Google Cloud

Edge Advanced Mediation
Response Mediation

Validating Incoming Request Data

Data Validation Approaches

- Simple Validation
  - Extract Variables in combination with a RaiseFault Policy
    - Great for JSON, Form Parameters and simple XML structured requests
- Format Specific Validation Approaches
  - JSON
    - JavaScript policies
  - XML
    - XSLT for dynamic references
  - SOAP
    - SOAP Message Validation policy
  - ALL
    - Java Callout

Lab – Validate, Extract, and Assign

- Complete Lab using ExtractVariables and AssignMessage Policies to validate your data and build a new Response for the client.

XMLToJSON/JSONToXML

XMLToJSON

Converts messages from the extensible markup language (XML) format to JavaScript Object Notation (JSON)

Mostly used for scenarios where APIs are consumed by diverse client apps

The response format can be dynamically set by configuring JSON to XML and XML to JSON policies to execute conditionally

Configuration options available with this policy:

RecognizeNumber - to retain number format instead of strings

RecognizeBoolean - to retain boolean values instead of strings

RecognizeNull - converts empty values to null values

NullValue - indicates what constitues a null value

TextAlwaysAsProperty/TextNodeName - element is converted to a string

AttributeBlockName/AttributePrefix - group values and append prefix to attribute names

OutputPrefix/OutputSuffix - to set prefix and suffix

StripLevels - strip parent levels

TreatAsArray - ensure that values from an XML document are put in a JSON array

NamespaceBlockName/DefaultNamespaceNodeName/NamespaceSeparator - for setting the namespace blocks

XMLToJSON

- Policy also supports certain predefined format which has defined templates to convert XML to JSON.

- Predefined formats include: xml.com, yahoo, google, badgerFish

xml.com

```
<RecognizeNull>true</RecognizeNull>
<TextNodeName>#text</TextNodeName>
<AttributePrefix>@</AttributePrefix>
```

yahoo

```
<RecognizeNumber>true</RecognizeNumber>
<TextNodeName>content</TextNodeName>
```

google

```
<TextNodeName>$t</TextNodeName>
<NamespaceSeparator>$</NamespaceSeparator>
<TextAlwaysAsProperty>true</
TextAlwaysAsProperty>
```

badgerFish

```
<TextNodeName>$</TextNodeName>
<TextAlwaysAsProperty>true</TextAlwaysAsProperty>
<AttributePrefix>@</AttributePrefix>
<NamespaceSeparator>:</NamespaceSeparator>
<NamespaceBlockName>@xmlns</NamespaceBlockName>
<DefaultNamespaceNodeName>$</
DefaultNamespaceNodeName>
```

JSONToXML

Converts messages from the JavaScript Object Notation (JSON) to extensible markup language (XML) format

Useful when transforming messages using a custom XSL stylesheet to perform the transformation needed.

The Content-Type must be application/json for this policy to enforce

Configuration options available with this policy:

NamespaceBlockName/DefaultNamespaceNodeName/NamespaceSeparator - serves as the source of a namespace definition in the XML

ObjectRootElementName - specifies the root element name

AttributeBlockName/AttributePrefix - specify when JSON elements are converted into XML attributes (rather than elements)

ArrayRootElementName/ArrayItemElementName - converts a JSON array into a list of XML elements

TextNodeName - converts a JSON property into an XML text node

NullValue - indicates a null value

InvalidCharsReplacement - replaces any JSON elements that produce invalid XML with the string

Lab