1. DELTA Open Source Rule Editor

This document is an extract from the User Manual for the operational DELTA system, describing the Rule Summary and Rule Editor user interfaces. Because of this, some of the examples will be different from the Sample example provided with the Open Source version. However, the underlying functionality is the same. Hopefully, providing a real-world example will better illustrate the underlying capabilities, and stimulate creative uses of these DELTA components.

1.1 Business Rules

Business rules specified by the user influence the supply source selection. Business rules may be entered, searched for, sorted, and edited.

1.1.1 Searching for Rules

Searching is done from the Rule Summary page. Figure 3.18 shows a sample Rule Summary page.

The user can click on any information on the Rule Summary display highlighted in blue:

- Clicking on any of the rule names will take the user to the Rule Detail display for that particular rule.
- Clicking on any number in the LTA-Specific column will take the user to the Contract Detail display for that particular contract number.
- Clicking on any number in the NSN-Specific column will take the user to the Item Summary display for that particular item number.

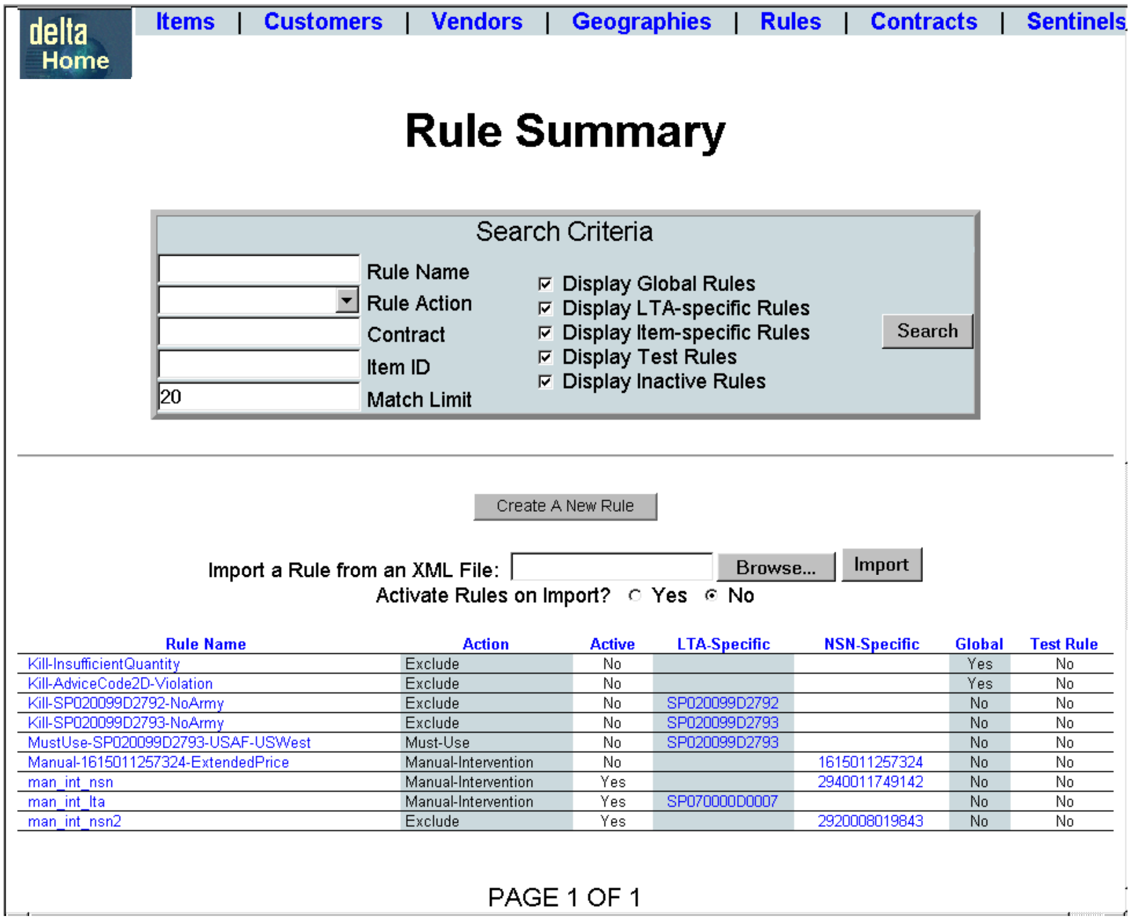


Figure 3.18 Rule Summary

Table 3-7 summarizes the search criteria that are available to search for business rules and provides a description of what results can be expected when using each criterion.

Table 3-7. Business Rules Search Criteria

Search Criteria	What to Type	Result
Rule Name	Any part of or all of an existing rule name	All rules with a rule name matching the criteria typed in
Rule Action	Choose from a pull down menu	All rules with the rule action chosen
Contract	Any part of or all of an existing contract number	All rules with a contract matching the criteria typed in
Item ID	Any part of or all of an existing item number	All rules with an item ID matching the criteria typed in
Match Limit	Any positive number	All rules satisfying the other search criteria up to the match limit number
Display Global Rules	To turn on, check the box	Displays global rules in addition to the nonglobal ones
Display LTA-Specific	To turn on, check the box	Displays LTA-specific rules in addition to the ones which are not
Display Item-Specific	To turn on, check the box	Displays Item-Specific rules in addition to the ones which are not

Table 3-7. Business Rules Search Criteria

Search Criteria	What to Type	Result
Display Test Rules	To turn on, check the box	Displays test rules in addition to the ones which are not
Display Inactive Rules	To turn on, check the box	Displays inactive rules in addition to the ones which are active

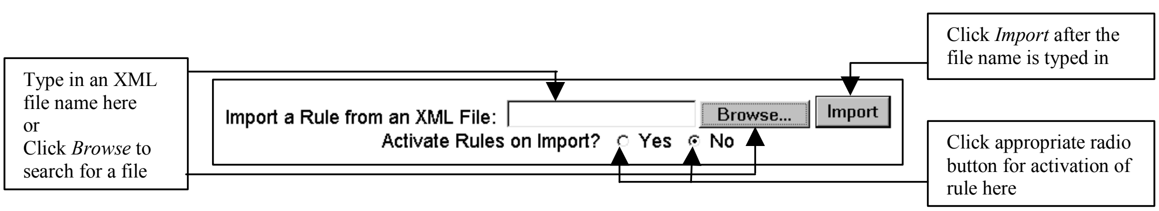
NOTE: Concerning the check boxes found in the Search Criteria box: If the boxes are not checked, those particular types of rules will be ignored when tabulating results. For example, if the box "Display Inactive Rules" is checked, all active and inactive rules will be part of the search result. If the box were not checked, only active rules would be part of the search result.

1.1.2 Importing and Exporting Rules

1.1.2.1 Importing

Rules may be imported from an XML file. To import a rule, or set of rules:

1. Choose Business Rules from the DELTA homepage or click the Rules navigation link at the top of the current page.
2. Type a XML file name in the space provided or choose the Browse option to choose from available XML files.
3. Choose whether or not the rules should be activated on import by clicking.
4. Click on the *Import* button.



1.1.2.2 Exporting

All rules may be exported and saved as XML files. To export a rule:

1. Choose Business Rules from the DELTA homepage or click the Rules navigation link at the top of the current page.
2. Search for specific rules or click *Search* to display all rules.
3. Click on a specific rule of interest.
4. From the Rule Detail Display, click on the *Export as XML* button.
5. Choose Save this file to disk from the dialog box.
6. Type in a file name and tell the system where the file should be saved.
7. Click *Save* to save the file or click *Cancel* to exit back to the Rule Editor.

1.1.3 Creating, Editing, and Deleting Rules

New rules can be created at any time. Note that while a new rule can be created at any time it will only affect sourcing decisions when it is activated. Existing rules can be edited and deleted.

1.1.3.1 Creating Rules

To add a new rule to the system:

1. Choose Business Rules from the DELTA homepage or click the Rules navigation link at the top of the current page.
2. Click on the *Create a New Rule* button.
3. Create a new Rule Name.
4. Select an Action.
5. Make Rule Conditions.

Additional rule conditions can be made by clicking on the *Add A Condition* button. This can be done as many times as necessary.

6. Add an exception by clicking on the *Add An Exception* button.

Additional exceptions can be entered by clicking again on *the Add An Exception* button. This can be done as many times as necessary. For specific information see Section 3.5.4.1.3.

7. When all the conditions and exceptions have been entered, click on the *Save As New Rule* button to save the rule to the database.

Please see Figure 3.19 to see what the rule editor looks like.

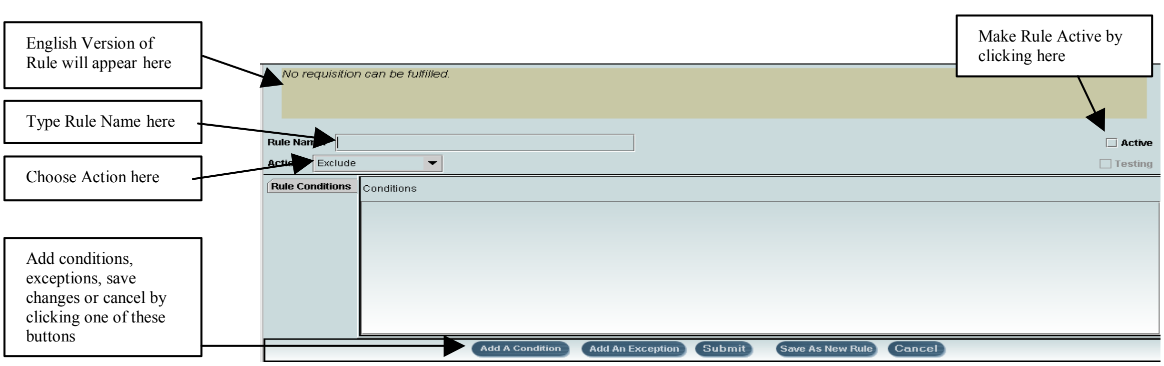


Figure 3.19 Rule Editor

Please see the sections and tables below for a more detailed explanation of actions, conditions and exceptions. The procedure for creating a rule can be canceled at any time by clicking the *Cancel* button. Conditions and Exceptions can be deleted at any time by clicking the appropriate *Delete* button. The rule is made active from the Rule Editor by checking the Active box in the upper right corner of the screen.

1.1.3.1.1 Select an Action

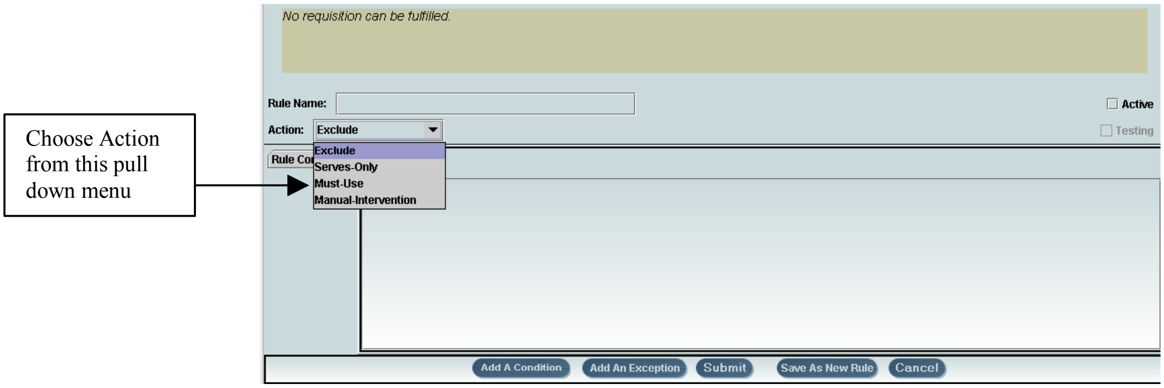


Figure 3.20

The action dictated by the user determines how the rule is used. Table 3-8 summarizes the possible actions and how the rule will operate if that action is chosen.

Table 3-8

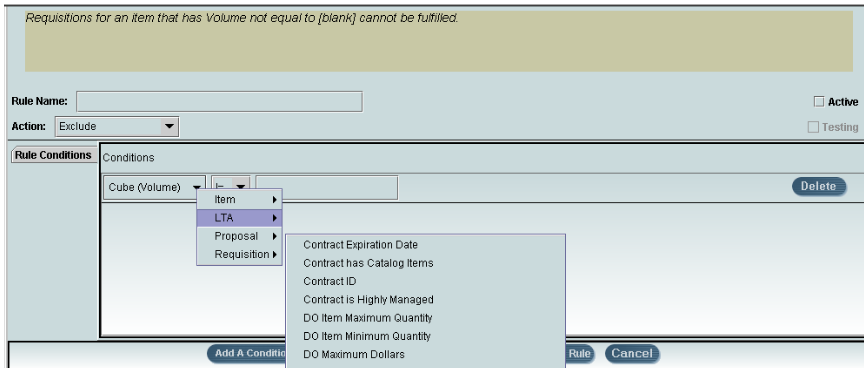
Action	Resulting Rule
Exclude	The requisition cannot be fulfilled if the stated conditions are met
Serves-Only	The requisition can only be fulfilled if the stated conditions are met
Must-Use	The requisition must be fulfilled if the stated conditions are met
Manual-Intervention	The requisition requires manual intervention if the stated conditions are met

If the stated conditions are met, any user-imposed exceptions are considered.

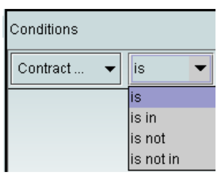
1.1.3.1.2 Conditions

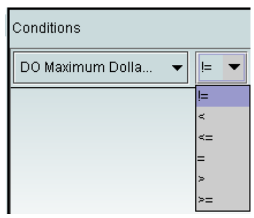
Conditions allow the user to control under what circumstances the rule is applied. Each condition is in three parts.

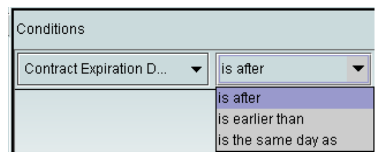
1. Determine what attribute the condition will be based on. A pull down menu offers a choice of Item, LTA, Proposal, or Requisition. Within each of these is a submenu containing more specific selections. See below.



2. Choose an operator from the pull down menu. The operator will depend on what attribute is selected. The DELTA system will only offer operators that are appropriate for the attribute. Some examples are below.







3. The third part of creating a condition depends on what attribute and operator has been chosen. The possible options are summarized below.

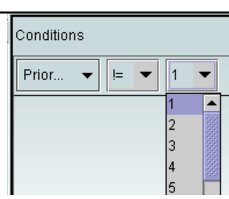
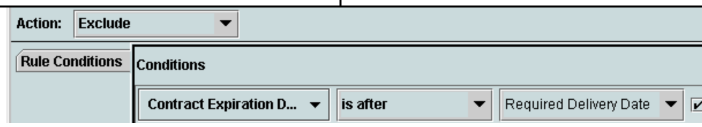
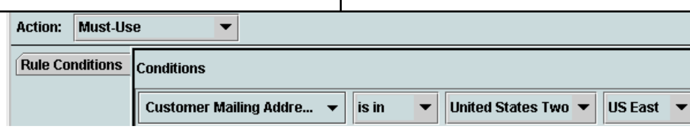
If this appears	Looks like	Do this
A blank box		Type in a word or quantity
A blank box with a check box next to it		Either type in a word or quantity or check the small box to choose from a pull down menu
A blank box with a browse button next to it		Either type in a word or quantity or click the browse button to browse from available options
A pull down menu		Choose a selection from those available

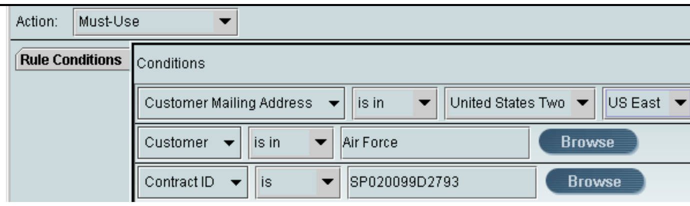
Table 3-9 gives some examples of conditions and how they would look in plain English.

Table 3-9.

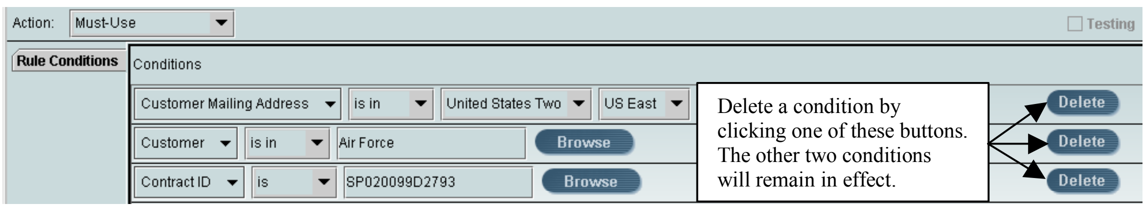
Rule Type	DELTA Condition Construction	English Translation
Exclude	Contract Expiration Date is after Required Delivery Date	A contract that has Expiration Date after the Requisition's Required Delivery Date cannot fulfill any requisitions.
Looks like:		
Serves-Only	Customer is in Navy	A requisition can only be filled only when the requesting customer belongs to "Navy".
Looks like:		
Must-Use	Customer Mailing Address is in United States Two US East	A requisition must be fulfilled when the requesting customer's Mailing Address is in Region "US East" of Geography "United States Two".
Looks like:		
Manual - Intervention	Customer Extended Price > 10000.0	A requisition requires manual intervention when the Proposed Customer Extended Price is greater than 10000.00.
Looks like:		

As many conditions as needed may be added. An example of the Must-Use rule above with multiple conditions is as follows:

Condition 1	Customer Mailing Address is in United States Two US East	A requisition must be fulfilled when the requesting customer's Mailing Address is in Region "US East" of Geography "United States Two".
Condition 2	Customer is in Air Force	A requisition must be fulfilled when the Requesting Customer belongs to "Air Force" and when the requesting customer's Mailing Address is in Region "US East" of Geography "United States Two".
Condition 3	Contract ID is SP020099D2793	Contract "SP020099D2793" must be used to fulfill requisitions when the Requesting Customer belongs to "Air Force" and when the requesting customer's Mailing Address is in Region "US East" of Geography "United States Two".

Looks like:	

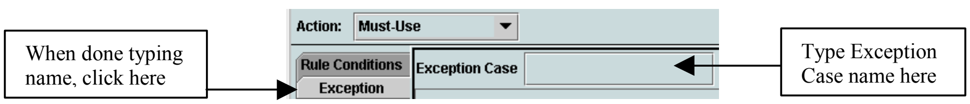
Conditions may be deleted at anytime by clicking the *Delete* button next to the condition that is to be eliminated. See below.



1.1.3.1.3 Exceptions

Exceptions allow the user to enter some circumstances in which the rule would not apply. To create an exception:

1. Click on the *Add an Exception* button.
2. Next to the box labeled **Exception Case**, type a name for the exception.



3. Click on the Exception tab to the left under the Rule Conditions tab. When this is done, the exception tab should now be labeled whatever name was typed in step 2.

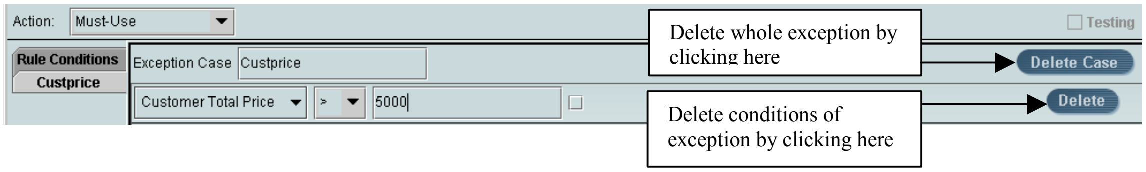
4. Add conditions, as many as necessary, to the exception. Please see Section 3.5.4.1.2 above for instructions on adding conditions. See example below.
5. More exceptions may be added, if needed.

An example of the same Must-Use rule above with an exception would be:

English Rule	Exception	New English Translation
A requisition must be fulfilled when the requesting customer's Mailing Address is in Region "US East" of Geography "United States Two".	Exception Case: Custprice Customer Total Price > 5000.00	A requisition must be fulfilled when the requesting customer's Mailing Address is in Region "US East" of Geography "United States Two" EXCEPT IF the Proposed Total Customer Price is greater than $5000.00.

Looks like:	

Exceptions, like conditions may be deleted at any time. See below.



1.1.3.2 Editing Rules

All rules can be edited with the Rule Editor. To edit a rule:

1. Choose Business Rules from the DELTA homepage or click the Rules navigation link at the top of the current page.
2. Search for specific rules or click *Search* to display all rules.
3. Click on a specific rule of interest.
4. From the Rule Detail display, click on the *Edit* button.
5. Make necessary edits to rule including changing the action, removing and adding conditions, and removing and adding exceptions (see section 3.1.5.1 above for instructions).
6. When all the edits have been entered, click on the *Submit* button to save the changes to the database.

1.1.3.3 Deleting Rules

Rules can be deleted from the Rule Detail and the Rule Editor displays. To delete a rule from the database:

1. Choose Business Rules from the DELTA homepage or click the Rules navigation link at the top of the current page.
2. Search for specific rules or click *Search* to display all rules.
3. Click on a specific rule of interest.
4. From the Rule Detail display, click on the *Delete* button.
5. warning dialog box will appear asking for the user to confirm the delete.

1.1.4 Activating and Deactivating Rules

Rules can be activated and deactivated through the Rule Editor. To activate or deactivate a rule:

1. Choose Business Rules from the DELTA homepage or click the Rules navigation link at the top of the current page.
2. Sort the rules or click all the display options to display all rules.

3. Click on a specific rule of interest.
4. From the Rule Detail display, click on the *Edit* button.
5. From the Rule Editor display, either check or uncheck the Active box depending on whether or not the rule should be active.