Run a Flow Service

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Duration: 30 minutes

Flow is a simple, point-and-click programming language, optimized for coding services. In this tutorial you will create and execute a Flow service that will perform some simple operations.

Prerequisites

This tutorial builds on concepts, techniques, and objects that were covered in the previous tutorial.

- The tutorial: 1. Create an IS Package and Folders (http://techcommunity.softwareag.com/pwiki/-/wiki/Main/webMethods+Flow+Tutorial+-+Create+an+IS+Package+and+Folders) must be completed or you can import the solution: Completed Export of 1. Create an IS Package and Folders.zip (http://techcommunity.softwareag.com/protected/download/developer-communities/webmethods/FreeTrial/Completed Export of 1. Create an IS Package and Folders.zip) using these instructions: Import an IS Package (http://techcommunity.softwareag.com/pwiki/-/wiki/Main/webMethods+Flow+Tutorial+-+Create+an+IS+Package+and+Folders)
- The IS must be started. Instructions on how to start the IS are found in the **Prerequisites** part of the 1. Create an IS Package and Folders (http://techcommunity.softwareag.com/pwiki/-/wiki/Main/webMethods+Flow+Tutorial+-+Create+an+IS+Package+and+Folders) FLOW tutorial.

Step Outline

You create and run a **Flow** service by:

- Creating the **Flow** service object
- Adding inputs and processing steps to the service
- Verifying the output from the service

Step 1: Create a Flow Service

In this step: You will create a Flow service by defining the Flow service object in the services folder of the **FLOW_Tutorial** package.

To create a Flow service:

- locate the **FLOW_Tutorial** package that you created previously, and expand the folder hierarchy:
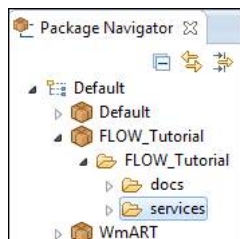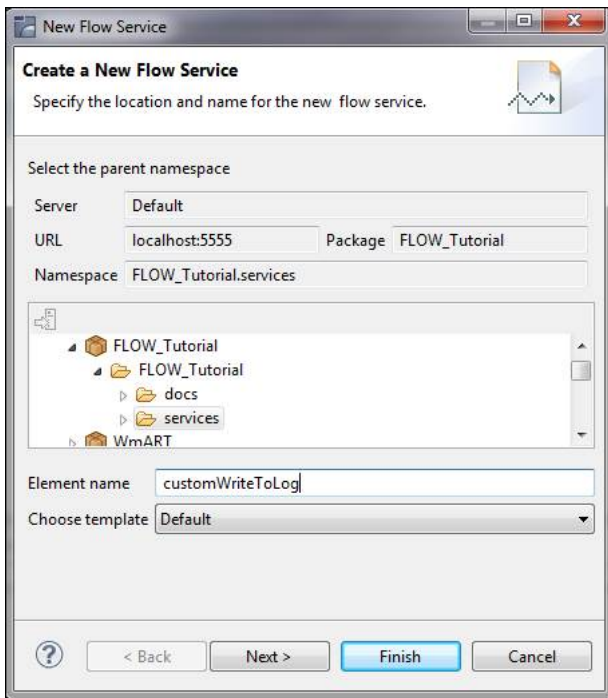

- Right-click on the services folder in the **FLOW_Tutorial** package, then select **New -> Flow Service:**
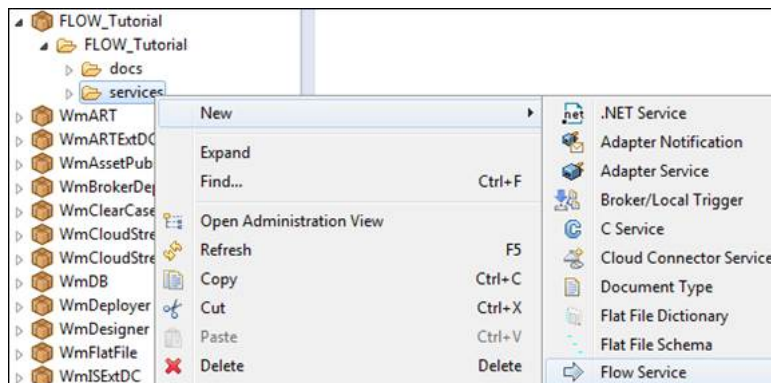
The New menu displays all the types of objects you can create on the IS.

In the **New Flow Service** dialog, enter customWriteToLog in the Element name field and select Finish:
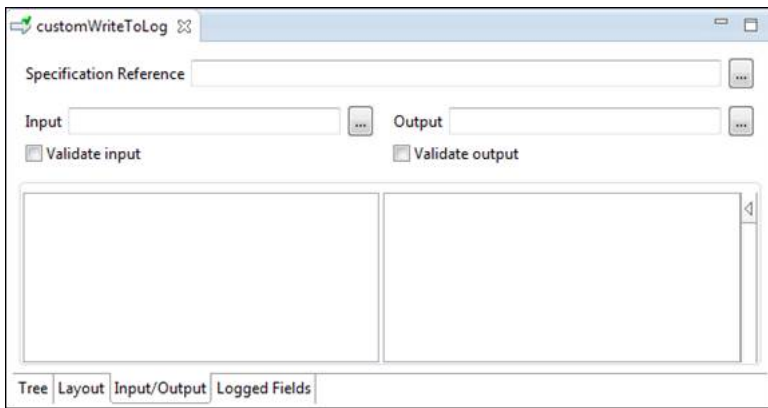
Designer creates the new flow service and opens it up in the Flow editor. Expand the **services** folder to see your newly created flow service:
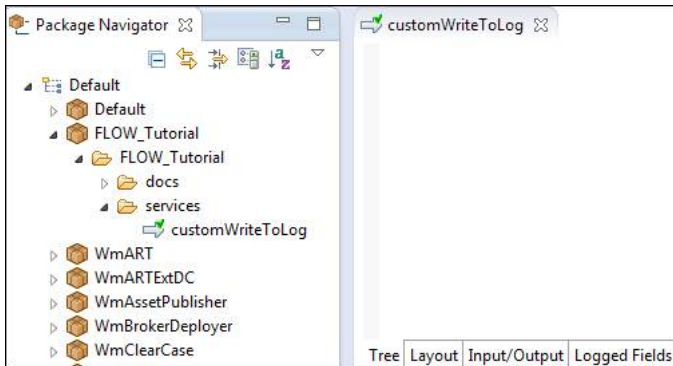
By default, the **Tree** tab is selected, showing an empty Flow. The Flow **Palette** may be expanded by clicking on the arrow on the right side of the flow editor:
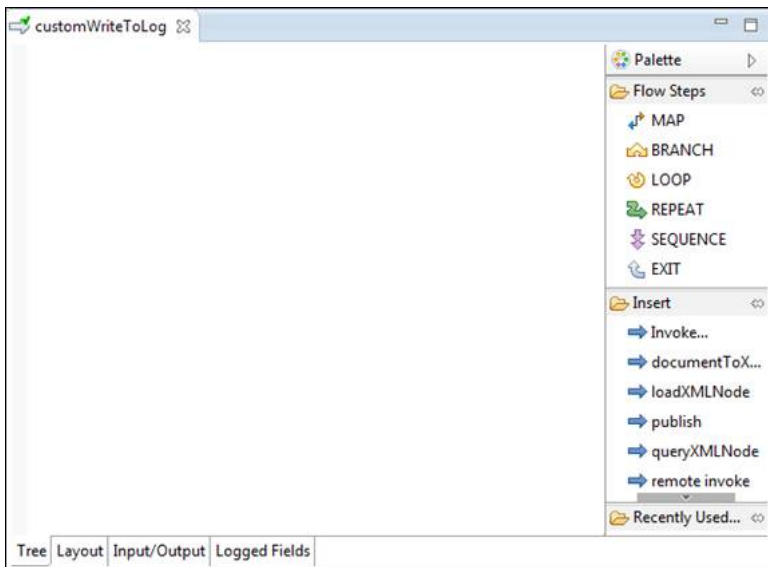
- Click the **Input/Output** tab on the bottom of the Flow Editor to open:

You may now add inputs to the new service. Open the Variables Palette by clicking the open arrow on the right of the **Input/Output** editor.

Step 2: Add String Inputs to the Service

In this step: You will add string inputs to the service using the Input/Output tab. When you run the service, the value of the input strings will be operated on and displayed as results.
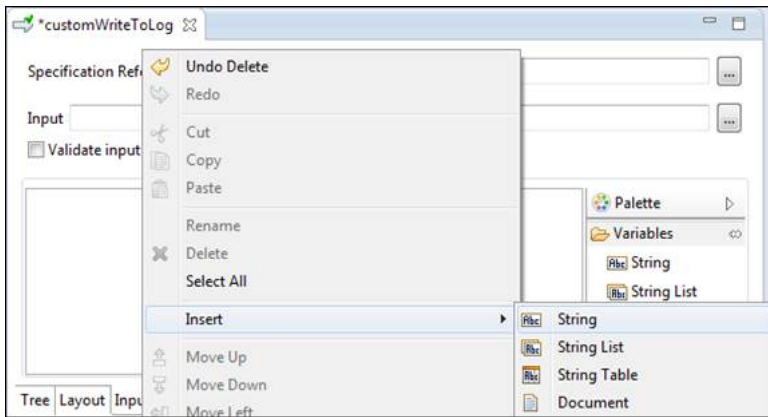
To add a string input to the service:

- Option 1 (click-and-click): Click once on **String**, and then click again in the white space in the left (input) panel, below the Validate Input checkbox:
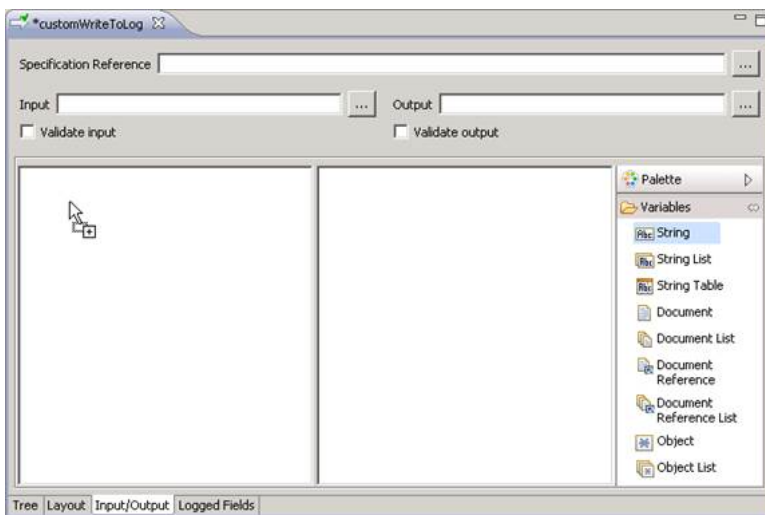
- Option 2 (click-and-drag): Select **String** then drag it to the white space in the left (input) panel, below the Validate Input checkbox:
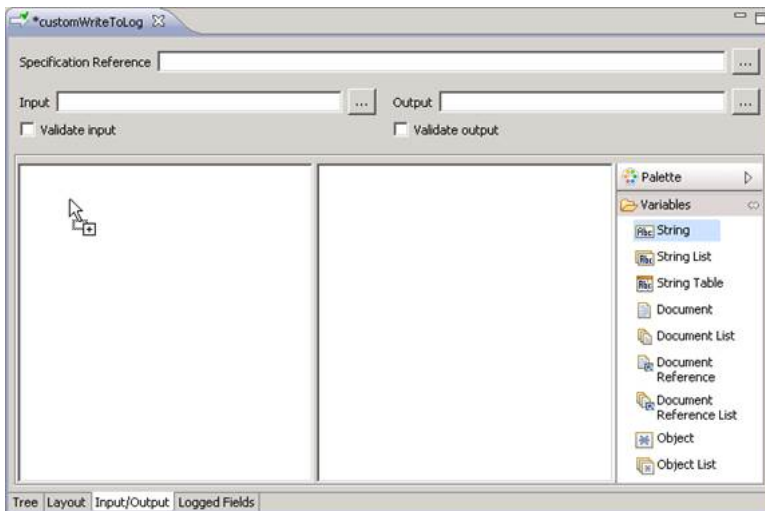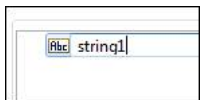

- Option 3 (right click): right-click in the white space in the left (input) panel, below the Validate Input checkbox, and from the context menu choose to **Insert->String**:
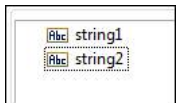
This will create an **Untitled** String variable as an input to your new service.

- Name the new string **string1:**

- Add another string to the service, and name it **string2:**

You can now insert steps into the service that will operate on the inputs.

## Step 3: Insert Steps into the Service #

In this step: You will insert two pre-defined utility services as steps in the **customWriteToLog** service. The **WmPublic** package provides commonly used utility services. In this step you will use the pre-defined **pub.string.concat** and **pub.string.toUpper** steps.

To insert the service steps:

- Select the
- Tree **tab at the bottom of the** Flow Editor **view, and expand the** Palette **on the right side of the view:**
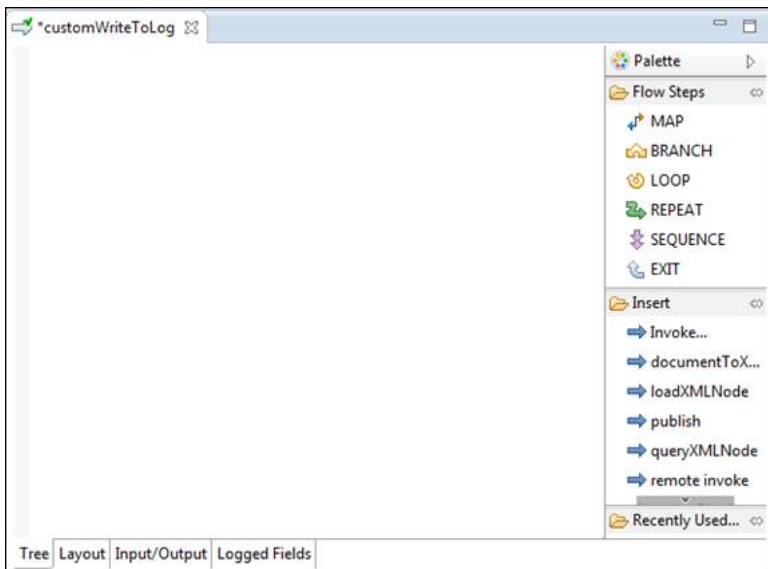
- From the
- Insert **section of the** Palette**, select** Invoke… **to invoke another service as a step within your flow:**
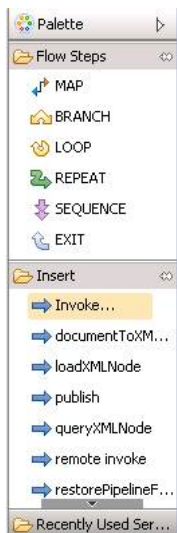
Note: As with the creation of the **input/output** variables, you may add an Invoke step to your flow service in several ways:

1) Click-and-click: click on **Invoke** in the **Palette** and then click again on the white space of the **Tree** area of the **Flow Editor**

2) Click-and-drag: click to select **Invoke** in the **Palette** and then drag it onto the white space of the **Tree** area of the **Flow Editor**

3) Toolbar insert button: instead of using the **Palette** on the right side of the **Flow Editor**, you may use the **Insert** button


at the top of the window in the Designer toolbar (use the drop-down arrow for the same options as the Palette, or click the button to create the same type of step as previously built (default is the Invoke… selection dialog box))

4) Right click: right click on the white space of the **Tree** area of the **Flow Editor**, and choose **Insert->Invoke…** from the context menu

5) Drag from Package Navigator: as you will see later, you may also drag services directly from the **Package Navigator** view

6) Copy/paste: steps may be cut/copied from other parts of a flow or copied from the **Package Navigator** view and pasted into your flow
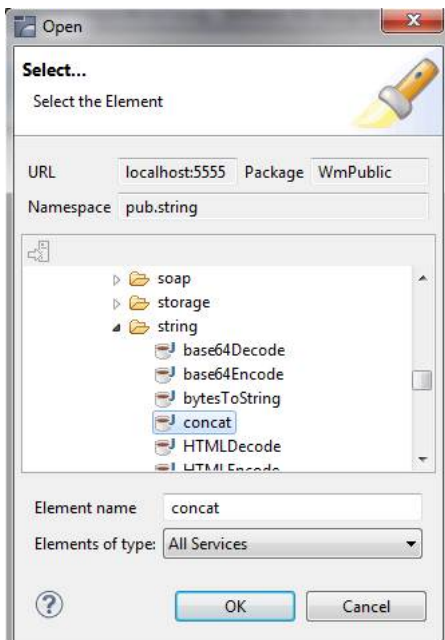
Insert the Invoke step into your flow. Because Invoke… is not a specific service, Designer will display a dialog box to prompt you to select the service that you would like to invoke.

The Open dialog displays the **IS packages**.

- Scroll down to the WmPublic package and expand **WmPublic ->** pub -> **string**:
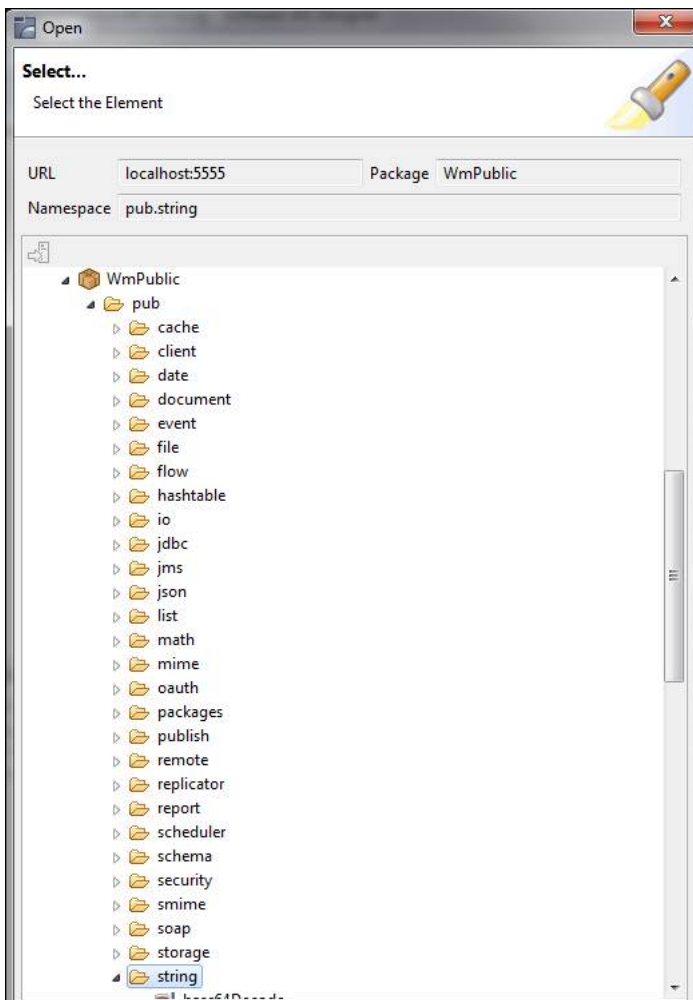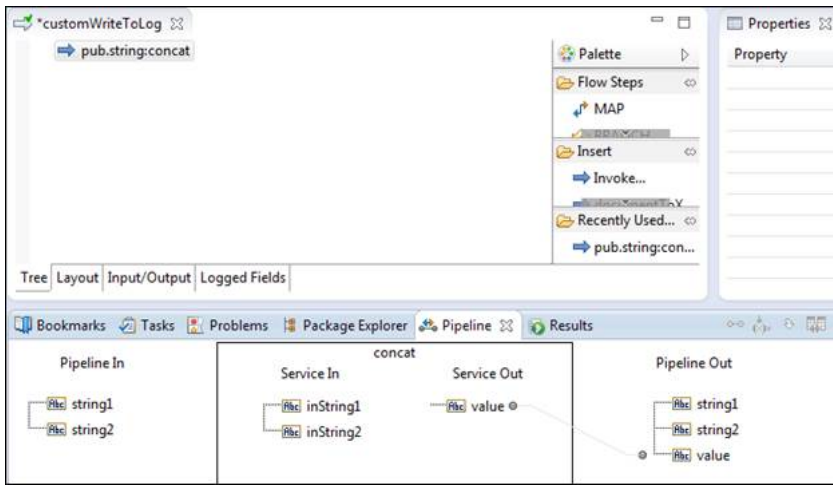
- Select the **concat** service and click **OK**:

This will insert an invocation to the built-in **pub.string:concat** service as a step in your flow. The fully qualified name of this service is: **pub.string:concat**. Every element name in all the packages on the IS must have a unique fully qualified name.
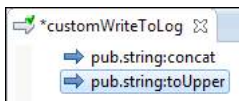
Click on the **Pipeline** view in the bottom panel of Designer:

- Now use the drag and drop way of adding another step to your flow service by finding the **pub.string:toUpper** (also located in the WmPublic package) in the **Package Navigator** view, select and drag and drop it onto your flow editor:
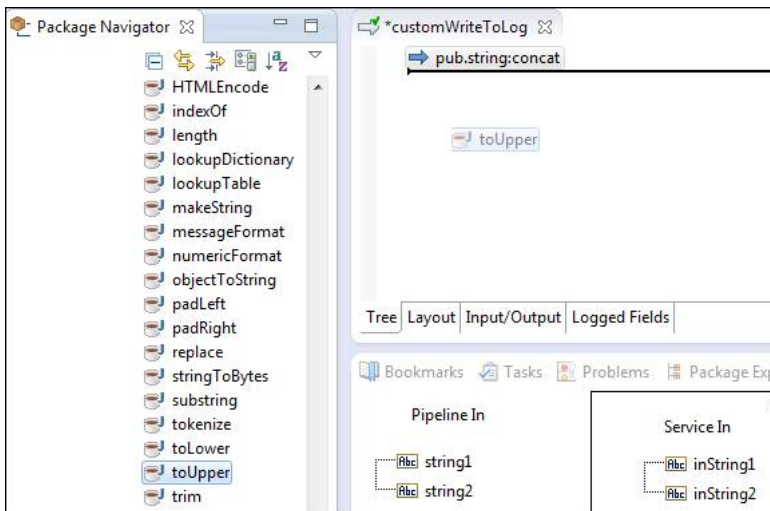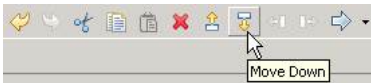

- Your flow service should look like the following:

- Add a third step to your flow by dragging the built-in service: **pub.flow:debugLog** (again located in the WmPublic package) and dropping it onto your flow editor:
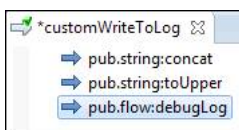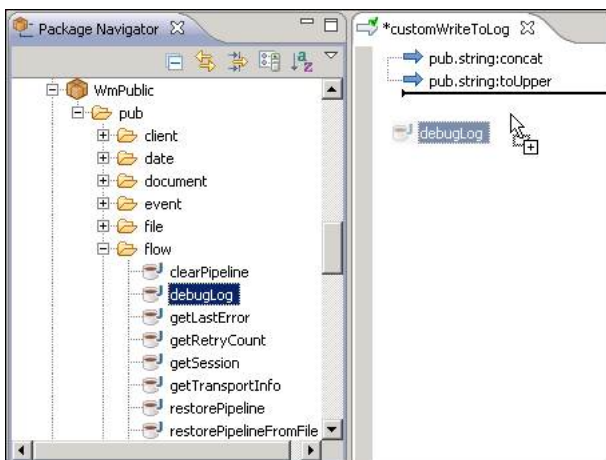
Note: You may change the order of steps within a service by dragging and dropping or by using the **Shift** buttons on the Designer toolbar:
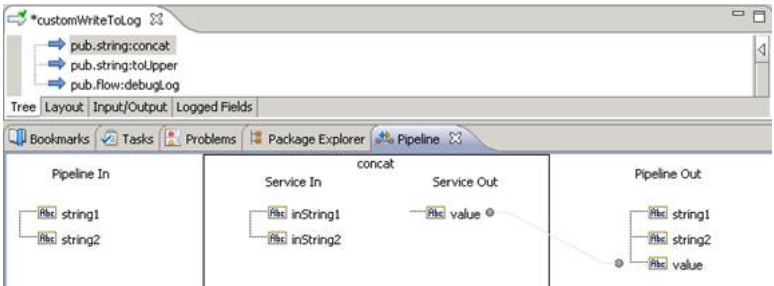
Move Down

Step 4: Map the Service Inputs

In this step: You will map the inputs to the **customWriteToLog** service using the **Pipeline** tab, which is by default located in the bottom panel of Designer.

To map the **pub.string:concat** service step:

- select the **pub.string:concat** service step, then select the **Pipeline** tab:

The **Pipeline** tab is divided into three sections:

- **Pipeline In**
- <selected service object>
- **Pipeline Out**

The Pipeline toolbar provides various pipeline management functions, including the **Link** tool.


Create a Link between the Selected Variables

Important: You use the **Pipeline** tools by first selecting one or more variables that you want to act on. When you select a variable, the applicable tools will become available in the toolbar.

For example, to map the variable string1 to the variable **instring1:**
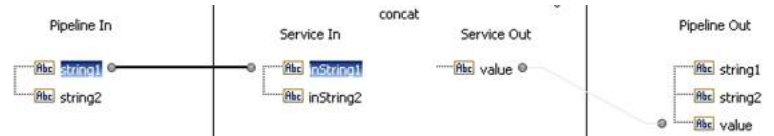
- Select **string1** in the **Pipeline** In section, then select **inString1** in the **Service In** section

The **Link** tool is now active.

- Click on the **Link** tool
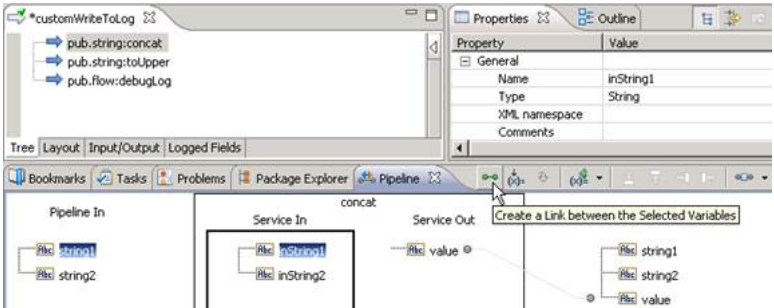
The **Link** tool maps **string1** to **inString1.**

- Use this technique to map additional variables in the **pub.string:concat** step as follows:

▫
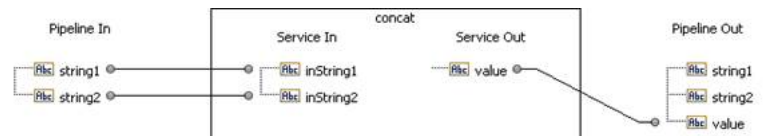
Pipeline In	concat		Pipeline Out
	Service In	Service Out	
Link: **string1** to ->	**instring1**	Link: **value** to ->	**value**
Link: **string2** to ->	**inString2**		

To map the **pub.string:toUpper** step:

- Select **pub.string:toUpper**, and link the objects as follows:
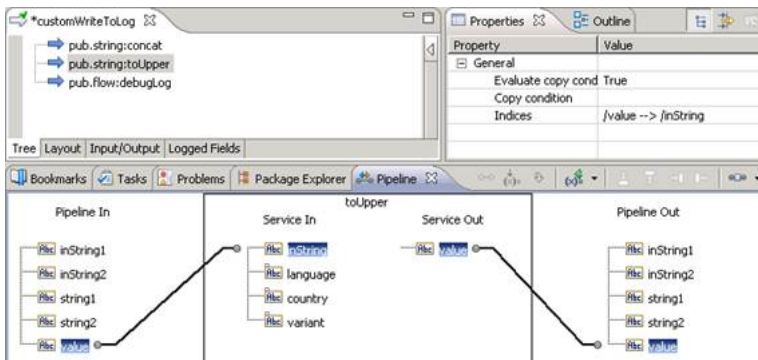
Pipeline In	toUpper		Pipeline Out
	Service In	Service Out	
Link: **value** to ->	**inString**	Link: **value** to ->	**value**

To map the **pub.flow:debuglog** step:

- Select **pub.flow:debuglog** and link the objects as follows:
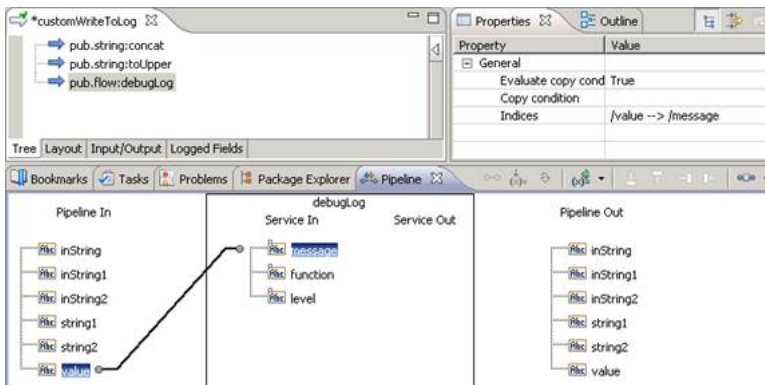
- Use the mapping tool to connect the variables as follows:

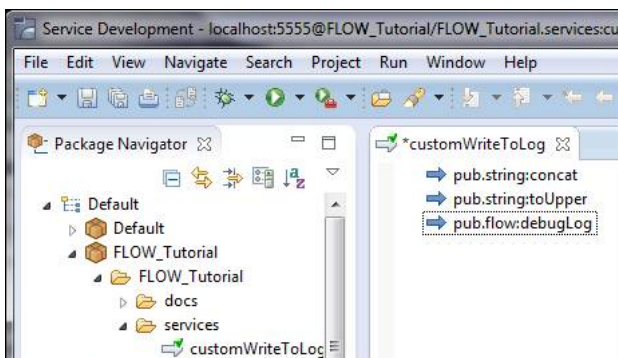| Pipeline In	debugLog		Pipeline Out
	Service In	Service Out	
Link: **value** to ->	**message**		

You have added steps to the Flow service and mapped them; you can now run the service.

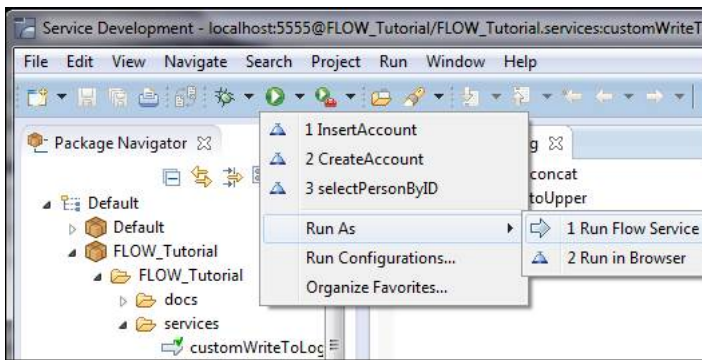## Step 5: Run the Flow Service #

In this step: You will run the Flow service and enter values for the input strings.
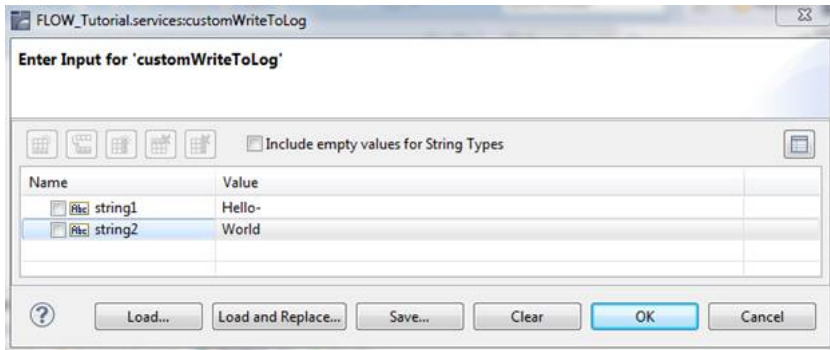
To run the service:

- Select the **Save** icon in the **Designer toolbar:**

- Select the **Run** toolbar button drop-down then **Run As -> Run Flow Service**:
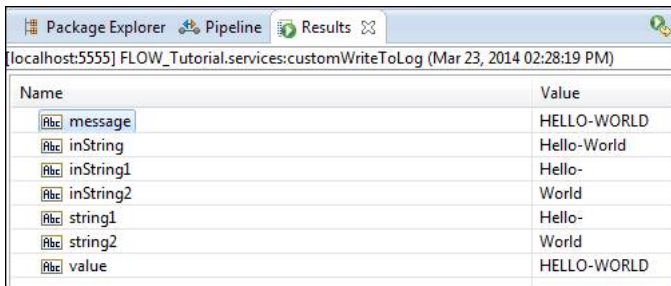
The **Enter** Input for **'customWriteToLog'** dialog opens. Enter **Hello-** for the value of the string1 variable and **World** for the value for the **string2** variable and click the **OK** button:

string1	Hello-
string2	World

The **Results** view displays the value of all variables after all the steps in the flow service executes:

Step 5: Maintaining the Pipeline

Services have the concept of a pipeline. The pipeline contains all the variables and their values that are present at a given point in the service.

In this step: You will edit the pipeline to discard data that is not needed at the specified steps.

Important: For normal Invoke steps, you can drop variables only from the **Pipeline Out** side of the **Pipeline** view.

To edit the pipeline for the **pub.string:concat** step:

- Select **pub.string:concat**, then select the unmapped variables in the **Pipeline Out** section:
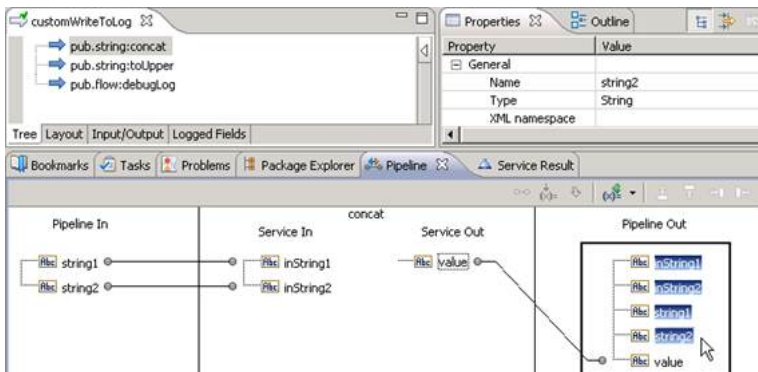
- Click on the **Drop** toolbar button to remove the unmapped variables from the service pipeline:

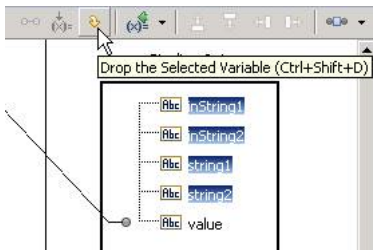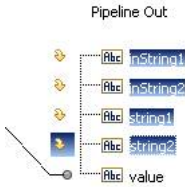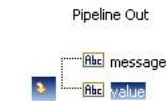The **Drop** icon indicates that the selected variables will be dropped from the service pipeline:

- Repeat this process for the **pub.string:toUpper** and **pub.flow:debuglog** steps; however, leave the variable message in the **Pipeline Out** section of the **pub.flow:debuglog** step:

Save the service. You can now run the Flow service and verify the output by examining the server log.

Step 6: Run the Service and Verify the Output

In this step: You will run the Flow service and verify its output by examining the contents of the server log.

To run the service:

- Select **Run** from the **Designer** toolbar and enter values for the strings as you did in Step 5.

Designer displays the **Results:**

To examine the server log:

- **Log** into the Integration **Server Administration** interface by opening one of the following URLs in your browser of choice:

http://localhost:5555 (http://localhost:5555) or http://<hostname (http://<hostname) or IP address>:5555

The Integration Server displays the **Authentication Required** dialog:

Use the following values to log into the **Integration Server:**

Field	Value
Username:	Administrator
Password:	manage

Note: These values may be stored from a previous session. In this case, simply select **OK.**

Firefox displays the **Integration Server** page:
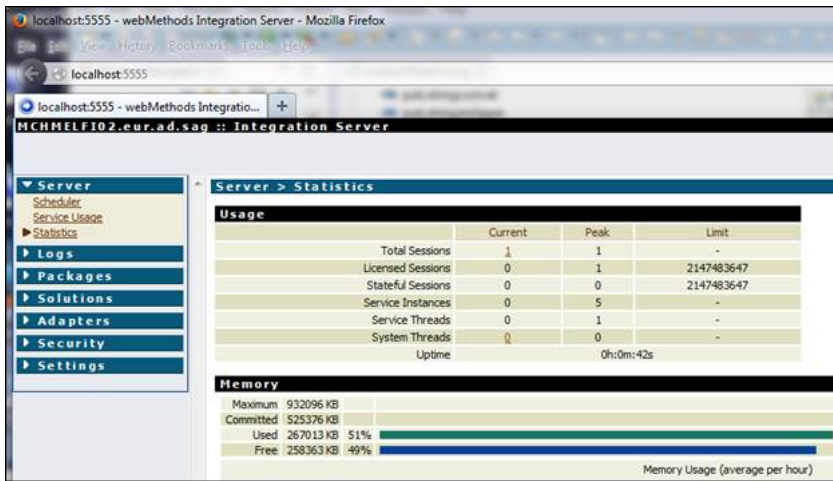
- select **Server** from the **Logs** section of the left menu:

The **Logs > Server** page displays the service output:

Conclusion

You have created, run, maintained, and verified a Flow service. You are now ready to develop more complex services as described in the next tutorials.

To import the solution of this tutorial download Completed Export of 2. Create and Run a Flow Service.zip (http://techcommunity.softwareag.com/ecosystem/export/sites/default/public/webmethods/products/esb_and_integration/codesamples/.attachments/20140411131939375_000_Completed_Exp (http://techcommunity.softwareag.com/protected/download/developer-communities/webmethods/FreeTrial/Completed Export of 2. Create and Run a Flow Service.zip)and follow the directions in the Import an IS Package (http://techcommunity.softwareag.com/pwiki/-/wiki/Main/Import+an+IS+Package) tutorial.

47 Attachments (http://techcommunity.softwareag.com/pwiki?

p_p_id=36&p_p_lifecycle=0&p_p_state=pop_up&p_p_mode=view&_36_struts_action=%2Fwiki%2Fview_page_attachments&p_r_p_185834411_nodeName=Main&p_r_p_185834411_title=webMethods+Flow+Tutorial+-

+No.2+Create+and+Run+a+Flow+Service&_36_redirect=http%3A%2F%2Ftechcommunity.softwareag.com%2Fpwiki%2F-%2Fwiki%2FMain%2FwebMethods%2BFlow%2BTutorial%2B-

%2BNo.2%2BCreate%2Band%2BRun%2Ba%2BFlow%2BService%2Fpop_up%3F_36_viewMode%3Dprint)

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Excellent. Straight to the point and very descriptive.

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dont forget making string1 and 2 check the box validate input output boxes...
Wm 9.8

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Posted on 6/19/15 12:20 PM.

Matthew Pearson

(http://techcommunity.softwareag.com/c/my_sites/view?groupId=7608936&privateLayout=0)

You should open the Resource perspective in order to see the Variables Palette to the right of the Input/Output editor.

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Ahmed Hamza

(http://techcommunity.softwareag.com/c/my_sites/view?groupId=7956371&privateLayout=0)

Many Thanks

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