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WebSphere® Business Modeler V6.1

Business rules support

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This presentation will discuss the business rules support that is available with WebSphere Business Modeler V6.1.

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Business rules for WebSphere Process Server

- The business rules support that is part of WebSphere Business Modeler V6.1 compliments the business rules feature that is part of WebSphere Process Server V6.1
  - The target runtime framework is part of WebSphere Process Server V6.1
- A business process with a business rule task is created in WebSphere Business Modeler V6.1
  - Exported to WebSphere Integration Developer V6.1
    - Implementation details refined
  - Deployed to WebSphere Process Server V6.1
    - Rules managed by the business rules manager, Web application.

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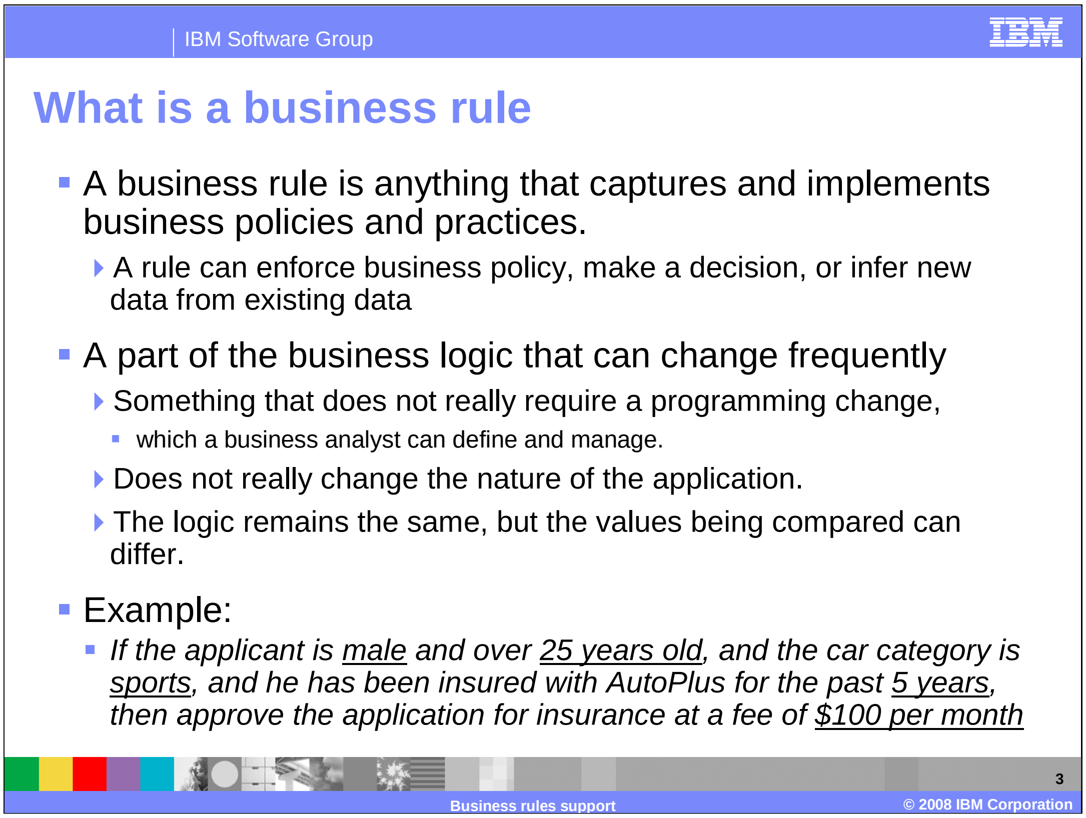
Business rules support

The business rule support that is available with WebSphere Business Modeler V6.1 is closely integrated with WebSphere Integration Developer V6.1 and WebSphere Process Server V6.1.

When a modeling project that contains business rules is imported into WebSphere Integration Developer V6.1, they are available to the integration developer completing the implementation. The business process is then deployed to the WebSphere Process Server runtime where there is a business rules framework that enables the business analyst to manage the rules.

Even if you’re not modeling to create an executable business process, the business rules can be used in your models, capturing valuable information about your business processes.



A business rule is anything that captures and implements business policies and practices.

A rule can enforce business policy, make a decision, or infer new data from existing data.

Business rules determine the outcome of a process based on the context.

Business rules are used in everyday business situations to make a decision given a specific set of circumstances.

This decision might require many rules to cover all the circumstances.

Business rules within a business process allow applications to respond quickly to changing business conditions.

What makes business rules appealing is that the rules can be changed without redeploying and creating a new version of the entire application. There is a business rules runtime framework that enables the business analyst to manage the business rules.

The example shown here is for an insurance corporation. In this case the general rule for determining what to charge will always be there, but the values which have been underlined might change. There is a different rule for a male under 25 that drives a minivan.

Templates and rules

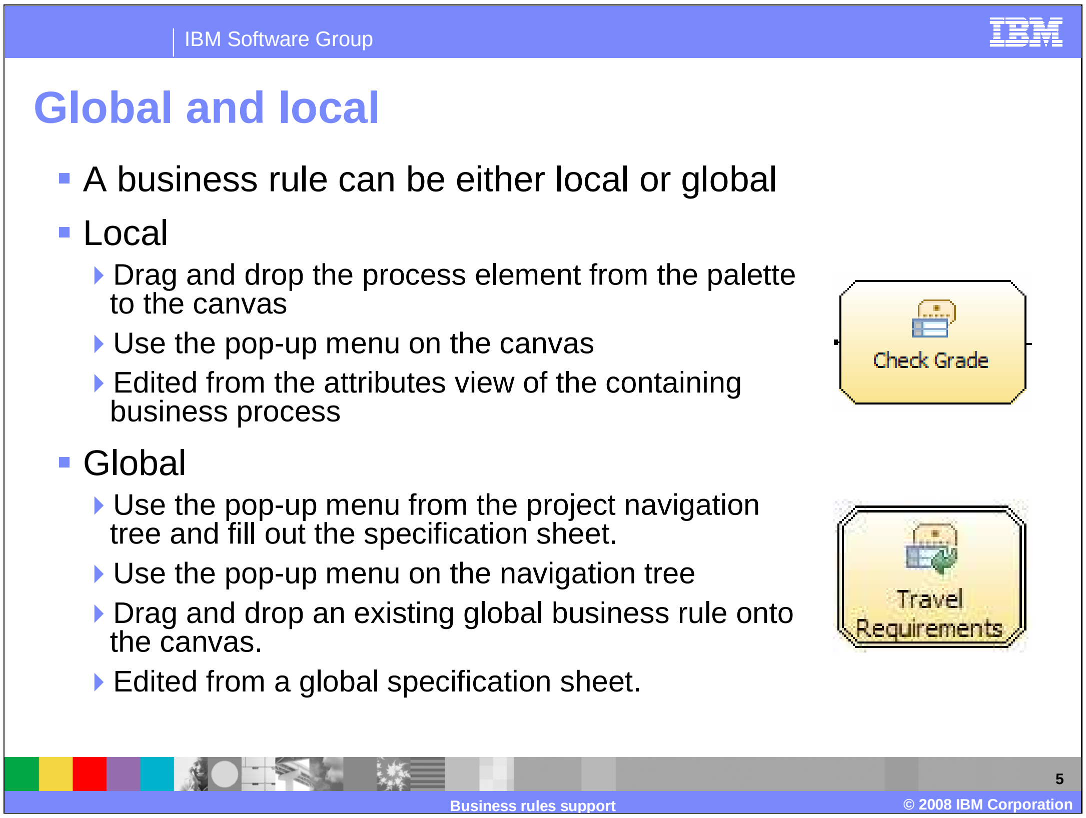
- Pay attention to the modeling mode
  - Capabilities are exposed depending on the modeling mode.
  - Business rules are targeted for the WebSphere Process Server V6.1 runtime environment.
- Business Rule
  - Simple *if-then* logic that uses data from the input to invoke an action.
- Business Rule Template
  - To reuse rule conditions and actions or allow their parameter values to be changed in an application at runtime, create a rule template.

From the example with the insurance company, it's easy to see that there is a potential to have many rules that are very similar. This situation is managed with the use of business rule templates. A template provides the common structure for a set of rules that are the same, except for the values used in the comparison.

Rule templates give you the flexibility to change the implementation details of a business rule in an application at runtime. For example, you can adjust the rates, age limit, or automobile category in the deployed insurance application.

Rule templates also simplify the creation of rule logic by allowing you to define a rule condition and action that you can reuse with different parameter values to create new if-then rules.

The business rule is the simple if-then logic. The data used by the rule comes from the input message at runtime and the action invoked can update the data that is part of the output message.



Both local and global business rules can be created.

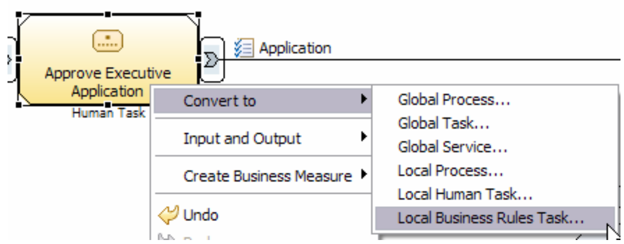
The local business rules are private to the business process in which they are created and the global business rules will have a global scope.

They are easily distinguished on the canvas by their icons.

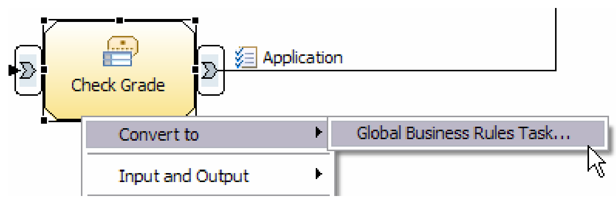
Both local and global business rules are specialized tasks, they are created the same way that a generic task is created in modeler. The property sheets are specialized and to edit a global business rule you use the specification sheet and to edit the local business rule, you use a tab in the attributes view for the business process.

Conversions

- Business rules can also be created by converting…
  - a generic task to a business rule



- A local business rule can be converted…
  - to a global business rule.



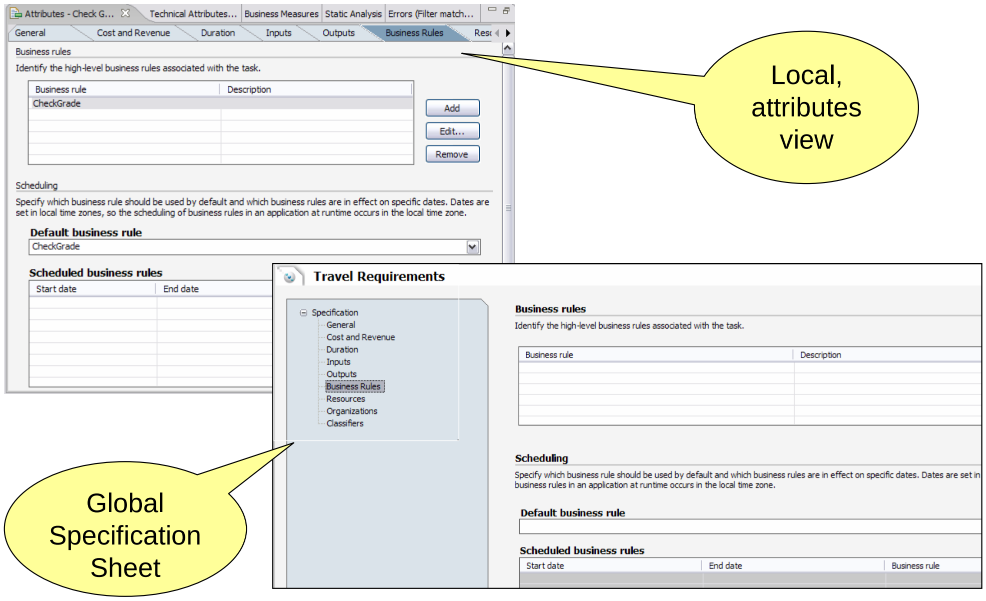
There are some nice conversion utilities available with WebSphere Business Modeler V6.1.

Just bring up the pop-up menu for the task you want to convert by selecting it with right-mouse-click.

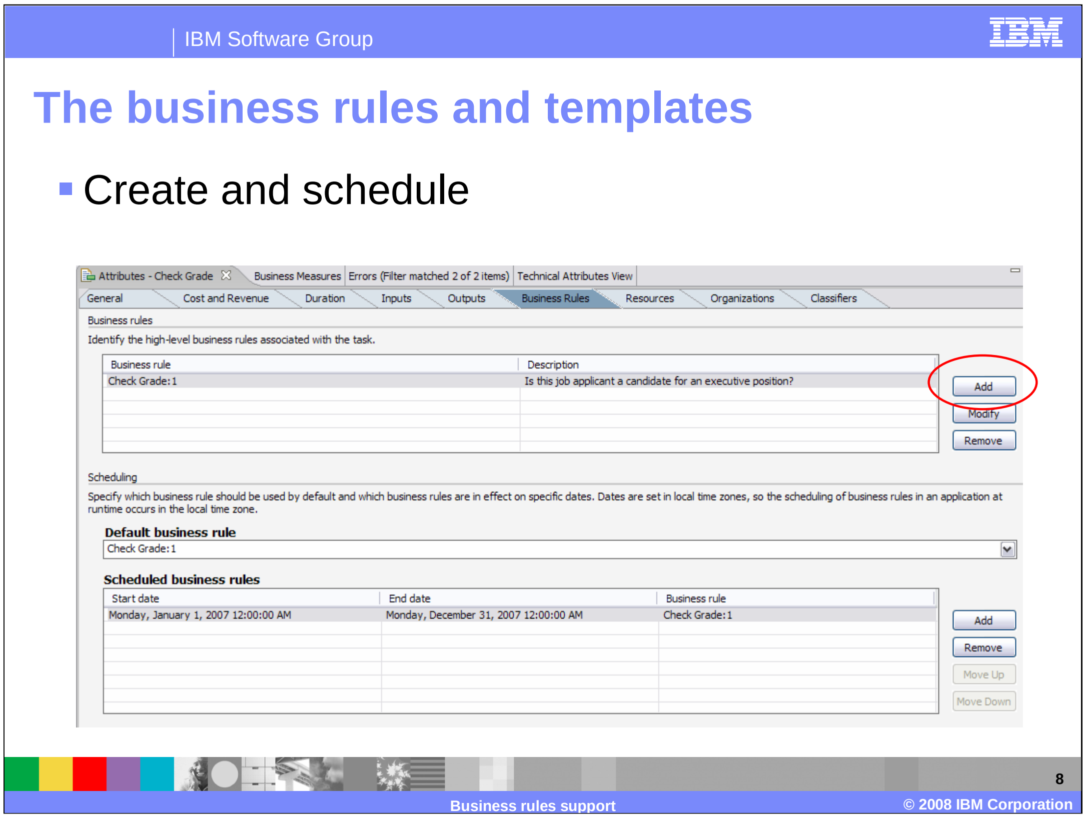
The conversion will convert a generic task to a local business rule task.

A local business rule can be further converted to a global rule.

Editing business rules



Shown here are the two ways to edit the business rules. Whether it is local or global, once you get to this point, the creation of the rules and templates is the same. They only differ in the way you get to the property sheets.



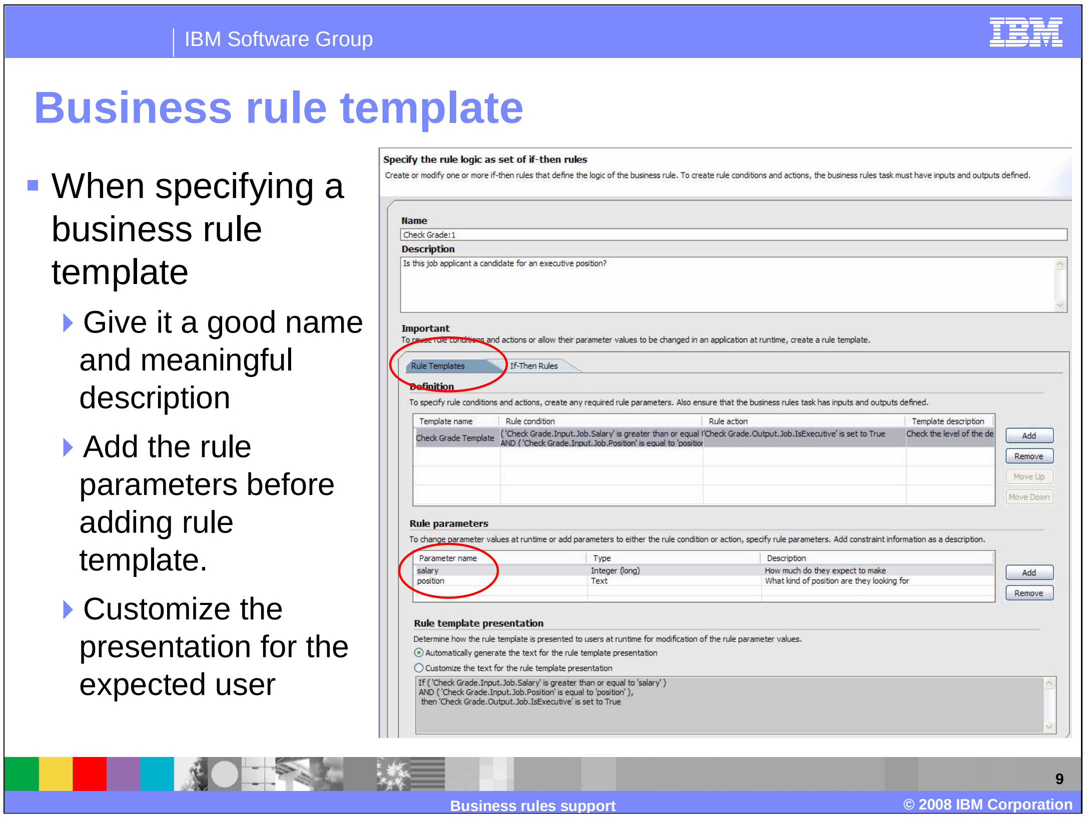
Notice that there are two sections.

The first section is for creating the rules and templates.

The second section is where you can schedule one or more rules to be active during a specified time period.

Since there might be a time period when none of the scheduled rules are in effect, you can also specify a default rule that is in effect when no rules are scheduled.

To create a new business rule or business rule template, select the add button in the top section.



Generally when starting out you'll want to create a business rule template first.

Select the rule templates tab.

When working with business rules and templates it is important to remember that there are developers further along in the process that will need to complete, test, deploy and maintain the business rules. For this reason it is always a good practice to give the rule a good name and to describe the expected behavior in the description.

Because the rules use the rule parameters, it is more efficient to create the rule parameters before creating the template. If you create the rule parameters first, they are available as a selectable property when creating the template.

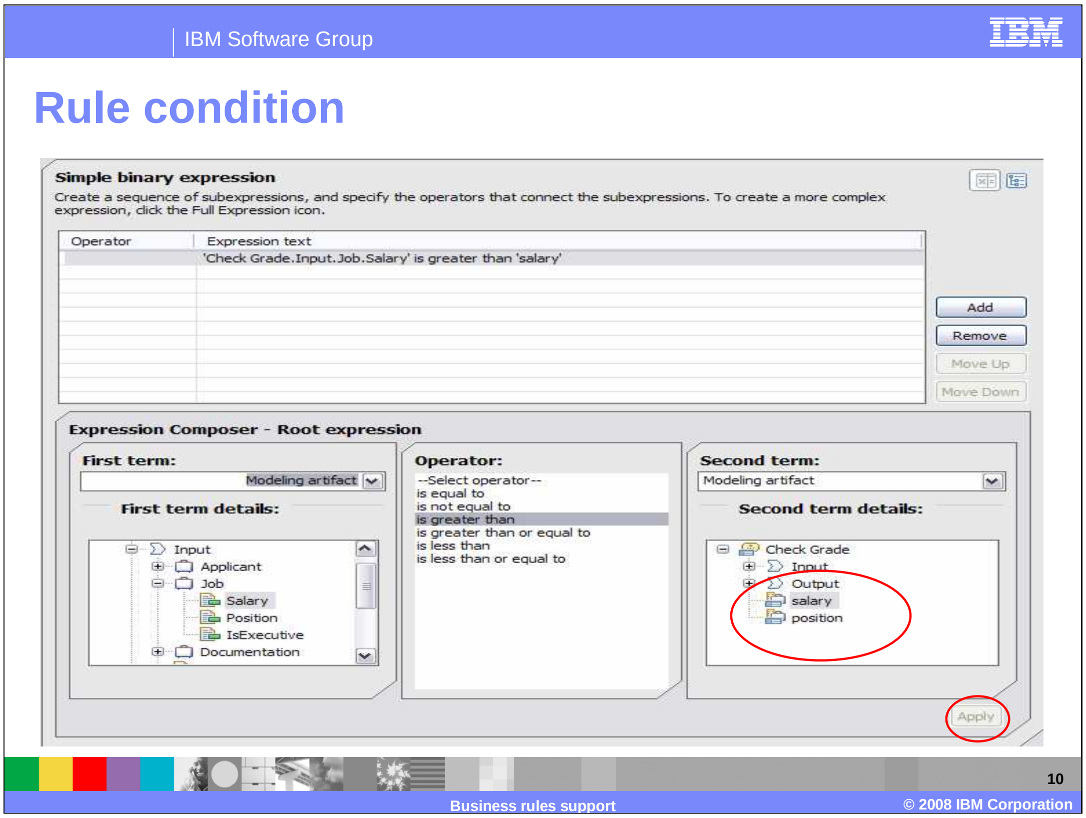
Pressing add will add an item to table but then you will still need to edit the cells in the tables. The table cells are directly editable. To edit a cell, select it with a single right mouse click. You'll be presented with a drown box or a button to invoke the expression builder.

After you have created the rule parameters, add the rule.

Besides the name and the description, there are two key parts to the rule template, the rule condition and the rule action.

Customizing the presentation is the last step in creating the business rule template.

We'll discuss each of these in the next few slides.



Select the cell for the rule condition and pressing the button will invoke the expression builder. This is the standard expression builder found in WebSphere Business Modeler.

Shown here is a completed expression. When the editor is invoked for a new expression it starts out blank. You begin by pressing add and then you'll be able to make selections in the lower panes.

To make complex expressions with multiple clauses, you press add again and a new clause is added, using and as the default operator. You can change the operator by directly editing the cell in the table.

The expression constructed here will take the value of the salary which is part of the input message and compare it with a rule parameter called salary.

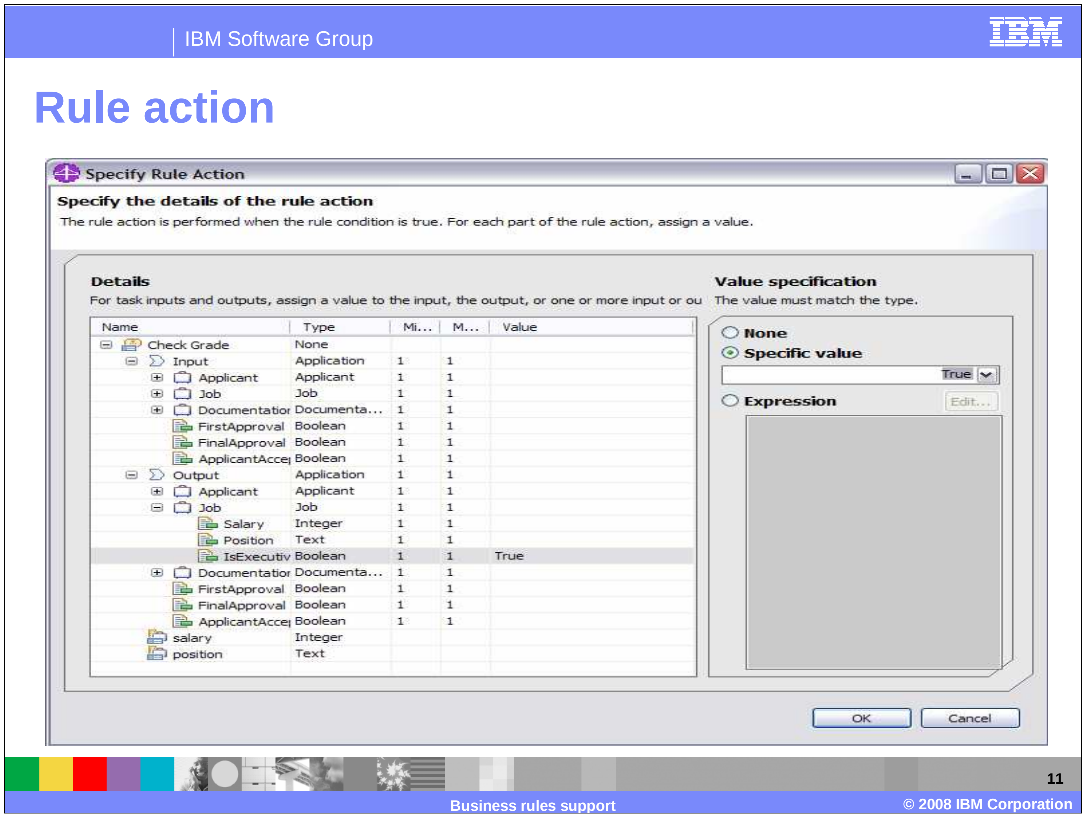
Building the clause for the expression is straightforward. Select what you want for the first term, in this case you want to use a property that is part of the input message so we've selected, modeling artifacts. Then navigate the tree to locate the Salary attribute of the input.

Select the operator in the center, in this case, if greater than.

For the second term you want to select the salary rule parameter, which is also a modeling artifact.

If the rule parameter is not created before creating the rule condition, they will not show up in the list as modeling artifacts.

When you have finished defining the rule condition, be sure to apply before you press OK. If you don't apply before ok, you'll lose your definition.

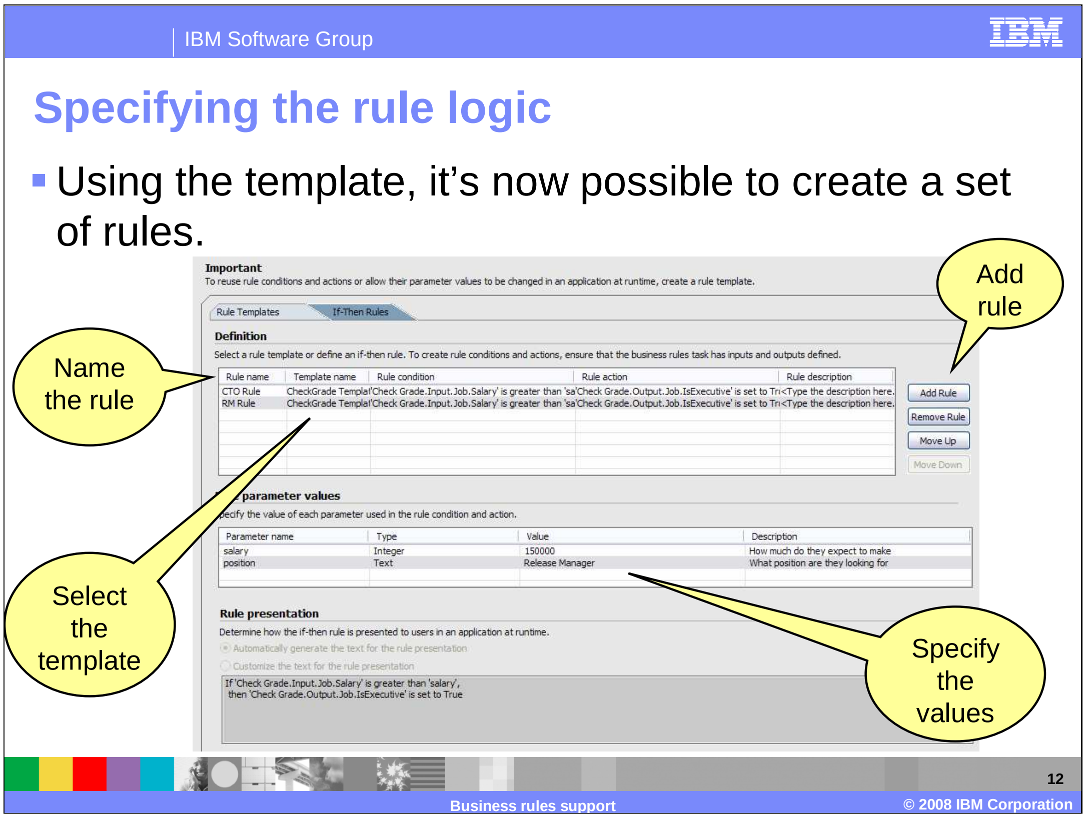


Next create the action to be invoked when the rule conditions are met.

The action editor is similar to the expression builder.

Navigate the tree to locate the modeling artifact you want to work with, then on the right, you can set the value to a specific value, leave it blank, or invoke an expression.

In this case the IsExecutive property is set to true.



Most of the work has been done when you specified the business rule template.

The dialog shown here is what you'll see when you select the if-Then Rules tab.

It looks very similar to the dialog for specifying the business rule template. Notice the names on the buttons.

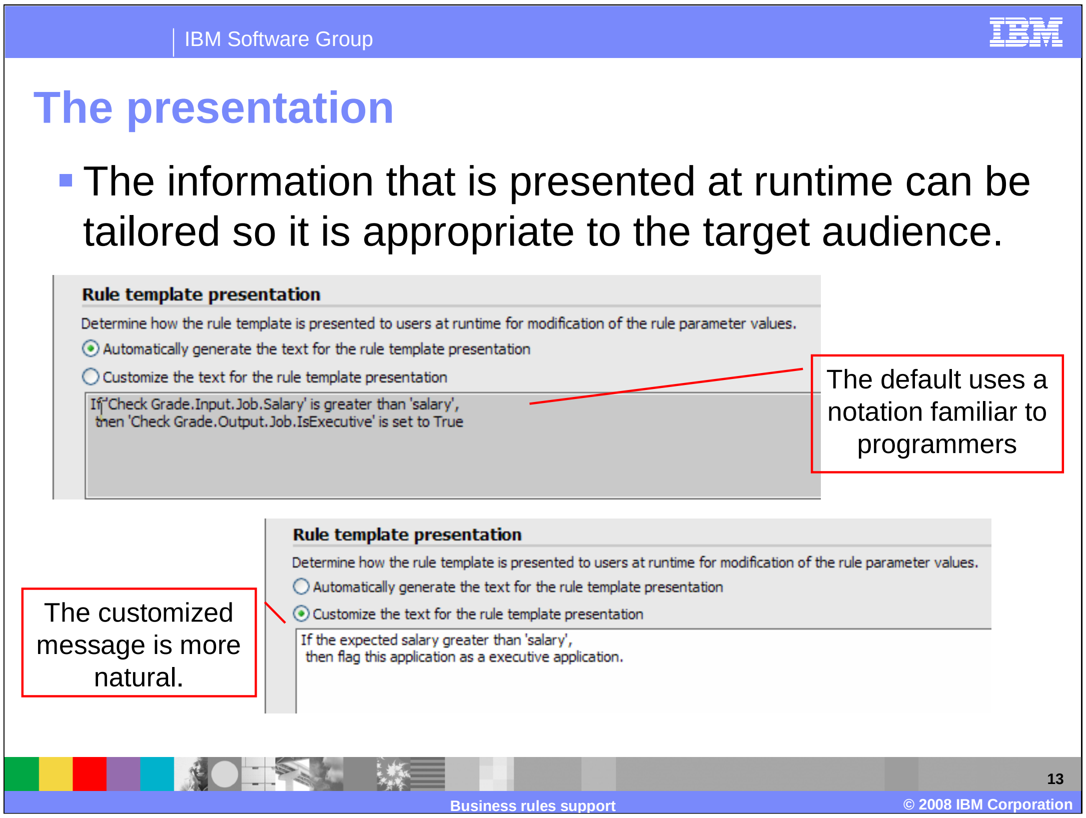
There say add rule and remove rule. This is a visual clue to remind you that you're working with rules and not templates.

To create a rule, press the add rule button.

Give the rule a name and then select the template by directly editing the cells in the table.

Once the template has been selected the condition and the action are filled in and all that is left to do is specify the values to be used by the rule parameters.

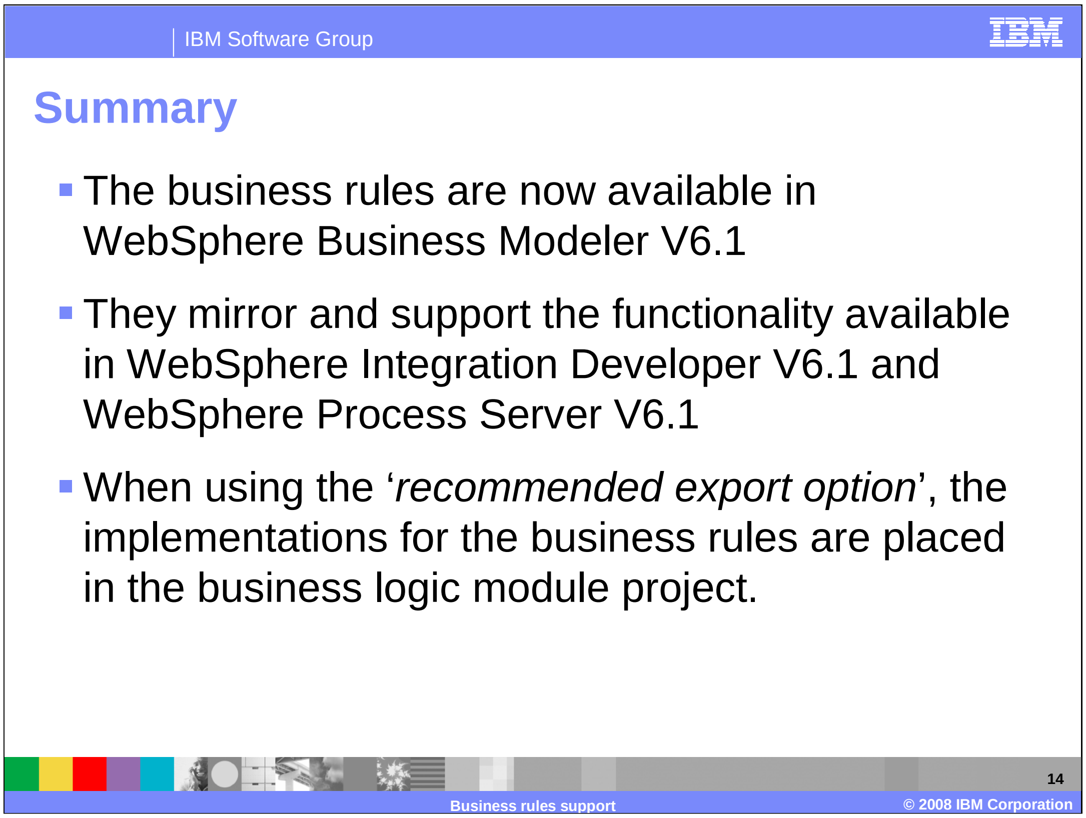
You might have noticed the buttons to move a rule up or down in the list. This option is available on several of the dialogs for specifying business rules and templates. This is an important feature, as the rules are evaluated sequentially based on their position in the list. It is up to you and the integration developer to ensure the rules fire in a sequence that provides the required behavior.



Remember that the business rules are accessible to business analysts at runtime to make changes by adding, deleting and rearranging them.

When they access the rules using the business rules manager they will see a message that tells them what the business rule does. Here you can customize the message so that it reads in a more natural way, instead of like a computer programming language.

Note, when using a business rule template, you can only edit the presentation from the template.



With WebSphere Business Modeler V6.1 you now have the ability to capture key elements of your business processes using business rules.

The business rules you create in WebSphere Business Modeler can be completely specified so that when you export your project to WebSphere Integration Developer you will have business rules that are ready to be deployed.

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