



# Process Designer

## Tutorial 1: Creating a Hello World Business Process

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In this first tutorial, you will learn about components of the Micro Focus Verastream Process Designer. If you do not already have Verastream Process Designer installed and running, see the Installation Guide for step-by-step instructions.

By default, Verastream Process Designer installs both Verastream Process Design Studio and Verastream Process Server. The Process Design Studio equips you with powerful tools for designing and building BPEL compliant processes. These processes orchestrate the activities of other business processes, connecting them into a single integrated flow. After creating them in the Process Design Studio, you deploy them to the Verastream Process Server, which makes them available as web services. They can then be used independently, or be integrated into other orchestration processes, or both.

In this tutorial, you will deploy and run a very simple example BPEL 'Hello World' process. Given any input (including nothing), this process returns the message "Hello, world!".

Prerequisites:

- Micro Focus Verastream Process Designer, including Process Design Studio and Process Server, installed and running
- Internet browser
- Some familiarity with XML Schema, WSDL, XPath, BPEL, and Web service standards

Let's get started.

## Opening the Process Design Studio

You can open the Process Design Studio from the Welcome screen (via the Start Now link), or view the help (via the Overview link), or go to a list of Tutorials.

If you have already installed the Verastream Process Designer, you can open the Process Design Studio by selecting **Start > Micro Focus Verastream > Process Designer > Process Design Studio**.

If you see the Welcome screen, shown below, click **Start Now**.

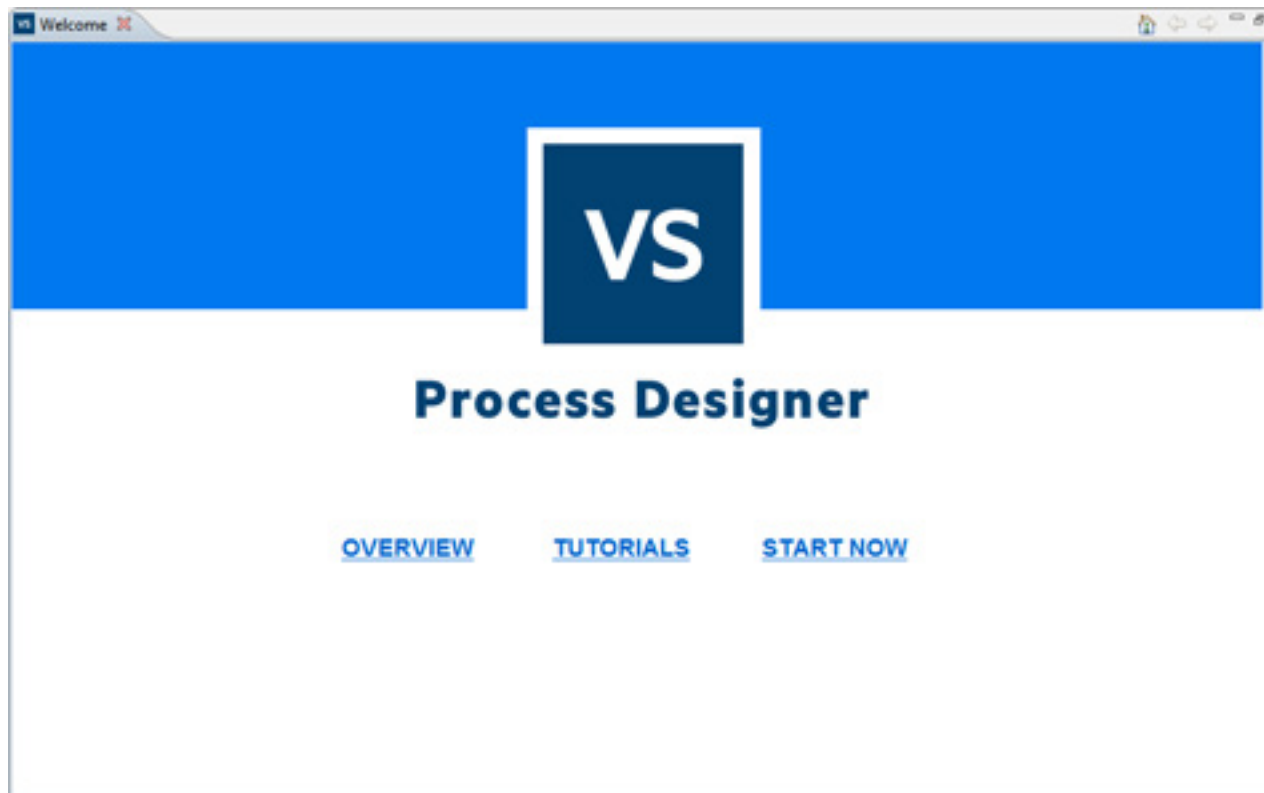
If the Design Studio opens a project, first close that project (**File > Close Project**), then start a new one (**File > New Project...**).

If the Design Studio opens without a project, start a new one (**File > New Project...**).

By default, Process Server starts automatically when your computer starts up.

To install and start the Process Designer:

1. Double-click **setup.exe**. You can choose your install location. These tutorials assume an install location of:  
C:\Program Files\Micro Focus\Verastream\

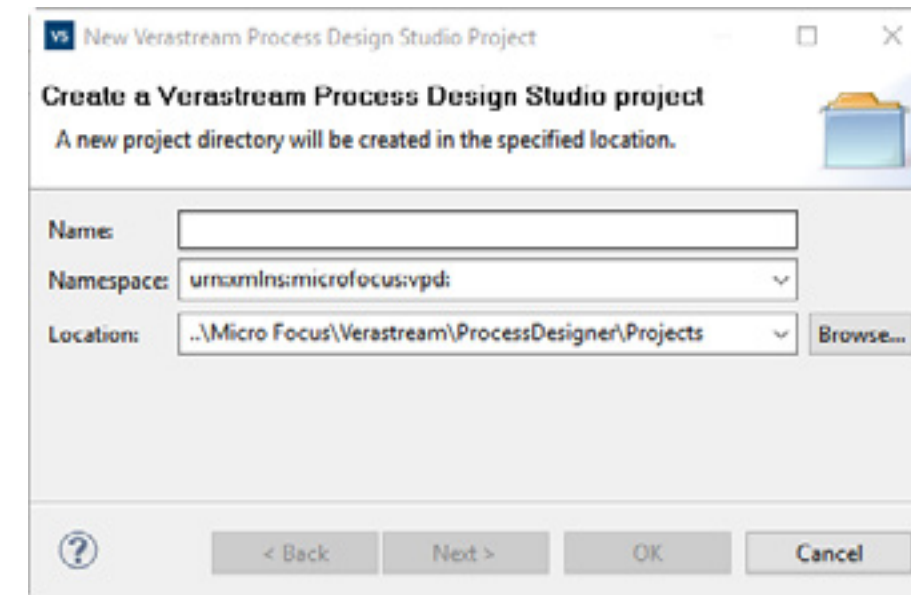


## Creating a project

The Hello World project simply returns "Hello, World!" when it is deployed as a Web service and executed.

To create a project:

1. If you do not already see the New Project dialog box, select **File > New Project**.
2. Type a project name into the Name field. Project names cannot contain spaces. For this example, type **HelloWorld**.
3. Click OK.



While you can choose any location to store your project files, the default location, and the one used in this tutorial, is in your Documents and Settings folder at:

My Documents\Micro Focus\Verastream\ProcessDesigner\workspace\

The default password is **secret** and the default username is **admin**. You should change these at your earliest convenience.

The BPEL namespace specified when you save a project to the workspace is used as a unique identifier of the composite service.

## Process Design Studio overview

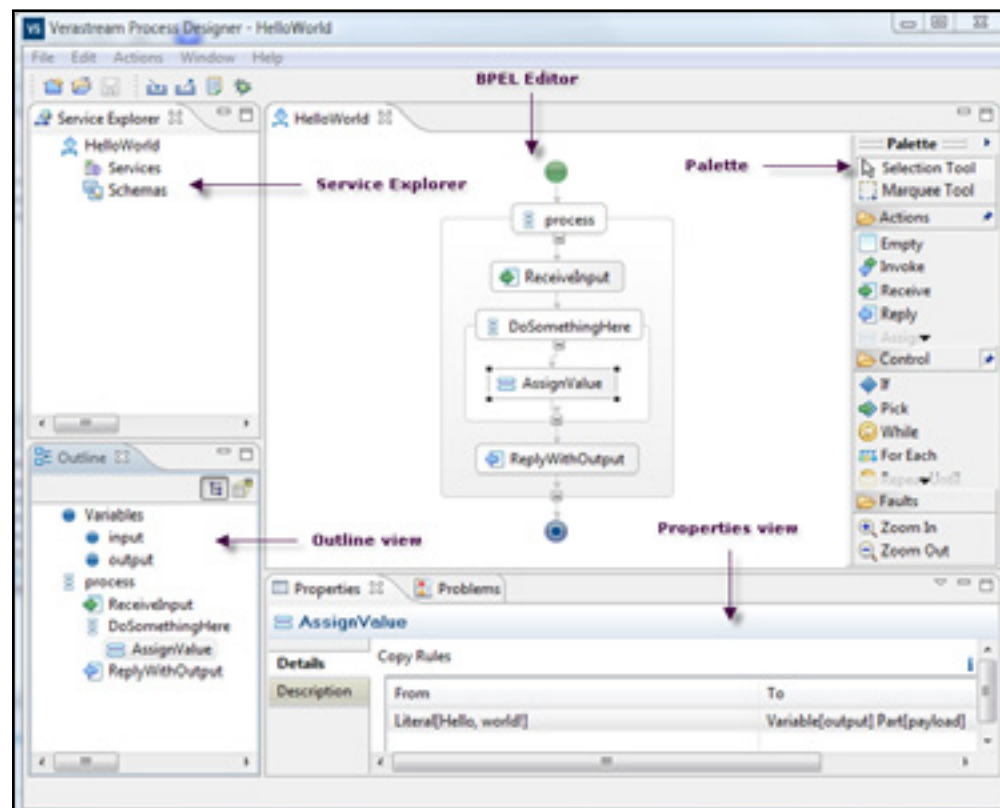
When you start a new project, the Process Design Studio fills in a default process structure. In this case, the basic process structure is the start of your Hello World process.

The Project Explorer is a tab that appears over the Service Explorer. To see it, choose **Window > Project Explorer**. With the Project Explorer tab open, right-click on the project WSDL and select **Open WSDL** to view the WSDL Editor. The WSDL Editor is a tab that appears over the BPEL Editor.

These next two pages introduce a number of terms that will be used throughout this tutorial.

The Process Designer creates an initial view of the Hello World project which contains the following:

- Service Explorer, a tree view of your project containing the services and schemas that can be used to build it.
- Outline View, which provides a condensed outline of the overall BPEL process, including any declared variables
- Properties View, where you can edit the different pieces of the BPEL process
- The Palette, which provides the activities that you use to interact with the BPEL process. There are many kinds of activities, from 'Assign' to 'If' and 'Throw'. Each has a different purpose. When you want a new activity, you drag it from the Palette into the BPEL Editor.
- BPEL Editor, where you will select and manipulate the activities that compose your process.

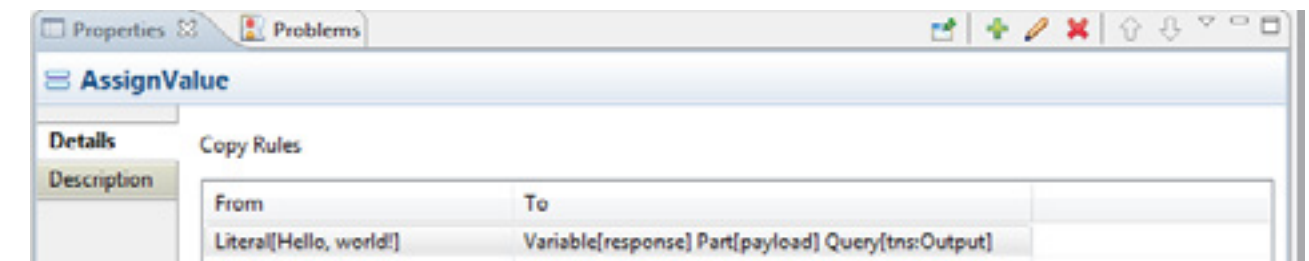


## Assigning values

In the BPEL Editor, follow the steps below to assign the fixed value 'Hello, world!' to the output of your new business process.

1. Select the Assign activity named **AssignValue** that is in the default process structure. The activity's only copy rule shows in the Properties View.
2. Double-click on the copy rule in the AssignValue property field (in the image below, it is the highlighted text) to open the Edit Copy Rule dialog box.

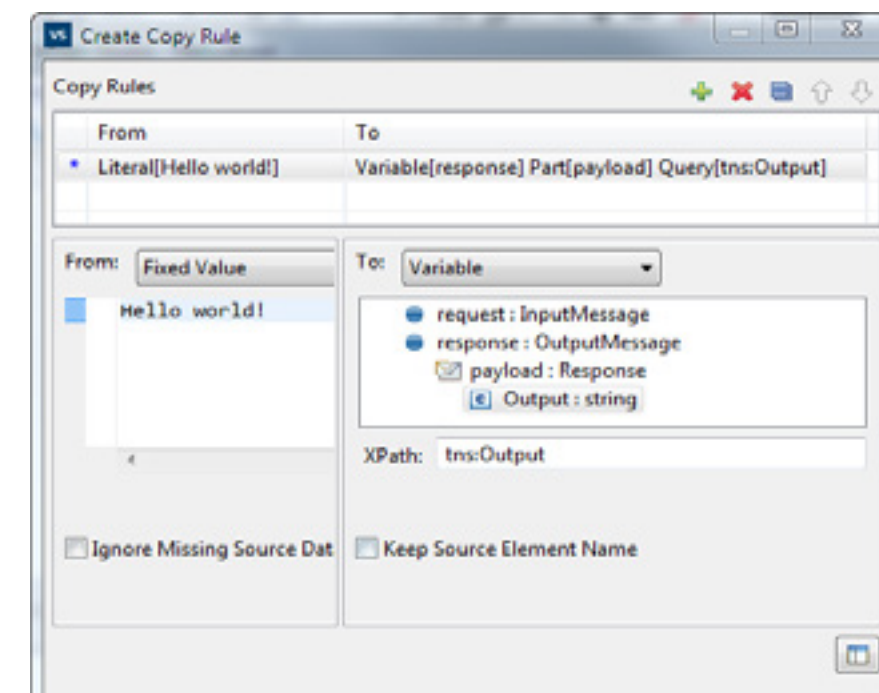
*A BPEL process receives, manipulates, and sends data using XML variables. Variables receive data as an input, and pass it as an output.*



Inside the Edit Copy Rule dialog box, you will create a fixed value and assign it as the variable's output.

1. Make sure the From menu has 'Fixed Value' selected, and the 'To' menu has 'Variable' selected.
2. Type **Hello, world!** in the text field.
3. In the To section, expand response:OutputMessage, then payload:Response, and select Output: string, then click OK.

*When you want to assign value to a variable, you use an Assign activity. Assign activities can contain one or more copy rules. Copy rules do the actual work--they place a value in a variable's input or output.*

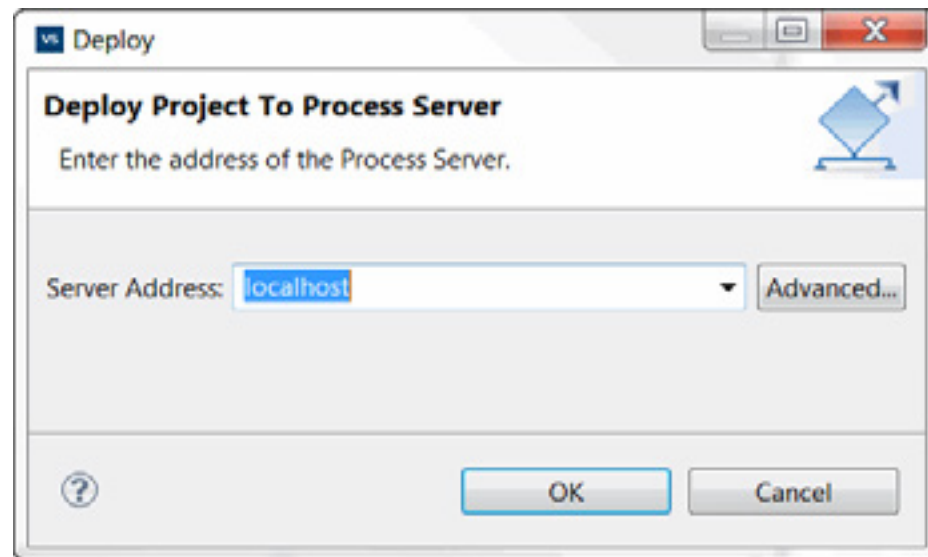


## Deploying the process

When you install Process Design Studio, the Verastream Process Server service on your PC runs at the **localhost** address. If you have trouble deploying to localhost, you can try restarting that service. To restart, right-click **Computer**, and choose **Manage**; double-click **Services and Applications**, double-click **Services**, scroll down to the Verastream Process Server service, right click it, and choose **Restart**.

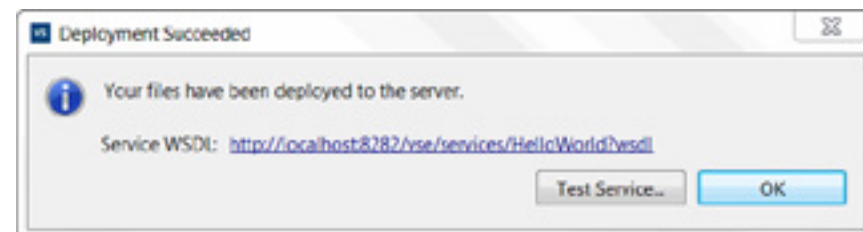
Deployment means packaging up the project you have been working on and sending the files needed to run it to the server. The server includes a *runtime* which interprets and executes the code, taking actions that the code specifies.

1. From the File menu, select **Deploy to Process Server....**
2. Enter the name of your process server, then click OK.



3. Enter the name, username and password for the server. The defaults are:  
name: **localhost** username: **admin** password: **secret**
4. In the Deployment Succeeded dialog box, click **Test Service** to launch the Web Services Explorer.

When the deployment is complete, you see a dialog with a URL called the 'Service WSDL'. Always make note of this URL: this is how you access your BPEL process.



Your deployment is successful!

To copy the Service WSDL to your clipboard (so you can paste it somewhere), right-click on it and choose **copy**.

The Web Service Definition Language or WSDL document describes exactly how to interact with the Web service. Like BPEL, this is an XML based language. It is designed to describe the interface to a Web service.

## Testing the process

Congratulations! You have created and deployed your first BPEL process with the Process Designer.

The next step is to test whether the process works as you expect. The 'Hello, world!' process should return the phrase 'Hello, world!' when deployed as a Web service and executed. We've just deployed it, let's execute it.

To finish testing your deployment from inside the Process Designer:

1. On the Deployment Succeeded dialog, click **Test Service** to open the Web Services Explorer in your default Web browser.
2. You will test against the SOAP11Binding. Open that node, select process.
3. This process does not need an input string, so just click **Go**. The process response displays in the Status field. It should read, 'Output (string): Hello, world!'

*If you have already dismissed the Deployment Succeeded dialog, you can redeploy. Alternately, **File > Launch Web Services Explorer...** will connect to the last deployed Web service.*

