**Practical Exercise: Configuring a Proxy Service**

Training Objective

Create a Proxy Service with a simple sequence and deploy it in the Micro Integrator.

High Level Steps

* Create an Integration project.
* Configure a Proxy Service.
* Deploy and test your new configuration.

Detailed Instructions

Using a Simple Proxy Service

This example demonstrates how to use a simple proxy service to expose a back-end service. In this example, a request received by the proxy service is forwarded to the sample service hosted in the backend.

Synapse configuration

Following is a sample proxy service configuration that we can used to implement this scenario.

An inSequence or endpoint or both of these would decide how the message would be handled after the proxy service receives the message. The outSequence defines how the response is handled before it is sent back to the client.

<**proxy** name="StockQuoteProxy" startOnLoad="true" transports="http https" xmlns="http://ws.apache.org/ns/synapse">

<**target**>

<**endpoint**>

<**address** uri="http://localhost:9000/services/SimpleStockQuoteService"/>

</**endpoint**>

<**outSequence**>

<**send**/>

</**outSequence**>

</**target**>

<**publishWSDL** uri="file:/path/to/sample\_proxy\_1.wsdl"/>

</**proxy**>

Build and run

Create the artifacts:

1. [Set up WSO2 Integration Studio](https://apim.docs.wso2.com/en/4.1.0/integrate/develop/installing-wso2-integration-studio).
2. [Create an integration project](https://apim.docs.wso2.com/en/4.1.0/integrate/develop/create-integration-project) with an **ESB Configs** module and an **Composite Exporter**.
3. [Create the proxy service](https://apim.docs.wso2.com/en/4.1.0/integrate/develop/creating-artifacts/creating-a-proxy-service) with the configurations given above.

**Tip**

Download the wsdl file (sample\_proxy\_1.wsdl) from [sample\_proxy\_1.wsdl](https://github.com/wso2-docs/WSO2_EI/blob/master/samples-protocol-switching/sample_proxy_1.wsdl). The wsdl uri in the proxy service needs to be updated with the path to this sample\_proxy\_1.wsdl file.

1. [Deploy the artifacts](https://apim.docs.wso2.com/en/4.1.0/integrate/develop/deploy-artifacts) in your Micro Integrator.

When the Micro Integrator starts, you could go to the following URL and view the WSDL generated for the proxy service defined in the configuration.

http://localhost:8290/services/StockQuoteProxy?wsdl

This WSDL is based on the source WSDL supplied in the proxy service definition and is updated to reflect the proxy service EPR.

Set up the back-end service:

1. Download the [back-end service](https://github.com/wso2-docs/WSO2_EI/blob/master/Back-End-Service/axis2Server.zip).
2. Extract the downloaded zip file.
3. Open a terminal, navigate to the axis2Server/bin/ directory inside the extracted folder.
4. Execute the following command to start the axis2server with the SimpleStockQuote back-end service:

On MacOS/Linux/CentOS

sh axis2server.sh

On Windows

Set up the SOAPUI client.

1. Download and Install [SoapUI](https://www.soapui.org/downloads/soapui.html" \t "_blank) to run this SOAP service.
2. Create a new SOAP project in the SoapUI using following WSDL file:

http://localhost:8290/services/StockQuoteProxy?wsdl

Send requests to the proxy service:

* Send the following payload to receive a response containing the last sales price for the stock. You can use the getQuote operation.

<**ser:getQuote** xmlns:ser="http://services.samples" xmlns:xsd="http://services.samples/xsd">

<**ser:request**>

<**xsd:symbol**>IBM</**xsd:symbol**>

</**ser:request**>

</**ser:getQuote**>

* Send the following payload to get simple quote response containing the last sales price for stock. You can use the getSimpleQuote operation.

<**ser:getSimpleQuote** xmlns:ser="http://services.samples">

<**ser:symbol**>IBM</**ser:symbol**>

</**ser:getSimpleQuote**>

* Send the following payload to get quote reports for the stock over a number of days (i.e. last 100 days of the year). You can use the getFullQuote operation.

<**ser:getFullQuote** xmlns:ser="http://services.samples" xmlns:xsd="http://services.samples/xsd">

<**ser:request**>

<**xsd:symbol**>IBM</**xsd:symbol**>

</**ser:request**>

</**ser:getFullQuote**>

* Send the following payload as an order for stocks using a one way request. You can use the placeOrder operation.

<**ser:placeOrder** xmlns:ser="http://services.samples" xmlns:xsd="http://services.samples/xsd">

<**ser:order**>

<**xsd:price**>3.141593E0</**xsd:price**>

<**xsd:quantity**>4</**xsd:quantity**>

<**xsd:symbol**>IBM</**xsd:symbol**>

</**ser:order**>

</**ser:placeOrder**>

* Send the following paylaod to get a market activity report for the day (i.e. quotes for multiple symbols). You can use the getMarketActivity operation.

<**ser:getMarketActivity** xmlns:ser="http://services.samples" xmlns:xsd="http://services.samples/xsd">

<**ser:request**>

<**xsd:symbols**>IBM</**xsd:symbols**>

...

<**xsd:symbols**>MSFT</**xsd:symbols**>

</**ser:request**>

</**ser:getMarketActivity**>

**Best Practices**

* Create the main logic (i.e. proxy service) in the main ESB Config module in the

Integration project.