclusions conditional. So for example, if you only want to exclude a category on certain conditions, you will need to add property or attribute based conditions. Before you add a condition, you need to create a condition group. A category can contain one or more condition groups, and each condition group can contain one or more attribute and property condition. This screen capture shows you an example of a catalog entry property conditions. In this example, the condition group "CG02" contains a catalog entry property condition of Manufacturer Name "MapleWear".

Creating catalog filters based on categories - using property conditions

Property Condition Name	Description	Matching rules
Product Part Number	Part number in the catalog.	Equals, not equals
Manufacturer Part Number	Part number given by manufacturer.	Equals, not equals
Manufacturer Name	Manufacturer	Equals, not equals



By default, these catalog entry properties are supported: Product Part Number, Manufacturer Part Number, and Manufacturer Name. This table shows you what type of matching rules you can use with the catalog entry properties.

Multi-value support for property conditions

- Multi-value support for property conditions using the **equals** or **not equals** operator
- Example:
 - Exclude entries if Product Part Number equals {FUFA-01, FUFA-02, FUFA-03}
 - Implicit include all else

The screenshot illustrates the process of setting a multi-valued property condition. It shows two states of the 'Attributes and properties conditions' table.

Initial State (Top):

* Type	* Name	* Matching rule	Value
	Product Part Number	equals	

1 of 1 selected

Pop-up Menu (Left):

Value
FUFA-01
FUFA-02
FUFA-03

0 of 3 selected

Close

Final State (Bottom):

* Type	* Name	* Matching rule	Value
	Product Part Number	equals	FUFA-01, FUFA-02, FUFA-03

0 of 1 selected

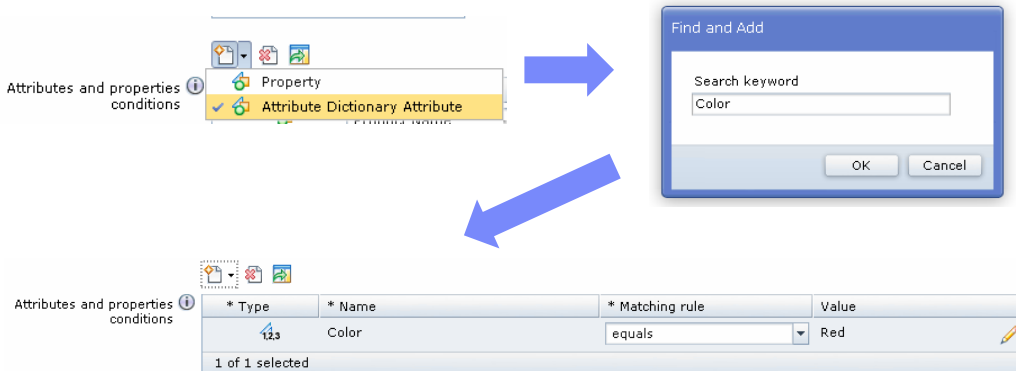
A yellow callout box with a pencil icon points to the pencil icon in the 'Value' column of the final state, with the text 'Click to input or edit values'. Two blue arrows indicate the flow from the initial state to the pop-up menu and then to the final state.

14 Catalog filter overview © 2011 IBM Corporation

There is multi-value support for the equals and not equals operator, where you can click the pencil to access the pop-up menu to specify the values. In this example, the condition is true if the product part number equals FUFA-01, FUFA-02 or FUFA-03.

Adding attribute dictionary attribute conditions

- Create filtering conditions based on attribute dictionary descriptive and defining attributes
- Ensure attribute dictionary attributes are marked searchable
- Classic attributes and attribute dictionary with assigned values are not supported



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Catalog filter overview

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You can create filtering conditions based on attribute dictionary attributes. This is based on both descriptive and defining attributes as long as they are marked searchable or indexable in Search. Note that classic attributes are not supported because they are not shared by multiple catalog entries, since they are private to catalog entries and the results can be ambiguous. Attributes with assigned values are not supported since translation to different languages can be ambiguous.

Multi-value support for attribute dictionary attribute conditions

- Attributes with pre-defined values (attrval.valusage = 1)
 - Select one or more values from drop down menu

Attributes and properties conditions

* Type	* Name	* Matching rule	Value
123	Color	equals	Blue, Red, White

1 of 1 selected

- Attributes without pre-defined values – require assignment (attrval.valusage = null or 0)
 - Unsupported

There are two types of attribute dictionary attribute, one with predefined values and one without predefined value. For allowable attributes with pre-defined list, you will have a multi-select list of values to choose from. Assigned attributes without a predefined list is not supported in catalog filters by default, but can be customized if you have a business need for this.

Relationship of conditions within a condition group

- Relationship between conditions in a condition group – AND (Intersection)
- The logical expression is (Black OR Blue) AND (FUFA-01 OR FUFA-02 OR FUFA-03)

Filter by Categories, Attributes, and Properties

View mode Tree view List view

Categories Madisons-FEP
 Apparel
 Furniture
 GroceryHealth
 Kitchenware
 Newsletters
 Tableware

Condition groups

* Name
CG01

 1 of 1 selected

Attributes and properties conditions

* Type	* Name	* Matching rule	Value
123	Colour Attribute	equals	Black, Blue
	Manufacturer Part Number	equals	FUFA-01, FUFA-02, FUFA-03

 0 of 2 selected

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Catalog filter overview

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This slide discusses the relationships within and between condition groups. So for one particular category, the relationship between conditions in a condition group is intersection or AND. This means that all conditions need to be satisfied in order for an exclude or include to happen. In the example, the entire catalog is included, with one conditional exclusion of a category based on two conditions. So within the Furniture category, if any of the products with Manufacturer part number in the list AND has a color of black or blue, then the product is excluded. Everything else is included. Both conditions need to be satisfied in order for the exclusion or inclusion to happen.

Relationship between condition groups

- Relationship between multiple condition groups of a category – OR (Union)
- The logical expression is (Black OR Blue) OR (FUFA-01 OR FUFA-02 OR FUFA-03)

The screenshot displays two examples of the 'Catalog filter overview' interface. Each example consists of a 'Condition groups' section and an 'Attributes and properties conditions' section.

Example 1 (Top):

- Condition groups:** A list with two entries, 'CG01' and 'CG02'. The status '1 of 2 selected' is shown at the bottom.
- Attributes and properties conditions:** A table with one row selected.

Type	Name	Matching rule	Value
Manufacturer Part Number		equals	FUFA-01, FUFA-02, FUFA-03

 The status '0 of 1 selected' is shown at the bottom.

Example 2 (Bottom):

- Condition groups:** A list with two entries, 'CG01' and 'CG02'. The status '1 of 2 selected' is shown at the bottom.
- Attributes and properties conditions:** A table with one row selected.

Type	Name	Matching rule	Value
Colour Attribute		equals	Black, Blue

 The status '1 of 1 selected' is shown at the bottom.

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Catalog filter overview

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The relationship between multiple condition groups is OR, in other words the final result is the union of the results of all condition groups. Take the same example from the previous slide, condition group 1 indicates that if a product has an attribute of black or blue, it is excluded. Condition group 2 says If a product has manufacturer part number of any of the above, it is excluded. So this time, if you have a product that has attribute of blue or black, then it is excluded, the other conditions do not need to be satisfied. Either condition can be met in order for an entry to be excluded from the category.

Creating catalog filters by catalog entries

- Two separate tables to specify catalog entry filters
- Drag and drop to respective tables to include/exclude
- Catalog entry inclusion/exclusion rules take precedence over category rules

Filter by Catalog Entries

Find and Add

Catalog entries to include

* Type	* Code	* Name
<input checked="" type="checkbox"/>	FULE-01	Wing Tip Leather Sofa
<input checked="" type="checkbox"/>	FULE-02	Purple Leather Sofa

0 of 2 selected

Find and Add

Catalog entries to exclude

* Type	* Code	* Name
<input checked="" type="checkbox"/>	FUDE-02	Craft Table
<input checked="" type="checkbox"/>	FUDE-01	Executive Six-Drawer Desk
<input checked="" type="checkbox"/>	FUDE-03	Student's Desk

0 of 3 selected

```

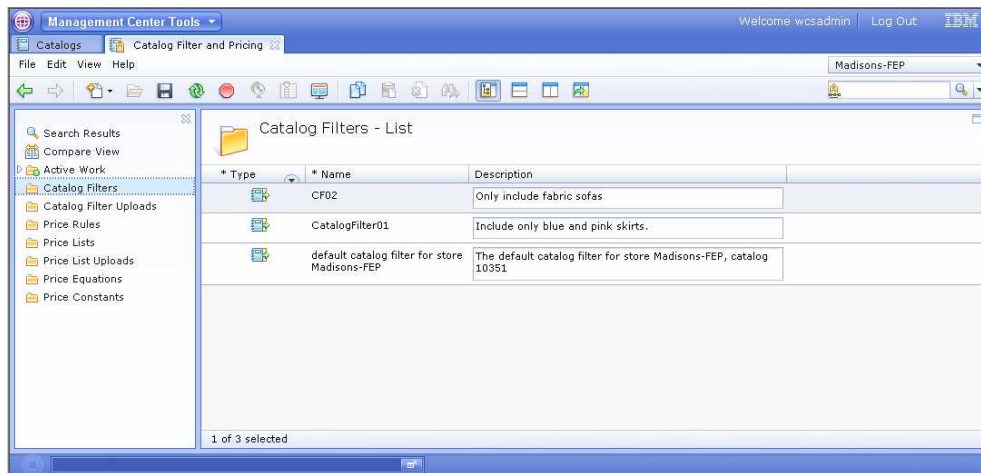
graph LR
    IP[Include products] --> ISKI[Include SKUs implicitly]
    IP --> ESKUS[Exclude SKUS]
    EP[Exclude products] --> ESKI[Exclude SKUs implicitly]
    EP --> ISKU[Include SKUs]
    ESKUS --- O1[Overrides product]
    ISKU --- O2[Overrides product]
  
```

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This slide looks at creating catalog filters by catalog entries. There are 2 separate tables under the catalog entries filtering options. One table is used for inclusions and the other is used for exclusions. You can find the entries from the utility pane, and drag the entries to respective tables without having to specify include or exclude. With this implementation, the ProductSet concept was reused to represent the entries where each include or exclude grid represents one productSet. This will help during migration if you are currently using the existing productSet catalog filters. This also supports large quantities of catalog entries both in the backend and frontend to provide clear visual lists of which entries are excluded and included.

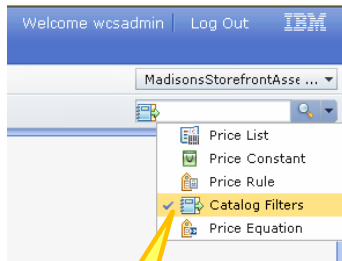
Note that catalog entry inclusion and exclusion rules take precedence over category based rules. So if you exclude a particular category, and later include certain catalog entries from that category, the latter is included. Similarly, SKUs are treated differently than products. If you include a product, all its SKUs are implicitly included. You still have the option to exclude particular SKUs after you included the product. These rules will take precedence.

View catalog filters

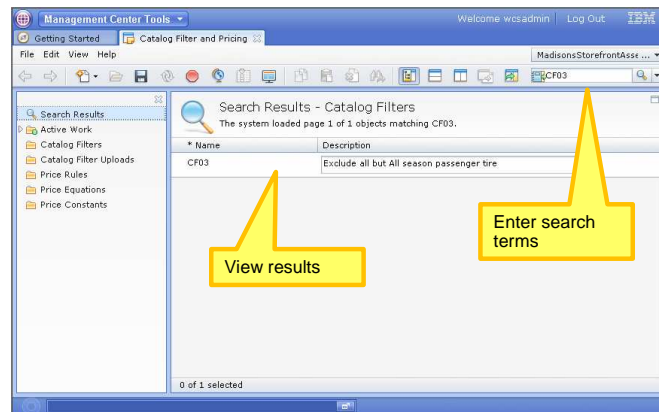


You can view all the catalog filters you created in a store from the Catalog Filter folder.

Searching for catalog filters



- Simple search by name only
- No advanced search option
- Not case-sensitive



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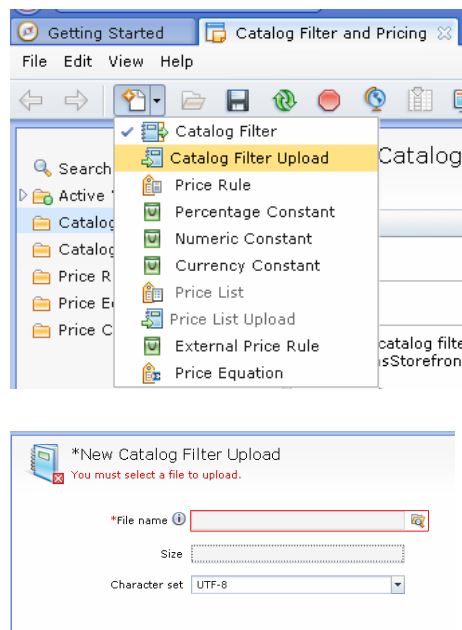
Catalog filter overview

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If you have a large list of catalog filters, you can search for it from the quick search in the management center. This is a simple search by name only and it is not case sensitive.

Uploading catalog filters

- Catalog Filters can be created using Catalog Filter Upload and command line data load utility
- What can you upload?
 - A CSV file
 - One or more CSV files in a .zip file
 - Multiple language CSV files in a .zip file.
- Encoding types
 - UTF-8, UTF-16, GB2312, Big5, Windows Latin-1, ISO8859-1, ISO8859-15, KS C5601 (KS X 1001), Shift JIS
- Limitation
 - Uploading a CSV file using the Mozilla Firefox browser with a self-signed SSL certificate unsupported



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Catalog filter overview

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Catalog filters support data load so you can upload catalog filter data using the Catalog Filter and Pricing tool. You can create filters in bulk by uploading CSV files containing various filter objects. For example, if your company maintains catalog filter data in a spreadsheet, you can upload the data from the spreadsheet to the WebSphere Commerce database. The Catalog Filter Upload feature uses the data load utility, but it provides a user interface that makes the upload process easier.

In the Management Center, you can load your catalog filter data from a CSV (comma-separated value) file or a compressed file to the WebSphere Commerce database. You can also use the Catalog Filter Upload feature to delete catalog filter data from the database. The upload supports multiple languages. But if you do upload multiple language CSV files in a compressed file, make sure all files are using the same file encoding.

There is a limitation where you cannot upload a CSV file to Management Center using the Mozilla Firefox browser with a self-signed SSL certificate.

Catalog filter objects to upload

- **CatalogFilter**
 - Use to load the catalog filter properties such as the name, description and identifier
- **CatalogFilterCatentry**
 - Use to load the catalog entry (product, SKU) inclusion and exclusion selection for a particular catalog filter
- **CatalogFilterCategory**
 - Use to load the category inclusion and exclusion selection for a particular catalog filter
- **CatalogFilterConditionGroups**
 - Use to load the condition groups for the particular catalog filter
- **CatalogFilterConditions**
 - Use to load conditions on a category for a particular catalog filter

Catalog filter object types are uploaded in this order: Catalog filter, Catalog filter catalog entry, Catalog filter category, Catalog filter condition groups, Catalog filter conditions. The different components of a catalog filter are broken down into objects. Use the `CatalogFilter` csv to load properties such as name and description. Use the `CatalogFilterCatentry` csv to load all the catentries you are excluding or including. Use the `CatalogFilterCategory` csv to load all the categories you are including or excluding. `ConditionGroups` load all the different condition groups. Use the `FilterConditions` to load different conditions. You can put components for multiple filters in each CSV file.

More detailed information about column definitions and possible values can be found in the WebSphere Commerce Information Center.

CSV format for catalog filter data

- In the CSV file:
 - The first row must contain the keyword that corresponds to the catalog filter business object type to upload
 - The second row must contain the column headings
 - The remaining rows contain catalog filter data
- The keyword and column headings are case sensitive
- By default, the maximum file size for uploads is 10 MB

	A	B	C	D	E	F	G	H	I	J
1	CatalogFilter									
2	CatalogFilterId	CatalogFilterName	StoreIdentifier	CatalogIdentifier	Usage	Delete	Field1	Field2	Field3	EnglishDescription
3		CatalogFilterA	Madisons	Madisons	Buyer	0	111	222	333	ShortDesc for filter A
4		CatalogFilterB	Madisons	Madisons	Price	0				ShortDesc for filter B

	K	L	M	N	O	P	Q	R	S	T	U	V	W
	FrenchDescription	GermanDe	ItalianDesc	SpanishDe	Portuguesi	SChineseC	TChineseC	KoreanDes	JapaneseC	RussianDe	RomanianI	PolishDescription	

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Catalog filter overview

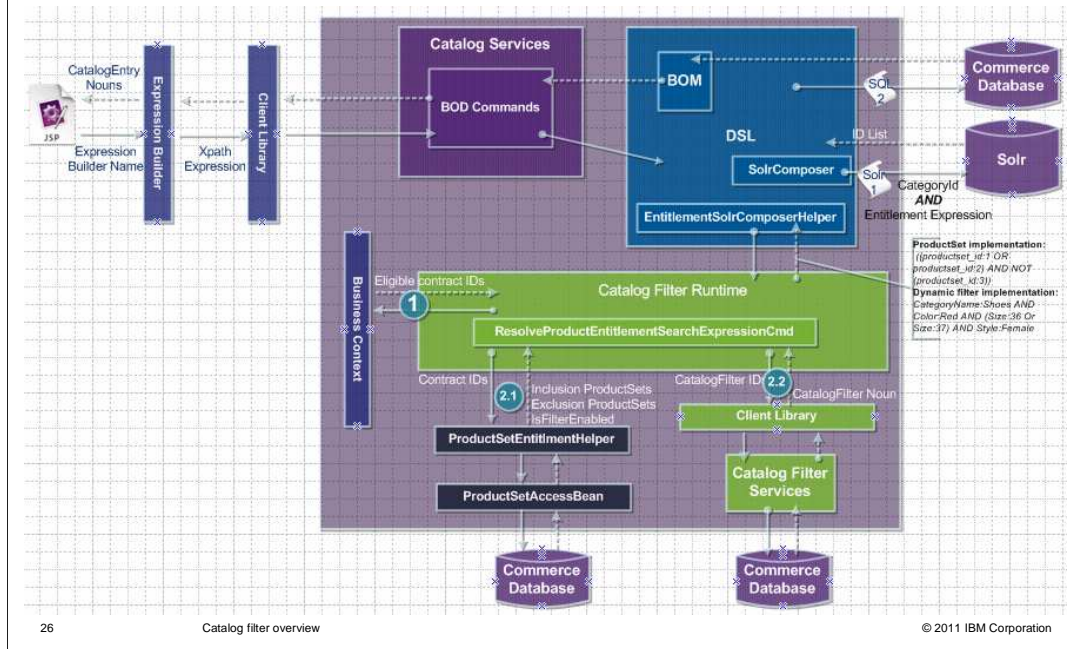
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The CSV format file you use to upload catalog filters must follow a specific format so that the data loads correctly into the WebSphere Commerce database. The screen capture shows the data contained in a sample CSV file for catalog filter data (note that the image is split into two rows to fit on this page). The first row must contain the keyword that corresponds to the catalog filter business object type to upload. The second row must contain the column headings. The remaining rows contain catalog filter data. The keyword and column headings are case sensitive.

Catalog filter assignment and contracts

Next, the presentation will show how catalog filters can be assigned to contracts.

Building search expressions



This diagram shows the process behind how search expressions are built from catalog filters using contract ids (which is retrieved either from Business Context or input). On the storefront a shopper logs on to a store, and can see the entitled top categories. The shopper will click a top category, the entitled sub categories display, and so on until the entitled catalog entries display. So in the backend, the search component will invoke the entitlementSolrComposerHelper. The entitlement helper will then interact with the catalog filter runtime to retrieve the contract IDs from business context. It will then resolve all the catalog filter TC and product set TC according to eligible contracts. The entitlement helper then gets the filter expressions from both cat filter TC and product set TC. This is assuming there are both product set and new catalog filters. If only one type of filters exist, then only one is resolved. Finally, the catalog filter runtime service composes the entitlement expression and returns it to search.

Product entitlement

- Assign catalog filters to contracts in Accelerator.
- Product entitlement within contracts
 - Base contract
 - business-to-business buyer contract
 - Store default contract
- For **business-to-business direct stores**, you can assign catalog filter to:
 - The default contract for the store
 - A base contract
 - A customer contract
- For **e-site stores** (business-to-business direct and consumer direct), you can assign catalog filter to:
 - The default base contract of the storefront asset store
 - The default contracts of extended site stores
- For **business-to-consumer direct stores**, assign catalog filter to the default store contract
- **Note:** For a given contract, only a single catalog filter can be in effect at one time

To entitle different customers to a subset of your catalog on the storefront, you must assign a catalog filter to a contract using WebSphere Commerce Accelerator. This requirement applies to all business models (business-to-business direct stores, consumer direct stores, and extended site stores). As a result, customers shopping under the contract are only entitled to see and purchase the set of catalog entries defined in the catalog filter. A catalog filter is one of the terms and conditions a contract can have. For a given contract, only a single catalog filter can be in effect at one time.

There are many different types of contracts where product entitlement can occur. A base contract is not a contract used by a customer; it is a base entity which is inherited by other business-to-business buyer contracts. If a catalog filter is assigned to a base contract, it applies to all the buyer contracts inherited from the base contract. If both buyer contract and its base contract are associated with the same catalog filter, the catalog filter in the buyer contract overrides the one in base contract. Catalog filters can be assigned to business-to-business buyer contracts, the customers shopping under the buyer contract are entitled to the set of catalog entries defined in the catalog filter. Finally, you can assign catalog filters to store default contracts of a store. The customers shopping under the store default contract are entitled to the set of catalog entries defined in the catalog filter. In most cases, this type of contract is used for business-to-consumer stores, especially business-to-consumer extended site stores.

Assigning a catalog filter to a contract

Business Model	Type of contract	Type of store	Procedure
business to business direct	customer contract	<ul style="list-style-type: none"> •business-to-business direct stores •business-to-business direct extended site stores 	<ol style="list-style-type: none"> 1. Logon to Accelerator 2. Sales > Accounts 3. Select contract 4. Update Extended TC 5. Catalog filter tab
	base contract	<ul style="list-style-type: none"> •business-to-business direct stores •business-to-business direct extended site stores 	
	base for default contract	<ul style="list-style-type: none"> •Storefront asset stores 	
	default contract	<ul style="list-style-type: none"> •business-to-business direct stores •business-to-business direct extended site stores 	Edit contract XML
Consumer direct	default contract	<ul style="list-style-type: none"> •Consumer direct stores •Consumer direct extended site stores 	<ol style="list-style-type: none"> 1. Logon to Accelerator 2. Merchandise > Catalog Filter and Price Rule 3. Catalog filter tab
	base for default contract	<ul style="list-style-type: none"> •Storefront asset stores 	Edit contract XML

To entitle different customers to a subset of your catalog on the storefront, you must assign a catalog filter to a contract using WebSphere Commerce Accelerator. This requirement applies to all business models (business-to-business direct stores, consumer direct stores, and extended site stores); however the assignment steps differ depending on the business model and the type of contract.

Usage scenarios and examples

In the next section, you will see some examples of creating catalog filters based on different usage scenarios. First, some reminders, child category and entry rules will override rules on the parent category. Criteria set on the parent category is passed to its children and grandchildren. Though once a child has filtering rules set on itself, the inherited criteria is ignored, and inheritance will stop passing to lower level category. Including a category based on a condition, means excluding remaining. Similarly, excluding a category based on a condition, means include the remaining. For example, include category Apparel when 'Color' equals 'Blue' means all other catalog entries in category Apparel with 'Color' not equaling 'Blue' is excluded.

Example 1: creating filters using categories

- **Scenario:**
 - One category (Apparel)
- **Steps to create filter:**
 - Exclude entire catalog
 - Include apparel category
 - No conditions

* Type	* Code	* Name	* Filter Type
	Madisons-FEP	Madisons-FEP catalog	Exclude
	Apparel	Apparel	Include

0 of 2 selected

This example shows how to include only the Apparel category. Because the catalog is implicitly included by default, you need to exclude it if you only want to show the Apparel category. Then you will need to include the Apparel category. There are no conditions needed for this scenario.

Example 2: creating filters using categories and property conditions

- **Scenario:**
 - Include only skirts (MW-0020, MW-0024)
- **Steps to create filter:**
 - click catalog and include
 - Add property condition
 - Name: Product Part Number
 - Operator: equals
 - Value: MW-0020, MW-0024

Filter by Categories, Attributes, and Properties

View mode Tree view List view

* Type	* Code	* Name	* Filter Type
		Madisons catalog	Include

1 of 1 selected

* Name
OnlySkirts

1 of 1 selected

* Type	* Name	* Matching rule	Value
	Product Part Number	equals	MW-0020, MW-0024

1 of 1 selected

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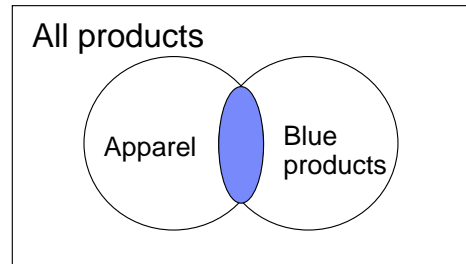
Catalog filter overview

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This example shows how to include two products based on the product part numbers MW-0020 and MW-0024. You will need to use property conditions with categories for this filter scenario. After you include the entire catalog, you need to add a condition group with one condition. The condition is of property type, with product part number as the name, using the equals matching rule. Fill in the part numbers MW-0020 and MW-0024 as the values of the condition. This will effectively include only these two part numbers in the catalog.

Example 3: creating filters using categories and attribute conditions

- **Scenario:**
 - Include only blue apparel
- **Steps to create filter:**
 - Select catalog and exclude
 - Select Apparel category and select include
 - Add attributes to this category
 - Name: Color
 - Operator: Equals
 - Value: blue



Categories

- Madisons-FEP
 - Apparel
 - Furniture
 - Grocery/Health
 - Kitchenware
 - Newsletters
 - Tableware

Condition groups

* Name
blueApparel
1 of 1 selected

Attributes and properties conditions

* Type	* Name	* Matching rule	Value
123	Color	equals	Blue
1 of 1 selected			

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Catalog filter overview

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This next example shows how to include catalog entries using attribute conditions so that only blue apparel products are included. First, the entire catalog is excluded. Then the apparel category is included on one condition. The condition states that the catalog entry has an attribute dictionary attribute 'Color' equals 'Blue'. All catalog entries in the apparel category with defining or description attributes of 'Color' with value equaling 'Blue' are included.

Example 4: Creating filters using categories, attributes and catalog entries

Scenario:

- Include blue Apparel
- Include all Fabric Sofas
- Include Craft Table (FUDE-02)

Steps to create filter:

>> Filter by categories

1. Click entire catalog and select exclude
2. Select Fabric Sofas and include
3. Select Apparel category and include

- Add condition group
- Add attribute dictionary attribute (Color = blue)

>> Filter by Catalog entries

1. Select FUDE-02 and add to Catalog entries to include table

The screenshot shows the 'Filter by Categories, Attributes, and Properties' configuration window. It is divided into three main sections:

- Filter by Categories:** A table with columns 'Type', 'Code', 'Name', and 'Filter Type'. It lists 'Madisons catalog' (Exclude), 'Apparel' (Include), and 'Fabric Sofas' (Include). A '1 of 3 selected' indicator is shown.
- Condition groups:** A section with a 'Name' field containing 'blueApparel' and a '1 of 1 selected' indicator.
- Attributes and properties conditions:** A table with columns 'Type', 'Name', 'Matching rule', and 'Value'. It shows a condition for 'Color' with the rule 'equals' and the value 'Blue'.

Below these sections is the 'Filter by Catalog Entries' section, which includes a search bar for 'FUDE-02' and a table with columns 'Type', 'Code', and 'Name'. It lists 'FUDE-02' as 'Craft Table' with a '0 of 1 selected' indicator.

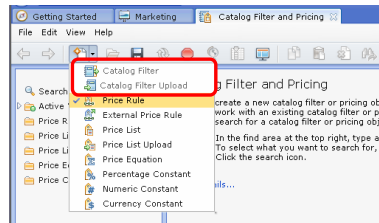
This next example includes a combination of all the types of filters you can create. You are including all blue apparel category, fabric sofas, and the craft table with product number FUDE-02. All other catalog entries are excluded. First, you will exclude the entire catalog. Then you will include the apparel category on the condition that the 'Color' attribute equals 'Blue'. Next, you will include the Fabric Sofa category. Finally, you will include the Craft table catalog entry by dragging the product FUDE-02 into the inclusion table in the Filter by Catalog Entries section.

Troubleshooting and limitations

This section lists some troubleshooting scenarios and limitations for the solution.

Troubleshooting: management center issues

- Problem:
 - Unable to create catalog filters in Catalog Filter and Pricing tool in your store



- Solution:
 - Catalog filter is unavailable if search is not configured for a particular store
 - Configure search for the store

If you are unable to create catalog filters from the Catalog Filter and Pricing tool where the options are not available, this indicates that you have not configured search for your store. It is required to have search configured for stores in order to create and use the new catalog filters. Catalog filters use the search engine in the backend to create expressions for product entitlement.

Troubleshooting: management center issues

- Problem: Attribute Dictionary attributes cannot be found so attribute based conditions cannot be created for filters

- Solution:
 - Attribute dictionary attributes need to be marked 'searchable' in order to be used in catalog filters

When creating attribute based filters, if you cannot find any attribute dictionary attributes, even after having uploaded them to the store, this is because you have not marked them searchable. The attributes need to be marked searchable in order for the search engine to index the attributes. The solution is to go mark them searchable, and try again.

Troubleshooting: management center Issues

- Problem: Attribute dictionary filtering condition generates error
 - Attribute dictionary attributes uploaded as searchable in Management Center
 - Data is not inserted into SRCHATTR table
- Solution:
 - Update attributes in Management Center after uploading and assign attributes to productsOR
 - Rebuild search index manually

There is an issue when uploading attribute dictionary attributes into Management Center without being modified or assigned to products, the attributes are not inserted into the SRCHATTR table. This is the case even when you mark the attributes as searchable in the CSV file you upload. You will see an error when trying to create filters based on attributes and on the storefront when searching for attributes. This synchronization issue is resolved if you update the attributes in Management Center or if you rebuild the search index.

Other considerations

- Trace strings
 - com.ibm.commerce.contract.*

- Migration and compatibility
 - Existing filters can be used if no new filters defined
 - Both new and existing filters defined in one contract not supported

The key trace components for debugging the catalog filter solution is shown here. Migration from old product set to new dynamic catalog filter is not supported since the underlying architecture is very different. The dynamic catalog filter runtime design will, however, keep the compatibility of existing product set functionality. It will use the new catalog filters if it is defined in the contract. If it is not there, it will use the old catalog filter. The catalog filter runtime does not support both new and old catalog filters defined in one contract.

Limitations

- Catalog Filter and Pricing Tool
 - Only available in WebSphere Commerce Enterprise Edition
 - Does not support supply chain or demand chain business models
- Catalog filter creation
 - Differing languages in Catalog entry properties and attribute dictionary attributes are not supported
 - Attributes that require assigned values are not supported in the filter conditions
 - Attributes that are not stored in the attribute dictionary are not supported
 - Workspaces and content versioning not supported
- Additional notes
 - If you assign new catalog filters to a contract it overrides any Accelerator catalog filter

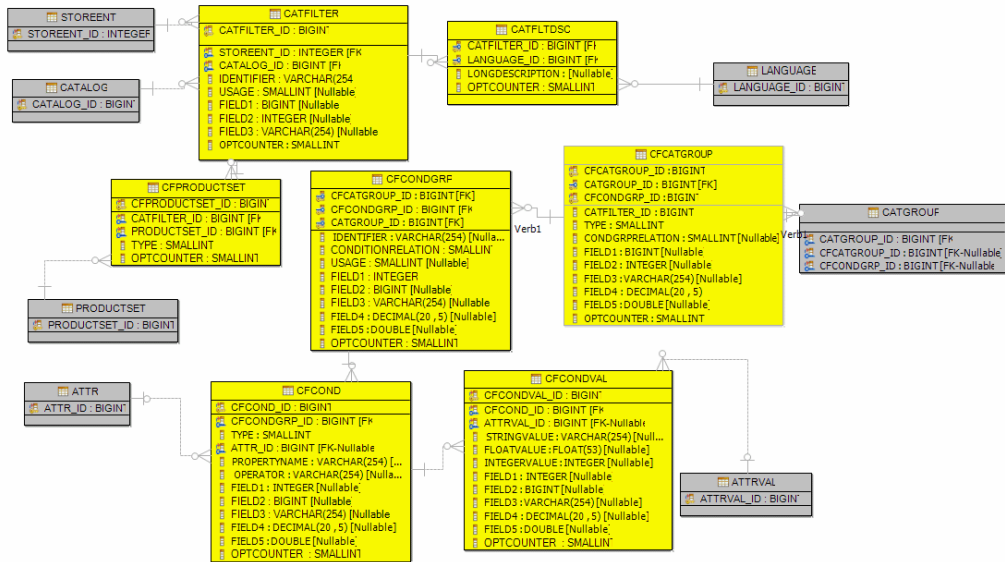
This slide summarizes the limitations for the solution. The Catalog Filter and Pricing tool is only available in WebSphere Commerce Enterprise Edition. This tool is not supported in WebSphere Commerce - Express, or WebSphere Commerce Professional editions. You cannot use the Catalog Filter and Pricing tool with the supply chain or demand chain business models. The Management Center implementation of catalog filtering is not supported in the IBM Sales Center for WebSphere Commerce. If the site uses Sales Center, do not create catalog filters by using the Catalog Filter and Pricing tool.

Differing languages in Catalog entry properties and attribute dictionary attributes are not supported. Attributes that require assigned values are not supported in the filter conditions. Attributes that are not stored in the attribute dictionary are not supported because they are not shared by multiple catalog entries. Catalog filtering does not support workspaces, or content versioning. There is no migration tool to migrate existing catalog filters in WebSphere Commerce Accelerator to the Catalog Filter and Pricing tool. If you assign new catalog filters to a contract it overrides any Accelerator catalog filter.

References

The next slides are provided for reference.

Database schema changes



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Catalog filter overview

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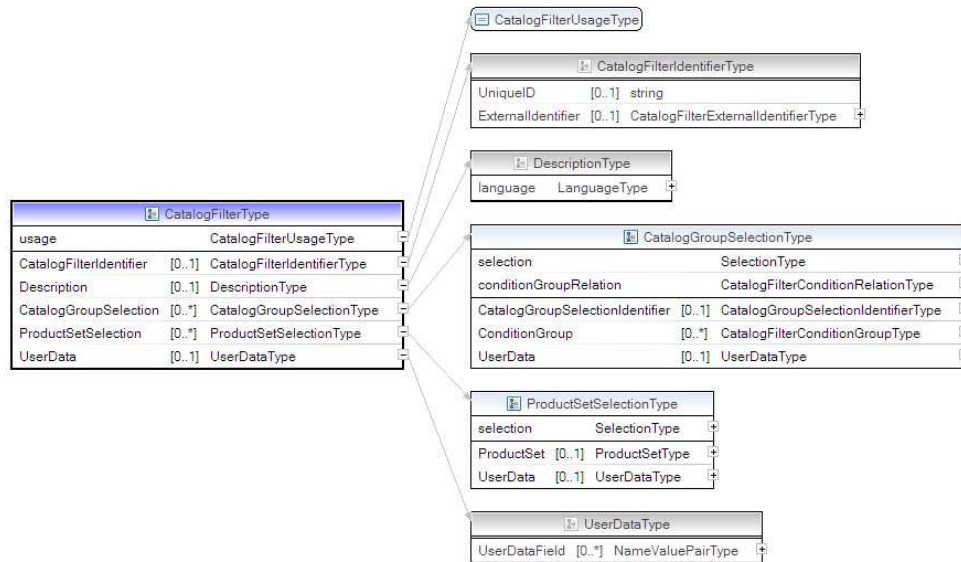
This slide is for additional reference. Here are the new tables introduced in FEP2 for the Catalog Filter solution.

New tables

- CATFILTER: Stores catalog filters
- CFCONDVAL: Stores association between a condition and an attribute value
- CFCONDGRP: Stores condition groups for a catalog filter
- CFCOND: Stores conditions in a certain condition group
- CFPRODUCTSET: Stores association between a catalog filter and a product set
- CATFLTDSC: Stores language specific description of a certain catalog filter
- CFCATGROUP: Stores selected catalog group in catalog tree

Here are all the new tables introduced in feature pack 2 for the catalog filter solution.

Logical Schema Changes – Catalog Filter Noun



This slide provides all the logical schema changes for the catalog filter solution in feature pack 2.

Reference links

- Catalog Filter and Pricing Tool (Top level)
 - <http://publib.boulder.ibm.com/infocenter/wchelp/v7r0m0/index.jsp?topic=/com.ibm.commerce.management-center.doc/concepts/cpipricingtools.htm>
- Catalog Filter sample scenarios
 - <http://publib.boulder.ibm.com/infocenter/wchelp/v7r0m0/index.jsp?topic=/com.ibm.commerce.management-center.doc/refs/rpncreatecatfiltersscenario.htm>
- Working with catalog filters (Top level)
 - <http://publib.boulder.ibm.com/infocenter/wchelp/v7r0m0/index.jsp?topic=/com.ibm.commerce.management-center.doc/tasks/tpncatalogfilters.htm>
- Catalog filter uploads
 - <http://publib.boulder.ibm.com/infocenter/wchelp/v7r0m0/index.jsp?topic=/com.ibm.commerce.management-center.doc/concepts/cpnsvcatfilterupload.htm>

Here are additional reference links found in the information center.



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[mailto:iea@us.ibm.com?subject=Feedback about CatalogFilterOverview.ppt](mailto:iea@us.ibm.com?subject=Feedback%20about%20CatalogFilterOverview.ppt)

This module is also available in PDF format at: [./CatalogFilterOverview.pdf](http://CatalogFilterOverview.pdf)

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