IBM
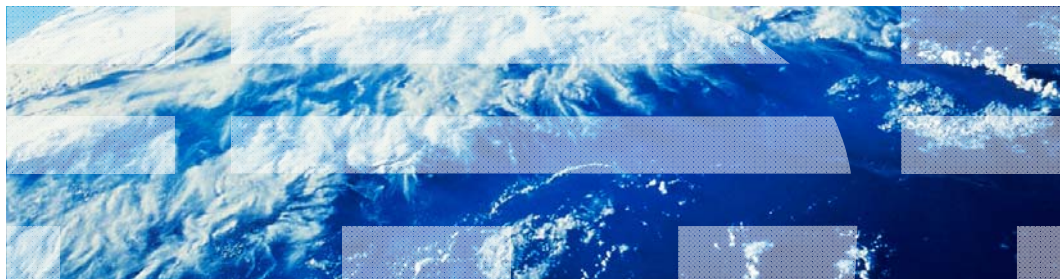
# Business Process Management
# IBM Business Process Manager V8.0.1

## Data flow visualization and tag groups

This presentation provides an overview of data flow visualization and tag groups in IBM Business Process Manager.

## Overview

- Data flow visualization
  - A new diagram in Process Designer
  - Validation of the data flow
- Tag groups
  - Meta data that is associated with the implementation of process activities
  - For example for development life cycle stages:
    - Tag group name: 'Life cycle stage'
    - Tag values: 'Development', 'Available', 'Retired'
  - View in the data flow visualization diagram

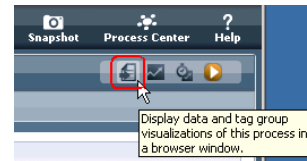Data flow visualization and tag groups

There are two new features in Process Designer which help you in your process design efforts. They are data flow visualization and tag groups.

Since a process uses many variables for the data needed for the process activities, it is helpful to visualize the flow of data objects in the process. The data flow visualization diagram shows the data flow. This can be useful when you are developing the process and want to validate that the correct data is available at each node in the diagram.

Tag groups are another new feature. Tags are used to add meta data to your process artifacts; and you can easily sort by those tags in the library. Tag groups are an extension of tags and are used to add meta data that has a natural grouping. For example, you can add a tag group for development life cycle stages that contains tags such as "Development," "Available" and 'Retired." Tag groups can be viewed in the data flow visualization diagram.

BPM801_DataFlowVisualization.ppt

Data flow visualization - Launching

- Launch from Process Designer when viewing a business process definition
    - Or click menu bar item Playback > Visualize Process

- Browser opens in another window
    - Diagram is not refreshed automatically in the browser as you make updates in the process, just reload the page to see the changes
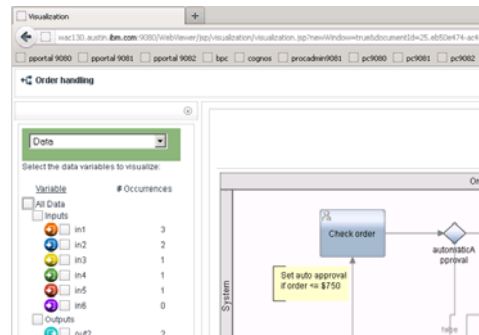
3          Data flow visualization and tag groups                                                    © 2012 IBM Corporation

In Process Designer, to launch the data flow visualization, you can click the icon shown here. You will see this icon in the upper right corner whenever you are viewing a business process definition. Alternatively, you can open the playback menu and select 'Visualize Process'. Launching the visualization diagram opens a separate browser window. In this window, you can use various options to configure what is displayed in the diagram.

You can continue to work on the process definition while the diagram is open, but the diagram is not automatically updated. To see your changes, reload the browser page.

Data flow visualization – In the browser

- Select Data option, then select inputs, outputs, private variables
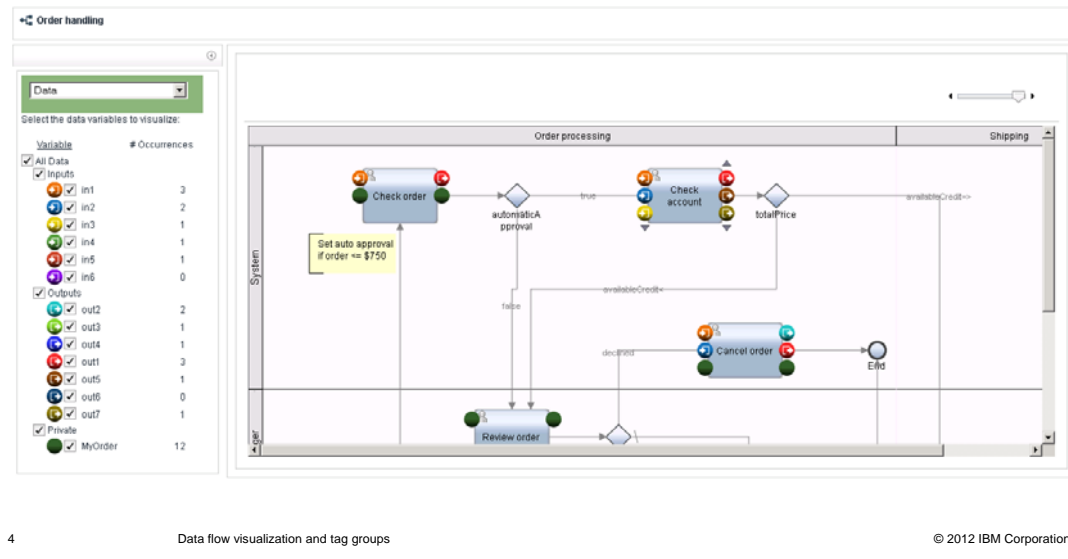
This slide shows you the layout of the data flow visualization. The diagram of the process is shown on the right. At the top of the left side of the window, there are two options in the drop-down box: "Data" and "Tag Groups." In this example, 'Data' is selected; so the diagram shows the data flow for the activities. Below the drop-down box, you can choose which inputs, outputs and private variables you want to display in the diagram. Notice that, in the diagram, the inputs are displayed on the left side of each activity and outputs are displayed on the right side. If there are more than three inputs or outputs, then scroller arrows are displayed to allow you to scroll through them.

In the list on the left, the variables appear in the same order as they appear on the variables tab of Process Designer. System variables are not listed, just local process variables. Notice that, in the column for number of occurrences, some have zero occurrences. In this case, the process variables are defined but not mapped to the activity.

Data flow visualization – Highlight a data element

- Click an icon and it is highlighted across the diagram
- In this example in1, in2, and out2 were clicked
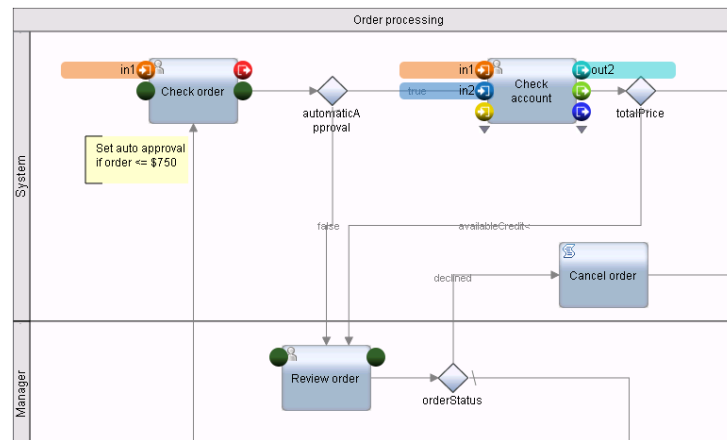
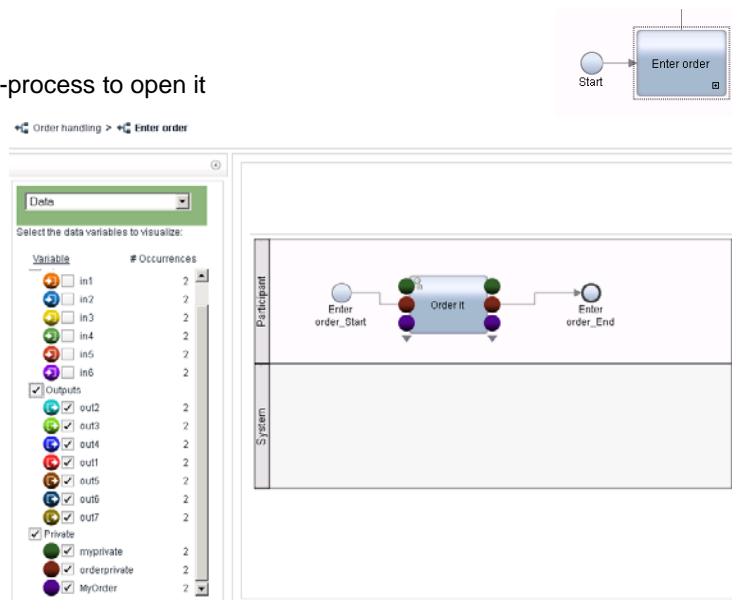A handy feature in the data flow visualization diagram is the ability to quickly highlight a data element throughout the diagram. You just click the icon for the data element. This causes its name to be displayed next to the icon and all other references to that element to be highlighted in the diagram. You can do this for one or more of the data elements in the diagram. In this example, three data elements were clicked; so all three are highlighted in the diagram.

Data flow visualization – Open a sub-process

- Click a sub-process to open it

You can click a sub-process to open it in the data flow visualization diagram. Since a sub-process uses the data of the parent process, you see the parent's variables listed. In addition, you also see any private variables that are defined in the sub-process. In the upper left corner of the window, you can see the bread crumbs, which make it easy to navigate within the process hierarchy.

Linked processes are treated differently than sub-processes. You cannot open linked processes in the data flow diagram for the parent process that invokes them. To open a linked process in the diagram, you need to open the business process definition for the linked process; then open the data flow visualization from there.

## Tag groups – Create new

- Tag values were available previously, but not tag groups
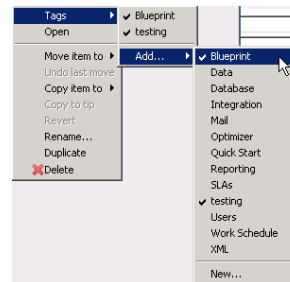
- To create a new tag group
  - Tags > Add… > New…
  - Select the check box for tag group
  - Enter name and value

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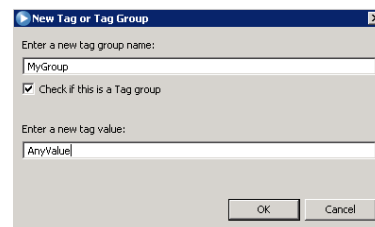
In previous releases of Process Designer, you can tag elements in your library. In version 8.0.1, tag groups offer another way to add meta data about your library elements. Tag groups are especially useful for meta data values that are related to each other. You can create a tag group, give the group a name and add any number of tag values to the group.

To create a tag group, use the Tags menu; select Add; and then select New. In the dialog, enter the tag group name, tag group value and select the check box to identify this as a tag group instead of a tag.

## Tag groups – In the menu

- After tagging to a group, it shows in the tags list and you can assign it to other services

- For a given service you can only assign one tag value within a given tag group

- To remove a tag group reference, just click the tag group value which de-selects it and removes the check

- Tag groups and values are automatically removed from the list when the last reference is removed
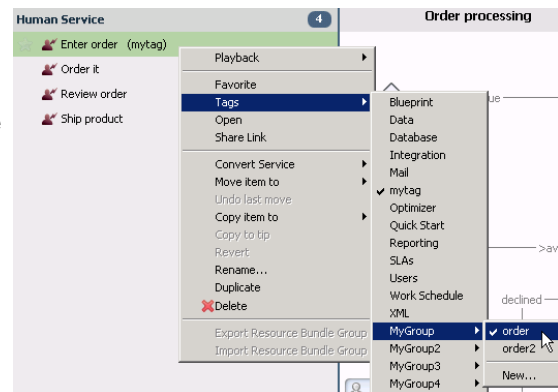
After the tag group has been created, it shows up, along with its associated tag values, in the tags menu. Then you can assign the group's tag values to services in the library. Only one tag value in the group can be assigned to a service. To remove a tag group value from a service, either click on the value in the menu or click on another tag value in the group. When you have removed all references to a tag group or tag group value, then it is removed from the list.

## Tag groups – Service calls in a script

- A script activity can call a service using the tw.system.executeServiceByName() JavaScript function
- To visualize the tag groups for this service, an annotation must be added to the script activity
- In the first line of the script, add the ServiceName annotation followed by the name of the service
- For example
  - //@ServiceName "myService"
  - Where myService is the exact name of the service

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A script activity can call a service synchronously using the executeServiceByName JavaScript function. To visualize the tag groups defined for such a service, an annotation that includes the service name must be added to the script activity. In the first line of the script activity, add the ServiceName annotation followed by the exact name of the service.

Tag groups – Visualization

- Select Tag Groups option, then select groups and values
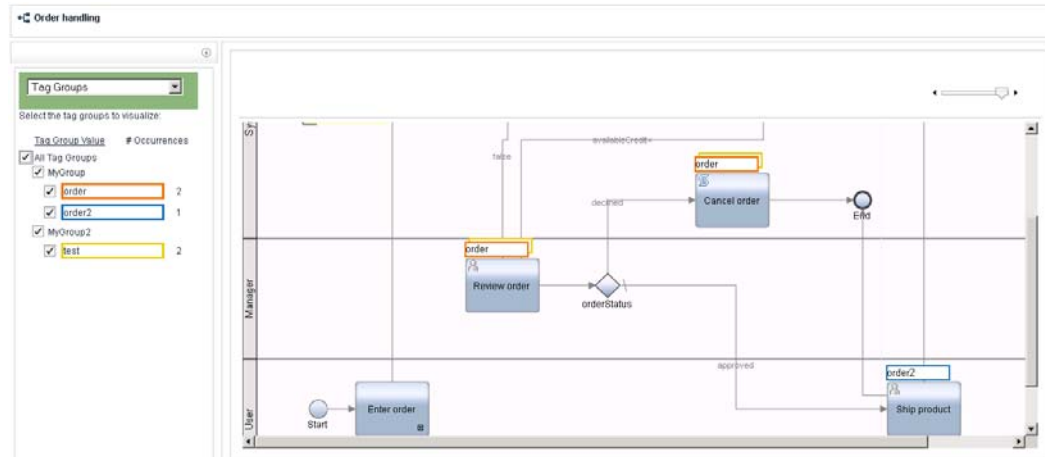
In the data flow visualization you can also view tag groups. At the top of the left side of the window, select the option "Tag Groups" from the drop-down box. Below the drop-down box, you see a list of tag groups with their corresponding tag group values, and the number of occurences in the diagram. Select the tag group values that you want to see. They appear in the diagram as a stack of values above each activity.

## Tag groups – Usage in the diagram

- Click the stack of tag group values to unstack them
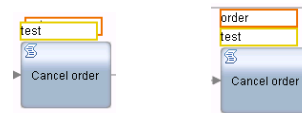
- Click any value in the stack to bring it to the front for any services that have that tag

Data flow visualization and tag groups
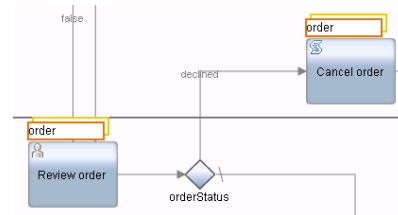
In the diagram, you can manipulate the visualization to make it easier to see the tag group values. For any activity, click the stack of tag group values. This unstacks them so you can view all the values for that activity. Then click any value to bring it to the front of the stack. When you bring a new value to the front, it also brings that value to the front of any other stack where it is found.

## Summary

- Covered the capability of data flow visualization and tag groups

Data flow visualization and tag groups

In summary, you have learned to use the new data visualization feature in IBM Process Designer and tag groups.

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