



# Echo Hello World Sample

## Hello World Series

### AN ACTIVE ENDPOINTS SAMPLE

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## “Echo Hello World” Sample: The Prototypical *Hello World*

The “Echo Hello World” sample is the smallest usable process which according to tradition does nothing more than echoes the string “Hello World!” to its caller.

It’s a part of a *Hello World* series of ActiveVOS samples and tutorials.

The recommended first steps for anyone evaluating or learning about ActiveVOS are as follows:

- **Review the Product Tour** (use Help > Welcome > First Steps and select “1. Take the Product Tour”) and its accompanying vignettes that describe how with ActiveVOS you model, implement, deploy and execute, and generate reports.
- **Review the Hello World Series of samples** you will find at Education Center in the [Getting Started](#) section.
- **Deploy and run the *completed* Loan Approval Process sample** using the ActiveVOS Designer’s Help > Welcome > First Steps and select “3. Deploy and run the completed Loan Approval Process” menu items.
- **Learn about ActiveVOS Designer** using the ActiveVOS Loan Approval Process Tutorial by launching it from Help > Welcome > First Steps and select “4. Learn how to build the Loan Approval Process”. If you haven’t installed ActiveVOS yet, you can review the Loan Approval Process Tutorial online at <http://infocenter.activevos.com/infocenter/ActiveVOS/v60/topic/com.activeee.bpel.doc/html/UG3.html>. The ActiveVOS Product Tour vignettes are available online at <http://www.activevos.com/indepth.php#Capabilities>.

We acknowledge that many of you would rather build a few “Hello World” projects before investing the time in the tutorial. The goal of the “Echo Hello World” sample is to allow you to experience ActiveVOS by providing you with an appreciation of some of its concepts and capabilities. This sample will demonstrate how to use ActiveVOS Designer to:

- Create an interface for the “Echo Hello World” process starting from XML schema
- Generate BPEL activities

- Perform simple XML manipulation to generate an output of “Hello World” for the process
- Simulate a process

We recommend that you print and read this document at the same time as viewing the accompanying recording.

Start the recording by selecting the *video* link for this sample from the [Getting Started](#) section of Education Center.

If you have any problems please contact [evalsupport@activevos.com](mailto:evalsupport@activevos.com) for assistance.

### Step 1. Create an “Echo Hello World” orchestration project

Every process needs an interface which it exposes to its consumers as a Web service described using a Web Services Description Language (WSDL) document. ActiveVOS generates this WSDL at runtime using the description of the interface prepared by ActiveVOS Designer at design-time. For the “Echo Hello World” sample we will use ActiveVOS Designer’s ability to generate this interface using an XML Schema document that will define the input and outputs of the process.

To create the “Echo Hello World” orchestration project, select File > New > Orchestration Project. Enter a project name of “Echo Hello World”. Press Next to see the set of templates ActiveVOS offers, and select “Default Orchestration” followed by “Finish”.

The project has now been created.

### Step 2. Create a BPEL Process in the “bpel” folder named “echoHelloWorld.bpel”

To create the “Echo Hello World” BPEL process, select File > New > BPEL Process and give it a file name of “echoHelloWorld.bpel”.

### Step 3. Configure your ActiveVOS process environment

You may want to optionally configure the default target namespace for your ActiveVOS processes or the Designer’s layout. See the recording to guide you through the selection of a default target namespace and a default style.

#### Step 4. Create the XML Schema for the process's interface

Using the XML Schema Editor or by pasting the content of the schema definition provided below, create an XML Schema document that you save in the "schema" folder as "echoHelloWorld.xsd".

To create the XML Schema document, select File > New > XML Schema File. Follow the demonstration provided in the recording, or paste the following XML content in echoHelloWorld.xsd file. If pasting the content, use the "source" tab and overwrite the entirety of the schema' content with what follows.

```
<?xml version="1.0" encoding="UTF-8"?>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://www.example.org/echoHelloWorld"
xmlns:tns="http://www.example.org/echoHelloWorld"
elementFormDefault="qualified">
  <element name="request" type="string" nillable="true"></element>
  <element name="response" type="string"></element>
</schema>
```

#### Step 5. Create a Process Service Consumer.

A Process Service Consumer represents the interface offered to consumers of the process. To learn more about Process Participants, use Help > Help Contents > ActiveVOS Designer Online Help > Participants. To create a Process Service Consumer, select the Process Service Consumers node in the Participants View, right button mouse click, and select "New Process Service Consumer..." Use the default consumer name provided.

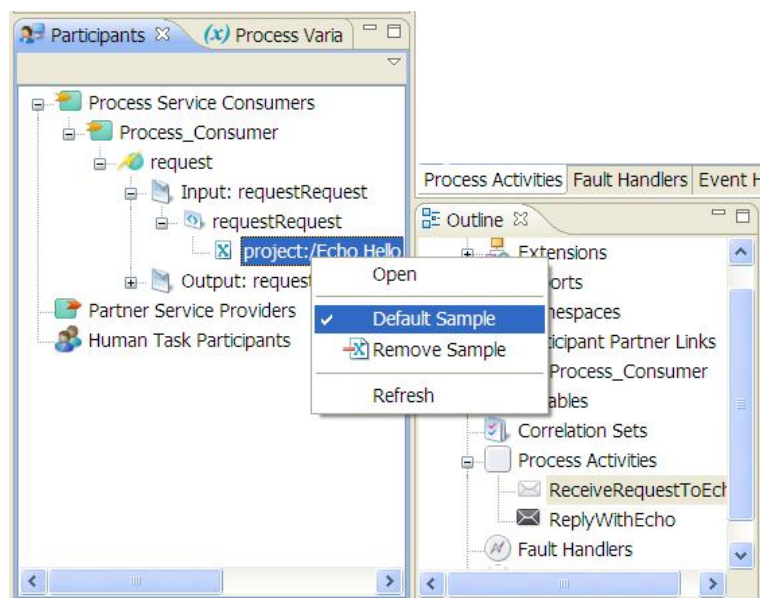
#### Step 6. Generate an interface for the process using the XML Schema document you created.

The "Process Service Consumer" dialog provides the ability to select a pre-registered interface (i.e. one that has been previously imported in the project) or generate one using "Generate Interface..." that launches the "New Interface Wizard". Use the New Interface Wizard to generate a request-response based operation using the XML Schema document you created for the process's input and output. Follow the recording to learn how to use this wizard to generate the interface. Once the new interface has been created and displayed in the "Process Service Consumer" dialog, select it as the interface of the process service consumer.

To learn more about creating interfaces with ActiveVOS Designer start Help and search for “New Interface Wizard”.

### Step 7. Generate Sample Data for simulation.

Using the Participants View, select the *requestRequest* message part created, right button mouse click and select “Generate Sample”. This will have the effect of generating a sample message that can be used in simulation. Simulation will be carried out in the last step of this sample. As shown below, notice when you select the file created that it is now the “Default Sample” message for simulation purposes.



### Step 8. Create receive and reply activities for the process

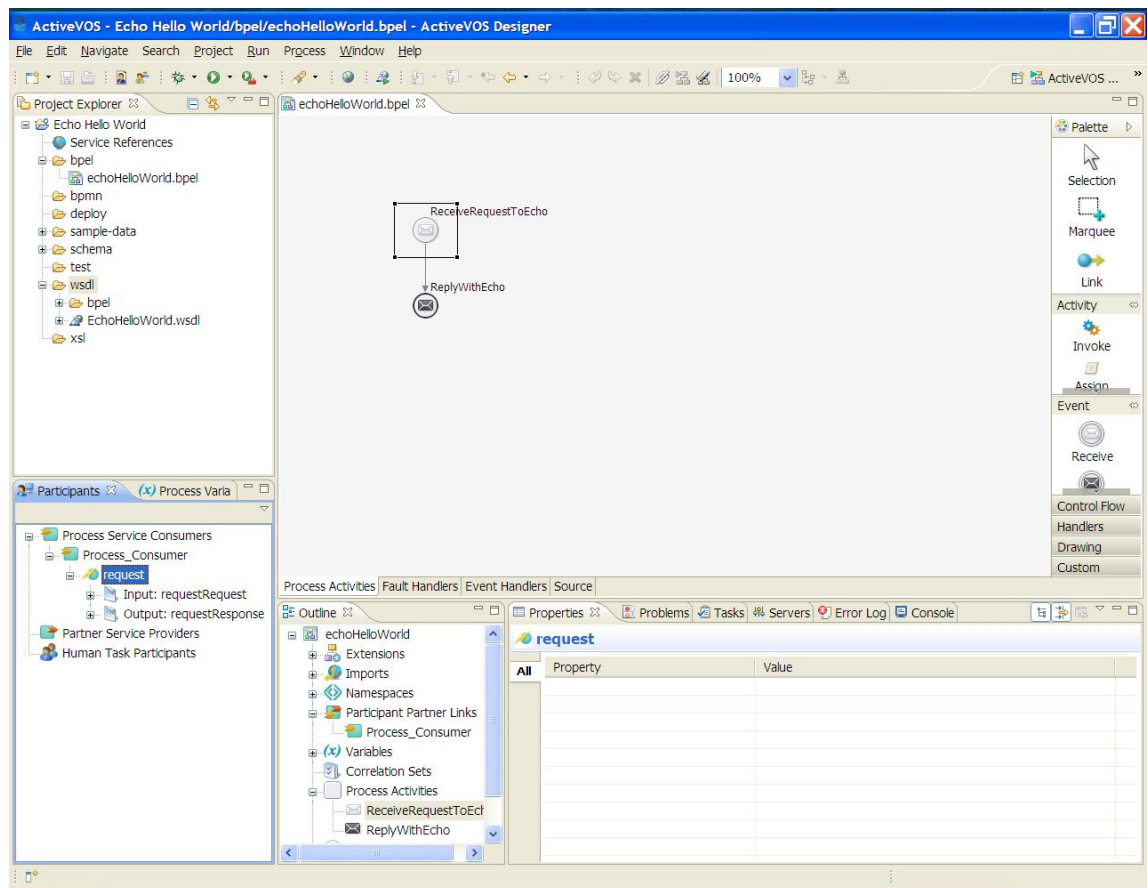
1. Drag the “request” operation depicted above to the canvas. This will create BPEL receive and reply activities.
2. Rename (optionally) the receive activity as *ReceiveRequestToEcho* and the reply activity as *ReplyWithEcho*
3. Select the receive activity (i.e. *ReceiveRequestToEcho*), select the Data tab, and create a new variable to process the input to the process. This variable will not actually be used by the process. This step is there to familiarize you with the concept.
4. Select the reply activity (i.e. *ReplyWithEcho*), select the Data tab and create an XQuery expression that will be used to return the output “Hello World!” Replace the { \$fill\_in\_here } placeholder with the string “Hello World!”.

5. Link the receive and reply activities
6. Save the process
7. You're now done building your first Hello World. Next step is to use simulation to perform a quick test of the process.

## Step 9. Simulate to test the process

Refer to the recording to see how to simulate the process using the sample data generated in Step 7.

## End Result



## Summary

This sample demonstrated how to:

- Create an interface for the “Echo Hello World” process starting from XML schema
- Generate BPEL activities
- Perform simple XML manipulation to generate an output of “Hello World” for the process
- Simulate a process

If you had any problems working with the sample, please contact [evalsupport@activevos.com](mailto:evalsupport@activevos.com) for assistance.

## Next Steps

You might want to proceed to the next *Hello World* series sample – the *Hello Jane Doe* sample - or as recommended, carry out the Loan Approval Process Tutorial.

## About Active Endpoints

Active Endpoints ([www.activevos.com](http://www.activevos.com)) is the leading developer of visual orchestration systems. VOS empowers line of business project teams to create applications using services and industry standards, making their businesses more agile and effective. Active Endpoints' ActiveVOS promotes mass adoption of SOA-enabled applications by focusing on accelerating project delivery time with a standards-based, easy to use system. Active Endpoints is headquartered in Waltham, MA with development facilities in Shelton, CT.

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