



IBM Software Group

# WebSphere® Business Modeler V6.1

## *Process editor enhancements*



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This presentation will discuss the process editor enhancements that are available with WebSphere Business Modeler V6.1

## New usability features for V6.1

- Ability to copy/paste multiple elements
  - ▶ Within the same process in the same context
  - ▶ Within the same process in another context
  - ▶ Into a different process
- Ability to associate states defined for business items with inputs and outputs
  - ▶ Support for custom icons for the different states
- Ability to show/hide repositories in process and simulation editors
- Ability to show/hide repository connections in process and simulation editors



With WebSphere Business Modeler V6.1 there are several areas that have been enhanced.

The behavior of the copy/paste feature has been improved to provide the expected behavior when copying single or multiple elements to the same context or to a different context.

A new feature being introduced is the ability to define a set of states for a business item. Each state can have a custom icon so that the business analyst can quickly see what state the business item is in as it flows through the business process.

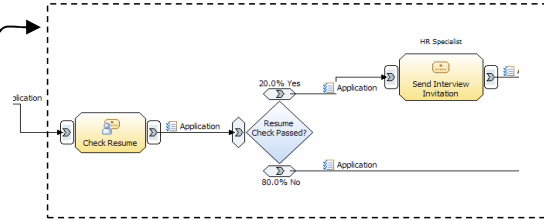
The third major usability improvement in the process editor is the ability to manage the visibility of the repository elements and their links.

Each of these areas are discussed in detail in subsequent slides.

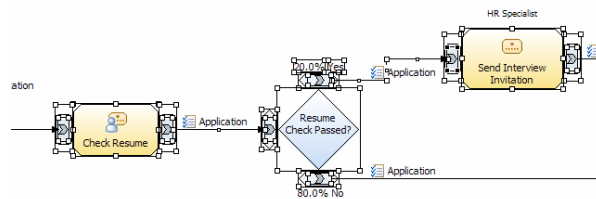
## Copy/paste multiple elements in a process editor

- Multiple elements can be selected using the marquee tool

- copied and pasted into the same process or another process



- In non-basic modes, the *inputs*, *outputs* and *criteria* will also be copied.



Using the marquee tool you can now select a group of process elements all at the same time and then copy and paste them into either the same process or another process.

The marquee tool is invoked by holding down the right mouse button on the background and then moving the mouse diagonally across the elements you want to select. A rectangular box (the rubber band) is drawn around the elements. Releasing the mouse button will cause all of the elements contained in the rectangle to be selected.

It should be noted that connections can not be copied and pasted if they're selected without the source and target. A connection has no meaning without it's endpoints.

## Copy/paste multiple elements in a process editor

- Paste using ctrl+v and right-click pop-up menu will have the same behavior
  - ▶ Elements are pasted relative to the original element's location
    - Same context
      - Offset from the original element's location
    - Different context
      - The same location as the original element's location
- Elements at different levels can not be copied/pasted at the same time

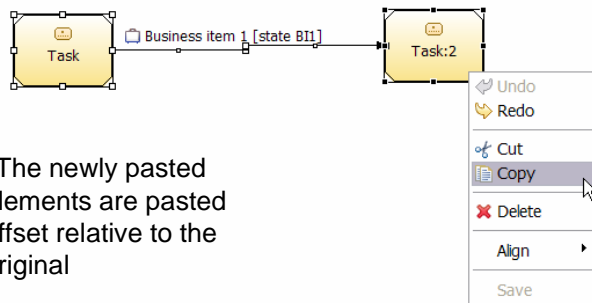


In previous versions the copy/paste behavior was different depending on whether you were using the keyboard or the pop-up menu to do the pasting.

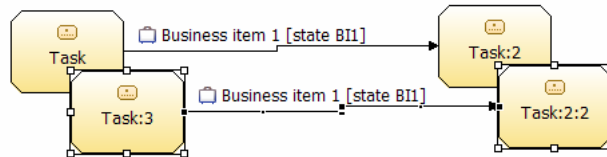
This behavior now matches user expectations based on their experience with other Windows based graphical applications.

Beware that elements from different levels of your business process diagram cannot be selected at the same time.

## Copy/Paste multiple elements to the same context



- The newly pasted elements are pasted offset relative to the original
- Unique identifiers are assigned



5

Process editor enhancements

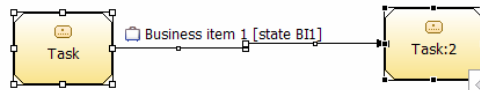
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Shown here and on the next slide is an illustration of the copy/paste behavior that was described on the previous slide.

Here you see what happens when a group of elements are pasted into the same context. To prevent the new elements from masking the original ones, they are offset slightly on the diagram and remain selected. Having the group remain selected after the paste makes it easy to reposition them as a group to the location you want.

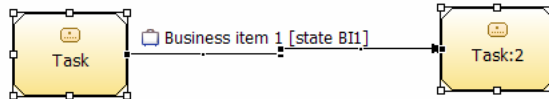
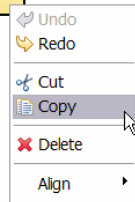
To avoid name conflicts the new elements are also appended with a numeric suffix and assigned unique identifiers. The identifiers are internal to the operation of WebSphere Business Modeler V6.1. You will not see them. They are used to manage the uniqueness of each element.

## Copy/Paste multiple elements to the different context



- The newly pasted elements are pasted at the same location.

- The original unique identifiers are maintained



This slide illustrates the other case, where the group of elements are pasted into a different context.

In this case there are no name or element conflicts so the name and the unique identifier remain the same.

## States for business items

- Ability to define states for business items and business item templates
- A new 'States' page is available in the business item editor
- States are presented in a tabular format on the 'States' page
- Ability to associate an icon with each state
  - ▶ A business item icon is associated by default when a new state is created
- An icon can be associated with a state independently or as an overlay on another icon
- Ability to define the position and the size if an overlay icon if chosen



Wouldn't it be nice if you could determine the state of a key business item in the business process flow by looking at the process diagram? For example, in a hiring business process; depending on where it is in the business process flow; the application business item could be either new, accepted or rejected.

With the state modeling feature, you can now define those states for the application business item and associate icons and icon decorators that show the state on the process diagram.

## Visualizing states in the process flow

- Associate a state defined on a business item with inputs and outputs
  - ▶ A state cannot be associated to a repository.
- Optional visual representation of states in process diagrams
  - ▶ State name along with business item name as connection label
  - ▶ State Icon
    - Shown instead of a business item icon when the state is associated with an input
  - ▶ Pop-up menu option to show/hide state name



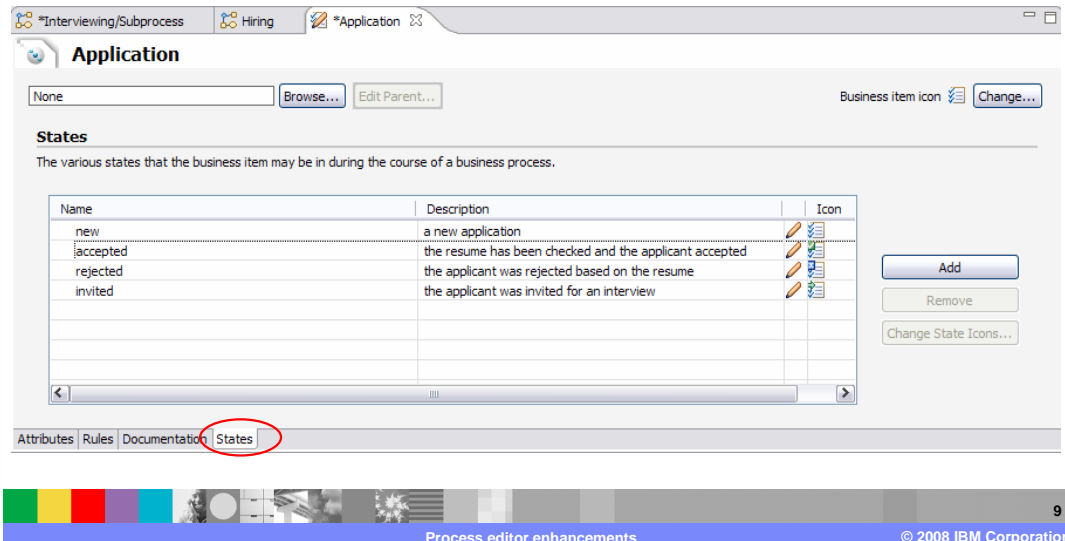
Once the states for the business item have been defined you then associate a given state with the input or output of a task or operation that uses that business item.

You can then choose to display the customized icon for that business item state on the process diagram, or not. There are several levels of display available. You can show the customized icon or the icon and the state name with the business item name. You can easily manage the display of the state name with the pop-up menu.



## Defining the states for a business item

- States for the 'Application' business item.



Defining the state for the business item is where it becomes very clear that you are modeling the state of data through the business process and not the state of the business process. This is an important distinction.

In this slide, you can see the four states defined for the business item called application. It is the application for employment in a hiring business process.

When you open the business items editor you will see a new tab at the bottom, called States. This is where you define the states for your business item.

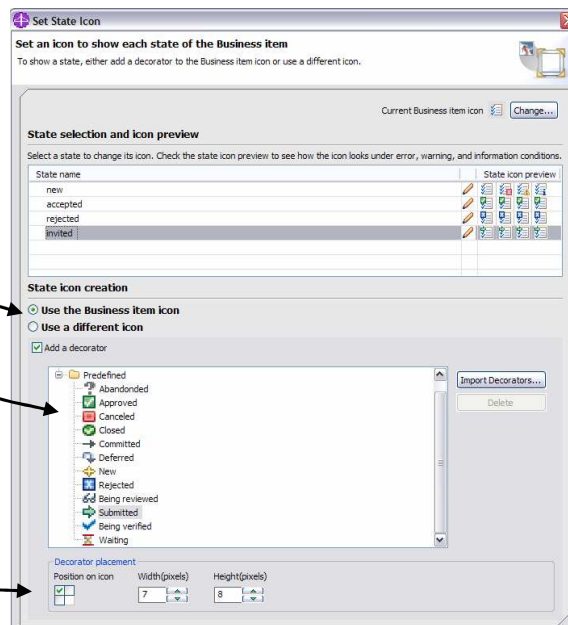
The first step is to define the states using the add button.

Next decide what you want to use for the base icon. Selecting the change button in the upper right, will present you with a list of icons and the option to import your own if you already have some that you want to use. The icon can be changed at any time. It is independent of the state decorators.

To change the state decorators, select one of the states and then select the 'change state icons' button.

## Customizing the business item icon

- The business item icon is associated with all the states by default
  - ▶ or you can use different base icon
  - ▶ an overlay can be used to signify a given state
- The size and position of the overlay can be controlled.



Selecting the 'change state icons' button will bring you to this screen.

Here you can set the icons and the decorators for each state.

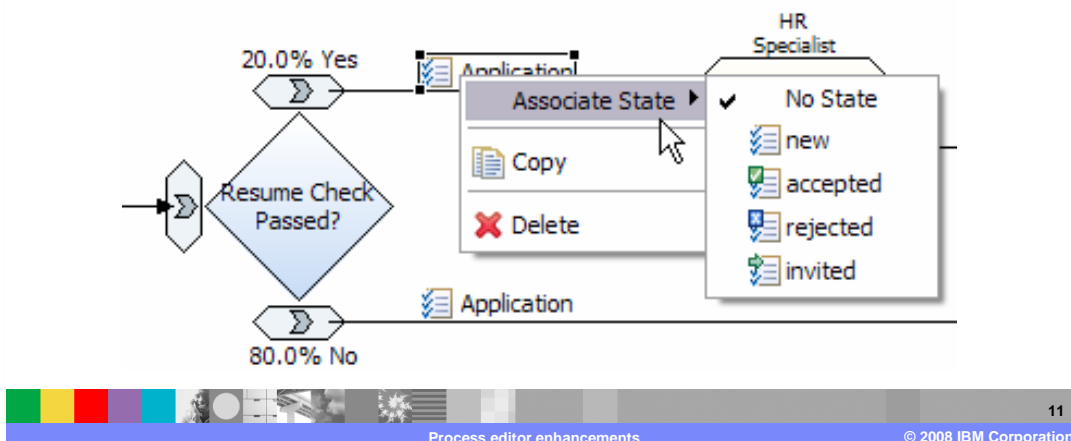
Also notice that you can change the base icon for a given state.

The section at the bottom is where you can specify the size of the decorator and the location where you want it to be located on the base icon.

The icons and decorators for all of the states can be set from this screen without exiting the wizard.

## Associating a state to an input or output

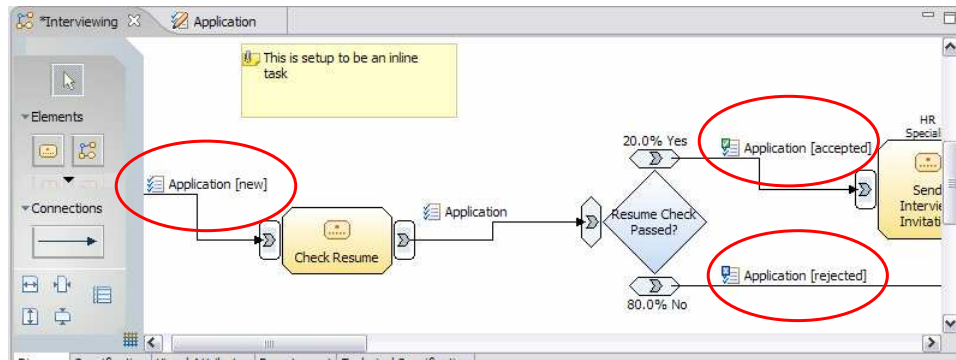
- Right mouse click on the business item icon in the process diagram
- Select the required state
- Notice the icons are setup using the default with overlays



Once the states have been defined with their custom icons, the next step is to associate a state to an input or output. The easiest way to do this is to use the pop-up menu as illustrated in this slide.

When looking at the diagram you might get the impression that the state is associated with the business item or the connection. The association is actually made with the input or the output of a process element. This can be seen if you go to the attributes for the process element and inspect the properties for the inputs and outputs. This is an important point that effects how the states can be defined in certain scenarios.

## Example: a process with states displayed

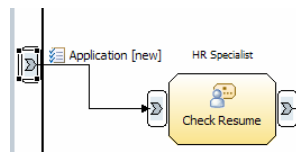


Here is an example that shows how the business item state can be used to enhance the business process diagram.

When the application enters the business process it is in the new state. The resume is checked and based on the resume, the application is either accepted or rejected. With the use of the customized icons it is very clear how this business process works and the state of the application business item before and after a key decision point.

## Validation warnings and state specifications

- The state is associated with the input or output of the modeling element.
- Not all combinations are valid and therefore warnings are generated for those cases.
  1. The state must be the same on both ends of the connection
  2. One end cannot be *no state* if the other end has a state specified
  3. Because a state cannot be associated with a *repository*, a repository cannot be connected to an input that has a state associated with it.



Attributes - Input	Business Measures	Errors (Filter ma)
<b>General</b>		
General information		
This section provides general information about this data input.		
<b>Name</b>		
Input		
<b>Associated data</b>		
Application		
<b>State</b>		
new		

Keep in mind that the state is associated with the input and the output.

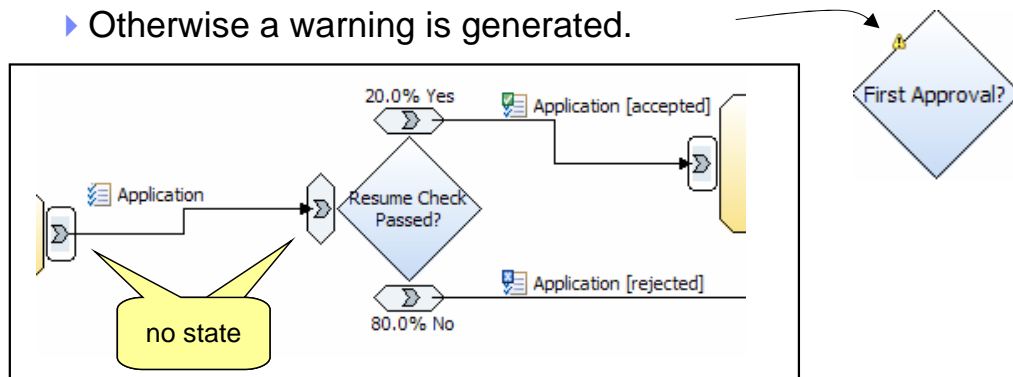
A connection joins the input and the output.

The data is not transformed in a connection as it flows from the output of one element to the input of another element, therefore the state on both ends of the connection must be the same.

Because the state cannot be associated with a repository, a repository cannot be connected to an input that has a state associated with it.

## Warnings with the decision elements

- A common pattern is to change the state based on the decision.
  - ▶ To do this the inputs, that is both ends of the input connection, must have a state of *no state*.
  - ▶ Otherwise a warning is generated.



14

Process editor enhancements

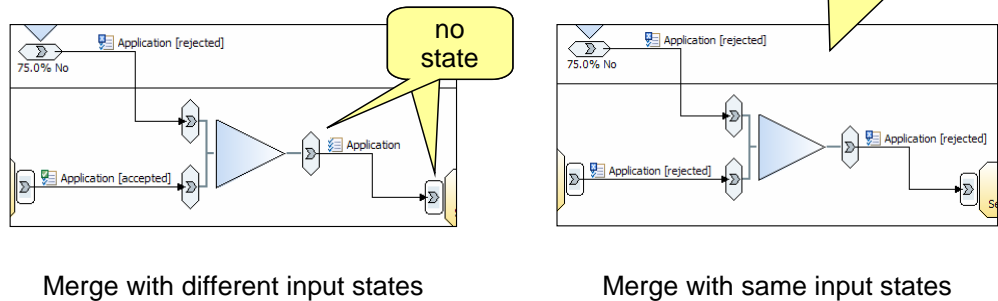
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A common pattern is to change the state based on a decision. This represents a special problem because you now have two outputs that will have different states. The input cannot match both of them at the same time. Therefore the solution in this case is to set the state of the input to no-state.

When you attempt to define a state that is not allowed, you will get a warning message. After you save your work, there is a little warning icon on the element and a full warning message in the errors view.

## Warnings with the merge and join elements

- If the output of the join has a state then the state of the inputs must all be the same.
- If the inputs are not all at the same state then the output should be set to *no state*.
- Join is the converse of the merge.



Merge with different input states

Merge with same input states

Continuing along the same thread, the join and merge element present a similar situation and the solution is the same.

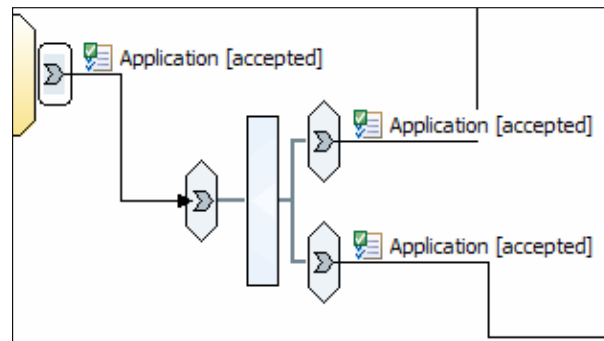
If you have an element with multiple inputs with different states, then the output must be set to no-state.

Failure to meet these conditions will cause a warning to be generated.

Join is the converse of the merge case. The rules are the same.

## Warnings with the fork element

- With the fork element, all the inputs and outputs must be at the same state.
  - ▶ If not, then a warning is generated.



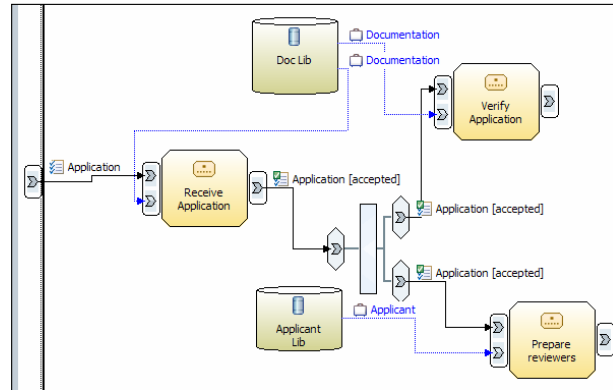
The fork is a slightly different case. With the fork, the two branches of the same flow are being created. There is no data transformation or decision being made in the fork element. Therefore all the outputs must be at the same state as the input.

Failure to meet these conditions will cause a warning to be generated.



## Show/Hide repositories

- When repositories are used in a model they sometimes add clutter to the diagram which detracts from the primary visual message.
  - ▶ Version 6.1 of WebSphere Business Modeler provides the capability of *hiding* or *showing*..
    - the repositories
    - the connections
- Available in the process editor and the simulation editor.



17

Process editor enhancements

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Business process diagrams can very easily become complex and visually overwhelming to the viewer. Where does your eye need to focus in order to understand the flow? If there is too much information it then becomes difficult to grasp the meaning.

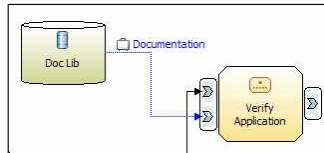
All of the information is important and you need to be able to have control over what is displayed at any given time.

In WebSphere Business Modeler V6.1, the repository elements and their connections are the kind of elements that provide important information that are not necessary to display all the time. Therefore with V6.1, you now have the ability to hide or show the repositories and their connections.

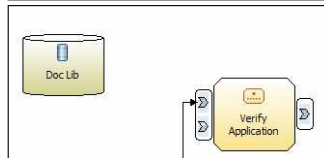
## Hiding and showing repositories and their connections

... is controlled by way of the pop-up menu for the process diagram.

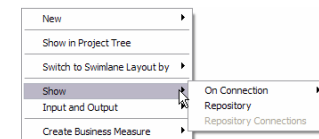
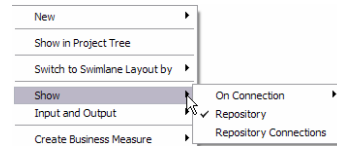
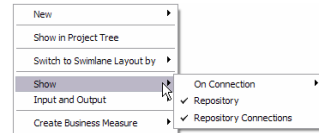
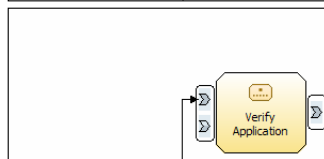
Show both connections and repositories



Show only the repository



Hide both connections and repository

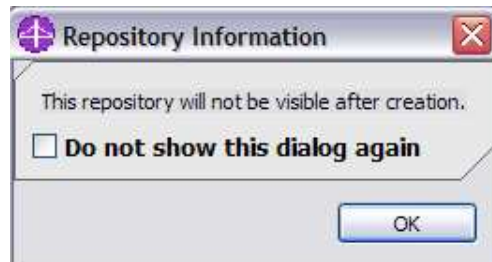


Shown here are the three different views possible with show/hide repository and connections options.

The views can be easily managed using the pop-up menu.

## Adding a repository when they are hidden

- In the case where the filter to hide the repositories is on when a new repository is being added...
  - ▶ A warning dialog is presented.



What happens when you have the repositories and their connections hidden and you add a new repository?

You will receive a warning to let you know that the new repository will not be displayed until you change the visibility option.

## Formatting with hidden connections

- Free form layout
  - ▶ Auto-layout
    - All repositories are moved to the bottom of the diagram
- Swimlane layout
  - ▶ All repositories are placed in the unassigned lane



Then there is the matter of the layout.

If you choose to do the auto-layout then the repositories are moved to the bottom of the diagram.

If you are in the swimlane view, the repositories are located in the unassigned lane.

## Summary

- New 6.1 process editor features:
  - ▶ Ability to copy multiple elements in a process editor and paste them into the same editor or another editor
  - ▶ Ability to define states for business items and business item templates
  - ▶ Ability to associate states of business items/templates with inputs and outputs
  - ▶ Ability to visualize associated state name/icon in the process diagram as connection label
  - ▶ Ability to show/hide repositories in process and simulation editor
  - ▶ Ability to show/hide repository connections in process and simulation editor



The focus for the process editor enhancements with WebSphere Business Modeler V6.1 are in the area of usability. Some minor but significant enhancements that enable you to work more efficiently, as in the case of the copy/paste or the ability to manage the clutter, as in the case of repository hide and show options.

Then there is the support for business item states; which help you bring important information about your business process flow from the internal data specifications to the surface of the process diagram. Bringing the information to the surface provides greater understanding at a glance.

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