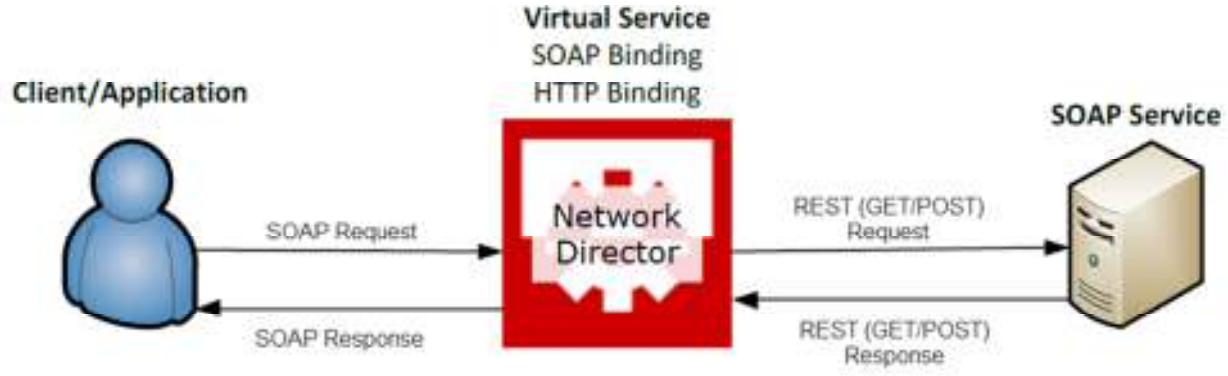
# Configuring SOAP to REST in Policy Manager 6.0

The checklist below provides a summary of steps required to configure mediation in the Network Director between SOAP and REST as shown in the diagram below.




The Component column in the matrix below lists the SOA component where the task must be performed.

| # | Component | Description / Task |
|---|---|---|
| 1 | Policy Manager Console<br><br>Create Physical REST Service | 1. From the Workbench Tab.<br>2. Select the Organization where you want to register the physical service.<br>3. From the Actions Portlet, select the option Create Physical Service.<br>4. On the Select Service Creation Option screen, select 'Create service from schema'.<br>5. On the Specify Physical Service Properties screen, enter the following when the WSDL is read into the Policy Manager:<br>a. Name: This is the physical service name, this can be any name used to identify the service<br>b. Service Key: If left blank, the Policy Manager will generate a unique key. Leave blank.<br>c. Qname: (Namespace URI) this is a Namespace URI for the service, in most cases this will be the service namespace URI. If this field is not filled in you can enter a namespace for the service (i.e http://myservice.com)<br>d. Qname: (Localpart) this is the service name read from the WSDL, for example myRESTService.<br>e. Binding Type: Leave the default option (HTTP) selected. |

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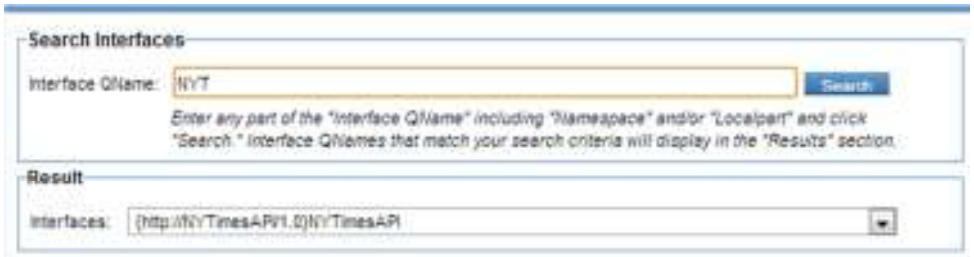
| | Virtualize Physical Service | f. Provider Organization: Verify the organization where the physical service will be registered..<br>6. Click Next to go to the Select Service Management Option screen and select 'Use Existing Schemas' option. Click Next.<br>7. On 'Specify Operations' screen, click 'Add Operation' for each RESTful operation. For example: 'getSearch' will define an operation that will use 'GET' method and has a unique context path. After adding all operation names click 'Next'.<br>8. On 'Specify Operations Details' screen define the schema elements and types that will be populated for each operations defined on the previous screen. Typical usecase will be assigning 'Types'->'anyType' for 'Input', 'Output', and 'Fault'.<br>9. On 'Configure HTTP Binding Properties' screen, Define the method (GET / POST / PUT / DELETE), URI Syntax (i.e. /getSearch?query1={query1}&query2={query2}), and each of the 'Content Type'. You can choose to define specific content type or select 'any (*/*)' if you are not sure of the content type. Click 'Next'.<br>10. On 'Select Service Management Option', select 'Manage through a Virtual Service' and uncheck 'Act as a proxy service'. Click 'Next'.<br>11. Enter the virtual service properties and verify the correct Virtual Service Provider Organization is selected.<br>Click Next.<br>12. Select the Network Director container or Network Director cluster on which the virtual service will be hosted.<br>13. Enter the Port Name and the Context path for the virtual service. The port name can be any name that describes the virtual service. This will be used in the WSDL for the virtual service. The context path is combined with the Listener URL defined for the Network Director to create the URL the consumer uses to invoke the virtual service.<br>14. After the virtual service has been registered, go back to 'Access Points' tab for the physical service and add the access point for the physical service.<br>15. After adding the physical endpoint, verify the virtual service is functioning correctly by sending a request through it (Note: A contract is required to send the request to the virtual service). |
| 2 | Policy Manager Console<br><br>Adding HTTP binding to the physical service interface for RESTful service support | An SOAP binding must be added to the physical service to support SOAP to REST mediation.<br><br>1. Click on the Configure Tab -> Registry sub-tab -> Bindings sub-tab.<br>2. From the Bindings sub-tab, click on 'Add Binding'.<br>3. Search for the physical service interface and make sure that is displayed in the Interfaces: window.<br>  <br><br>4. On the Specify Binding Details screen: Enter a name for the binding in the LocalPart (i.e. myServiceBindingSOAP). Verify the Binding Type is Soap 1.1 Click Next to go to the Configure Binding Properties screen. Click 'Finish' to accept the default values. |

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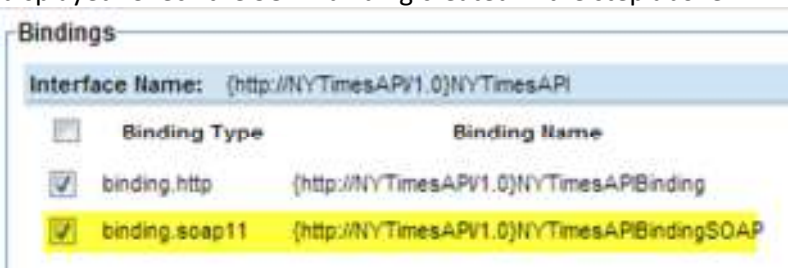
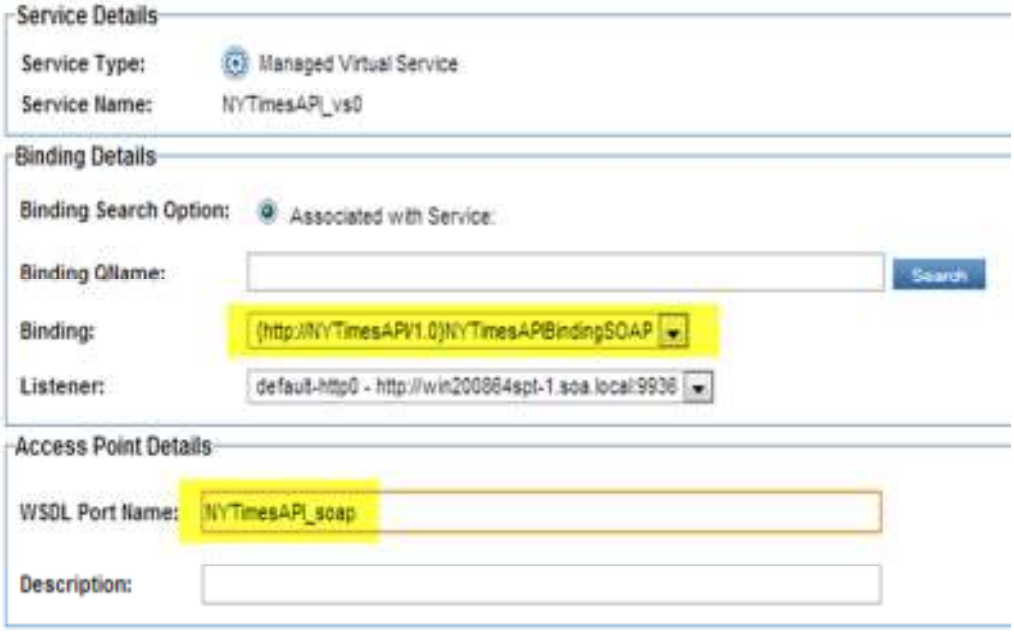
| | | Assign the SOAP binding to the virtual service.<br>1. Click on the virtual service in the organization tree.<br>2. Click on Manage in the Interfaces and Bindings section of the Service Overview portlet.<br>  <br>3. The Interfaces assigned to the virtual service should be displayed in the Interfaces Assigned window. Click Next to go to the Bindings screen.<br>4. In the Select Bindings screen, the bindings available for the virtual service are displayed. Check the SOAP binding created in the step above.<br>  <br>Click *Finish.* |
| | Policy Manager Console<br><br>Network Director Container<br><br>Hosted Services | An new URL is required to be able to invoke the service using the SOAPbinding created. To configure the URL:<br><br>1. Select the Network Director container from the Organization tree<br>2. Click on the Hosted Services sub-tab<br>3. From the select Action pulldown, select Modify Virtual Service<br>4. Check the SOAP binding and enter a WSDL Port Name for this binding.<br>  <br><br>5. In the Specify HTTP Details screen, enter the URL the consumer will use to invoke the service using SOAP. |

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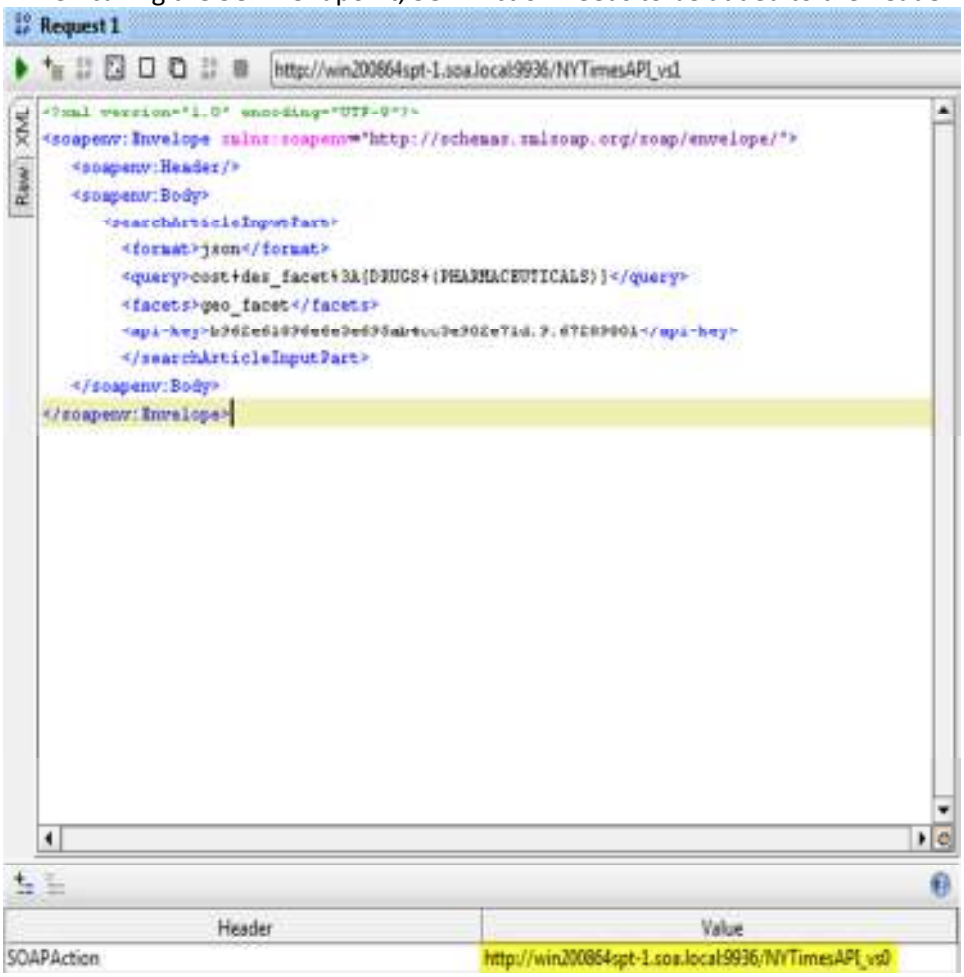
| | Policy Manager Console<br><br>Virtual Service Operation | When the service is virtualized on the Network Director if the virtual service was setup as a proxy, the default is to preserve the HTTP headers when the request is sent from the Network Director to the endpoint.<br><br>To verify the header behavior, do the following:<br><br>1. Select the virtual service from the organization tree<br>2. Click on the Operations sub-tab<br>3. Select an operation<br>4. Click on the Implementation sub-tab. The header behavior is displayed.<br>  |
| | | SOAPAction needs to be defined to deliver the request to virtual endpoint for the REST service.<br><br>1. Download the WSDL for the virtual endpoint (i.e. http://win200864spt-1.soa.local:9936/NYTimesAPI_soap_vs?wsdl )<br>2. Using a text editor, open the WSDL and find the SOAP action for the virtual SOAP binding.<br>3. Enter the virtual endpoint for REST as SOAPAction. Save WSDL.<br><br>4. Go to the service Detail page for the virtual service and click 'Update Service'. Select the WSDL path and choose the updated WSDL. Click 'Next' and select 'Use exiting binding' on Manage Duplicate Bindings' screen. Click 'Finish'.<br>  |

5. When calling the SOAP endpoint, SOAPAction needs to be added to the header.




The request and response are shown below:

**Request: Client to Network Director**

POST http://win200864spt-1.soa.local:9936/NYTimesAPI_vs1 HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: text/xml;charset=UTF-8
SOAPAction: http://win200864spt-1.soa.local:9936/NYTimesAPI_vs0
User-Agent: Jakarta Commons-HttpClient/3.1
Host: win200864spt-1.soa.local:9936
Content-Length: 425

<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
<soapenv:Header/>
<soapenv:Body>
<searchArticleInputPart>
<format>json</format>

<query>cost+des_facet%3A[DRUGS+(PHARMACEUTICALS)]</query>
<facets>geo_facet</facets>
<api-key>b962e61896e6e3e695ab4cc3e902e71d:9:67289801</api-key>
</searchArticleInputPart>
</soapenv:Body>
</soapenv:Envelope>

**Response: Physical Service to Network Director**

HTTP/1.1 200 OK
X-Mashery-Responder: mashery-web1-atl.mashery.com
Server: nginx/1.0.10
Date: Tue, 12 Feb 2013 18:27:56 GMT
Content-Type: text/xml;charset=UTF-8
Connection: keep-alive
X-Original-Transfer-Encoding: chunked
Accept-Ranges: bytes
Content-Length: 127
Content-Encoding: gzip
Transfer-Encoding: chunked

<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"><soap:Header/><soap:Body><getArticleOutputPart xmlns="http://www.w3.org/2001/XMLSchema"><facets/><offset>0</offset><results/><tokens><element>cost</element><element>des_facet%3A[DRUGS (PHARMACEUTICALS)]</element></tokens><total>0</total></getArticleOutputPart></soap:Body></soap:Envelope>