



BEARocket® Mission Control™

Creating Trigger Rules

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Introduction to Creating Trigger Rules

An alert is a message to the user that an event has occurred during an application run. These alerts might be triggered when the connection to the Oracle JRockit JVM was lost or when an attribute reaches a certain, user-determined threshold; for example, when used memory reaches 90%. You can set trigger constraints to limit when a rule is activated; for example, you can constrain Oracle JRockit Mission Control from sending alerts at night or on certain dates.

This section is divided into the following topics:

- [Looking at the Triggers Tab](#)
- [Working with the Triggers Tab](#)

Introduction to Creating Trigger Rules

Looking at the Triggers Tab

An alert is a message to the user that an event has occurred during an application run. These alerts might be triggered when the connection to Oracle JRockit JVM was lost or when an attribute reaches a certain, user-determined threshold; for example, when used memory reaches 90%. You can set trigger constraints to limit when a rule is activated; for example, you can constrain the JRockit Mission Control Client from sending alerts at night or on certain dates.

The different actions are triggered by rules that are set on the **Triggers** tab. This tab lists all rules you have created and allows you to activate or deactivate any trigger for the connection you are working on. When you first run the Management Console, the list of triggers is empty. You can then create triggers by using the **Add** feature. When you exit the Management Console, the rules that you have created are saved in the console settings file.

You set the rules for triggers by combining an attribute subscription with a trigger, with optional constraints. The action is activated as soon as the rule condition is met.

This section serves as an introduction to the **Triggers** tab. It includes these topics:

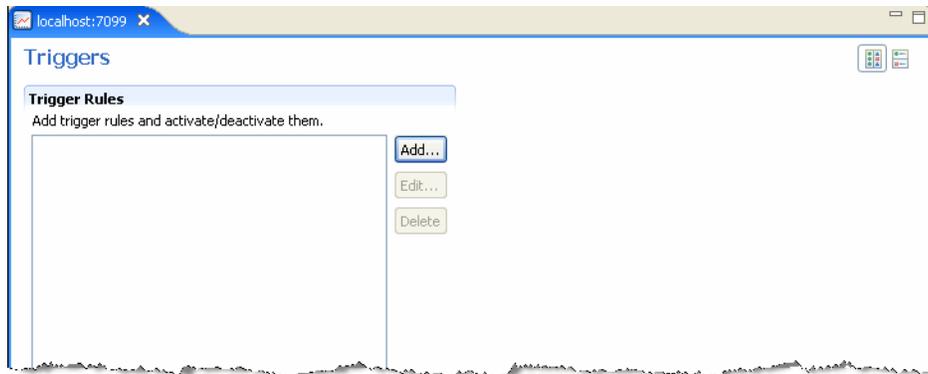
- [Getting Familiar with the Triggers Tab](#)
- [Trigger Tab Contents when Rule is Added](#)

Getting Familiar with the Triggers Tab

When you first open the **Triggers** tab (Figure 2-1), it is blank except for the **Trigger Rules** panel and **Add**, **Edit**, and **Delete** buttons. In the top right corner are the horizontal and vertical alignment controls.

Looking at the Triggers Tab

Figure 2-1 Triggers Tab

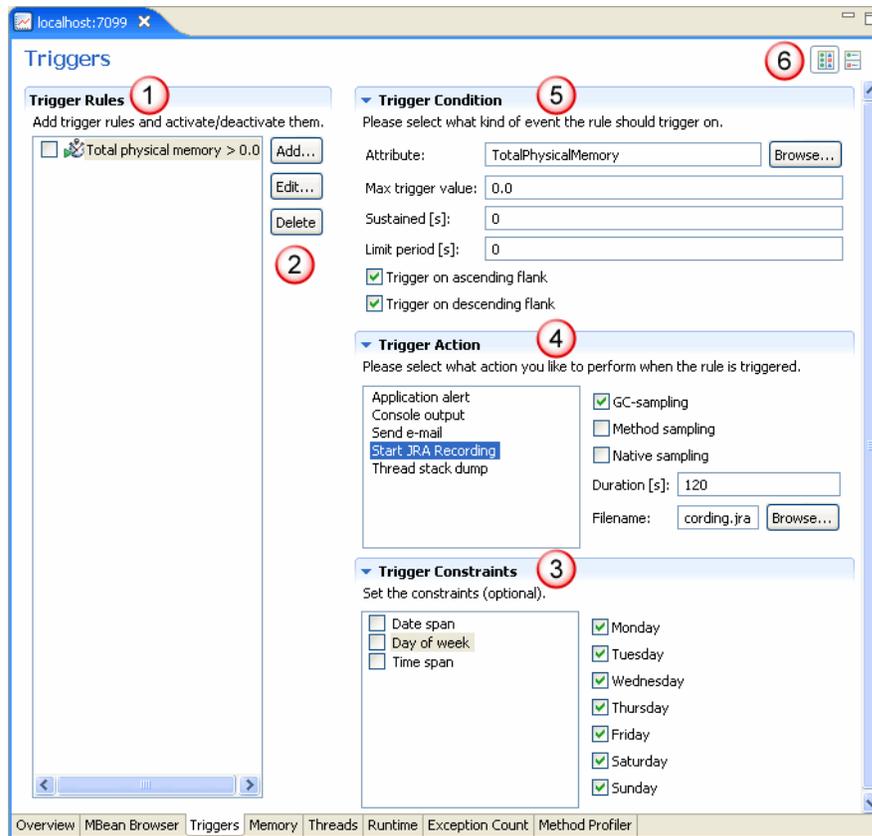


For information on what's on the **Triggers** tab when a rule has been added, see [Trigger Tab Contents when Rule is Added](#).

Trigger Tab Contents when Rule is Added

Once you add a rule, three more panels will appear on the panel ([Figure 2-2](#)). Those panels aid you in changing your rule.

Figure 2-2 Panel After Rule is Added



The **Triggers** tab is divided into the following sections:

1. **Trigger Rules**—is a list of all rules that you have added.
2. **Add, Edit, and Delete** buttons—lets you add, delete, or edit a rule.
3. **Trigger Constraints**—sets the constraints of the rule, for example, it limits the action to specific days of the week or specific times of day.
4. **Trigger Action**—selects the action for the JRockit Mission Control Client to perform when the rule triggers an event.
5. **Trigger Condition**—lets you browse for the attribute on which the rule should trigger.

Looking at the Triggers Tab

6. Horizontal and vertical alignment buttons—lets you arrange the **Triggers** tab horizontally or vertically.

See [Working with the Triggers Tab](#) for information on how to add, edit, or delete a rule.

Working with the Triggers Tab

The primary purpose of the **Triggers** tab is to allow you to create the rules to govern your application and then activate and deactivate those rules as you deem necessary. You also use this tab to edit and delete trigger rules. This section contains the procedures necessary to successfully create, edit and delete rules and to activate and deactivate them. It includes the following topics:

- [Adding a New Trigger Rule using the Add Wizard](#)
- [Activating and Deactivating a Rule](#)
- [Editing a Trigger Rule on the Triggers Tab](#)
- [Editing a Trigger Rule Using the Edit Wizard](#)
- [Deleting a Trigger Rule](#)

Adding a New Trigger Rule using the Add Wizard

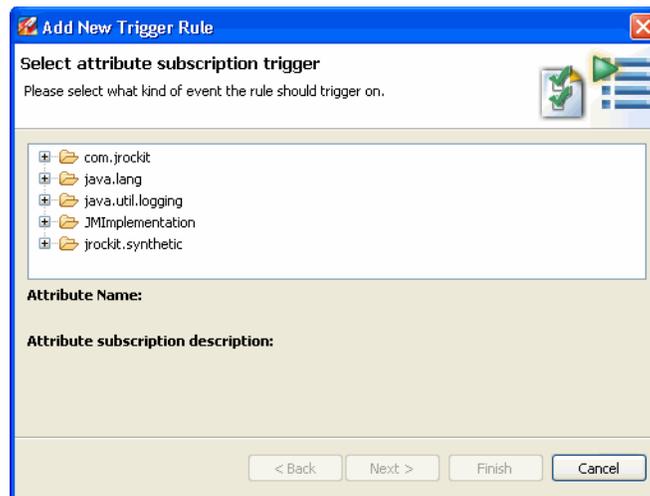
This section describes the steps you follow to add a new trigger rule. Once a rule is added, it can be activated or deactivated for the running application, as described in [Activating and Deactivating a Rule](#). To create a trigger rule, you must at least complete [step 1](#) through [step 3](#) in the following procedure.

To add a new trigger rule by using the add wizard

1. Click on the **Triggers** tab.
2. Click **Add**.

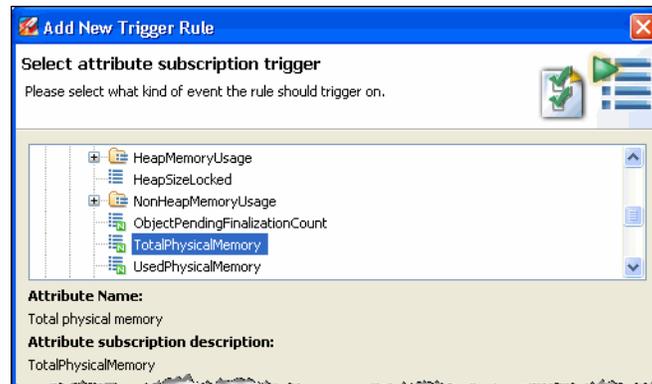
The Add New Trigger Rule—Select attribute selection trigger dialog box appears (Figure 3-1).

Figure 3-1 Add New Trigger Rule—Select Attribute Selection Trigger Dialog Box



3. Drill down to locate the attribute on which you want to trigger, as shown in the example in Figure 3-2.

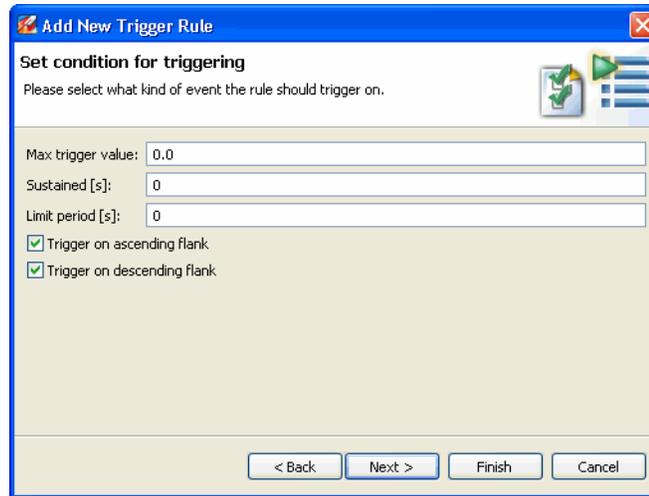
Figure 3-2 Drilling Down to Locate an Attribute



4. Click **Next**.

The Add New Trigger Rule—Set condition for triggering dialog box appears (Figure 3-3).

Figure 3-3 Add New Trigger Rule—Set Condition for Triggering Dialog Box



In this dialog box, you set the properties that define when the rule will be triggered; for example, the threshold at which the rule is invoked and for how long the triggering condition should be sustained before invoking the trigger action.

5. Fill in the fields as described on [Table 3-1](#).

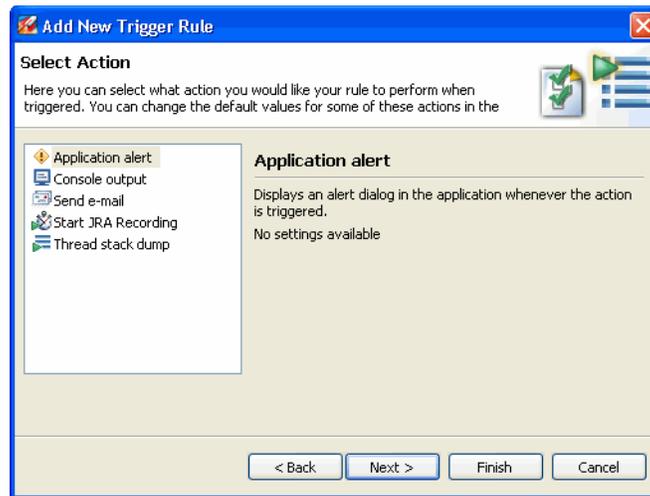
Table 3-1 Set Condition for Triggering Field Descriptions

In this field	Enter
Max trigger value	The maximum value at which point the rule should be triggered
Sustained (s)	The duration, in seconds (s), that the triggering condition must be met for the action to trigger.
Limit period (s)	The minimum time, in seconds (s), between consecutive triggers.
Trigger on descending flank (checkbox)	Whether you want the action to be triggered when the attribute reaches the trigger value from a higher value; for example, if the trigger value is 80 and attribute value descends from 100 to 80, the notification will be triggered.
Trigger on ascending flank (checkbox)	Whether you want the action to be triggered when the attribute reaches the trigger value from a lower value; for example, if the trigger value is 80 and attribute value ascends from 60 to 80, the notification will be triggered.

6. Click **Next**.

The Add New Trigger Rule—Select Action dialog box appears (Figure 3-4).

Figure 3-4 Add New Trigger Rule—Select Action Dialog Box



Use this dialog box to identify the type of action you want to occur when a notification is sent. You have a choice of five options:

- Send an alert to the application
- Send a warning to standard output
- Send an e-mail to a specific recipient
- Start a JRA recording
- Create a thread stackdump.

7. Select the action you want performed. Depending on the action you select, you might have to enter additional data, as described on [Table 3-2](#).

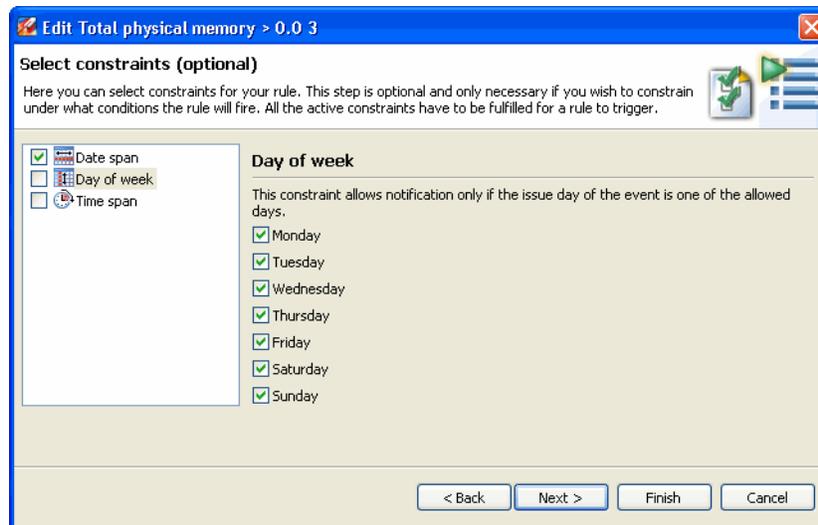
Table 3-2 Selecting a Notification Action

Select	To
Application alert	Print a notification in The Trigger Alerts Dialog Box . Please refer to Viewing Individual Alerts for an example of this kind of action.
Console output	Print a notification on the console (<code>system.out</code>).
Send e-mail	Send an e-mail to a specified user. If you select this option, you will need to enter the following data in the fields that appear: <ul style="list-style-type: none"> • To (the e-mail recipient). • CC (anyone—aside from the recipient—to whom you want to send the e-mail). • BCC (anyone—aside from the recipient—to whom you want to anonymously send the e-mail).
Start JRA recording	Create a JRA recording of the application run. If you select this option, you will need to enter the following data in the fields that appear: <ul style="list-style-type: none"> • The type of sampling you want; that is, what will be sampled (garbage collection, method, or native). • The duration of the JRA recording. • The name of the file to which the JRA should write the results of the JRA recording.
Thread stack dump	Create a thread stackdump and log it to a file or display it as an application alert. If you select this option, you will need to enter the following data in the fields that appear: <ul style="list-style-type: none"> • The output method (system alert or log to file). • If you select Log to file, the name of the file to which you want the dump written.

8. Click **Next**.

The Add New Trigger Rule—Select constraints dialog box appears ([Figure 3-5](#)).

Figure 3-5 Add New Trigger Rule—Select Constraints Dialog Box

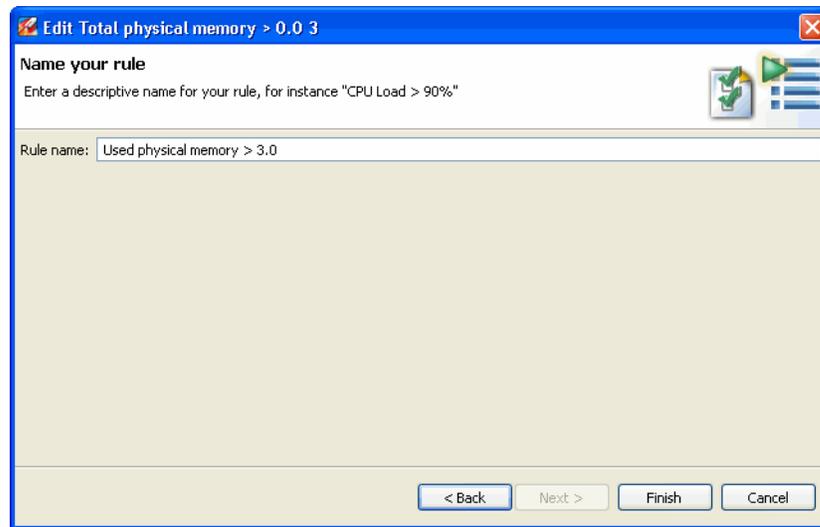


This is an optional step that allows you to limit when an action is triggered; for example, you might only want your action to trigger every other day of the week or during specific hours. If you don't want to set a constraint, skip [step 9](#) and go on to [step 10](#).

9. Select the constraints you want applied to the trigger rule.
 - **Date span** sets a range of dates.
 - **Day of week** sets which days of the week you want your action to trigger. If you select this option, you will need to also specify which days you want your action to trigger.
 - **Time span** sets the time period.
10. Click **Next**.

The Add New Trigger Rule—Name your rule dialog box appears ([Figure 3-6](#)).

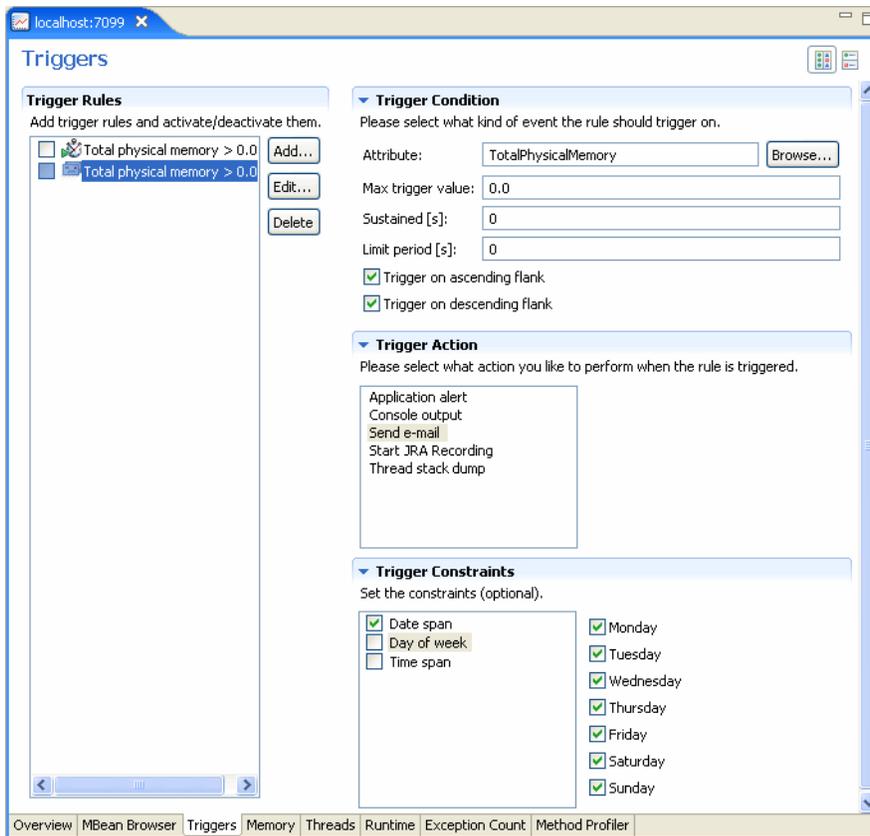
Figure 3-6 Name Your Rule Dialog Box



11. Enter a name for your new rule and click **Finish**.

The new rule appears on the Trigger Rules list ([Figure 3-7](#)).

Figure 3-7 New Trigger Rule Added



Before you can apply the rule, you will need to activate it, as described in [Activating and Deactivating a Rule](#).

Activating and Deactivating a Rule

Activating a trigger rule applies that rule to the running application. Conversely, deactivating a rule means that the rule won't apply to the running application, although it remains available for later use.

To activate or deactivate a trigger rule

- To activate a trigger rule, select its checkbox.

- To deactivate a trigger rule, deselect its checkbox.

For More Information

- To add a new trigger rule, see [Adding a New Trigger Rule using the Add Wizard](#).
- To edit a trigger rule, see [Editing a Trigger Rule Using the Edit Wizard](#).
- To delete a trigger rule, see [Deleting a Trigger Rule](#).

Editing a Trigger Rule on the Triggers Tab

You will note that when a rule appears for the first time, three new panels open on the **Triggers** tab. These panels contain the same information you entered for the rule when following the [Adding a New Trigger Rule using the Add Wizard](#). You can use these panels to edit an existing rule directly on the **Trigger** tab. These panels appear as soon as you select a trigger rule under the **Trigger Rules** panel.

To edit a trigger rule directly on the Triggers tab

1. Click on the trigger rule you want to edit.
2. In **Trigger Condition** ([Figure 3-8](#)), set the properties that define when the rule will be triggered; for example, the threshold at which the rule is invoked and for how long the triggering condition should be sustained before invoking the rule. [Table 3-1](#) describes the fields on this panel.

Figure 3-8 Trigger Condition Panel

Trigger Condition
Please select what kind of event the rule should trigger on.

Attribute:

Max trigger value:

Sustained [s]:

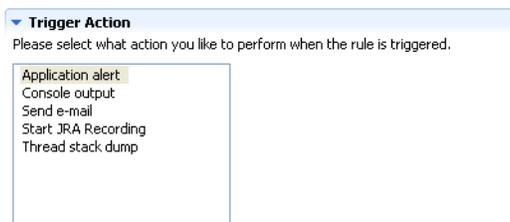
Limit period [s]:

Trigger on ascending flank
 Trigger on descending flank

3. In **Trigger Action** ([Figure 3-9](#)), set the type of action you want your rule to perform when your rule is triggered. You have a choice of these options:
 - Send an alert to the application
 - Send a warning is sent to standard output.

- Send an e-mail to a specific recipient
- Start a JRA recording
- Create a thread stackdump

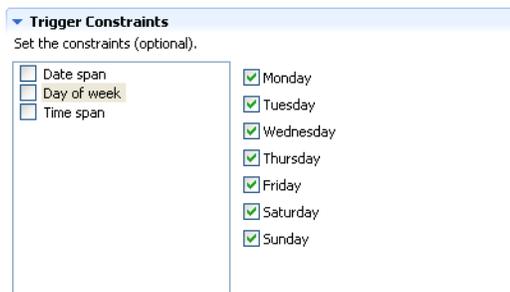
Figure 3-9 Trigger Action Panel



Depending on the action you select, you might have to enter additional data, as described on [Table 3-2](#).

4. In **Trigger Constraints** ([Figure 3-10](#)), set any constraints you want on the rule. This is an optional step that allows you to limit when a trigger action is activated; for example, you might want your trigger action to be activated only every other day of the week or during specific hours of the day.

Figure 3-10 Trigger Constraints Panel



You can select from these options:

- **Date span** sets a range of dates.
- **Day of week** sets which days of the week you want the trigger action to be activated. If you select this option, you will also need to specify which day(s) you want it to be activated.
- **Time span** sets the time period.

For More Information

- To activate or deactivate a trigger rule, see [Activating and Deactivating a Rule](#).
- To edit a trigger rule, see [Editing a Trigger Rule Using the Edit Wizard](#).
- To delete a trigger rule, see [Deleting a Trigger Rule](#).

Editing a Trigger Rule Using the Edit Wizard

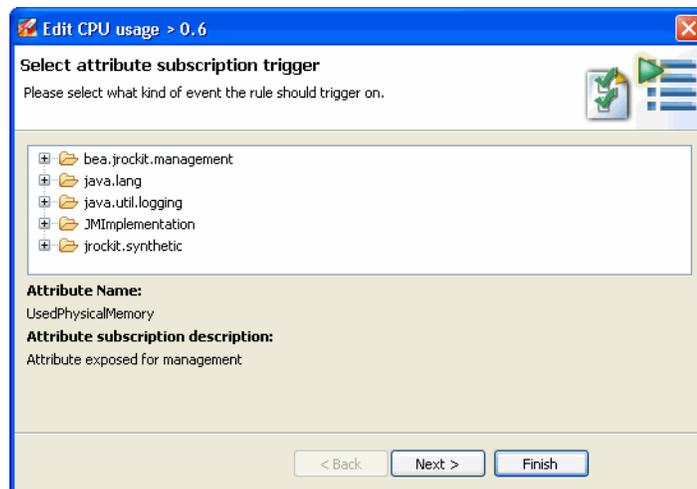
Editing a trigger rule with the **Edit** wizard allows you to change the properties of a rule without having to create a new one. The process of editing a rule using the Edit wizard, follows a similar sequence as the process described in [Adding a New Trigger Rule using the Add Wizard](#).

To edit a rule by using the trigger wizard

1. Highlight the rule you want to edit.
2. Click **Edit**.

The **Edit** *<rule name>* trigger wizard appears (where *<rule name>* is the name of the rule as it appears on **Trigger Rules** list ([Figure 3-11](#)).

Figure 3-11 Edit rule wizard



3. Click **Next** until you arrive at the dialog box that contains the property you want to edit.

4. After you've edited the necessary properties, click **Finish**.

All edits will appear on the affected property panels on the **Triggers** tab.

For More Information

- To add a new trigger rule, see [Adding a New Trigger Rule using the Add Wizard](#).
- To activate or deactivate a trigger rule, see [Activating and Deactivating a Rule](#).
- To delete a trigger rule, see [Deleting a Trigger Rule](#).

Deleting a Trigger Rule

Deleting a trigger rule removes it completely from the Trigger Rules list; it cannot be used for the running application without being recreated, as described in [Adding a New Trigger Rule using the Add Wizard](#).

To delete a trigger rule

- Highlight the rule on the **Trigger Rules** panel and click **Delete**.

The rule will disappear from the list.

Note: You need to be sure you want to delete a rule, since you do not get any confirmation before deleting.

For More Information

- To add a new trigger rule, see [Adding a New Trigger Rule using the Add Wizard](#).
- To activate or deactivate a trigger rule, see [Activating and Deactivating a Rule](#).
- To edit a trigger rule, see [Editing a Trigger Rule Using the Edit Wizard](#).