

CIS Conversion of JSON to XML When the JSON Response Structure is not Wrapped in a Top Element



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Contents

Introduction

Problem

Solution

Introduction

This document describes the steps required to convert a JavaScript Object Notation (JSON) response received by the Representational State Transfer (REST) datasource [in the Cisco Information Server (CIS)] into XML if the JSON response received by CIS is not wrapped in a top element.

Problem

Sometimes the JSON response does not wrap as a single document. For example, the JSON response could be:

```
{ "status": "OK",
  "data": { "trends": { "55-64": [
                                { "date": "201312", "value": "13.15" }
                                ]
          },
          "query_cost": 6,
          "trends_frequency": "monthly"
        }
      }
```

If that is the response, then the XML to JSON conversion by default only gives the XML as:

```
<?xml version="1.0" encoding="UTF-8"?><test>
  <status>OK</status>
```

Only the first snippet is returned within Studio. However, in the RestClient, the complete response is returned and the *cs_server.log* also shows the full response.

The desired XML output is:

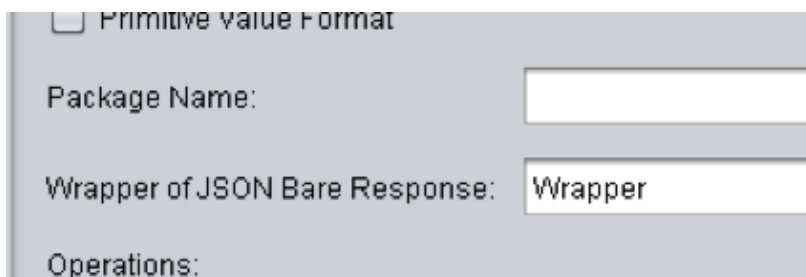
```
<?xml version="1.0" encoding="UTF-8"?>
<Wrapper>
  <status>OK</status>
  <data>
  <trends>
```

```
<_55-64>
<date>201312</date>
<value>13.15</value>
</_55-64>
</trends>
<query_cost>6</query_cost>
<trends_frequency>monthly</trends_frequency>
</data>
</Wrapper>
```

Solution

REST data sources retrieve data from a web service in either JSON or XML format. If the data can be extracted into tabular format, you must use an XSL transformer in order to do this. Here are basic instructions:

1. Upgrade Studio to at least the 6.2.3.00.22 patch. This provides you new functionality in order to Design by Example, which makes it easier to obtain the schema for the Extensible Stylesheet Language Transformations (XSLT) procedure to use in order to map the JSON output to tabular output.
2. In Studio, configure its *XML text size* to a large value like 50,000. This is important because later, when you click Design by Example, it breaks if the returned XML exceeds this size limit. If you are in a situation where you cannot increase this setting in Studio, consider the use of different input criteria in order to reduce the size of the returned XML.
3. You can do this step when you create the data source, or after the data source is created. When you create the REST data source, check the JSON Format check box.
4. If your JSON structure is not wrapped in a top element, CIS can add a wrapper so that the XML created from the JSON response is properly formatted into legal XML. If you do not know whether the response is wrapped, you can add the wrapper and evaluate whether you need this later. This is set with the *Wrapper of JSON Bare Response* field, which sets the root node for the *JSON > XML* output.



Primitive Value Format

Package Name:

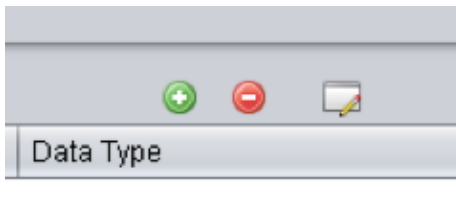
Wrapper of JSON Bare Response:

Operations:

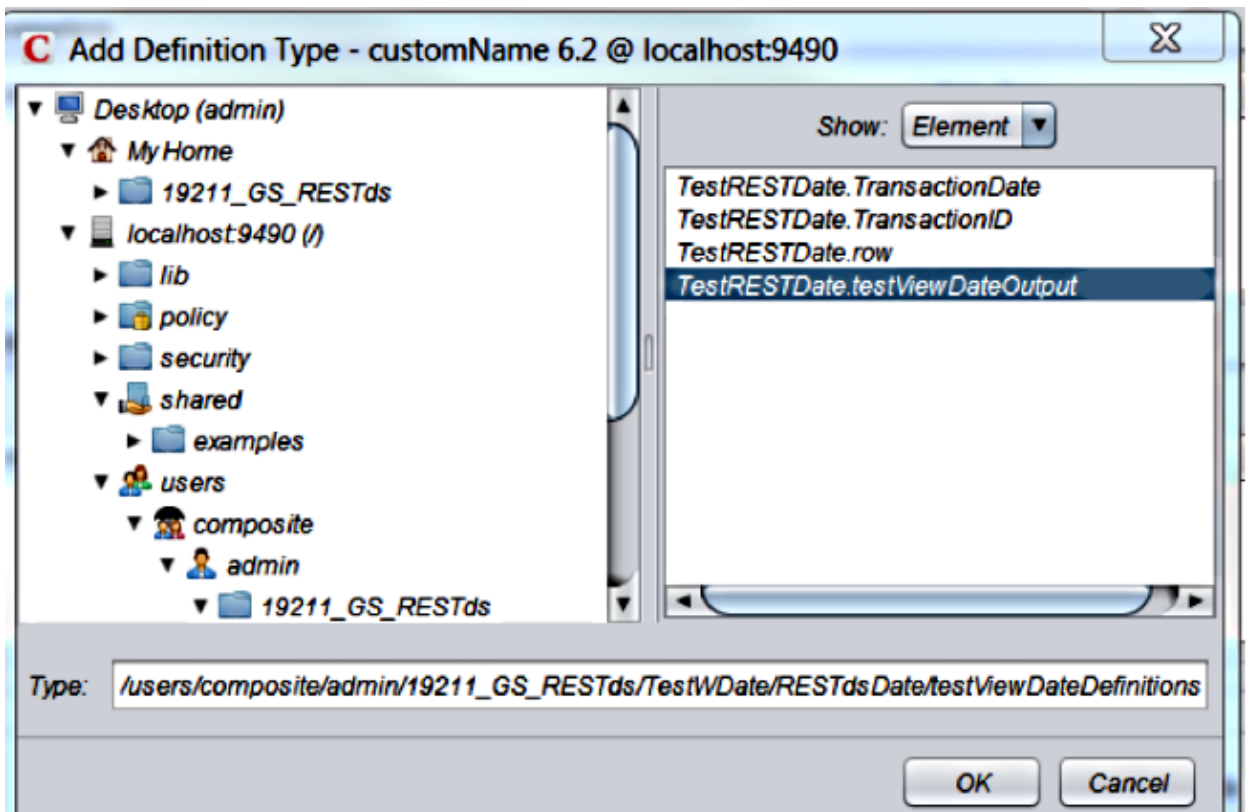
5. Select one of the Operations added in the Operations section:



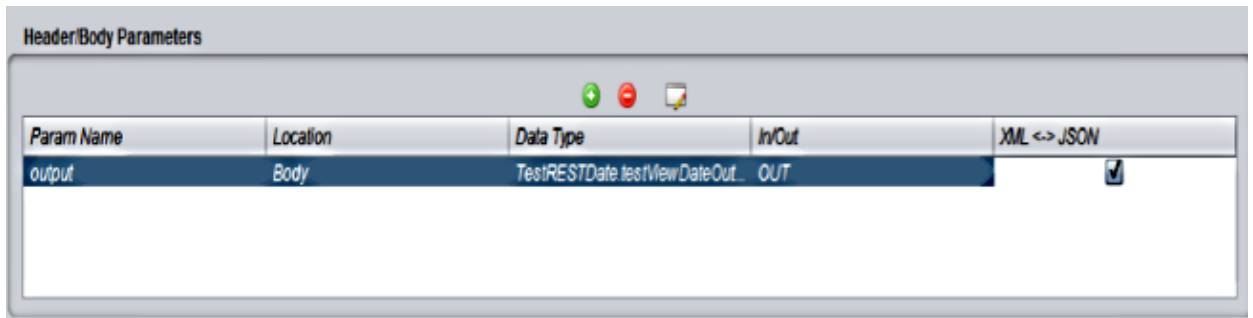
6. Click Design by Example in the Header/Body Parameters section. If you just added this operation, you might have to close the REST data source panel and re-open it in order to make this button active.



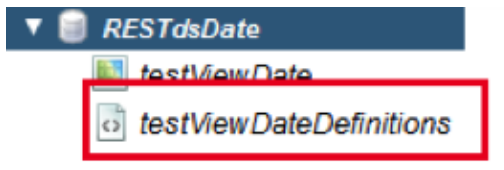
7. Choose the top-level element of your JSON response and click **OK**.



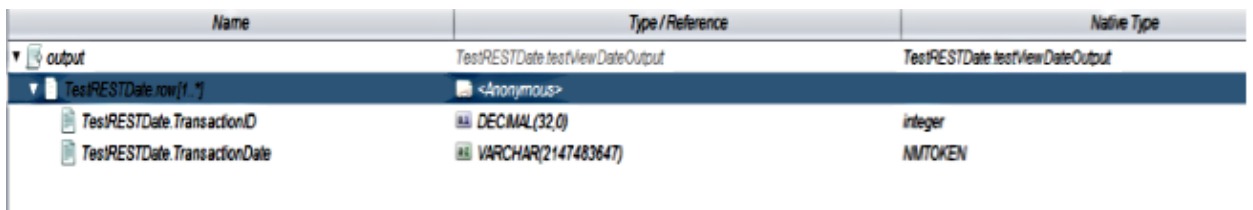
8. Give the Parameter a name and click *Save*.



This creates an XML Schema Definition Set that appears in your data source resources.



9. This also transforms the JSON output to XML so that the XSL transformer can process it. Open the operation and examine the output structure. It shows you the structure that you use in the XSLT procedure.



10. Execute the operation. The JSON output transforms into XML.

