Sample 1: Simple Content-Based Routing (CBR) of Messages

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Introduction

This sample demonstrates the simple content-based routing of messages where a message is passed through the ESB in the Dumb Client Mode. The ESB acts as a gateway to accept all messages, and then performs mediation and routing based on message properties or content.

Prerequisites

For a list of prerequisites, see Prerequisites to Start the ESB Samples.

Building the sample

The XML configuration for this sample is as follows:

```xml
<definitions xmlns="http://ws.apache.org/ns/synapse">
  <sequence name="main">
    <in>
      <!-- filtering of messages with XPath and regex matches -->
      <filter source="get-property('To')" regex=".*\./StockQuote\.*">
        <send>
          <endpoint>
            <address uri="http://localhost:9000/services/SimpleStockQuoteService"/>
          </endpoint>
        </send>
      </filter>
    </in>
    <out>
      <send/>
    </out>
  </sequence>
</definitions>
```

This configuration file synapse_sample_1.xml is available in the <ESB_HOME>/repository/samples directory.

To build the sample

1. Start the ESB with the sample 1 configuration. For instructions on starting a sample ESB configuration, see Starting the ESB with a sample configuration.

   The operation log keeps running until the server starts, which usually takes several seconds. Wait until the server has fully booted up and displays a message similar to “WSO2 Carbon started in n seconds.”

2. Start the Axis2 server. For instructions on starting the Axis2 server, see Starting the Axis2 server.

3. Deploy the back-end service SimpleStockQuoteService. For instructions on deploying sample back-end
services, see Deploying sample back-end services.

Now you have a running ESB instance and a back-end service deployed. In the next section, we will send a message to the back-end service through the ESB using a sample client.

Executing the sample

The sample client used here is the Stock Quote Client, which can operate in several modes. For further details on this sample client and its operation modes, see Stock Quote Client.

**To execute the sample client**

- Run the following command from the `<ESB_HOME>/samples/axis2Client` directory, to execute the Stock Quote Client in the Dumb Client Mode.

```
ant stockquote -Dtrpurl=http://localhost:8280/services/StockQuote
```

Analyzing the output

Analyze the output debug messages for the actions in the Dumb Client Mode.

You will see the ESB receiving a message for which the ESB is set as the ultimate receiver. ESB performs a match to the path `/StockQuote` based on the To EPR in the following location: `http://localhost:8280/services/StockQuote`

As the request matches the XPath expression of the Filter Mediator, the Filter Mediator's child mediators execute. It sends the message to a different endpoint as specified by the endpoint definition. During response processing, the filter condition fails. Therefore, the implicit Send Mediator forwards the response back to the client.